EMCA
Gestión de la Calidad Asistencial

# Boletín de Artículos Científicos

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1. **ARTÍCULO Nº: 4054**

McCabe JM, Kennedy KF, Eisenhauer AC, Waldman HM, Mort EA, Pomerantsev E et al. ***Reporting trends and outcomes in ST-segment-elevation myocardial infarction national hospital quality assessment programs.*** Circulation. 2014; 129(2): 194-202.

BACKGROUND: For patients who undergo primary percutaneous coronary intervention (PCI) for ST-segment-elevation myocardial infarction, the door-to-balloon time is an important performance measure reported to the Centers for Medicare & Medicaid Services (CMS) and tied to hospital quality assessment and reimbursement. We sought to assess the use and impact of exclusion criteria associated with the CMS measure of door-to-balloon time in primary PCI. METHODS AND RESULTS: All primary PCI-eligible patients at 3 Massachusetts hospitals (Brigham and Women's, Massachusetts General, and North Shore Medical Center) were evaluated for CMS reporting status. Rates of CMS reporting exclusion were the primary end points of interest. Key secondary end points were between-group differences in patient characteristics, door-to-balloon times, and 1-year mortality rates. From 2005 to 2011, 26% (408) of the 1548 primary PCI cases were excluded from CMS reporting. This percentage increased over the study period from 13.9% in 2005 to 36.7% in the first 3 quarters of 2011 (P<0.001). The most frequent cause of exclusion was for a diagnostic dilemma such as a nondiagnostic initial ECG, accounting for 31.2% of excluded patients. Although 95% of CMS-reported cases met door-to-balloon time goals in 2011, this was true of only 61% of CMS-excluded cases and consequently 82.6% of all primary PCI cases performed that year. The 1-year mortality for CMS-excluded patients was double that of CMS-included patients (13.5% versus 6.6%; P<0.001). CONCLUSIONS: More than a quarter of patients who underwent primary PCI were excluded from hospital quality reports collected by CMS, and this percentage has grown substantially over time. These findings may have significant implications for our understanding of process improvement in primary PCI and mechanisms for reimbursement through Medicare.

2. **ARTÍCULO Nº: 4055**

Arnold SV, Masoudi FA, Rumsfeld JS, Li Y, Jones PG, Spertus JA. ***Derivation and validation of a risk standardization model for benchmarking hospital performance for health-related quality of life outcomes after acute myocardial infarction.*** Circulation. 2014; 129(3): 313-320.

BACKGROUND: Before outcomes-based measures of quality can be used to compare and improve care, they must be risk-standardized to account for variations in patient characteristics. Despite the importance of health-related quality of life (HRQL) outcomes among patients with acute myocardial infarction (AMI), no risk - standardized models have been developed. METHODS AND RESULTS: We assessed disease-specific HRQL using the Seattle Angina Questionnaire at baseline and 1 year later in 2693 unselected AMI patients from 24 hospitals enrolled in the Translational Research Investigating Underlying disparities in

acute Myocardial infarction Patients' Health status (TRIUMPH) registry. Using 57 candidate sociodemographic, economic, and clinical variables present on admission, we developed a parsimonious, hierarchical linear regression model to predict HRQL. Eleven variables were independently associated with poor HRQL after AMI, including younger age, previous coronary artery bypass graft surgery, depressive symptoms, and financial difficulties (R(2)=20%). The model demonstrated excellent internal calibration and reasonable calibration in an independent sample of 1890 AMI patients in a separate registry, although the model slightly overpredicted HRQL scores in the higher deciles. Among the 24 TRIUMPH hospitals, 1-year unadjusted HRQL scores ranged from 67-89. After risk-standardization, HRQL score variability narrowed substantially (range=79-83), and the group of hospital performance (bottom 20%/middle 60%/top 20%) changed in 14 of the 24 hospitals (58% reclassification with risk-standardization). CONCLUSIONS: In this predictive model for HRQL after AMI, we identified risk factors, including economic and psychological characteristics, associated with HRQL outcomes. Adjusting for these factors substantially altered the rankings of hospitals as compared with unadjusted comparisons. Using this model to compare risk-standardized HRQL outcomes across hospitals may identify processes of care that maximize this important patient-centered outcome.

3. **ARTÍCULO Nº: 4056**

Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Blaha MJ et al. ***Heart disease and stroke statistics--2014 update: a report from the American Heart Association***. Circulation. 2014; 129(3): e28-e292.

4. **ARTÍCULO Nº: 4057**

Spertus J. ***Barriers to the use of patient-reported outcomes in clinical care***. Circ.Cardiovasc.Qual.Outcomes. 2014; 7(1): 2-4.

5. **ARTÍCULO Nº: 4058**

Ho PM, Lambert-Kerzner A, Carey EP, Fahdi IE, Bryson CL, Melnyk SD et al. ***Multifaceted intervention to improve medication adherence and secondary prevention measures after acute coronary syndrome hospital discharge: a randomized clinical trial***. JAMA Intern.Med. 2014; 174(2): 186-193.

IMPORTANCE: Adherence to cardioprotective medication regimens in the year after hospitalization for acute coronary syndrome (ACS) is poor. OBJECTIVE: To test a multifaceted intervention to improve adherence to cardiac medications. DESIGN, SETTING, AND PARTICIPANTS: In this randomized clinical trial, 253 patients from 4 Department of Veterans Affairs medical centers located in Denver (Colorado), Seattle (Washington); Durham (North Carolina), and Little Rock (Arkansas) admitted with ACS were randomized to the multifaceted intervention (INT) or usual care (UC) prior to discharge. INTERVENTIONS: The INT lasted for 1 year following discharge and comprised (1) pharmacist-led medication reconciliation and tailoring; (2) patient education; (3) collaborative care between pharmacist and a patient's primary care clinician and/or cardiologist; and (4) 2 types of voice messaging (educational and medication refill reminder calls). MAIN OUTCOMES AND MEASURES: The primary outcome of interest was proportion of patients adherent to medication regimens based on a mean proportion of days covered (PDC) greater than 0.80 in the year after hospital discharge using pharmacy refill data for 4 cardioprotective medications (clopidogrel, beta-blockers, 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitors [statins], and angiotensin-converting enzyme inhibitors or angiotensin receptor blockers [ACEI/ARB]). Secondary outcomes included achievement of blood pressure (BP) and low-density lipoprotein cholesterol (LDL-C) level targets. RESULTS Of 253 patients, 241 (95.3%) completed the study (122 in INT and 119 in UC). In the INT group, 89.3% of patients were adherent compared with 73.9% in the UC group (P = .003). Mean PDC

was higher in the INT group (0.94 vs 0.87; P< .001). A greater proportion of intervention patients were adherent to clopidogrel (86.8% vs 70.7%; P = .03), statins (93.2% vs 71.3%; P < .001), and ACEI/ARB (93.1% vs 81.7%; P = .03) but not beta-blockers (88.1% vs 84.8%; P = .59). There were no statistically significant differences in the proportion of patients who achieved BP and LDL-C level goals. CONCLUSIONS AND RELEVANCE: A multifaceted intervention comprising pharmacist-led medication reconciliation and tailoring, patient education, collaborative care between pharmacist and patients' primary care clinician and/or cardiologist, and voice messaging increased adherence to medication regimens in the year after ACS hospital discharge without improving BP and LDL-C levels. Understanding the impact of such improvement in adherence on clinical outcomes is needed prior to broader dissemination of the program. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT00903032.

6. **ARTÍCULO Nº: 4059**

Barreto-Filho JA, Wang Y, Rathore SS, Spatz ES, Ross JS, Curtis JP et al. ***Transfer rates from nonprocedure hospitals after initial admission and outcomes among elderly patients with acute myocardial infarction***. JAMA Intern.Med. 2014; 174(2): 213-222.

IMPORTANCE: It is unknown whether hospital transfer rates for patients with acute myocardial infarction admitted to nonprocedure hospitals (facilities that do not provide catheterization) vary and whether these rates further influence revascularization rates, length of stay, and mortality. OBJECTIVES: To examine hospital differences in transfer rates for elderly patients with acute myocardial infarction across nonprocedure hospitals and to determine whether these rates are associated with revascularization rates, length of stay, and mortality. DESIGN, SETTING, AND PARTICIPANTS: We used Medicare claims data from January 1, 2006, to December 31, 2008, to assess transfer rates in nonprocedure hospitals, stratified according to transfer rates as low (</= 20%), mid-low (>20%-30%), mid-high (>30%-40%), or high (>40%). Data were analyzed for 55,962 Medicare fee-for-service patients admitted to 901 nonprocedure US hospitals with more than 25 admissions per year for acute myocardial infarction. MAIN OUTCOMES AND MEASURES: We compared rates of catheterization, percutaneous coronary intervention, and coronary artery bypass graft surgery during hospitalization and within 60 days, as well as hospital total length of stay, across groups. We measured risk-standardized mortality rates at 30 days and 1 year. RESULTS The median transfer rate was 29.4% (interquartile range [25th-75th percentile], 21.8%-37.8%). Higher transfer rates were associated with higher rates of catheterization (P < .001), percutaneous coronary intervention (P < .001), and coronary artery bypass graft surgery (P < .001). Median length of stay was not meaningfully different across the groups. There was no meaningful evidence of associations between transfer rates and risk-standardized mortality at 30 days (mean [SD], 22.3% [2.6%], 22.1% [2.3%], 22.3% [2.4%], and 21.7% [2.1%], respectively; P = .054) or 1 year (43.9% [2.3%], 43.6% [2.2%], 43.5% [2.4%], and 42.8% [2.2%], respectively; P < .001) for low, mid-low, mid-high, and high transfer groups. CONCLUSIONS AND RELEVANCE: Nonprocedure hospitals vary substantially in their use of the transfer process for elderly patients admitted with acute myocardial infarction. High-transfer hospitals had greater use of invasive cardiac procedures after admission compared with low-transfer hospitals. However, higher transfer rates were not associated with a significantly lower risk-standardized mortality rate at 30 days. Moreover, at 1 year there was only a 1.1% difference (42.8% vs 43.9%) between hospitals with higher and lower transfer rates. These findings suggest that, as a single intervention, promoting the transfer of patients admitted with acute myocardial infarction may not improve hospital outcomes.

7. **ARTÍCULO Nº: 4060**

Psaty BM, Weiss NS. ***2013 ACC/AHA guideline on the treatment of blood cholesterol: a fresh interpretation of old evidence*** . JAMA. 2014; 311(5): 461-462.

8. **ARTÍCULO Nº: 4061**

Ioannidis JP. ***More than a billion people taking statins?: Potential implications of the new cardiovascular guidelines***. JAMA. 2014; 311(5): 463-464.

9. **ARTÍCULO Nº: 4062**

Montori VM, Brito JP, Ting HH. ***Patient-centered and practical application of new high cholesterol guidelines to prevent cardiovascular disease***. JAMA. 2014; 311(5): 465-466.

10. **ARTÍCULO Nº: 4063**

Saver JL. ***Blood pressure management in early ischemic stroke***. JAMA. 2014; 311(5): 469-470.

11. **ARTÍCULO Nº: 4064**

He J, Zhang Y, Xu T, Zhao Q, Wang D, Chen CS et al. ***Effects of immediate blood pressure reduction on death and major disability in patients with acute ischemic stroke: the CATIS randomized clinical trial***. JAMA. 2014; 311(5): 479-489.

IMPORTANCE: Although the benefit of reducing blood pressure for primary and secondary prevention of stroke has been established, the effect of antihypertensive treatment in patients with acute ischemic stroke is uncertain. OBJECTIVE: To evaluate whether immediate blood pressure reduction in patients with acute ischemic stroke would reduce death and major disability at 14 days or hospital discharge. DESIGN, SETTING, AND PARTICIPANTS: The China Antihypertensive Trial in Acute Ischemic Stroke, a single-blind, blinded end-points randomized clinical trial, conducted among 4071 patients with nonthrombolysed ischemic stroke within 48 hours of onset and elevated systolic blood pressure. Patients were recruited from 26 hospitals across China between August 2009 and May 2013. INTERVENTIONS: Patients (n = 2038) were randomly assigned to receive antihypertensive treatment (aimed at lowering systolic blood pressure by 10% to 25% within the first 24 hours after randomization, achieving blood pressure less than 140/90 mm Hg within 7 days, and maintaining this level during hospitalization) or to discontinue all antihypertensive medications (control) during hospitalization (n = 2033). MAIN OUTCOMES AND MEASURES: Primary outcome was a combination of death and major disability (modified Rankin Scale score >/=3) at 14 days or hospital discharge. RESULTS: Mean systolic blood pressure was reduced from 166.7 mm Hg to 144.7 mm Hg (-12.7%) within 24 hours in the antihypertensive treatment group and from 165.6 mm Hg to 152.9 mm Hg (-7.2%) in the control group within 24 hours after randomization (difference, -5.5% [95% CI, -4.9 to -6.1%]; absolute difference, -9.1 mm Hg [95% CI, -10.2 to -8.1]; P < .001). Mean systolic blood pressure was 137.3 mm Hg in the antihypertensive treatment group and 146.5 mm Hg in the control group at day 7 after randomization (difference, -9.3 mm Hg [95% CI, -10.1 to -8.4]; P < .001). The primary outcome did not differ between treatment groups (683 events [antihypertensive treatment] vs 681 events [control]; odds ratio, 1.00 [95% CI, 0.88 to 1.14]; P = .98) at 14 days or hospital discharge. The secondary composite outcome of death and major disability at 3-month posttreatment follow-up did not differ between treatment groups (500 events [antihypertensive treatment] vs 502 events [control]; odds ratio, 0.99 [95% CI, 0.86 to 1.15]; P = .93). CONCLUSION AND RELEVANCE: Among patients with acute ischemic stroke, blood pressure reduction with antihypertensive medications, compared with the absence of hypertensive medication, did not reduce the likelihood of death and

major disability at 14 days or hospital discharge. TRIAL REGISTRATION: clinicaltrials.gov Identifier: NCT01840072.

12. **ARTÍCULO Nº: 4065**

Lau BD, Haut ER. ***Practices to prevent venous thromboembolism: a brief review***. BMJ Qual.Saf. 2014; 23(3): 187-195.

BACKGROUND: Venous thromboembolism (VTE) is a common cause of preventable harm for hospitalised patients. Over the past decade, numerous intervention types have been implemented in attempts to improve the prescription of VTE prophylaxis in hospitals, with varying degrees of success. We reviewed key articles to assess the efficacy of different types of interventions to improve prescription of VTE prophylaxis for hospitalised patients. METHODS: We conducted a search of MEDLINE for key studies published between 2001 and 2012 of interventions employing education, paper based tools, computerised tools, real time audit and feedback, or combinations of intervention types to improve prescription of VTE prophylaxis for patients in hospital settings. Process outcomes of interest were prescription of any VTE prophylaxis and best practice VTE prophylaxis. Clinical outcomes of interest were any VTE and potentially preventable VTE, defined as VTE occurring in patients not prescribed appropriate prophylaxis. RESULTS: 16 articles were included in this review. Two studies employed education only, four implemented paper based tools, four used computerised tools, two evaluated audit and feedback strategies, and four studies used combinations of intervention types. Individual modalities result in improved prescription of VTE prophylaxis; however, the greatest and most sustained improvements were those that combined education with computerised tools. CONCLUSIONS: Many intervention types have proven effective to different degrees in improving VTE prevention. Provider education is likely a required additional component and should be combined with other intervention types. Active mandatory tools are likely more effective than passive ones. Information technology tools that are well integrated into provider workflow, such as alerts and computerised clinical decision support, can improve best practice prophylaxis use and prevent patient harm resulting from VTE.

13. **ARTÍCULO Nº: 4066**

Newcombe RG, Bender R. ***Implementing GRADE: calculating the risk difference from the baseline risk and the relative risk***. Evid.Based.Med. 2014; 19(1): 6-8.

A key step in implementing the GRADE (Grading of Recommendations Assessment, Development and Evaluation) system is the estimation of a risk difference based on estimates of the baseline risk and the relative risk estimated from different sources. In this paper we describe a simple and effective method to calculate confidence intervals (CIs) for the risk difference for this situation. Whenever an independent source is available to estimate the baseline risk for the population to which the effect estimates should be applied, this source should be used and CIs for the absolute risk difference should be calculated taking all sources of uncertainty into account.

14. **ARTÍCULO Nº: 4067**

Rubenstein L, Khodyakov D, Hempel S, Danz M, Salem-Schatz S, Foy R et al. ***How can we recognize continuous quality improvement?*** Int.J.Qual.Health Care. 2014; 26(1): 6-15.

OBJECTIVE: Continuous quality improvement (CQI) methods are foundational approaches to improving healthcare delivery. Publications using the term CQI, however, are methodologically heterogeneous, and labels other than CQI are used to signify relevant approaches. Standards for

identifying the use of CQI based on its key methodological features could enable more effective learning across quality improvement (QI) efforts. The objective was to identify essential methodological features for recognizing CQI. DESIGN: Previous work with a 12-member international expert panel identified reliably abstracted CQI methodological features. We tested which features met rigorous a priori standards as essential features of CQI using a three-phase online modified-Delphi process. SETTING: Primarily United States and Canada. PARTICIPANTS: 119 QI experts randomly assigned into four on-line panels. INTERVENTION: Participants rated CQI features and discussed their answers using online, anonymous and asynchronous discussion boards. We analyzed ratings quantitatively and discussion threads qualitatively. Main outcome measure(s) Panel consensus on definitional CQI features. RESULTS: /st> Seventy-nine (66%) panelists completed the process. Thirty-three completers self-identified as QI researchers, 18 as QI practitioners and 28 as both equally. The features 'systematic data guided activities,' 'designing with local conditions in mind' and 'iterative development and testing' met a priori standards as essential CQI features. Qualitative analyses showed cross-cutting themes focused on differences between QI and CQI. CONCLUSIONS: We found consensus among a broad group of CQI researchers and practitioners on three features as essential for identifying QI work more specifically as 'CQI.' All three features are needed as a minimum standard for recognizing CQI methods.

15. **ARTÍCULO Nº: 4068**

Staggs VS, Dunton N. ***Associations between rates of unassisted inpatient falls and levels of registered and non-registered nurse staffing***. Int.J.Qual.Health Care. 2014; 26(1): 87-92.

OBJECTIVE: To enhance understanding of how nurse staffing relates to unassisted falls by exploring non-linear associations between unassisted fall rates and levels of registered nurse (RN) and non-RN staffing on 5 nursing unit types, thereby enabling managers to improve patient safety by making better-informed decisions about staffing. DESIGN: Cross-sectional analysis of routinely collected data using hierarchical negative binomial regression. SETTING: 8069 nursing units in 1361 U.S. hospitals participating in the National Database of Nursing Quality Indicators((R)). Main outcome measure Rate of unassisted falls per inpatient day. RESULTS: Associations between unassisted fall rates and nurse staffing varied by unit type. For medical-surgical units, higher RN staffing was weakly associated with lower fall rates. On step-down and medical units, the association between RN staffing and fall rates depended on the level of staffing: At lower staffing levels, the fall rate increased as staffing increased, but at moderate and high staffing levels, the fall rate decreased as staffing increased. Higher levels of non-RN staffing were generally associated with higher fall rates.. CONCLUSIONS: Increasing non-RN staffing seems ineffective at preventing unassisted falls. Increasing RN staffing may be effective, depending on the unit type and the current level of staffing.

16. **ARTÍCULO Nº: 4069**

O'Donoghue C, Eklund M, Ozanne EM, Esserman LJ. ***Aggregate cost of mammography screening in the United States: comparison of current practice and advocated guidelines***. Ann.Intern.Med. 2014; 160(3): 145

BACKGROUND: Controversy exists over how often and at what age mammography screening should be implemented. Given that evidence supports less frequent screening, the cost differences among advocated screening policies should be better understood. OBJECTIVE: To estimate the aggregate cost of mammography screening in the United States in 2010 and compare the costs of policy recommendations by professional organizations. DESIGN: A model was developed to estimate the cost of mammography screening in 2010 and 3 screening strategies: annual (ages 40 to 84 years), biennial

(ages 50 to 69 years), and U.S. Preventive Services Task Force (USPSTF) guidelines (biennial for those aged 50 to 74 years and personalized based on risk for those younger than 50 years and based on comorbid conditions for those 75 years and older). SETTING: United States. PATIENTS: Women aged 40 to 85 years. INTERVENTION: Mammography annually, biennially, or following USPSTF guidelines. MEASUREMENTS: Cost of screening per year, using Medicare reimbursements. RESULTS: The estimated cost of mammography screening in the United States in 2010 was $7.8 billion, with approximately 70% of women screened. The simulated cost of screening 85% of women was $10.1 billion, $2.6 billion, and $3.5 billion for annual, biennial, and USPSTF guidelines, respectively. The largest drivers of cost (in order) were screening frequency, percentage of women screened, cost of mammography, percentage of women screened with digital mammography, and percentage of mammography recalls. LIMITATION: Cost estimates and assumptions used in the model were conservative. CONCLUSION: The cost of mammography varies by at least $8 billion per year on the basis of screening strategy. The USPSTF guidelines are based on the scientific evidence to date to maximize patient benefit and minimize harm but also result in far more effective use of resources. PRIMARY FUNDING SOURCE: University of California and the Safeway Foundation.

17. **ARTÍCULO Nº: 4070**

Lee JK, Liles EG, Bent S, Levin TR, Corley DA. ***Accuracy of fecal immunochemical tests for colorectal cancer: systematic review and meta-analysis***. Ann.Intern.Med. 2014; 160(3): 171

BACKGROUND: Performance characteristics of fecal immunochemical tests (FITs) to screen for colorectal cancer (CRC) have been inconsistent. PURPOSE: To synthesize data about the diagnostic accuracy of FITs for CRC and identify factors affecting its performance characteristics. DATA SOURCES: Online databases, including MEDLINE and EMBASE, and bibliographies of included studies from 1996 to 2013. STUDY SELECTION: All studies evaluating the diagnostic accuracy of FITs for CRC in asymptomatic, average-risk adults. DATA EXTRACTION: Two reviewers independently extracted data and critiqued study quality. DATA SYNTHESIS: Nineteen eligible studies were included and meta-analyzed. The pooled sensitivity, specificity, positive likelihood ratio, and negative likelihood ratio of FITs for CRC were 0.79 (95% CI, 0.69 to 0.86), 0.94 (CI, 0.92 to 0.95), 13.10 (CI, 10.49 to 16.35), 0.23 (CI, 0.15 to 0.33), respectively, with an overall diagnostic accuracy of 95% (CI, 93% to 97%). There was substantial heterogeneity between studies in both the pooled sensitivity and specificity estimates. Stratifying by cutoff value for a positive test result or removal of discontinued FIT brands resulted in homogeneous sensitivity estimates. Sensitivity for CRC improved with lower assay cutoff values for a positive test result (for example, 0.89 [CI, 0.80 to 0.95] at a cutoff value less than 20 microg/g vs. 0.70 [CI, 0.55 to 0.81] at cutoff values of 20 to 50 microg/g) but with a corresponding decrease in specificity. A single-sample FIT had similar sensitivity and specificity as several samples, independent of FIT brand. LIMITATIONS: Only English-language articles were included. Lack of data prevented complete subgroup analyses by FIT brand. CONCLUSION: Fecal immunochemical tests are moderately sensitive, are highly specific, and have high overall diagnostic accuracy for detecting CRC. Diagnostic performance of FITs depends on the cutoff value for a positive test result. PRIMARY FUNDING SOURCE: National Institute of Diabetes and Digestive and Kidney Diseases and National Cancer Institute.

18. **ARTÍCULO Nº: 4071**

Tonelli M, Wanner C. ***Lipid management in chronic kidney disease: synopsis of the Kidney Disease: Improving Global Outcomes 2013 clinical practice guideline***. Ann.Intern.Med. 2014; 160(3): 182

DESCRIPTION: The Kidney Disease: Improving Global Outcomes (KDIGO) organization developed a clinical practice guideline in 2013 on lipid management and treatment of all adults and children with chronic kidney disease (CKD). All forms of CKD are included (non-dialysis-dependent, dialysis-dependent, and kidney transplant recipients). METHODS: The KDIGO Lipid Guideline Development Work Group defined the scope of the guideline, gathered evidence, determined topics for systematic review, and graded the quality of evidence that had been summarized by an evidence review team. Searches of the English-language literature were conducted through August 2011 and supplemented by targeted searches through June 2013. Final modification of the guidelines was informed by the KDIGO Board of Directors and a public review process involving registered stakeholders. RECOMMENDATIONS: The full guideline includes 13 recommendations; a key element was the recommendation for statin or statin with ezetimibe treatment of adults aged 50 years or older with estimated glomerular filtration rates less than 60 mL/min/1.73 m2 but not treated with long-term dialysis or kidney transplantation. This synopsis focuses on 8 recommendations pertinent to assessment of lipid status and treatment with a statin-based regimen in adults.

19. **ARTÍCULO Nº: 4072**

Elmore JG, Gross CP. ***The cost of breast cancer screening in the United States: a picture is worth ... a billion dollars?*** Ann.Intern.Med. 2014; 160(3): 203

20. **ARTÍCULO Nº: 4073**

Lobos Bejarano JM, Polo GJ, Vargas OD. ***[The family doctor and the barriers to prescribing the new oral anticoagulants: Heterogeneity, inequality and confusion. Statement of the Spanish Primary Care and Family Medicine Societies]***. Aten.Primaria. 2014; 46(1): 1-3.

21. **ARTÍCULO Nº: 4074**

Catalan-Ramos A, Verdu JM, Grau M, Iglesias-Rodal M, del Val Garcia JL, Consola A et al. ***[Population prevalence and control of cardiovascular risk factors: what electronic medical records tell us]***. Aten.Primaria. 2014; 46(1): 15-24.

OBJECTIVE: To analyze the prevalence, control, and management of hypertension, hypercholesterolemia, and diabetes mellitus type 2 (DM2). DESIGN: Cross-sectional analysis of all individuals attended in the Catalan primary care centers between 2006 and 2009. LOCATION: History of cardiovascular diseases, diagnosis and treatment of hypertension, hypercholesterolemia, DM2, lipid profile, glycemia and blood pressure data were extracted from electronic medical records. Age-standardized prevalence and levels of management and control were estimated. PARTICIPANTS: Individuals aged 35-74 years using primary care databases. MAIN MEASURES: A total of 2,174,515 individuals were included (mean age 52 years [SD 11], 47% men). RESULTS: Hypertension was the most prevalent cardiovascular risk factor (39% in women, 41% in men) followed by hypercholesterolemia (38% and 40%) and DM2 (12% and 16%), respectively. Diuretics and angiotensin-converting enzyme inhibitors were most often prescribed for hypertension control (<140/90mmHg, achieved in 68% of men and 60% of women treated). Hypercholesterolemia was controlled (low-density lipoprotein cholesterol <130mg/dl) in just 31% of men and 26% of women with no history of cardiovascular disease, despite lipid-lowering treatment, primarily (90%) with statins. The percentage of women and men with DM2 and with glycated hemoglobin <7% was 64.7% and 59.2%, respectively; treatment was predominantly with oral hypoglycemic agents alone (70%), or combined with insulin (15%). CONCLUSIONS: Hypertension was the most prevalent cardiovascular risk factor in the Catalan population attended at primary care centers. About two thirds of individuals with hypertension or DM2 were adequately controlled; hypercholesterolemia control was particularly low.

22. **ARTÍCULO Nº: 4075**

Rodenas F, Garces J, Donate-Martinez A, Zafra E. ***[Application of the Community Assessment Risk Screen in Primary Care centres of the Valencia Health System]***. Aten.Primaria. 2014; 46(1): 25-31.

OBJECTIVE: Application of The Community Assessment Risk Screen (CARS) tool for detection of chronic elderly patients at risk of hospital readmission and the viability study for its inclusion in health information systems. DESIGN: Retrospective cohort study. LOCATION: Health Departments 6, 10, and 11 from the Valencia Community. PARTICIPANTS: Patients of 65 and over seen in 6 Primary Care centres in December 2008. The sample consisted of 500 patients (sampling error=+/-4.37%, sampling fraction=1/307). VARIABLES: The CARS tools includes 3items: Diagnostics (heart diseases, diabetes, myocardial infarction, stroke, COPD, cancer), number of prescribed drugs and hospital admissions or emergency room visits in the previous 6months. The data came from SIA-Abucasis, GAIA and MDS, and were compared by Primary Care professionals. The end-point was hospital admission in 2009. RESULTS: CARS risk levels are related to future readmission (P<.001). The value of sensitivity and specificity is 0.64; the tool accurately identifies patients with low probability of being hospitalized in the future (negative predictive value=0.91, diagnostic efficacy=0.67), but has a positive predictive value of 0.24. CONCLUSIONS: CARS does not properly identify the population at high risk of hospital readmission. However, if it could be revised and the positive predictive value improved, it could be incorporated into the Primary Care computer systems and be useful in the initial screening and grouping of chronic patients at risk of hospital readmission.

23. **ARTÍCULO Nº: 4076**

faro-Lara ER, Vega-Coca MD, Galvan-Banqueri M, Nieto-Martin MD, Perez-Guerrero C, Santos-Ramos B. ***[Pharmacological treatment conciliation methodology in patients with multiple conditions]***. Aten.Primaria. 2014; 46(2): 89-99.

OBJECTIVE: To carry out a bibliographic review in order to identify the different methodologies used along the reconciliation process of drug therapy applicable to polypathological patients. DESIGN: We performed a literature review. Data sources The bibliographic review (February 2012) included the following databases: Pubmed, EMBASE, CINAHL, PsycINFO and Spanish Medical Index (IME). The different methodologies, identified on those databases, to measure the conciliation process in polypathological patients, or otherwise elderly patients or polypharmacy, were studied. Study selection Two hundred and seventy three articles were retrieved, of which 25 were selected. Data extraction Specifically: the level of care, the sources of information, the use of registration forms, the established time, the medical professional in charge and the registered variables such as errors of reconciliation. RESULTS: Most of studies selected when the patient was admitted into the hospital and after the hospital discharge of the patient. The main sources of information to be highlighted are: the interview and the medical history of the patient. An established time is not explicitly stated on most of them, nor the registration form is used. The main professional in charge is the clinical pharmacologist. Apart from the home medication, the habits of self-medication and phytotherapy are also identified. The common errors of reconciliation vary from the omission of drugs to different forms of interaction with other medicinal products (drugs interactions). CONCLUSIONS: There is a large heterogeneity of methodologies used for reconciliation. There is not any work done on the specific figure of the polypathological patient, which precisely requires a standardized methodology due to its complexity and its susceptibility to errors of reconciliation.

24. **ARTÍCULO Nº: 4077**

Rydenfalt C, Ek A, Larsson PA. ***Safety checklist compliance and a false sense of safety: new directions for research.*** BMJ Qual.Saf. 2014; 23(3): 183-186.

25. **ARTÍCULO Nº: 4078**

Regidor E, Barrio G, Bravo MJ, de la FL. ***Has health in Spain been declining since the economic crisis?*** J.Epidemiol.Community Health. 2014; 68(3): 280-282.

BACKGROUND: The economic recession starting in 2008 may be having negative effects on health. PURPOSE: We aimed to identify and characterise changes in trends in 15 health indicators in Spain during the recession. METHODS: Joinpoint regression and average annual percent change (AAPC) were used to compare trends. RESULTS: Premature mortality rates from several causes of death, except from cancer, showed statistically significant downward trends during the recession, as did poor self-reported health. HIV incidence was stable. No indicator declined significantly more slowly during the recession than in the preceding 4-year period, and two declined significantly faster. CONCLUSION: Health in Spain has continued to improve during the first four years of the economic recession at a rate equal to or higher than in previous years.

26. **ARTÍCULO Nº: 4079**

Cameron JI, Naglie G, Gignac MA, Bayley M, Warner G, Green T et al. ***Randomized clinical trial of the timing it right stroke family support program: research protocol.*** BMC.Health Serv.Res. 2014; 14: 18

BACKGROUND: Family caregivers provide invaluable support to stroke survivors during their recovery, rehabilitation, and community re-integration. Unfortunately, it is not standard clinical practice to prepare and support caregivers in this role and, as a result, many experience stress and poor health that can compromise stroke survivor recovery and threaten the sustainability of keeping the stroke survivor at home. We developed the Timing it Right Stroke Family Support Program (TIRSFSP) to guide the timing of delivering specific types of education and support to meet caregivers' evolving needs. The objective of this multi-site randomized controlled trial is to determine if delivering the TIRSFSP across the stroke care continuum improves caregivers' sense of being supported and emotional well-being. METHODS/DESIGN: Our multi-site single-blinded randomized controlled trial will recruit 300 family caregivers of stroke survivors from urban and rural acute care hospitals. After completing a baseline assessment, participants will be randomly allocated to one of three groups: 1) TIRSFSP guided by a stroke support person (health care professional with stroke care experience), delivered in-person during acute care and by telephone for approximately the first six to 12 months post-stroke, 2) caregiver self-directed TIRSFSP with an initial introduction to the program by a stroke support person, or 3) standard care receiving the educational resource "Let's Talk about Stroke" prepared by the Heart and Stroke Foundation. Participants will complete three follow-up quantitative assessments 3, 6, and 12-months post-stroke. These include assessments of depression, social support, psychological well-being, stroke knowledge, mastery (sense of control over life), caregiving assistance provided, caregiving impact on everyday life, and indicators of stroke severity and disability. Qualitative methods will also be used to obtain information about caregivers' experiences with the education and support received and the impact on caregivers' perception of being supported and emotional well-being. DISCUSSION: This research will determine if the TIRSFSP benefits family caregivers by improving their perception of being supported and emotional well-being. If proven effective, it could be recommended as a model of stroke family education and support that meets the Canadian Stroke Best Practice Guideline recommendation for providing timely education and support to families through transitions. TRIAL REGISTRATION: ClinicalTrials.gov: NCT00958607.

27. **ARTÍCULO Nº: 4080**

Eggli Y, Desquins B, Seker E, Halfon P. ***Comparing potentially avoidable hospitalization rates related to ambulatory care sensitive conditions in Switzerland: the need to refine the definition of health conditions and to adjust for population health status.*** BMC.Health Serv.Res. 2014; 14: 25

BACKGROUND: Regional rates of hospitalization for ambulatory care sensitive conditions (ACSC) are used to compare the availability and quality of ambulatory care but the risk adjustment for population health status is often minimal. The objectives of the study was to examine the impact of more extensive risk adjustment on regional comparisons and to investigate the relationship between various area-level factors and the properly adjusted rates. METHODS: Our study is an observational study based on routine data of 2 million anonymous insured in 26 Swiss cantons followed over one or two years. A binomial negative regression was modeled with increasingly detailed information on health status (age and gender only, inpatient diagnoses, outpatient conditions inferred from dispensed drugs and frequency of physician visits). Hospitalizations for ACSC were identified from principal diagnoses detecting 19 conditions, with an updated list of ICD-10 diagnostic codes. Co-morbidities and surgical procedures were used as exclusion criteria to improve the specificity of the detection of potentially avoidable hospitalizations. The impact of the adjustment approaches was measured by changes in the standardized ratios calculated with and without other data besides age and gender. RESULTS: 25% of cases identified by inpatient main diagnoses were removed by applying exclusion criteria. Cantonal ACSC hospitalizations rates varied from to 1.4 to 8.9 per 1,000 insured, per year. Morbidity inferred from diagnoses and drugs dramatically increased the predictive performance, the greatest effect found for conditions linked to an ACSC. More visits were associated with fewer PAH although very high users were at greater risk and subjects who had not consulted at negligible risk. By maximizing health status adjustment, two thirds of the cantons changed their adjusted ratio by more than 10 percent. Cantonal variations remained substantial but unexplained by supply or demand. CONCLUSION: Additional adjustment for health status is required when using ACSC to monitor ambulatory care. Drug-inferred morbidities are a promising approach.

28. **ARTÍCULO Nº: 4081**

Ross J, Stevenson F, Dack C, Pal K, May C, Michie S et al. ***Evaluating the implementation of HeLP-Diabetes within NHS services: study protocol.*** BMC.Health Serv.Res. 2014; 14: 51

BACKGROUND: Self-management by people with type 2 diabetes is central to good health outcomes and the prevention of associated complications. Structured education to teach self-management is recommended by the National Institute for Heath and Clinical Excellence; however, only a small proportion of patients report being offered this education and even fewer attend. This study aims to evaluate the implementation of a new internet-based self-management intervention: HeLP-Diabetes (Healthy Living for People with type 2 Diabetes) within the National Health Service. Specific objectives are to a) determine the uptake and use of HeLP-Diabetes by services and patients; b) identify the factors which inhibit or facilitate use; c) identify the resources needed for effective implementation; d) explore possible effects of HeLP-Diabetes use on self-reported patient outcome measures. METHODS/DESIGN: This study will use an iterative design to implement HeLP-Diabetes into existing health services within the National Health Service. A two stage implementation process will be taken, whereby batches of General Practice surgeries and diabetes clinics will be offered HeLP-Diabetes and will subsequently be asked to participate in evaluating the implementation. We will collect data to describe the number of services and patients who sign up to HeLP-Diabetes, the types of services and patients who sign up and the implementation costs. Semi-structured interviews will be conducted with patients and health professionals and cohorts of patient participants will be asked to complete

self-report measures at baseline, 3 months, and 12 months. DISCUSSION: This study will evaluate the implementation of a new online self-management intervention and describe what happens when it is made available to existing National Health Services and patients with type 2 diabetes. We will collect data to describe the uptake and use of the intervention and the resources needed for widespread implementation. We will report on patient benefits from using HeLP-Diabetes and the resources needed to achieve these in routine practice. Interviews with key stake holders will identify, define and explain factors that promote or inhibit the normalization of new patterns of patient and professional activity arising from HeLP-Diabetes.

29. **ARTÍCULO Nº: 4082**

Drennan VM, Grant RL, Harris R. ***Trends over time in prescribing by English primary care nurses: a secondary analysis of a national prescription database***. BMC.Health Serv.Res. 2014; 14: 54

BACKGROUND: A growing number of countries legislate for nurses to have medication prescribing authority although it is a contested issue. The UK is one of these countries, giving authority to nurses with additional qualifications since 1992 and incrementally widened the scope of nurse prescribing, most recently in 2006. The policy intention for primary care was to improve efficiency in service delivery through flexibility between medical and nursing roles. The extent to which this has occurred is uncertain. This study investigated nurses prescribing activities, over time, in English primary care settings. METHODS: A secondary data analysis of a national primary care prescription database 2006-2010 and National Health Service workforce database 2010 was undertaken. RESULTS: The numbers of nurses issuing more than one prescription annually in primary care rose from 13,391 in 2006 to 15,841 in 2010. This represented forty three percent of those with prescribing qualifications and authorisation from their employers. The number of items prescribed by nurses rose from 1.1% to 1.5% of total items prescribed in primary care. The greatest volume of items prescribed by independent nurse prescribers was in the category of penicillins, followed by dressings. However, the category where independent nurse prescribers contributed the largest proportion of all primary care prescriptions was emergency contraception (9.1%). In contrast, community practitioner nurse prescribers' greatest volume and contribution was in the category of gel and colloid dressings (27%), medicated stockings (14.5%) and incontinence appliances (4.2%). There were slightly higher rates of nurse prescribing in areas with higher levels of socio-economic deprivation and fewer physicians per capita, but the correlations were weak and warrant further investigation. CONCLUSIONS: The percentage of prescriptions written by nurses in primary care in England is very small in comparison to physicians. Our findings suggest that nurse prescribing is used where it is seen to have relative advantage by all stakeholders, in particular when it supports efficiency in nursing practice and also health promotion activities by nurses in general practice. It is in these areas that there appears to be flexibility in the prescribing role between nurses and general practitioners.

30. **ARTÍCULO Nº: 4083**

Bajorek B, Magin P, Hilmer S, Krass I. ***A cluster-randomized controlled trial of a computerized antithrombotic risk assessment tool to optimize stroke prevention in general practice: a study protocol***. BMC.Health Serv.Res. 2014; 14: 55

BACKGROUND: Therapy for stroke prevention in older persons with atrial fibrillation (AF) is underutilized despite evidence to support its effectiveness. To prevent stroke in this high-risk population, antithrombotic treatment is necessary. Given the challenges and inherent risks of antithrombotic therapy, decision-making is particularly complex for clinicians, necessitating comprehensive risk:benefit assessments. Targeted interventions are urgently needed to support

clinicians in this context; the Computerized Antithrombotic Risk Assessment Tool (CARAT) offers a unique approach to this clinical problem. METHODS/DESIGN: This study (a prospective, cluster-randomized controlled clinical trial) will be conducted across selected regions in the state of New South Wales, Australia. Fifty GPs will be randomized to either the 'intervention' or 'control' arm, with each GP recruiting 10 patients (aged >/=65 with AF); target sample size is 500 patients. GPs in the intervention arm will use CARAT during routine patient consultations to: assess risk factors for stroke, bleeding and medication misadventure; quantify the risk/benefit ratio of antithrombotic treatment, identify the recommended therapy, and decide on the treatment course, for an individual patient. CARAT will be applied by the GP at baseline and repeated at 12 months to identify any changes to treatment requirements. At baseline, the participant (patients and GPs) characteristics will be recorded, as well as relevant practice and clinical parameters. Patient follow up will occur at 1, 6, and 12 months via telephone interview to identify changes to therapy, medication side effects, or clinical events. DISCUSSION: This project tests the utility of a novel decision support tool (CARAT) in improving the use of preventative therapy to reduce the significant burden of stroke. Importantly, it targets the interface of patient care (general practice), addresses the at-risk population, evaluates clinical outcomes, and offers a tool that may be sustainable via integration into prescribing software and primary care services. GP support and guidance in identifying at risk patients for the appropriate selection of therapy is widely acknowledged. This trial will evaluate the impact of CARAT on the prescription of antithrombotic therapy, its longer-term impact on clinical outcomes including stroke and bleeding, and clinicians perceived utility of CARAT in practice. TRIAL REGISTRATION: Australian New Zealand Clinical Trials Registry: ACTRN12613000060741.

31. **ARTÍCULO Nº: 4084**

Burton CR, Fargher E, Plumpton C, Roberts GW, Owen H, Roberts E. ***Investigating preferences for support with life after stroke: a discrete choice experiment***. BMC.Health Serv.Res. 2014; 14: 63

BACKGROUND: There is little evidence of service user preferences to guide the commissioning and improvement of services that support life after stroke. We report the first investigation of patients' and family carers' preferences for community services after stroke using a discrete choice experiment (DCE). METHODS: Two workshops with patients and family carers (n = 8) explored stroke experiences, identifying attributes important in shaping views about service design, and piloted data collection strategies. Attributes were group versus individual support; service provider; additional support for social and leisure activities; and the total time required to access services. Patients and family carers were recruited six months post stroke-onset (mean 331 days) from four stroke services, and invited to participate in the DCE. Patients' general health (EQ5D) and functional dependence (Barthel Index) were also assessed. Of 474 eligible patients, 144 (30%) expressed an interest in the study, and 80 (56%) of these completed the survey questionnaire. 34 of 74 (46%) family carers recruited through patients completed the DCE. RESULTS: All four attributes were significant in shaping patients preferences for stroke support service delivery ($p < 0.05$), confirming the interpretation of workshop findings. Patients prefer help and support for emotional needs, communication problems and physical difficulties to be provided on an individual basis; and to be offered additional social and leisure activities that they are able to attend on their own. Patients would appear to prefer that voluntary organisations do not provide these services, although this may be linked to lack of experience of these services. Family carers would prefer help and support in their caring role on a one-to-one basis. Whilst health related quality of life is associated with preference for format of service, results were relatively consistent across sub-groups, with the exception of time since stroke, where social and leisure activities had a greater impact on preferences of established service users. CONCLUSIONS: The data provide unique insights into how preferences for community services that support life after stroke are

shaped. This information can be used to inform both service re-design, and barriers to implementation that will need to be accounted for in policy shifts towards a more mixed economy of service provision.

32. **ARTÍCULO Nº: 4085**

Hutchings A, Neuburger J, van der MJ, Black N. ***Estimating recruitment rates for routine use of patient reported outcome measures and the impact on provider comparisons***. BMC.Health Serv.Res. 2014; 14: 66

BACKGROUND: The routine use of patient reported outcome measures (PROMs) aims to compare providers as regards the clinical need of their patients and their outcome. Simple methods of estimating recruitment rates based on aggregated data may be inaccurate. Our objectives were to: use patient-level linked data to evaluate these estimates; produce revised estimates of national and providers' recruitment rates; and explore whether or not recruitment bias exists. METHODS: Case study based on patients who were eligible to participate in the English National PROMs Programme for elective surgery (hip and knee replacement, groin hernia repair, varicose vein surgery) using data from pre-operative questionnaires and Hospital Episode Statistics. Data were linked to determine: the eligibility for including operations; eligibility of date of surgery; duplicate questionnaires; cancelled operations; correct assignment to provider. Influence of patient characteristics on recruitment rates were investigated. RESULTS: National recruitment rates based on aggregated data over-estimated the true rate because of the inclusion of ineligible operations (from 1.9% - 7.0% depending on operation) and operations being cancelled (1.9% - 3.6%). Estimates of national recruitment rates using inclusion criteria based on patient-level linked data were lower than those based on simple methods (eg hip replacement was 73% rather than 78%).Estimates of provider's recruitment rates based on aggregated data were also adversely affected by attributing patients to the wrong provider (2.4% - 4.9%). Use of linked data eliminated all estimates of over 100% recruitment, though providers still showed a wide range of rates.While the principal determinant of recruitment rates was the provider, some patients' socio-demographic characteristics had an influence on non-recruitment: non-white (Adjusted Odds Ratio 1.25-1.67, depending on operation); most deprived socio-economic group (OR 1.11-1.23); aged over 75 years (OR 1.28-1.79). However, there was no statistically significant association between providers' recruitment rates and patients' pre-operative clinical need. CONCLUSIONS: Accurate recruitment rates require the use of linked data to establish consistent inclusion criteria for numerators and denominators. Non-recruitment will bias comparisons of providers' pre-operative case-mix and may bias comparisons of outcomes if unmeasured confounders are not evenly distributed between providers. It is important, therefore, to strive for high recruitment rates.

33. **ARTÍCULO Nº: 4086**

Drosler SE, Romano PS, Sundararajan V, Burnand B, Colin C, Pincus H et al. ***How many diagnosis fields are needed to capture safety events in administrative data? Findings and recommendations from the WHO ICD-11 Topic Advisory Group on Quality and Safety***. Int.J.Qual.Health Care. 2014; 26(1): 16-25.

OBJECTIVE: As part of the WHO ICD-11 development initiative, the Topic Advisory Group on Quality and Safety explores meta-features of morbidity data sets, such as the optimal number of secondary diagnosis fields. DESIGN: The Health Care Quality Indicators Project of the Organization for Economic Co-Operation and Development collected Patient Safety Indicator (PSI) information from administrative hospital data of 19-20 countries in 2009 and 2011. We investigated whether three countries that expanded their data systems to include more secondary diagnosis fields showed increased PSI rates compared with six countries that did not. Furthermore, administrative hospital

data from six of these countries and two American states, California (2011) and Florida (2010), were analysed for distributions of coded patient safety events across diagnosis fields. RESULTS: Among the participating countries, increasing the number of diagnosis fields was not associated with any overall increase in PSI rates. However, high proportions of PSI-related diagnoses appeared beyond the sixth secondary diagnosis field. The distribution of three PSI-related ICD codes was similar in California and Florida: 89-90% of central venous catheter infections and 97-99% of retained foreign bodies and accidental punctures or lacerations were captured within 15 secondary diagnosis fields. CONCLUSIONS: Six to nine secondary diagnosis fields are inadequate for comparing complication rates using hospital administrative data; at least 15 (and perhaps more with ICD-11) are recommended to fully characterize clinical outcomes. Increasing the number of fields should improve the international and intra-national comparability of data for epidemiologic and health services research, utilization analyses and quality of care assessment.

34. **ARTÍCULO Nº: 4087**

Threapleton DE, Greenwood DC, Evans CE, Cleghorn CL, Nykjaer C, Woodhead C et al. ***Dietary fibre intake and risk of cardiovascular disease: systematic review and meta-analysis***. BMJ. 2013; 347: f6879

OBJECTIVE: To investigate dietary fibre intake and any potential dose-response association with coronary heart disease and cardiovascular disease. DESIGN: Systematic review of available literature and dose-response meta-analysis of cohort studies using random effects models. DATA SOURCES: The Cochrane Library, Medline, Medline in-process, Embase, CAB Abstracts, ISI Web of Science, BIOSIS, and hand searching. ELIGIBILITY CRITERIA FOR STUDIES: Prospective studies reporting associations between fibre intake and coronary heart disease or cardiovascular disease, with a minimum follow-up of three years and published in English between 1 January 1990 and 6 August 2013. RESULTS: 22 cohort study publications met inclusion criteria and reported total dietary fibre intake, fibre subtypes, or fibre from food sources and primary events of cardiovascular disease or coronary heart disease. Total dietary fibre intake was inversely associated with risk of cardiovascular disease (risk ratio 0.91 per 7 g/day (95% confidence intervals 0.88 to 0.94)) and coronary heart disease (0.91 (0.87 to 0.94)). There was evidence of some heterogeneity between pooled studies for cardiovascular disease (I(2)=45% (0% to 74%)) and coronary heart disease (I(2)=33% (0% to 66%)). Insoluble fibre and fibre from cereal and vegetable sources were inversely associated with risk of coronary heart disease and cardiovascular disease. Fruit fibre intake was inversely associated with risk of cardiovascular disease. CONCLUSIONS: Greater dietary fibre intake is associated with a lower risk of both cardiovascular disease and coronary heart disease. Findings are aligned with general recommendations to increase fibre intake. The differing strengths of association by fibre type or source highlight the need for a better understanding of the mode of action of fibre components.

35. **ARTÍCULO Nº: 4088**

Zorzela L, Golder S, Liu Y, Pilkington K, Hartling L, Joffe A et al. ***Quality of reporting in systematic reviews of adverse events: systematic review***. BMJ. 2014; 348: f7668

OBJECTIVES: To examine the quality of reporting of harms in systematic reviews, and to determine the need for a reporting guideline specific for reviews of harms. DESIGN: Systematic review. DATA SOURCES: Cochrane Database of Systematic Reviews (CDSR) and Database of Abstracts of Reviews of Effects (DARE). REVIEW METHODS: Databases were searched for systematic reviews having an adverse event as the main outcome, published from January 2008 to April 2011. Adverse events included an adverse reaction, harms, or complications associated with any healthcare intervention. Articles with a

primary aim to investigate the complete safety profile of an intervention were also included. We developed a list of 37 items to measure the quality of reporting on harms in each review; data were collected as dichotomous outcomes ("yes" or "no" for each item). RESULTS: Of 4644 reviews identified, 309 were systematic reviews or meta-analyses primarily assessing harms (13 from CDSR; 296 from DARE). Despite a short time interval, the comparison between the years of 2008 and 2010-11 showed no difference on the quality of reporting over time (P=0.079). Titles in fewer than half the reviews (proportion of reviews 0.46 (95% confidence interval 0.40 to 0.52)) did not mention any harm related terms. Almost one third of DARE reviews (0.26 (0.22 to 0.31)) did not clearly define the adverse events reviewed, nor did they specify the study designs selected for inclusion in their methods section. Almost half of reviews (n=170) did not consider patient risk factors or length of follow-up when reviewing harms of an intervention. Of 67 reviews of complications related to surgery or other procedures, only four (0.05 (0.01 to 0.14)) reported professional qualifications of the individuals involved. The overall, unweighted, proportion of reviews with good reporting was 0.56 (0.55 to 0.57); corresponding proportions were 0.55 (0.53 to 0.57) in 2008, 0.55 (0.54 to 0.57) in 2009, and 0.57 (0.55 to 0.58) in 2010-11. CONCLUSION: Systematic reviews compound the poor reporting of harms data in primary studies by failing to report on harms or doing so inadequately. Improving reporting of adverse events in systematic reviews is an important step towards a balanced assessment of an intervention.

36. **ARTÍCULO Nº: 4089**

Sorita A, Ahmed A, Starr SR, Thompson KM, Reed DA, Prokop L et al. ***Off-hour presentation and outcomes in patients with acute myocardial infarction: systematic review and meta-analysis***. BMJ. 2014; 348: f7393

OBJECTIVE: To assess the association between off-hour (weekends and nights) presentation, door to balloon times, and mortality in patients with acute myocardial infarction. DATA SOURCES: Medline in-process and other non-indexed citations, Medline, Embase, Cochrane Database of Systematic Reviews, and Scopus through April 2013. STUDY SELECTION: Any study that evaluated the association between time of presentation to a healthcare facility and mortality or door to balloon times among patients with acute myocardial infarction was included. DATA EXTRACTION: Studies' characteristics and outcomes data were extracted. Quality of studies was assessed with the Newcastle-Ottawa scale. A random effect meta-analysis model was applied. Heterogeneity was assessed using the Q statistic and I(2). RESULTS: 48 studies with fair quality, enrolling 1,896,859 patients, were included in the meta-analysis. 36 studies reported mortality outcomes for 1,892,424 patients with acute myocardial infarction, and 30 studies reported door to balloon times for 70,534 patients with ST elevation myocardial infarction (STEMI). Off-hour presentation for patients with acute myocardial infarction was associated with higher short term mortality (odds ratio 1.06, 95% confidence interval 1.04 to 1.09). Patients with STEMI presenting during off-hours were less likely to receive percutaneous coronary intervention within 90 minutes (odds ratio 0.40, 0.35 to 0.45) and had longer door to balloon time by 14.8 (95% confidence interval 10.7 to 19.0) minutes. A diagnosis of STEMI and countries outside North America were associated with larger increase in mortality during off-hours. Differences in mortality between off-hours and regular hours have increased in recent years. Analyses were associated with statistical heterogeneity. CONCLUSION: This systematic review suggests that patients with acute myocardial infarction presenting during off-hours have higher mortality, and patients with STEMI have longer door to balloon times. Clinical performance measures may need to account for differences arising from time of presentation to a healthcare facility.

37. **ARTÍCULO Nº: 4090**

Walsh T, Barr PJ, Thompson R, Ozanne E, O'Neill C, Elwyn G. ***Undetermined impact of patient decision support interventions on healthcare costs and savings: systematic review***. BMJ. 2014; 348: g188

OBJECTIVE: To perform a systematic review of studies that assessed the potential of patient decision support interventions (decision aids) to generate savings. DESIGN: Systematic review. DATA SOURCES: After registration with PROSPERO, we searched 12 databases, from inception to 15 March 2013, using relevant MeSH terms and text words. Included studies were assessed with Cochrane's risk of bias method and Drummond's quality checklist for economic studies. Per patient costs and projected savings associated with introducing patient decision support interventions were calculated, as well as absolute changes in treatment rates after implementation. ELIGIBILITY CRITERIA: Studies were included if they contained quantitative economic data, including savings, spending, costs, cost effectiveness analysis, cost benefit analysis, or resource utilization. We excluded studies that lacked quantitative data on savings, costs, monetary value, and/or resource utilization. RESULTS: After reviewing 1508 citations, we included seven studies with eight analyses. Of these seven studies, four analyses predicted system-wide savings, with two analyses from the same study. The predicted savings range from $8 ( pound5, euro6) to $3068 ( pound1868, euro2243) per patient. Larger savings accompanied reductions in treatment utilization rates. The impact on utilization rates was mixed. Authors used heterogeneous methods to allocate costs and calculate savings. Quality scores were low to moderate (median 4.5, range 0-8 out of 10), and risk of bias across the studies was moderate to high (3.5, range 3-6 out of 6), with studies predicting the most savings having the highest risk of bias. The range of issues identified in the studies included the relative absence of sensitivity analyses, the absence of incremental cost effectiveness ratios, and short time periods. CONCLUSION: Although there is evidence to show that patients choose more conservative approaches when they become better informed, there is insufficient evidence, as yet, to be confident that the implementation of patient decision support interventions leads to system-wide savings. Further work-with sensitivity analyses, longer time horizons, and more contexts-is required to avoid premature or unrealistic expectations that could jeopardize implementation and lead to the loss of already proved benefits. REGISTRATION: PROSPERO registration CRD42012003421.

38. **ARTÍCULO Nº: 4091**

Makela KT, Matilainen M, Pulkkinen P, Fenstad AM, Havelin L, Engesaeter L et al. ***Failure rate of cemented and uncemented total hip replacements: register study of combined Nordic database of four nations***. BMJ. 2014; 348: f7592

OBJECTIVE: To assess the failure rate of cemented, uncemented, hybrid, and reverse hybrid total hip replacements in patients aged 55 years or older. DESIGN: Register study. SETTING: Nordic Arthroplasty Register Association database (combined data from Sweden, Norway, Denmark, and Finland). PARTICIPANTS: 347,899 total hip replacements performed during 1995-2011. MAIN OUTCOME MEASURES: Probability of implant survival (Kaplan-Meier analysis) along with implant survival with revision for any reason as endpoint (Cox multiple regression) adjusted for age, sex, and diagnosis in age groups 55-64, 65-74, and 75 years or older. RESULTS: The proportion of total hip replacements using uncemented implants increased rapidly towards the end of the study period. The 10 year survival of cemented implants in patients aged 65 to 74 and 75 or older (93.8%, 95% confidence interval 93.6% to 94.0% and 95.9%, 95.8% to 96.1%, respectively) was higher than that of uncemented (92.9%, 92.3% to 93.4% and 93.0%, 91.8% to 94.0%), hybrid (91.6%, 90.9% to 92.2% and 93.9%, 93.1% to 94.5%), and reverse hybrid (90.7%, 87.3% to 93.2% and 93.2%, 90.7% to 95.1%) implants. The survival of cemented (92.2%, 91.8% to 92.5%) and uncemented (91.8%, 91.3% to 92.2%) implants in

patients aged 55 to 64 was similar. During the first six months the risk of revision with cemented implants was lower than with all other types of fixation in all age groups. CONCLUSION: The survival of cemented implants for total hip replacement was higher than that of uncemented implants in patients aged 65 years or older. The increased use of uncemented implants in this age group is not supported by these data. However, because our dataset includes only basic information common to all national registers there is potential for residual confounding.

39. **ARTÍCULO Nº: 4092**

Miller AB, Wall C, Baines CJ, Sun P, To T, Narod SA. ***Twenty five year follow-up for breast cancer incidence and mortality of the Canadian National Breast Screening Study: randomised screening trial.*** BMJ. 2014; 348: g366

OBJECTIVE: To compare breast cancer incidence and mortality up to 25 years in women aged 40-59 who did or did not undergo mammography screening. DESIGN: Follow-up of randomised screening trial by centre coordinators, the study's central office, and linkage to cancer registries and vital statistics databases. SETTING: 15 screening centres in six Canadian provinces,1980-85 (Nova Scotia, Quebec, Ontario, Manitoba, Alberta, and British Columbia). PARTICIPANTS: 89,835 women, aged 40-59, randomly assigned to mammography (five annual mammography screens) or control (no mammography). INTERVENTIONS: Women aged 40-49 in the mammography arm and all women aged 50-59 in both arms received annual physical breast examinations. Women aged 40-49 in the control arm received a single examination followed by usual care in the community. MAIN OUTCOME MEASURE: Deaths from breast cancer. RESULTS: During the five year screening period, 666 invasive breast cancers were diagnosed in the mammography arm (n=44,925 participants) and 524 in the controls (n=44,910), and of these, 180 women in the mammography arm and 171 women in the control arm died of breast cancer during the 25 year follow-up period. The overall hazard ratio for death from breast cancer diagnosed during the screening period associated with mammography was 1.05 (95% confidence interval 0.85 to 1.30). The findings for women aged 40-49 and 50-59 were almost identical. During the entire study period, 3250 women in the mammography arm and 3133 in the control arm had a diagnosis of breast cancer, and 500 and 505, respectively, died of breast cancer. Thus the cumulative mortality from breast cancer was similar between women in the mammography arm and in the control arm (hazard ratio 0.99, 95% confidence interval 0.88 to 1.12). After 15 years of follow-up a residual excess of 106 cancers was observed in the mammography arm, attributable to over-diagnosis. CONCLUSION: Annual mammography in women aged 40-59 does not reduce mortality from breast cancer beyond that of physical examination or usual care when adjuvant therapy for breast cancer is freely available. Overall, 22% (106/484) of screen detected invasive breast cancers were over-diagnosed, representing one over-diagnosed breast cancer for every 424 women who received mammography screening in the trial.

40. **ARTÍCULO Nº: 4093**

Kontopantelis E, Springate D, Reeves D, Ashcroft DM, Valderas JM, Doran T. ***Withdrawing performance indicators: retrospective analysis of general practice performance under UK Quality and Outcomes Framework.*** BMJ. 2014; 348: g330

OBJECTIVES: To investigate the effect of withdrawing incentives on recorded quality of care, in the context of the UK Quality and Outcomes Framework pay for performance scheme. DESIGN: Retrospective longitudinal study. SETTING: Data for 644 general practices, from 2004/05 to 2011/12, extracted from the Clinical Practice Research Datalink. PARTICIPANTS: All patients registered with any of the practices over the study period-13,772,992 in total. INTERVENTION: Removal of financial

incentives for aspects of care for patients with asthma, coronary heart disease, diabetes, stroke, and psychosis. MAIN OUTCOME MEASURES: Performance on eight clinical quality indicators withdrawn from a national incentive scheme: influenza immunisation (asthma) and lithium treatment monitoring (psychosis), removed in April 2006; blood pressure monitoring (coronary heart disease, diabetes, stroke), cholesterol concentration monitoring (coronary heart disease, diabetes), and blood glucose monitoring (diabetes), removed in April 2011. Multilevel mixed effects multiple linear regression models were used to quantify the effect of incentive withdrawal. RESULTS: Mean levels of performance were generally stable after the removal of the incentives, in both the short and long term. For the two indicators removed in April 2006, levels in 2011/12 were very close to 2005/06 levels, although a small but statistically significant drop was estimated for influenza immunisation. For five of the six indicators withdrawn from April 2011, no significant effect on performance was seen following removal and differences between predicted and observed scores were small. Performance on related outcome indicators retained in the scheme (such as blood pressure control) was generally unaffected. CONCLUSIONS: Following the removal of incentives, levels of performance across a range of clinical activities generally remained stable. This indicates that health benefits from incentive schemes can potentially be increased by periodically replacing existing indicators with new indicators relating to alternative aspects of care. However, all aspects of care investigated remained indirectly or partly incentivised in other indicators, and further work is needed to assess the generalisability of the findings when incentives are fully withdrawn.

41. **ARTÍCULO Nº: 4094**

Kuipers E, Yesufu-Udechuku A, Taylor C, Kendall T. ***Management of psychosis and schizophrenia in adults: summary of updated NICE guidance.*** BMJ. 2014; 348: g1173

42. **ARTÍCULO Nº: 4095**

Lapointe-Shaw L, Bell CM. ***Acute myocardial infarction.*** BMJ. 2014; 348: f7696

43. **ARTÍCULO Nº: 4096**

Klotz L. ***Conservative management for low-risk prostate cancer improves quality-adjusted life expectancy at lower cost compared with initial treatment.*** Evid.Based.Med. 2014; 19(1): 40

44. **ARTÍCULO Nº: 4097**

Toribio-Montero JC, Canca-Sanchez JC. ***La enfermería ante el espejo. Evaluación de competencias clínicas específicas de enfermería. Reto para el desarrollo profesional y la garantía de la seguridad clínica y la calidad asistencial.*** Evidentia. 2013; 10(44)

45. **ARTÍCULO Nº: 4098**

Tizon-Bouza E. ***Úlceras por presión en urgencias hospitalarias: conocimientos del personal de enfermería y detección de paciente de riesgo.*** Evidentia. 2013; 10(44)

Objetivo: Analizar la atención enfermera en prevención y tratamiento de úlceras por presión en un servicio de urgencias.
Material y métodos: Estudio descriptivo para conocer el nivel de conocimientos en prevención y tratamiento de úlceras por presión y estudio prospectivo de detección del riesgo de úlceras por presión.
Resultados: El nivel de conocimientos del personal de enfermería en prevención de UPP es del 86%, mientras la práctica terapéutica baja al 49%. Son menores los conocimientos en cuidados aplicados (69,9%). El 53% de los pacientes de urgencias tienen riesgo de sufrir úlceras por presión.
Conclusiones: Las horas en urgencias son determinantes para iniciar el proceso úlceras por presión,

por lo que es necesario tener un personal formado en las últimas evidencias, que identifique las personas de riesgo y la instauración precoz de medidas de prevención.

46. **ARTÍCULO Nº: 4099**

Pineda-Gines C, Rojo-Sombrero E, endez-Morillejo D. ***Mejorando la gestión de calidad en úlceras por presión.*** Evidentia. 2013; 10(44)

Resumen: Las úlceras por presión constituyen uno de los problemas más frecuentes en la práctica diaria enfermera. En el Hospital Universitario Infanta Sofía, los resultados obtenidos tras la evaluación de riesgo y control de úlceras por presión, manifestaron la necesidad de plantear un proyecto de gestión para su mejora continua.
Se utilizaron los los 5 pilares de la prevención: Valoración del riesgo, registro de actividades de cuidado, formación de profesionales, cuidados de la piel y Manejo de presiones. La revisión bibliográfica nos permitió valorar la oferta de superficies especiales de manejo de presiones, optamos por un sistema de renting, definiendo el número y tipo de superficies.
Tras la implantación del proyecto de gestión, la incidencia de pacientes con úlcreas por presión intrahospitalarias, ha disminuido en un 4,2%, en 7 meses.
Una gestión eficaz de este problema, mejora la seguridad de nuestros pacientes y la calidad de los cuidados prestados.

47. **ARTÍCULO Nº: 4100**

Chicote-Aylagas N, Gamarra-Lousa M, Cardos-Martinez A, Gil-Diego C, Sanz-Escribano M, Novo-Garcia C. ***Intervenciones de Enfermería en pacientes que han sufrido un accidente cerebro-vascular.*** Evidentia. 2013; 10(44)

Objetivo: Identificar las mejores evidencias en intervenciones enfermeras a pacientes que han sufrido Accidente Cerebro-Vascular.
Metodología: Revisión de la literatura siguiendo un protocolo explícito. Revisión por pares y resolución de las discrepancias en grupo.
Resultados y Conclusiones: Se seleccionan 2 ECA, 10 revisiones sistemáticas, 5 revisiones narrativas, 3 guías de práctica clínica. Una rehabilitación precoz es importante para la recuperación de la movilidad; manejo de líquidos y alimentos previene el estreñimiento. En pacientes con disfagia: sabor amargo, temperatura fría y textura modificada en las dietas pueden causar un efecto positivo. La intervención educativa del personal sanitario en el cuidado bucal mejoró la higiene de los pacientes. Para prevenir las úlceras por presión recomiendan cuidados de la piel, cambios posturales.

48. **ARTÍCULO Nº: 4101**

King J, Patel V, Jamoom EW, Furukawa MF. ***Clinical benefits of electronic health record use: national findings.*** Health Serv.Res. 2014; 49(1 Pt 2): 392-404.

OBJECTIVE: To assess whether physicians' reported electronic health record (EHR) use provides clinical benefits and whether benefits depend on using an EHR meeting Meaningful Use criteria or length of EHR experience. DATA SOURCE: The 2011 Physician Workflow study, representative of U.S. office-based physicians. STUDY DESIGN: Cross-sectional data were used to examine the association of EHR use with enhanced patient care overall and nine specific clinical benefits. PRINCIPAL FINDINGS: Most physicians with EHRs reported EHR use enhanced patient care overall (78 percent), helped them access a patient's chart remotely (81 percent), and alerted them to a potential medication error (65 percent) and critical lab values (62 percent). Between 30 and 50 percent of physicians reported that

EHR use was associated with clinical benefits related to providing recommended care, ordering appropriate tests, and facilitating patient communication. Using EHRs that met Meaningful Use criteria and having 2 or more years of EHR experience were independently associated with reported benefits. Physicians with EHRs meeting Meaningful Use criteria and longer EHR experience were most likely to report benefits across all 10 measures. CONCLUSIONS: Physicians reported EHR use enhanced patient care overall. Clinical benefits were most likely to be reported by physicians using EHRs meeting Meaningful Use criteria and longer EHR experience.

49. **ARTÍCULO Nº: 4102**

Bjurling-Sjoberg P, Jansson I, Wadensten B, Engstrom G, Poder U. ***Prevalence and quality of clinical pathways in Swedish intensive care units: a national survey***. J.Eval.Clin.Pract. 2014; 20(1): 48-57.

RATIONALE, AIMS AND OBJECTIVES: To identify the prevalence of clinical pathways (CPs) in Swedish intensive care units (ICUs) and to explore the quality, content and evidence base of the documents. METHODS: A descriptive and explorative survey of all Swedish ICUs (N84) and a review of submitted examples of CPs (n12) were conducted. RESULTS: CPs were in use at 20% of the Swedish ICUs. There was a significant geographic variation but no relationship between the use of CPs and category of hospital, type of ICU, size of ICU or type of health record applied. In total, 56 CPs were reported within a range of scopes and extensions. The content of the ICUs' CPs, as well as the degree to which they were interprofessional, evidence based, and renewed varied. CONCLUSIONS: Progress has been made in relation to CPs in recent years, but there is potential for further improvements. None of the ICUs had CPs that contained all key characteristics of a high-quality, interprofessional and evidence-based CP identified in the literature. Greater knowledge sharing and cooperation within the field would be beneficial, and further research is needed.

50. **ARTÍCULO Nº: 4103**

Baath C, Idvall E, Gunningberg L, Hommel A. ***Pressure-reducing interventions among persons with pressure ulcers: results from the first three national pressure ulcer prevalence surveys in Sweden***. J.Eval.Clin.Pract. 2014; 20(1): 58-65.

RATIONALE, AIMS AND OBJECTIVES: The overall aim of this study was to describe preventive interventions among persons with pressure ulcer (PU) in three nationwide PU prevalence surveys in Sweden. METHODS: A cross-sectional research design was used; more than 70 000 persons from different hospitals and nursing homes participated in the three prevalence surveys conducted in March 2011, October 2011 and March 2012. The methodology used was that recommended by the European Pressure Ulcers Advisory Panel. RESULTS: The overall prevalence of PU categories I-IV in hospitals was 16.6%, 14.4% and 16.1%, respectively. Corresponding figures for nursing homes were 14.5%, 14.2% and 11.8%, respectively. Heel protection/floating heels and sliding sheets were more frequently planned for persons with PU category I. CONCLUSIONS: Despite the three prevalence studies that have showed high prevalence of PU the use of preventing interventions is still not on an acceptable level. Heel protection/floating heels and sliding sheets were more frequently planned for persons with PUs, and individual-planned repositioning also increased. However, when persons already have a PU they should all have pressure-reducing preventive interventions to prevent the development of more PUs. Preventing PUs presents a challenge even when facilities have prevention programmes. A PU prevention programme requires an enthusiastic leader who will maintain the team's focus and direction for all staff involved in patient care.