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Sommaire

Assurance maladie / Health Insurance

Rahman M., Grabowski D.C., Gozalo P.L., Thomas K.S., Mor V. (2014). Are dual eligibles admitted to poorer quality skilled nursing facilities? *Health Services Research,* 49 (3) : 798-817.

Abstract: BACKGROUND: Dual eligibles, persons who qualify for both Medicare and Medicaid coverage, often receive poorer quality care relative to other Medicare beneficiaries. OBJECTIVES: To determine whether dual eligibles are discharged to lower quality post-acute skilled nursing facilities (SNFs) compared with Medicare-only beneficiaries. RESEARCH DESIGN: Following the random utility maximization model, we specified a discharge function using a conditional logit model and tested how this discharge rule varied by dual-eligibility status. SUBJECTS: A total of 692,875 Medicare fee-for-service patients (22% duals) who were discharged for Medicare paid SNF care between July 2004 and June 2005. MEASURES: Medicare enrollment and the Medicaid Analytic Extract files were used to determine dual eligibility. The proportion of Medicaid patients and nursing staff characteristics provided measures of SNF quality. RESULTS: Duals are more likely to be discharged to SNFs with a higher share of Medicaid patients and fewer nurses. These results are robust to estimation with an alternative subsample of patients based on primary diagnoses, propensity of being dual eligible, and likelihood of remaining in the nursing home. CONCLUSIONS: Disparities exist in access to quality SNF care for duals. Strategies to improve discharge planning processes are required to redirect patients to higher quality providers, regardless of Medicaid eligibility.

Stavrunova O., Yerokhin O. (2014). Tax incentives and the demand for private health insurance. *J Health Econ,* 34 121-130.

Abstract: We analyze the effect of an individual insurance mandate (Medicare Levy Surcharge) on the demand for private health insurance (PHI) in Australia. With administrative income tax return data, we show that the mandate has several distinct effects on taxpayers' behavior. First, despite the large tax penalty for not having PHI coverage relative to the cost of the cheapest eligible insurance policy, compliance with mandate is relatively low: the proportion of the population with PHI coverage increases by 6.5 percentage points (15.6%) at the income threshold where the tax penalty starts to apply. This effect is most pronounced for young taxpayers, while the middle aged seem to be least responsive to this specific tax incentive. Second, the discontinuous increase in the average tax rate at the income threshold created by the policy generates a strong incentive for tax avoidance which manifests itself through bunching in the taxable income distribution below the threshold. Finally, after imposing some plausible assumptions, we extrapolate the effect of the policy to other income levels and show that this policy has not had a significant impact on the overall demand for private health insurance in Australia.

Economie de la santé / Health Economics

Brown T.T., Martinez-Gutierrez M.S., Navab B. (2014). The impact of changes in county public health expenditures on general health in the population. *Health Econ Policy Law,* 9 (3) : 251-269.

Abstract: We estimate the effect of changes in the per capita expenditures of county departments of public health on county-level general health status. Using panel data on 40 counties in California (2001-2009), dynamic panel estimation techniques are combined with the Lewbel instrumental variable technique to estimate an aggregate demand for health function that measures the causal cumulative impact that per capita public health expenditures have on county-level general health status. We find that a $10 long-term increase in per capita public health expenditures would increase the percentage of the population reporting good, very good or excellent health by 0.065 percentage

points. Each year expenditures were increased would result in approximately 24,000 individuals moving from the 'poor or fair health' category to the 'good, very good or excellent health' category across these 40 counties. In terms of the overall impact of county public health departments on general health status, at current funding levels, each annual expenditure cycle results in over 207,000 individuals being in the 'good, very good or excellent' categories of health status rather than the 'poor or fair' categories.

Serrier H., Sultan-Taieb H., Luce D., Bejean S. (2014). Estimating the social cost of respiratory cancer cases attributable to occupational exposures in France. *Eur J Health Econ,* 15 (6) : 661-673.

Abstract: PURPOSE: The objective of this article was to estimate the social cost of respiratory cancer cases attributable to occupational risk factors in France in 2010. METHODS: According to the attributable fraction method and based on available epidemiological data from the literature, we estimated the number of respiratory cancer cases due to each identified risk factor. We used the cost-of-illness method with a prevalence-based approach. We took into account the direct and indirect costs. We estimated the cost of production losses due to morbidity (absenteeism and presenteeism) and mortality costs (years of production losses) in the market and nonmarket spheres. RESULTS: The social cost of lung, larynx, sinonasal and mesothelioma cancer caused by exposure to asbestos, chromium, diesel engine exhaust, paint, crystalline silica, wood and leather dust in France in 2010 were estimated at between 917 and 2,181 million euros. Between 795 and 2,011 million euros (87-92 %) of total costs were due to lung cancer alone. Asbestos was by far the risk factor representing the greatest cost to French society in 2010 at between 531 and 1,538 million euros (58-71 %), ahead of diesel engine exhaust, representing an estimated social cost of between 233 and 336 million euros, and crystalline silica (119-229 million euros). Indirect costs represented about 66 % of total costs. CONCLUSION: Our assessment shows the magnitude of the economic impact of occupational respiratory cancers. It allows comparisons between countries and provides valuable information for policy-makers responsible for defining public health priorities.

Atella V., Conti V. (2014). The effect of age and time to death on primary care costs: The Italian experience. *Soc Sci Med,* 114C 10-17.

Abstract: A large body of literature shows that time to death (TTD) is by far a better predictor of health spending than age. In this paper, we investigate if this finding holds true also in presence of primary care costs (pharmaceuticals, diagnostic tests and specialist visits) in Italy, where they represent an important share (about 30%) of the total health care expenditure (HCE). Our analysis is based on a large sample of the Italian population (about 750,000 individuals), obtained from the Health Search-SiSSI database, which contains patient-level data collected routinely by General Practitioners in Italy since 2002. We study individuals aged 19 and older, over the period 2006-2009. By means of a two-part model which accounts for the presence of zero expenditure, our findings show that age represents the most important driver of primary care costs in Italy, although TTD remains a good predictor. These results suggest that age and TTD can have a different role in shaping health care costs according to the component of health expenditure examined. Therefore, our advice to policy makers is to use disaggregated models to better disentangle these contributions and to produce more reliable health spending forecasts.

Liang L.L., Mirelman A.J. (2014). Why do some countries spend more for health? An assessment of sociopolitical determinants and international aid for government health expenditures. *Soc Sci Med,* 114C 161-168.

Abstract: A consensus exists that rising income levels and technological development are among key drivers of total health spending. Determinants of public sector health expenditure, by contrast, are less well understood. This study examines a complex relationship across government health expenditure (GHE), sociopolitical risks, and international aid, while taking into account the impacts of national income, debt and tax financing and aging populations on health spending. We apply a fixed-effects two-stage least squares regression method to a panel dataset comprising 120 countries for the years 1995 through 2010. Our results show that democratic accountability has a diminishing positive correlation with GHE, and that levels of GHE are higher when government is more stable. Corruption is associated with less GHE in developing countries, but with higher GHE in developed countries. We

also find that development assistance for health (DAH) is fungible with domestically financed government health expenditure (DGHE). For an average country, a 1% increase in DAH to government is associated with a 0.03-0.04% decrease in DGHE. Furthermore, the degree of fungibility of DAH to government is higher in countries where corruption or ethnic tensions are widespread. However, DAH to non-governmental organizations is not fungible with DGHE.

Etat de santé / Health Status

Boncz I., Vajda R., Agoston I., Endrei D., Sebestyen A. (2014). Changes in the health status of the population of Central and Eastern European countries between 1990 and 2010. *Eur J Health Econ,* 15 Suppl 1 137-141.

Abstract: OBJECTIVE: The aim of this study was to analyse change in the health status of the population in the countries of Central and Eastern Europe (CEE) since 1990, compared with the 'old' EU-15 member states of the European Union (EU). METHODS: We analysed data from the Health for All Database and the Global Burden of Disease report of the World Health Organization (WHO). Life expectancy at birth and disability-adjusted life years were analysed for 1990-2010. Age-standardised death rates (ASDR) and potential years of life lost (PYLL) were assessed for selected inflammatory diseases. RESULTS: Life expectancy at birth for male individuals improved in CEE by 4.8 years and in the EU-15 by 5.4 years. During the same period, life expectancy at birth for female individuals improved in CEE by 4.0 years and in the EU-15 by 4.2 years. The difference in life expectancy at birth between male and female individuals in the EU-15 decreased by 1.2 years and in CEE by 0.8 years. Comparisons of ASDR and PYLL among the EU-15 and CEE countries were difficult because of the potentially low validity of the available data. CONCLUSIONS: The health status of the CEE population has improved since 1990. However, only a few countries have closed the gap with the EU-15 countries. Inflammatory conditions might represent a significant disease burden in CEE countries; however, a thorough analysis and comparison to the EU-15 is difficult because of a shortage of good-quality data.

Cullati S. (2014). The influence of work-family conflict trajectories on self-rated health trajectories in Switzerland: A life course approach. *Soc Sci Med,* 113 23-33.

Abstract: Self-rated health (SRH) trajectories tend to decline over a lifetime. Moreover, the Cumulative Advantage and Disadvantage (CAD) model indicates that SRH trajectories are known to consistently diverge along socioeconomic positions (SEP) over the life course. However, studies of working adults to consider the influence of work and family conflict (WFC) on SRH trajectories are scarce. We test the CAD model and hypothesise that SRH trajectories diverge over time according to socioeconomic positions and WFC trajectories accentuate this divergence. Using longitudinal data from the Swiss Household Panel (N = 2327 working respondents surveyed from 2004 to 2010), we first examine trajectories of SRH and potential divergence over time across age, gender, SEP and family status using latent growth curve analysis. Second, we assess changes in SRH trajectories in relation to changes in WFC trajectories and divergence in SRH trajectories according to gender, SEP and family status using parallel latent growth curve analysis. Three measures of WFC are used: exhaustion after work, difficulty disconnecting from work, and work interference in private family obligations. The results show that SRH trajectories slowly decline over time and that the rate of change is not influenced by age, gender or SEP, a result which does not support the CAD model. SRH trajectories are significantly correlated with exhaustion after work trajectories but not the other two WFC measures. When exhaustion after work trajectories are taken into account, SRH trajectories of higher educated people decline slower compared to less educated people, supporting the CAD hypothesis.

Géographie de la santé / Geography of Health

Forder J., Allan S. (2014). The impact of competition on quality and prices in the English care homes market. *J Health Econ,* 34 73-83.

Abstract: This study assesses the impact of competition on quality and price in the English care/nursing homes market. Considering the key institutional features, we use a theoretical model to assess the conditions under which further competition could increase or reduce quality. A dataset comprising the population of 10,000 care homes was used. We constructed distance/travel-time weighted competition measures. Instrumental variable estimations, used to account for the endogeneity of competition, showed quality and price were reduced by greater competition. Further analyses suggested that the negative quality effect worked through the effect on price - higher competition reduces revenue which pushes down quality.

Toth F. (2014). How health care regionalisation in Italy is widening the North-South gap. *Health Econ Policy Law,* 9 (3) : 231-249.

Abstract: The Italian National Health Service began experimenting with a significant regionalisation process during the 1990s. The purpose of this article is to assess the effects that this regionalisation process is having on the rift between the north and the south of the country. Has the gap between the health care systems of the northern and southern regions been increasing or decreasing during the 1999-2009 decade? Three indicators will be utilised to answer this question: (1) the level of satisfaction expressed by the citizens towards the regional hospital system; (2) the mobility of the patients among regions; (3) the health care deficit accumulated by the individual regions. On the basis of these three indicators, there is evidence to conclude that, during the decade under study, the gap between the North and the South, already significant, has increased further.

Hôpital / Hospitals

Or Z. (2014). Implementation of DRG Payment in France: Issues and recent developments. *Health Policy,* Ahead of pub

Abstract: In France, a DRG-based payment system was introduced in 2004/2005 for funding acute services in all hospitals with the objectives of improving hospital efficiency, transparency and fairness in payments to public and private hospitals. Despite the initial consensus on the necessity of the reform, providers have become increasingly critical of the system because of the problems encountered during the implementation. In 2012 the government announced its intention to modify the payment model to better deal with its adverse effects. The paper reports on the issues raised by the DRG-based payment in the French hospital sector and provides an overview of the main problems with the French DRG payment model. It also summarises the evidence on its impact and presents recent developments for reforming the current model. DRG-based payment addressed some of the chronic problems inherent in the French hospital market and improved accountability and productivity of health-care facilities. However, it has also created new problems for controlling hospital activity and ensuring that care provided is medically appropriate. In order to alter its adverse effects the French DRG model needs to better align greater efficiency with the objectives of better quality and effectiveness of care.

Hakkinen U., Rosenqvist G., Peltola M., Kapiainen S., Ratto H., Cots F., Geissler A., Or Z., Serden L., Sund R. (2014). Quality, cost, and their trade-off in treating AMI and stroke patients in European hospitals. *Health Policy,* Ahead of pub

Abstract: OBJECTIVES: This study compared the cost and in-hospital mortality of hospital care for two major diseases, acute myocardial infarction (AMI) and stroke, by pooling patient-level data from five European countries (Finland, France, Germany, Spain, and Sweden). We examined whether a cost-quality trade-off existed in these countries by comparing hospital-level costs and survival rates, and whether hospitals which performed well in terms of cost or quality in treating one patient group (AMI)

performed well also in treating the other patient group (stroke). METHODS: A fixed-effect probit regression model for survival and the linear model for log costs were used to calculate indicators for hospital quality and cost, which were plotted against each other. FINDINGS: Both with AMI and stroke there were remarkable differences between hospitals and countries in (both crude and adjusted) rates of patients discharged alive. Swedish and French hospitals had lower mortality than hospitals in Germany, Finland and Spain in the care of AMI patients. However, a longer length of stay in Spanish and German hospitals may bias the results in the two countries. The Finnish hospitals seemed to have lower mortality than the other countries' hospitals in the care of stroke patients. There was no correlation at either the national or hospital level in the quality of treatment of these two diseases. We did not find a clear cost-quality trade-off. The only notable exception was Sweden, where the costs for AMI patients were higher in hospitals with the highest quality of care. CONCLUSIONS: Countries should identify the best performing hospitals both in terms of cost and quality in order to learn from hospitals that demonstrate better practice. It is equally important to better understand the reasons behind the observed differences between hospitals in costs and quality.

Renzi C., Asta F., Fusco D., Agabiti N., Davoli M., Perucci C.A. (2014). Does public reporting improve the quality of hospital care for acute myocardial infarction? Results from a regional outcome evaluation program in Italy. *Int J Qual.Health Care,* 26 (3) : 223-230.

Abstract: OBJECTIVE: To evaluate whether public reporting of performance data was associated with a change over time in quality indicators for acute myocardial infarction (AMI) in Italian hospitals. DESIGN: Pre-post evaluation of AMI indicators in the Lazio region, before and after disclosure of the Regional Outcome Evaluation Program, and a comparative evaluation versus other Italian regions not participating in the program. SETTING/DATA SOURCES: Nationwide Hospital Information System and vital status records. PARTICIPANTS: 24 800 patients treated for AMI in Lazio and 39 350 in the other regions. INTERVENTION: Public reporting of the Regional Outcome Evaluation Program in the Lazio region. MAIN OUTCOME MEASURE: Risk-adjusted indicators for AMI. RESULTS: The proportion of ST-segment elevation myocardial infarction (STEMI) patients treated with percutaneous coronary interventions (PCI) within 48 h in Lazio changed from 31.3 to 48.7%, before and after public reporting, respectively (relative increase 56%; P < 0.001). In the other regions, the proportion increased from 51.5 to 58.4% (relative increase 13%; P < 0.001). Overall 30-day mortality and 30-day mortality for patients treated with PCI did not improve during the study period. The 30-day mortality for STEMI patients not treated with PCI in Lazio was significantly higher in 2009 (29.0%) versus 2006/07 (24.0%) (P = .002). CONCLUSIONS: Public reporting may have contributed to increasing the proportion of STEMI patients treated with timely PCI. The mortality outcomes should be interpreted with caution. Changes in AMI diagnostic and coding systems should also be considered. Risk-adjusted quality indicators represent a fundamental instrument for monitoring and potentially enhancing quality of care.

Yu T.H., Chung K.P. (2014). Is the implementation of quality improvement methods in hospitals subject to the neighbourhood effect? *Int J Qual.Health Care,* 26 (3) : 231-239.

Abstract: OBJECTIVE: Quality improvement (QI) methods have been fashionable in hospitals for decades. Previous studies have discussed the relationships between the implementation of QI methods and various external and internal factors, but there has been no examination to date of whether the neighbourhood effect influences such implementation. The aim of this study was to use a multilevel model to investigate whether and how the neighbourhood effect influences the implementation of QI methods in the hospital setting in Taiwan. DESIGN: This is a retrospective questionnaire-based survey. SETTING: All medical centres, regional hospitals and district teaching hospitals in Taiwan. PARTICIPANTS: Directors or persons in charge of implementing QI methods in hospitals. INTERVENTIONS: None. MAIN OUTCOME MEASURES: The breadth and depth of QI method implementation. RESULTS: Seventy-two of the 139 hospitals contacted returned the questionnaire, yielding a 52% response rate. The breadth and depth of QI method implementation increased over the 10-year study period, particularly between 2004 and 2006. The breadth and depth of the QI methods implemented in the participating hospitals were significantly associated with the average breadth and depth of those implemented by their competitors in the same medical area during the previous period. In addition, time was positively associated with the breadth and depth of QI method implementation. CONCLUSIONS: In summary, the findings of this study show that hospitals'

QI implementation status is influenced by that of their neighbours. Hence, the neighbourhood effect is an important factor in understanding hospital behaviour.

Taha M., Pal A., Mahnken J.D., Rigler S.K. (2014). Derivation and validation of a formula to estimate risk for 30-day readmission in medical patients. *Int J Qual.Health Care,* 26 (3) : 271-277.

Abstract: OBJECTIVE: To create a simple readmission risk-prediction tool that can be generated easily at the bedside by physicians, nurses, care coordinators and discharge planners. DESIGN: Retrospective cohort study. SETTING: Tertiary academic medical center. PARTICIPANTS: Inpatients aged 18 and older on general internal medicine services. MEASURES: Predictor variables included age, prior hospitalization, high-risk diagnoses, high-risk medications, polypharmacy, depression, use of palliative care and a cumulative score summing these factors (readmission risk score-RRS). The main outcome measure was 30-day readmission. Predictive values were calculated. RESULTS: Readmission increased linearly from 4.9% of those whose RRS score was 0-37.5% of those with highest risk scores (P = 0.0002). We derived a simple formula for readmission risk as 8 and 4% more for each additional readmission risk factor. The positive predictive value for RRS >0 was low, while the negative predictive value for this cutoff was 95%. CONCLUSIONS: An easily calculated 7-point score can be used to estimate readmission risk. This tool may be particularly useful for identifying lower risk patients who may not require intensive intervention, thus aiding in appropriate targeting of resources.

Echevin D., Fortin B. (2014). Physician payment mechanisms, hospital length of stay and risk of readmission: Evidence from a natural experiment. *J Health Econ,* 36 112-124.

Abstract: We provide an analysis of the effect of physician payment methods on their hospital patients' length of stay and risk of readmission. To do so, we exploit a major reform implemented in Quebec (Canada) in 1999. The Quebec Government introduced an optional mixed compensation (MC) scheme for specialist physicians working in hospital. This scheme combines a fixed per diem with a reduced fee for services provided, as an alternative to the traditional fee-for-service system. We develop a model of a physician's decision to choose the MC scheme. We show that a physician who adopts this system will have incentives to increase his time per clinical service provided. We demonstrate that as long as this effect does not improve his patients' health by more than a critical level, they will stay more days in hospital over the period. At the empirical level, we estimate a model of transition between spells in and out of hospital analog to a difference-in-differences approach. We find that the hospital length of stay of patients treated in departments that opted for the MC system increased on average by 4.2% (0.28 days). However, the risk of readmission to the same department with the same diagnosis does not appear to be overall affected by the reform.

Franzini L., White C., Taychakhoonavudh S., Parikh R., Zezza M., Mikhail O. (2014). Variation in Inpatient Hospital Prices and Outpatient Service Quantities Drive Geographic Differences in Private Spending in Texas. *Health Services Research,* Ahead of pub.

Abstract: Objective To measure the contribution of market-level prices, utilization, and health risk to medical spending variation among the Blue Cross Blue Shield of Texas (BCBSTX) privately insured population and the Texas Medicare population. Data Sources Claims data for all BCBSTX members and publicly available CMS data for Texas in 2011. Study Design We used observational data and decomposed overall and service-specific spending into health status and health status adjusted utilization and input prices and input prices adjusted for the BCBSTX and Medicare populations. Principal Findings Variation in overall BCBSTX spending across HRRs appeared driven by price variation, whereas utilization variation factored more prominently in Medicare. The contribution of price to spending variation differed by service category. Price drove inpatient spending variation, while utilization drove outpatient and professional spending variation in BCBSTX. The context in which negotiations occur may help explain the patterns across services. Conclusions The conventional wisdom that Medicare does a better job of controlling prices and private plans do a better job of controlling volume is an oversimplification. BCBSTX does a good job of controlling outpatient and professional prices, but not at controlling inpatient prices. Strategies to manage the variation in spending may need to differ substantially depending on the service and payer.

http://dx.doi.org/10.1111/1475-6773.12192

Derose S.F., Gabayan G.Z., Chiu V.Y., Yiu S.C., Sun B.C. (2014). Emergency Department Crowding Predicts Admission Length-of-Stay But Not Mortality in a Large Health System. *Medical Care,* 52 (7)

Abstract: Background:Emergency department (ED) crowding has been identified as a major threat to public health. Objectives:We assessed patient transit times and ED system crowding measures based on their associations with outcomes. Research Design:Retrospective cohort study. Subjects:We accessed electronic health record data on 136,740 adults with a visit to any of 13 health system EDs from January 2008 to December 2010. Measures:Patient transit times (waiting, evaluation and treatment, boarding) and ED system crowding [nonindex patient length-of-stay (LOS) and boarding, bed occupancy] were determined. Outcomes included individual inpatient mortality and admission LOS. Covariates included demographic characteristics, past comorbidities, severity of illness, arrival time, and admission diagnoses. Results:No patient transit time or ED system crowding measure predicted increased mortality after control for patient characteristics. Index patient boarding time and lower bed occupancy were associated with admission LOS (based on nonoverlapping 95% CI vs. the median value). As boarding time increased from none to 14 hours, admission LOS increased an additional 6 hours. As mean occupancy decreased below the median (80% occupancy), admission LOS decreased as much as 9 hours. Conclusions:Measures indicating crowded ED conditions were not predictive of mortality after case-mix adjustment. The first half-day of boarding added to admission LOS rather than substituted for it. Our findings support the use of boarding time as a measure of ED crowding based on robust prediction of admission LOS. Interpretation of measures based on other patient ED transit times may be limited to the timeliness of care.
http://journals.lww.com/lww-medicalcare/Fulltext/2014/07000/Emergency_Department_Crowding_Predicts_Admission.6.aspx

Fujino Y., Kubo T., Muramatsu K., Murata A., Hayashida K., Tomioka S., Fushimi K., Matsuda S. (2014). Impact of Regional Clinical Pathways on the Length of Stay in Hospital Among Stroke Patients in Japan. *Medical Care,* 52 (7)

Abstract: Background:Clinical pathways are care plans used by health providers to describe essential steps in the care of patients with specific medical conditions. Clinical implementation of the regional clinical pathways in Japan has spread, and the 2008 fee schedule included a new regional inter-provider care planning feeGfor stroke. However, no evidence regarding the efficacy of the regional clinical pathways for stroke has appeared. Objectives:We examined the association of regional clinical pathways on the length of in-hospital stay in patients with stroke. We also examined whether a variation in the length of in-hospital stay for stroke patients between hospitals exists, and if so, the impact of regional clinical pathways on this variation. Research Design:Cross-sectional analysis using the Diagnosis Procedure Combination database for the period April 2011 to March of 2012. Subjects: A total of 117,180 patients with the diagnosis' cerebral infarction,S coded as I63 in ICD10. Measures:Associations of the use of a regional clinical pathway with the length of in-hospital stay (LOS) were estimated by multilevel regression models using a 2-level structure of individuals nested within the 1011 hospitals. The models added both patient-level factors and hospital-level factors that are potentially associated with LOS. Results:Hospitals administering a regional clinical pathway had a significantly shorter LOS (9.1 d) than hospitals that did not. Approximately 12% of the variation in LOS between hospitals is possibly explained by whether hospitals implement regional clinical pathways. Application of regional clinical pathways at the individual level is associated with a 7.2-day decrease in LOS at the individual level. Conclusions:These findings suggest that the regional clinical pathways are potentially effective in improving the management of stroke patients and in promoting the consistency of care between hospitals.
http://journals.lww.com/lww-medicalcare/Fulltext/2014/07000/Impact_of_Regional_Clinical_Pathways_on_the_Length.10.aspx

Castillo-Manzano J.I., Castro-Nuno M., Fageda X. (2014). Can health public expenditure reduce the tragic consequences of road traffic accidents? The EU-27 experience. *Eur J Health Econ,* 15 (6) : 645-652.

Abstract: This study uses data for the EU-27 countries in the period 1999-2009 to estimate determinants of road traffic fatality rates. Controlling for country attributes and road safety policy variables, we examine the influence of variables related with the national health systems; the number of hospital beds per square kilometer, and the percentage of health expenditures over gross domestic product. We find evidence that the density of hospital beds contributes to the fall in traffic-related fatalities. Furthermore, the quality of general medical facilities and technology associated with increases in health expenditure may be also a relevant factor in reducing road traffic fatalities.

Wysocki A., Kane R.L., Golberstein E., Dowd B., Lum T., Shippee T. (2014). The association between long-term care setting and potentially preventable hospitalizations among older dual eligibles. *Health Services Research,* 49 (3) : 778-797.

Abstract: OBJECTIVE: To compare the probability of experiencing a potentially preventable hospitalization (PPH) between older dual eligible Medicaid home and community-based service (HCBS) users and nursing home residents. DATA SOURCES: Three years of Medicaid and Medicare claims data (2003-2005) from seven states, linked to area characteristics from the Area Resource File. STUDY DESIGN: A primary diagnosis of an ambulatory care sensitive condition on the inpatient hospital claim was used to identify PPHs. We used inverse probability of treatment weighting to mitigate the potential selection of HCBS versus nursing home use. PRINCIPAL FINDINGS: The most frequent conditions accounting for PPHs were the same among the HCBS users and nursing home residents and included congestive heart failure, pneumonia, chronic obstructive pulmonary disease, urinary tract infection, and dehydration. Compared to nursing home residents, elderly HCBS users had an increased probability of experiencing both a PPH and a non-PPH. CONCLUSIONS: HCBS users' increased probability for potentially and non-PPHs suggests a need for more proactive integration of medical and long-term care.

Inégalités de santé / Health Inequalities

Morton A. (2014). Aversion to health inequalities in healthcare prioritisation: A multicriteria optimisation perspective. *J Health Econ,* 36 164-173.

Abstract: In this paper we discuss the prioritisation of healthcare projects where there is a concern about health inequalities, but the decision maker is reluctant to make explicit quantitative value judgements and the data systems only allow the measurement of health at an aggregate level. Our analysis begins with a standard welfare economic model of healthcare resource allocation. We show how - under the assumption that the healthcare projects under consideration have a small impact on individual health - the problem can be reformulated as one of finding a particular subset of the class of efficient solutions to an implied multicriteria optimisation problem. Algorithms for finding such solutions are readily available, and we demonstrate our approach through a worked example of treatment for clinical depression.

Makdissi P., Yazbeck M. (2014). Measuring socioeconomic health inequalities in presence of multiple categorical information. *J Health Econ,* 34 84-95.

Abstract: While many of the measurement approaches in health inequality measurement assume the existence of a ratio-scale variable, most of the health information available in population surveys is given in the form of categorical variables. Therefore, the well-known inequality indices may not always be readily applicable to measure health inequality as it may result in the arbitrariness of the health concentration index's value. In this paper, we address this problem by changing the dimension in which the categorical information is used. We therefore exploit the multi-dimensionality of this information, define a new ratio-scale health status variable and develop positional stochastic dominance conditions that can be implemented in a context of categorical variables. We also propose

a parametric class of population health and socioeconomic health inequality indices. Finally we provide a twofold empirical illustration using the Joint Canada/United States Surveys of Health 2004 and the National Health Interview Survey 2010.

Médicaments / Pharmaceuticals

Mousnad M.A., Shafie A.A., Ibrahim M.I. (2014). Systematic review of factors affecting pharmaceutical expenditures. *Health Policy,* 116 (2-3) : 137-146.

Abstract: OBJECTIVE: To systematically identify the main factors contributing to the increase in pharmaceutical expenditures. METHODS: A systematic search of published studies was conducted utilising major widely used electronic databases using the search terms 'factors,' 'financing,' 'pharmaceutical,' and 'expenditures.' To be included, the studies needed to: (1) measure at least one of the following outcomes: total growth in pharmaceutical expenditures, price growth or quantity growth; (2) mention a clear method for analysing the impact of factors affecting the increases in drug expenditures; (3) be written in English. Nonprimary articles that were published only as an abstract, a review, a commentary or a letter were excluded. MAIN RESULTS: From a total of 2039 studies, only 25 were included in the full review. The main determinant categories that were identified in the review were factors related to price, utilisation, therapeutic choice, demand and health care system. CONCLUSIONS: The major cost drivers were found to be changes in drug quantities and therapies as well as new drugs. It is important for policymakers to understand pharmaceutical spending trends and the factors that influence them in order to formulate effective cost containment strategies and design optimum drug policy.

Horn H., Nink K., McGauran N., Wieseler B. (2014). Early benefit assessment of new drugs in Germany - Results from 2011 to 2012. *Health Policy,* 116 (2-3) : 147-153.

Abstract: Rising drug costs in Germany led to the Act on the Reform of the Market for Medicinal Products (AMNOG) in January 2011. For new drugs, pharmaceutical companies have to submit dossiers containing all available evidence to demonstrate an added benefit versus an appropriate comparator therapy. The Federal Joint Committee (G-BA), the main decision-making body of the statutory healthcare system, is responsible for the overall procedure of "early benefit assessment". The Institute for Quality and Efficiency in Health Care (IQWiG) largely conducts the dossier assessments, which inform decisions by the G-BA on added benefit and support price negotiations. Of the 25 dossiers (excluding orphan drugs) assessed until 31 December 2012, 14 contained sufficient data from randomized active-controlled trials investigating patient-relevant outcomes or at least acceptable surrogates; 11 contained insufficient data. The most common indications were oncology (6) and viral infections (4). For the 14 drugs assessed, the extent of added benefit was rated as minor, considerable, and non-quantifiable in 3, 8, and 2 cases; the remaining drug showed no added benefit. Despite some shortcomings, for the first time it has been possible in Germany to implement a systematic procedure for assessing new drugs at market entry, thus providing support for price negotiations and informed decision-making for patients, clinicians and policy makers.

Bonastre J., Chevalier J., Van der Laan C., Delibes M., De Pouvourville G. (2014). Access to innovation: Is there a difference in the use of expensive anticancer drugs between French hospitals? *Health Policy,* 116 (2-3) : 162-169.

Abstract: In DRG-based hospital payment systems, expensive drugs are often funded separately. In France, specific expensive drugs (including a large proportion of anticancer drugs) are fully reimbursed up to national reimbursement tariffs to ensure equity of access. Our objective was to analyse the use of expensive anticancer drugs in public and private hospitals, and between regions. We had access to sales per anticancer drug and per hospital in the year 2008. We used a multilevel model to study the variation in the mean expenditure of expensive anticancer drugs per course of chemotherapy and per hospital. The mean expenditure per course of chemotherapy was euro922 [95% CI: 890-954]. At the hospital level, specialisation in chemotherapies for breast cancers was

associated with a higher expenditure of anticancer drugs per course for those hospitals with the highest proportion of cancers at this site. There were no differences in the use of expensive drugs between the private and the public hospital sector after controlling for case mix. There were no differences between the mean expenditures per region. The absence of disparities in the use of expensive anticancer drugs between hospitals and regions may indicate that exempting chemotherapies from DRG-based payments and providing additional reimbursement for these drugs has been successful at ensuring equal access to care.

Puig-Junoy J., Lopez-Valcarcel B.G. (2014). Launch prices for new pharmaceuticals in the heavily regulated and subsidized Spanish market, 1995-2007. *Health Policy,* 116 (2-3) : 170-181.*

Abstract: This paper provides empirical evidence on the explanatory factors affecting introductory prices of new pharmaceuticals in a heavily regulated and highly subsidized market. We collect a data set consisting of all new chemical entities launched in Spain between 1997 and 2005, and model launch prices following an extended version of previous economic models. We found that, unlike in the US and Sweden, therapeutically "innovative" products are not overpriced relative to "imitative" ones after having controlled for other factors. Price setting is mainly used as a mechanism to adjust for inflation independently of the degree of innovation. The drugs that enter through the centralized EMA approval procedure are overpriced, which may be a consequence of market globalization and international price setting.

Curto S., Ghislandi S., Van der Vooren K., Duranti S., Garattini L. (2014). Regional tenders on biosimilars in Italy: An empirical analysis of awarded prices. *Health Policy,* 116 (2-3) : 182-187.

Abstract: OBJECTIVE: The goal of the present study is to assess the awarded prices and thus the real level of competition the regional tenders referring to biosimilars in Italy achieved. METHODS: We conducted a web-based analysis to collect detailed information on regional biosimilar tenders, up to December 2012. We identified 191 lots referring to the three off-patent biologicals (somatropin, epoetin and filgrastim) mentioned in the 24 tenders that took place during the study period (2008-2012). A multiple linear regression analysis was conducted to assess the relationship between prices awarded (dependent variable) and potentially explanatory variables (base quantities, bioagent, number of competitors, purchasing region and time). RESULTS: While the price of somatropin stayed steady, those of filgrastim and epoetin dropped steeply. The mean number of competitors was lowest for somatropin and highest for filgrastim. One additional competitor was associated with about a 10% reduction in the price on average. The benefits of having many competitors did not fade with increasing numbers of companies. DISCUSSION: Our analysis confirms the theory that worthwhile savings can be generated in tenders, once the bid is designed in such a way that competition can produce its effects, i.e. allowing more than one manufacturer to tender. However, most of the Italian regional tenders on off-patent bioagents do not seem to exploit potential competition to the full.

Vivas-Consuelo D., Uso-Talamantes R., Trillo-Mata J.L., Caballer-Tarazona M., Barrachina-Martinez I., Buigues-Pastor L. (2014). Predictability of pharmaceutical spending in primary health services using Clinical Risk Groups. *Health Policy,* 116 (2-3) : 188-195.

Abstract: BACKGROUND: Risk adjustment instruments applied to existing electronic health records and administrative datasets may contribute to monitoring the correct prescribing of medicines. OBJECTIVE: We aim to test the suitability of the model based on the CRG system and obtain specific adjusted weights for determined health states through a predictive model of pharmaceutical expenditure in primary health care. METHODS: A database of 261,054 population in one health district of an Eastern region of Spain was used. The predictive power of two models was compared. The first model (ATC-model) used nine dummy variables: sex and 8 groups from 1 to 8 or more chronic conditions while in the second model (CRG-model) we include sex and 8 dummy variables for health core statuses 2-9. RESULTS: The two models achieved similar levels of explanation. However, the CRG system offers higher clinical significance and higher operational utility in a real context, as it offers richer and more updated information on patients. CONCLUSIONS: The potential of the CRG model developed compared to ATC codes lies in its capacity to stratify the population according to

specific chronic conditions of the patients, allowing us to know the degree of severity of a patient or group of patients, predict their pharmaceutical cost and establish specific programmes for their treatment.

Miguel L.S., Augustin U., Busse R., Knai C., Rubert G., Sihvo S., Baeten R. (2014). Recognition of pharmaceutical prescriptions across the European Union: A comparison of five Member States' policies and practices. *Health Policy,* 116 (2-3) : 206-213.

Abstract: BACKGROUND: In 2011, the EU Directive on Patients' Rights in Cross Border Healthcare was approved, including a regulation on mutual recognition of prescriptions. OBJECTIVE: To compare current national policies and practices on prescribing and dispensing, prescription-only medicines (POMs) in European countries in order to identify differences which could, challenge acceptance across borders. METHODS: Semi-structured interviews with 37 national stakeholders were carried out. Furthermore, data on policies for prescribing and dispensing POMs were gathered based on desk research, and, contacts with relevant authorities via a purposely designed questionnaire. RESULTS: Important differences exist regarding: (1) information requirements for prescriptions to be, legally valid, (2) generic and international non-proprietary name (INN) policies and (3) professionals, legally allowed to prescribe POMs. Moreover, there is a lack of EU-wide access to key information for, validating prescriptions, recognizing the equivalence of products or identifying authorised prescribers. CONCLUSION: Differences in legislation and its application across Europe pose important challenges to be, addressed by policy makers with appropriate actions: (1) a prescribed product may not be dispensed, to a patient who needs it, (2) an inappropriate product (or inappropriate instructions) could be, provided and (3) POMs could be dispensed and consumed or sold, based on false prescriptions.

Dunne S., Shannon B., Hannigan A., Dunne C., Cullen W. (2014). Physician and pharmacist perceptions of generic medicines: What they think and how they differ. *Health Policy,* 116 (2-3) : 214-223.

Abstract: INTRODUCTION: This study is the first comparative assessment, internationally, of perceptions of generic medicines between general practitioners (GPs) and pharmacists in at least the last decade. METHODOLOGY: One-to-one semi-structured interviews were performed with 34 GPs and 44 community pharmacists in Ireland. Interviews were transcribed and qualitative analyses were performed using NVivo (version 9). RESULTS: GPs expressed more negative opinions than pharmacists. 94.1% of GPs and 88.6% of pharmacists reported receiving complaints from patients related to generics. 11.8% of GPs versus 2.3% of pharmacists believed generics do not work as well as originators. More than twice as many GPs (14.7%) as pharmacists (6.8%) expressed a preference for the originator medication. Participants believed that most negative experiences reported by patients (with generic medicines) were not actual but imagined/nocebo. DISCUSSION: Education of stakeholders is a requirement for increased usage of generics. Resources to facilitate healthcare professionals in educating patients are needed. GPs' opinions could negatively influence patient opinions; countering these opinions may prove important for successful influencing of patient perceptions.

Costa-Font J., Rudisill C., Tan S. (2014). Brand loyalty, patients and limited generic medicines uptake. *Health Policy,* 116 (2-3) : 224-233.

Abstract: The sluggish development of European generic drug markets depends heavily on demand side factors, and more specifically, patients' and doctors' loyalty to branded products. Loyalty to originator drugs, to the point where originator prices rise upon generic entry has been described as the 'generics paradox'. Originator loyalty can emerge for a plethora of reasons; including costs, perceptions about quality and physician advice. We know very little about the behavioural underpinnings of brand loyalty from the consumer or patient standpoint. This paper attempts to test the extent to which patients are brand loyal by drawing upon Spain's 2002 Health Barometer survey as it includes questions about consumer acceptance of generics in a country with exceptionally low generic uptake and substitution at the time of the study. Our findings suggest that at least 13% of the population would not accept generics as substitutes to the originator. These results confirm evidence of brand loyalty for a minority. Alongside high levels of awareness of generics, we find that low cost-sharing levels explain consumer brand loyalty but their impact on acceptance of generic substitution is

very small. Higher cost-sharing and exempting fewer patients from cost-sharing have the potential to encourage generic acceptance.

Rudisill C., Vandoros S., Antoun J.G. (2014). Pharmaceutical policy reform in the Russian Federation. *J Health Polit.Policy Law,* 39 (3) : 691-705.

Abstract: Of Russia's 142 million citizens, fewer than 20 million are enrolled in outpatient drug coverage plans. The current government aims to establish universal health insurance including outpatient medicines. Based on the current political and regulatory environment, this report explores pharmaceutical pricing options for Russia that balance greater access to medicines with achieving government plans of boosting local pharmaceutical production. To match innovative medicine prices with their health benefits, in the long run, we suggest that Russia consider adopting value-based pricing, and in the short term, that it introduce direct price negotiations and price drugs according to reference countries that use health technology assessment. Although generic market shares are high, generic medicine prices are higher than they should be. We propose tenders at the manufacturer level for the pricing of high-selling generics, and free pricing for products with sufficient market competition. These policy recommendations are a jumping-off point for further discussion about how pharmaceutical policy could aid this major economy to achieve its population health and health service goals.

Grabowski H.G., Guha R., Salgado M. (2014). Regulatory and cost barriers are likely to limit biosimilar development and expected savings in the near future. *Health Aff.(Millwood.),* 33 (6) : 1048-1057.

Abstract: In March 2010 Congress established an abbreviated Food and Drug Administration approval pathway for biosimilars-drugs that are very similar but not identical to a reference biological product and cost less. Because bringing biosimilars to the market currently requires large investments of money, fewer biosimilars are expected to enter the biologics market than has been the case with generic drugs entering the small-molecule drug market. Additionally, given the high regulatory hurdles to obtaining interchangeability-which would allow pharmacists to substitute a biosimilar for its reference product, subject to evolving state substitution laws-most biosimilars will likely compete as therapeutic alternatives instead of as therapeutic equivalents. In other words, biosimilars will need to compete with their reference product on the basis of quality; price; and manufacturer's reputation with physicians, insurers, and patient groups. Biosimilars also will face dynamic competition from new biologics in the same therapeutic class-including "biobetters," which offer incremental improvements on reference products, such as extended duration of action. The prospects for significant cost savings from the use of biosimilars appear to be limited for the next several years, but their use should increase over time because of both demand- and supply-side factors.

Levaggi R. (2014). Pricing schemes for new drugs: a welfare analysis. *Soc Sci Med,* 102 69-73.

Abstract: Drug price regulation is acquiring increasing significance in the investment choices of the pharmaceutical sector. The overall objective is to determine an optimal trade-off between the incentives for innovation, consumer protection, and value for money. However, price regulation is itself a source of distortion. In this study, we examine the welfare properties of listing through a bargaining process and value-based pricing schemes. The latter are superior instruments to uncertain listing processes for maximising total welfare, but the distribution of the benefits between consumers and the industry depends on rate of rebate chosen by the regulator. However, through an appropriate choice, it is always possible to define a value-based pricing scheme with risk sharing, which both consumers and the industry prefer to an uncertain bargaining process.

Kaiser U., Mendez S.J., Ronde T., Ullrich H. (2014). Regulation of pharmaceutical prices: Evidence from a reference price reform in Denmark. *J Health Econ,* 36 174-187.

Abstract: Reference price systems for prescription drugs constitute widely adopted cost containment tools. Under these regimes, patients co-pay a fraction of the difference between a drug's pharmacy retail price and a reference price that is set by the government. Reference prices are either externally (based on drug prices in other countries) or internally (based on domestic drug prices) determined. We

study the effects of a change from external to internal reference pricing in Denmark in 2005. We find that the reform led to substantial reductions in retail prices, reference prices and patient co-payments as well as to sizable decreases in overall producer revenues and health care expenditures. The reform induced consumers to substitute away from branded drugs for which we estimate strong preferences. The increase in consumer welfare due to the reform therefore depends on whether or not we take perceived quality differences into account in its calculation.

Dylst P., Vulto A., Simoens S. (2014). Barriers to the Uptake of Biosimilars and Possible Solutions: A Belgian Case Study. In : PharmacoEconomics. *PharmacoEconomics,* 32 (7) : 681-691.

Abstract: Background : Biosimilars are medicinal products that are similar to a biopharmaceutical that has already been authorised. As biopharmaceuticals are expected to dominate the best-selling pharmaceuticals worldwide by 2016, the emergence of biosimilars imposes an important challenge for governments. At this moment, the uptake of biosimilars in Belgium is limited, with market shares close to 0 %.Objective : This study aimed to identify the barriers that impede the uptake of biosimilars in Belgium. Methods : Semi-structured interviews were conducted to investigate in depth the barriers to the uptake of biosimilars in Belgium. Respondents were selected through selective sampling so that all different stakeholders were represented (authorities, physicians, pharmacists, patients, academics and industry). Respondents were contacted by e-mail and letter with a request for participation. A thematic framework was used to analyze the data. Results : Three main barriers to the uptake of biosimilars in the Belgian market were identified: a lack of confidence towards biosimilars by some stakeholders; uncertainty about the interchangeability and substitution of biosimilars; and a hospital financing system that discourages the use of them. Providing all stakeholders with objective information on the concept of biosimilars, reforming the financing of hospitals, developing and implementing prescription quota in hospitals, setting up patient registries for biosimilars and speeding up the pricing and reimbursement process of biosimilars are suggested solutions to increase the uptake of biosimilars in Belgium. Conclusions : To fully capture the potential savings of biosimilars, governments should take measures to increase their uptake. The Belgian government, and also the manufacturers of biosimilars, should take measures to reduce the uncertainties related to biosimilars and raise confidence among prescribers. In addition, the financing of hospitals should be reformed and incentives should be developed to stimulate physicians to prescribe biosimilars.
http://dx.doi.org/10.1007/s40273-014-0163-9

Coronado J., Jimenez-Martin S., Marin P.L. (2014). An empirical analysis of the multimarket contact theory in pharmaceutical markets. *Eur J Health Econ,* 15 (6) : 623-643.

Abstract: Multimarket contact theory predicts that firms will optimally reduce prices in markets where collusive prices are sustainable and allocate the slack of the corresponding incentive compatibility to increase prices in markets where collusion is not sustainable. Binding price caps in collusive markets will have different effects over the multimarket contact mechanism depending on the severity of the cap. Setting a price cap close to the unregulated case will increase the size of the redistribution of market power whereas stronger regulation will even reduce prices in unregulated markets. Therefore, price regulations aiming at capping prices in a specific market will also affect markets that are not subject to specific mandatory price regulations. We find evidence of the theory predictions using information for nine OECD countries for pharmaceutical markets. Unregulated US markets are shown to respond to the redistribution effect; Canadian markets, known to be subject to soft price regulations, with respect to the former, are shown to be consistent with a stronger redistribution effect. EU markets and Japan are either consistent with the effect of a medium regulation or strong regulation. In this last case multimarket contact cannot explain prices, and these are expected to be lower compared to the unregulated benchmark.

Méthodologie – Statistique / Methodology – Statistics

Kjellsson G., Clarke P., Gerdtham U.G. (2014). Forgetting to remember or remembering to forget: A study of the recall period length in health care survey questions. *J Health Econ,* 35 34-46.

Abstract: Self-reported data on health care use is a key input in a range of studies. However, the length of recall period in self-reported health care questions varies between surveys, and this variation may affect the results of the studies. This study uses a large survey experiment to examine the role of the length of recall periods for the quality of self-reported hospitalization data by comparing registered with self-reported hospitalizations of respondents exposed to recall periods of one, three, six, or twelve months. Our findings have conflicting implications for survey design, as the preferred length of recall period depends on the objective of the analysis. For an aggregated measure of hospitalization, longer recall periods are preferred. For analysis oriented more to the micro-level, shorter recall periods may be considered since the association between individual characteristics (e.g., education) and recall error increases with the length of the recall period.

Gavious A., Greenberg D., Hammerman A., Segev E. (2014). Impact of a financial risk-sharing scheme on budget-impact estimations: a game-theoretic approach. *Eur J Health Econ,* 15 (5) : 553-561.

Abstract: BACKGROUND: As part of the process of updating the National List of Health Services in Israel, health plans (the 'payers') and manufacturers each provide estimates on the expected number of patients that will utilize a new drug. Currently, payers face major financial consequences when actual utilization is higher than the allocated budget. We suggest a risk-sharing model between the two stakeholders; if the actual number of patients exceeds the manufacturer's prediction, the manufacturer will reimburse the payers by a rebate rate of alpha from the deficit. In case of under-utilization, payers will refund the government at a rate of gamma from the surplus budget. Our study objective was to identify the optimal early estimations of both 'players' prior to and after implementation of the risk-sharing scheme. METHODS: Using a game-theoretic approach, in which both players' statements are considered simultaneously, we examined the impact of risk-sharing within a given range of rebate proportions, on players' early budget estimations. RESULTS: When increasing manufacturer's rebate alpha to be over 50 %, then manufacturers will announce a larger number, and health plans will announce a lower number of patients than they would without risk sharing, thus substantially decreasing the gap between their estimates. Increasing gamma changes players' estimates only slightly. CONCLUSION: In reaction to applying a substantial risk-sharing rebate alpha on the manufacturer, both players are expected to adjust their budget estimates toward an optimal equilibrium. Increasing alpha is a better vehicle for reaching the desired equilibrium rather than increasing gamma, as the manufacturer's rebate alpha substantially influences both players, whereas gamma has little effect on the players behavior.

Toh S., Shetterly S., Powers J.D., Arterburn D. (2014). Privacy-preserving Analytic Methods for Multisite Comparative Effectiveness and Patient-centered Outcomes Research. *Medical Care,* 52 (7)

Abstract: Background :For privacy and practical reasons, it is sometimes necessary to minimize sharing of individual-level information in multisite studies. However, individual-level information is often needed to perform more rigorous statistical analysis. Objectives :To compare empirically 3 analytic methods for multisite studies that only require sharing of summary-level information to perform statistical analysis that have traditionally required access to detailed individual-level data from each site. Research Design, Subjects, and Measures: We analyzed data from a 7-site study of bariatric surgery outcomes within the Scalable Partnering Network. We compared the long-term risk of rehospitalization between adjustable gastric banding and Roux-en-y gastric bypass procedures using a stratified analysis of propensity score (PS)-defined strata, a case-centered analysis of risk set data, and a meta-analysis of site-specific effect estimates. Their results were compared with the result from

a pooled individual-level data analysis. Results:The study included 1327 events (18.1%) among 7342 patients. The adjusted hazard ratio was 0.71 (95% CI, 0.59, 0.84) comparing adjustable gastric banding with Roux-en-y gastric bypass in the individual-level data analysis. The corresponding effect estimate was 0.70 (0.59, 0.83) in the PS-stratified analysis, 0.71 (0.59, 0.84) in the case-centered analysis, and 0.71 (0.60, 0.84) in both the fixed-effect and random-effects meta-analysis. Conclusions:In this empirical study, PS-stratified analysis, case-centered analysis, and meta-analysis produced results that are identical or highly comparable with the result from a pooled individual-level data analysis. These methods have the potential to be viable analytic alternatives when sharing of individual-level information is not feasible or not preferred in multisite studies.
http://journals.lww.com/lww-medicalcare/Fulltext/2014/07000/Privacy_preserving_Analytic_Methods_for_Multisite.14.aspx

Politique de santé / Health Policy

Sage W.M. (2014). Getting the product right: how competition policy can improve health care markets. *Health Aff.(Millwood.),* 33 (6) : 1076-1082.

Abstract: As hospital, physician, and health insurance markets consolidate and change in response to health care reform, some commentators have called for vigorous enforcement of the federal antitrust laws to prevent the acquisition and exercise of market power. In health care, however, stricter antitrust enforcement will benefit consumers only if it accounts for the competitive distortions caused by the sector's long history of government regulation. This article directs policy makers to a neglected dimension of health care competition that has been altered by regulation: the product. Competition may have failed to significantly lower costs, increase access, or improve quality in health care because we have been buying and selling the wrong things. Competition policy makers-meaning both antitrust enforcers and regulators-should force the health care industry to define and market products that can be assembled and warranted to consumers while keeping emerging sectors such as mHealth free from overregulation, wasteful subsidy, and appropriation by established insurer and provider interests.

Wilensky G.R. (2014). Medicare physician payment reform in 2014 is looking unlikely. *Milbank Q,* 92 (2) : 182-185.

Bevan G., Brown L.D. (2014). The political economy of rationing health care in England and the US: the 'accidental logics' of political settlements. *Health Econ Policy Law,* 1-22.

Abstract: This article considers how the 'accidental logics' of political settlements for the English National Health Service (NHS) and the Medicare and Medicaid programmes in the United States have resulted in different institutional arrangements and different implicit social contracts for rationing, which we define to be the denial of health care that is beneficial but is deemed to be too costly. This article argues that rationing is designed into the English NHS and designed out of US Medicare; and compares rationing for the elderly in the United States and in England for acute care, care at the end of life, and chronic care.

Gusmano M.K., Allin S. (2014). Framing the issue of ageing and health care spending in Canada, the United Kingdom and the United States. *Health Econ Policy Law,* 1-17.

Abstract: Political debates about the affordability of health care programmes in high-income countries often point to population ageing as a threat to sustainability. Debates in the United States, in particular, highlight concerns about intergenerational equity, whereby spending on older people is perceived as a threat to spending on the young. This paper compares how the problem of health spending is defined in Canada, the United Kingdom and the United States by presenting the results of a content analysis of print media during the period 2005-2010. We found that population ageing was cited as an important source of health care cost increases in all three countries but was cited less frequently in Canadian newspapers than in the UK or US papers. Direct claims about intergenerational equity are infrequent among the articles we coded, but newspaper articles in the United States were

more likely than those in Canada and the United Kingdom to claim that of high health care spending on older people takes resources away from younger people. In Canada a much larger percentage of articles in our sample either claimed that high health care spending is crowding out other types of government expenditure. Finally, we found that almost no articles in the United States challenged the view that population ageing causes health care spending, whereas in both Canada and the United Kingdom a small, but steady stream of articles challenged the idea that population ageing is to blame for health care spending increases.

Roehrich J.K., Lewis M.A., George G. (2014). Are public-private partnerships a healthy option? A systematic literature review. *Soc Sci Med,* 113 110-119.

Abstract: Governments around the world, but especially in Europe, have increasingly used private sector involvement in developing, financing and providing public health infrastructure and service delivery through public-private partnerships (PPPs). Reasons for this uptake are manifold ranging from rising expenditures for refurbishing, maintaining and operating public assets, and increasing constraints on government budgets stifle, seeking innovation through private sector acumen and aiming for better risk management. Although PPPs have attracted practitioner and academic interest over the last two decades, there has been no attempt to integrate the general and health management literature to provide a holistic view of PPPs in healthcare delivery. This study analyzes over 1400 publications from a wide range of disciplines over a 20-year time period. We find that despite the scale and significance of the phenomenon, there is relatively limited conceptualization and in-depth empirical investigation. Based on bibliographic and content analyses, we synthesize formerly dispersed research perspectives into a comprehensive multi-dimensional framework of public-private partnerships. In so doing, we provide new directions for further research and practice.

Prévention / Prevention

Yaqub O., Castle-Clarke S., Sevdalis N., Chataway J. (2014). Attitudes to vaccination: a critical review. *Soc Sci Med,* 112 1-11.

Abstract: This paper provides a consolidated overview of public and healthcare professionals' attitudes towards vaccination in Europe by bringing together for the first time evidence across various vaccines, countries and populations. The paper relies on an extensive review of empirical literature published in English after 2009, as well as an analysis of unpublished market research data from member companies of Vaccines Europe. Our synthesis suggests that hesitant attitudes to vaccination are prevalent and may be increasing since the influenza pandemic of 2009. We define hesitancy as an expression of concern or doubt about the value or safety of vaccination. This means that hesitant attitudes are not confined only to those who refuse vaccination or those who encourage others to refuse vaccination. For many people, vaccination attitudes are shaped not just by healthcare professionals but also by an array of other information sources, including online and social media sources. We find that healthcare professionals report increasing challenges to building a trustful relationship with patients, through which they might otherwise allay concerns and reassure hesitant patients. We also find a range of reasons for vaccination attitudes, only some of which can be characterised as being related to lack of awareness or misinformation. Reasons that relate to issues of mistrust are cited more commonly in the literature than reasons that relate to information deficit. The importance of trust in the institutions involved with vaccination is discussed in terms of implications for researchers and policy-makers; we suggest that rebuilding this trust is a multi-stakeholder problem requiring a co-ordinated strategy.

Oliver A., Ubel P. (2014). Nudging the obese: a UK-US consideration. *Health Econ Policy Law,* 1-14.

Abstract: Over recent years, nudge policies have become increasingly popular (if somewhat confused) internationally. This article attempts to clarify what a nudge entails, and critically summarises some of the nudge policies that have been proposed to motivate weight loss in the United Kingdom and the

United States. Despite the fact that most of the evidence on nudge-related policy has so far been produced in the United States, and that the leading nudge champions are American, the United Kingdom, at least with respect to considering policy interventions of this kind at the national level, appears to be relatively advanced. That said, nudge interventions remain of marginal practical import everywhere, and are never going to solve completely the obesity problem. Nonetheless, even a marginal effect may extend and improve many lives, a result that would satisfy most behavioural economists.

Prévision – Evaluation / Prevision – Evaluation

Hatz M., Schremser K., Rogowski W. (2014). Is Individualized Medicine More Cost-Effective? A Systematic Review. In : PharmacoEconomics.

PharmacoEconomics, 32 (5) : 443-455.
http://dx.doi.org/10.1007/s40273-014-0143-0

Nord E., Johansen R. (2014). Concerns for severity in priority setting in health care: A review of trade-off data in preference studies and implications for societal willingness to pay for a QALY.

Health Policy, 116 (2-3) : 281-288.

Abstract: OBJECTIVE: In a wide range of health care jurisdictions, to give priority to the severely ill over the less severely ill is important in decisions about resource allocation across patient groups. We summarise data on concerns for severity measured at a cardinal level in preference studies in various countries and show how the data may provide guidance for determining severity graded willingness to pay for a QALY. METHODS: We review evidence in 15 articles published in peer reviewed journals in the time period 1978-2010, with reports from altogether 20 individual studies in 9 different countries. The studies all focus on the quality of life dimension of severity, i.e. utility losses on the 0-1 scale used in QALY-calculations. We report 116 individual observations of paired comparisons of utility improvements with different start levels. We argue that the strength of concerns observed on the quality of life dimension may be assumed to apply also to losses in length of life and thus to severity in terms of proportional shortfall of QALYs. By means of regression analyses we estimate a severity gradient in each study that suggests the span in societal willingness to pay for a QALY to people at high and low levels of severity respectively. RESULTS: Concerns for severity show up quite strongly across countries, sample types and question framings, although the size of the severity gradient varies very much. Interested policy makers may hopefully find the central tendency in the results to be useful as an input to determining severity dependent willingness to pay for a QALY.

Karlsson M., Klohn F. (2014). Testing the red herring hypothesis on an aggregated level: ageing, time-to-death and care costs for older people in Sweden.

Eur J Health Econ, 15 (5) : 533-551.

Abstract: In this paper we test the 'red herring' hypothesis for expenditures on long-term care (LTC). The main contribution of this paper is to assess the 'red herring' hypothesis by using the probability of dying as a measure for time-to-death (TTD). In addition, we implement models that allow for age-specific TTD effects on LTC utilization as well as sex-specific effects. We also focus on total, institutional and domiciliary LTC separately. For our analysis we use high quality administrative data from Sweden. Our analysis is based on fixed effects estimates. We use our findings to project future LTC expenditures and show that, although TTD is a relevant predictor, age itself remains the main driver of LTC expenditures.

Rottger J., Blumel M., Fuchs S., Busse R. (2014). Assessing the responsiveness of chronic disease care - Is the World Health Organization's concept of health system responsiveness applicable?

Soc Sci Med, 113 87-94.

Abstract: The concept of health system responsiveness is an important dimension of health system performance assessment. Further efforts have been made in recent years to improve the analysis of responsiveness measurements, yet few studies have applied the responsiveness concept to the evaluation of specific health care delivery structures. The objective of this study was to test the World Health Organization's (WHO's) responsiveness concept for an application in the evaluation of chronic disease care. In September and October 2012 we conducted four focus groups of chronically ill people (n = 38) in Germany, in which participants discussed their experiences and expectations regarding health care. The data was analyzed deductively (on the basis of the WHO responsiveness concept) and inductively using directed content analysis. Ten themes related to health system responsiveness and one theme (finances) not directly related to health system responsiveness, but of high importance to the focus group participants, could be identified. Eight of the ten responsiveness themes are consistent with the WHO concept. Additionally, two new themes were identified: trust (consultation and treatment are not led by any motive other than the patients' wellbeing) and coordination (treatment involving different providers is coordinated and different actors communicate with each other). These findings indicate the suitability of the WHO responsiveness concept for the evaluation of chronic disease care. However, some amendments, in particular an extension of the concept to include the two domains trust and coordination, are necessary for a thorough assessment of the responsiveness of chronic disease care.

Soins de santé primaires / Primary Health Care

Coyle N., Strumpf E., Fiset-Laniel J., Tousignant P., Roy Y. (2014). Characteristics of physicians and patients who join team-based primary care practices: Evidence from Quebec's Family Medicine Groups. *Health Policy,* 116 (2-3) : 264-272.

Abstract: PURPOSE: New models of delivering primary care are being implemented in various countries. In Quebec, Family Medicine Groups (FMGs) are a team-based approach to enhance access to, and coordination of, care. We examined whether physicians' and patients' characteristics predicted their participation in this new model of primary care. METHODS: Using provincial administrative data, we created a population cohort of Quebec's vulnerable patients. We collected data before the advent of FMGs on patients' demographic characteristics, chronic illnesses and health service use, and their physicians' demographics, and practice characteristics. Multivariate regression was used to identify key predictors of joining a FMG among both patients and physicians. RESULTS: Patients who eventually enrolled in a FMG were more likely to be female, reside outside of an urban region, have a lower SES status, have diabetes and congestive heart failure, visit the emergency department for ambulatory sensitive conditions and be hospitalized for any cause. They were also less likely to have hypertension, visit an ambulatory clinic and have a usual provider of care. Physicians who joined a FMG were less likely to be located in urban locations, had fewer years in medical practice, saw more patients in hospital, and had patients with lower morbidity. CONCLUSIONS: Physicians' practice characteristics and patients' health status and health care service use were important predictors of joining a FMG. To avoid basing policy decisions on tenuous evidence, policymakers and researchers should account for differential selection into team-based primary health care models.

Murante A.M., Vainieri M., Rojas D., Nuti S. (2014). Does feedback influence patient - professional communication? Empirical evidence from Italy. *Health Policy,* 116 (2-3) : 273-280.

Abstract: Healthcare providers often look for feedback from patient surveys. Does health-professional awareness of patient survey results improve communication between patients and providers? To test this hypothesis, we analyzed the data of two surveys on organizational-climate and patient experience in Italy. The two surveys were conducted in 26 hospitals in the Tuscany region and involved 8942 employees and 5341 patients, respectively. Statistical analysis showed that the patient experience index significantly improved by 0.35 points (scale: 0-100) when the professionals' knowledge of the patient survey results increased by 1%. These findings suggest that the control systems should focus

more on the dissemination phase of patient survey results among health professionals in order to improve the quality of services.

Hebert P.L., Liu C.F., Wong E.S., Hernandez S.E., Batten A., Lo S., Lemon J.M., Conrad D.A., Grembowski D., Nelson K., Fihn S.D. (2014). Patient-centered medical home initiative produced modest economic results for veterans health administration, 2010-12. *Health Aff.(Millwood.),* 33 (6) : 980-987.

Abstract: In 2010 the Veterans Health Administration (VHA) began a nationwide initiative called Patient Aligned Care Teams (PACT) that reorganized care at all VHA primary care clinics in accordance with the patient-centered medical home model. We analyzed data for fiscal years 2003-12 to assess how trends in health care use and costs changed after the implementation of PACT. We found that PACT was associated with modest increases in primary care visits and with modest decreases in both hospitalizations for ambulatory care-sensitive conditions and outpatient visits with mental health specialists. We estimated that these changes avoided $596 million in costs, compared to the investment in PACT of $774 million, for a potential net loss of $178 million in the study period. Although PACT has not generated a positive return, it is still maturing, and trends in costs and use are favorable. Adopting patient-centered care does not appear to have been a major financial risk for the VHA.

Brunt C.S., Jensen G.A. (2014). Pricing distortions in medicare's physician fee schedule and patient satisfaction with care quality and access. *Health Econ,* 23 (7) : 761-775.

Abstract: Medicare adjusts its payments to physicians for geographic differences in the cost of operating a medical practice, but the method it uses is imprecise. We measure the inaccuracy in its geographic adjustment factors and categorize beneficiaries by whether they live where Medicare's formula is favorable or unfavorable to physicians. Then, using the 2001-2003 Medicare Current Beneficiary Survey, we examine whether differences in physician payment generosity, that is, whether favorable or unfavorable, influence the satisfaction ratings Medicare seniors assign to their quality of care and access to services. We find strong evidence that they do. Many beneficiaries live in payment-unfavorable areas and receive a less satisfying quality of care and less satisfying access to services than beneficiaries who live where payments are favorable to physicians.

Eissens Van Der Laan MR, Van Offenbeek M.A., Broekhuis H., Slaets J.P. (2014). A person-centred segmentation study in elderly care: Towards efficient demand-driven care. *Soc Sci Med,* 113 68-76.

Abstract: Providing patients with more person-centred care without increasing costs is a key challenge in healthcare. A relevant but often ignored hindrance to delivering person-centred care is that the current segmentation of the population and the associated organization of healthcare supply are based on diseases. A person-centred segmentation, i.e., based on persons' own experienced difficulties in fulfilling needs, is an elementary but often overlooked first step in developing efficient demand-driven care. This paper describes a person-centred segmentation study of elderly, a large and increasing target group confronted with heterogeneous and often interrelated difficulties in their functioning. In twenty-five diverse healthcare and welfare organizations as well as elderly associations in the Netherlands, data were collected on the difficulties in biopsychosocial functioning experienced by 2019 older adults. Data were collected between March 2010 and January 2011 and sampling took place based on their (temporarily) living conditions. Factor Mixture Model was conducted to categorize the respondents into segments with relatively similar experienced difficulties concerning their functioning. First, the analyses show that older adults can be empirically categorized into five meaningful segments: feeling vital; difficulties with psychosocial coping; physical and mobility complaints; difficulties experienced in multiple domains; and feeling extremely frail. The categorization seems robust as it was replicated in two population-based samples in the Netherlands. The segmentation's usefulness is discussed and illustrated through an evaluation of the alignment between a segment's unfulfilled biopsychosocial needs and current healthcare utilization. The set of person-centred segmentation variables provides healthcare providers the option to perform a more comprehensive first triage step than only a disease-based one. The outcomes of this first step could

guide a focused and, therefore, more efficient second triage step. On a local or regional level, this person-centred segmentation provides input information to policymakers and care providers for the demand-driven allocation of resources.

Kristensen T., Olsen K.R., Schroll H., Thomsen J.L., Halling A. (2014). Association between fee-for-service expenditures and morbidity burden in primary care. *Eur J Health Econ,* 15 (6) : 599-610.

Abstract: BACKGROUND: In primary care, fee-for-services (FFS) tariffs are often based on political negotiation rather than costing systems. The potential for comprehensive measures of patient morbidity to explain variation in negotiated FFS expenditures has not previously been examined. OBJECTIVES: To examine the relative explanatory power of morbidity measures and related general practice (GP) clinic characteristics in explaining variation in politically negotiated FFS expenditures. METHODS: We applied a multilevel approach to consider factors that explain FFS expenditures among patients and GP clinics. We used patient morbidity characteristics such as diagnostic markers, multimorbidity casemix adjustment based on resource utilisation bands (RUB) and related GP clinic characteristics for the year 2010. Our sample included 139,527 patients visiting GP clinics. RESULTS: Out of the individual expenditures, 31.6 % were explained by age, gender and RUB, and around 18 % were explained by RUB. Expenditures increased progressively with the degree of resource use (RUB0-RUB5). Adding more patient-specific morbidity measures increased the explanatory power to 44 %; 3.8-9.4 % of the variation in expenditures was related to the GP clinic in which the patient was treated. CONCLUSIONS: Morbidity measures were significant patient-related FFS expenditure drivers. The association between FFS expenditure and morbidity burden appears to be at the same level as similar studies in the hospital sector, where fees are based on average costing. However, our results indicate that there may be room for improvement of the association between politically negotiated FFS expenditures and morbidity in primary care.

Pedersen L.B., Gyrd-Hansen D. (2014). Preference for practice: a Danish study on young doctors' choice of general practice using a discrete choice experiment. *Eur J Health Econ,* 15 (6) : 611-621.

Abstract: OBJECTIVE: This study examines the preferences of general practitioners (GPs) in training for organizational characteristics in general practice with focus on aspects that can mitigate problems with GP shortages. STUDY DESIGN: A discrete choice experiment was used to investigate preferences for the attributes practice type, number of GPs in general practice, collaboration with other practices, change in weekly working hours (administrative versus patient related), and change in yearly surplus. DATA COLLECTION: In May 2011, all doctors actively engaged in the family medicine program in Denmark were invited to participate in a web-based survey. A total of 485 GPs in training responded to the questionnaire, resulting in a response rate of 56 %. PRINCIPAL FINDINGS: A mixed logit model showed that GPs in training prefer to work in smaller shared practices (2 GPs). This stands in contrast to the preferences of current GPs. Hence, a generational change in the GP population is likely to introduce more productive practice forms, and problems with GP shortages are likely to be mitigated over the coming years. Results further showed that a majority of the respondents are willing to work in larger shared practices (with 3-4 GPs) if they receive an increase in surplus (approximately 50,000 DKK/6,719 EUR per year) and that they may be willing to take in more patient-related work if the increase in surplus is sufficient (approximately 200,000 DKK/26,875 EUR per year for 5 extra hours per week). Monetary incentives may therefore be an effective tool for further improving productivity.

Systèmes de santé / Health Policy

Cornelissen E., Mitton C., Davidson A., Reid C., Hole R., Visockas A.M., Smith N. (2014). Determining and broadening the definition of impact from implementing a rational priority setting approach in a healthcare organization. *Soc Sci Med,* 114C 1-9.

Abstract: Techniques to manage scarce healthcare resources continue to evolve in response to changing, growing and competing demands. Yet there is no standard definition in the priority setting literature of what might constitute the desired impact or success of resource management activities. In this 2006-09 study, using action research methodology, we determined the impact of implementing a formal priority setting model, Program Budgeting and Marginal Analysis (PBMA), in a Canadian health authority. Qualitative data were collected through post year-1 (n = 12) and year-2 (n = 9) participant interviews, meeting observation and document review. Interviews were analyzed using a constant comparison technique to identify major themes. Impact can be defined as effects at three levels: system, group, and individual. System-level impact can be seen in the actual selection of priorities and resource re-allocation. In this case, participants prioritized a list of $760,000 worth of investment proposals and $38,000 of disinvestment proposals; however, there was no clear evidence as to whether financial resources were reallocated as a result. Group and individual impacts, less frequently reported in the literature, included changes in priority setting knowledge, attitudes and practice. PBMA impacts at these three levels were found to be interrelated. This work argues in favor of attempts to expand the definition of priority setting success by including both desired system-level outcomes like resource re-allocation and individual or group level impacts like changes to priority setting knowledge, attitudes and practice. These latter impacts are worth pursuing as they appear to be intrinsic to successful system-wide priority setting. A broader definition of PBMA impact may also suggest conceptualizing PBMA as both a priority setting approach and as a tool to develop individual and group priority setting knowledge and practice. These results should be of interest to researchers and decision makers using or considering a formal priority setting approach to manage scarce healthcare resources.

Vieillissement / Aging

Bravo G., Dubois M.F., Demers L., Dubuc N., Blanchette D., Painter K., Lestage C., Corbin C. (2014). Does regulating private long-term care facilities lead to better care? A study from Quebec, Canada. *Int J Qual.Health Care,* 26 (3) : 330-336.

Abstract: OBJECTIVE: In the province of Quebec, Canada, long-term residential care is provided by two types of facilities: publicly funded accredited facilities and privately owned facilities in which care is privately financed and delivered. Following evidence that private facilities were delivering inadequate care, the provincial government decided to regulate this industry. We assessed the impact of regulation on care quality by comparing quality assessments made before and after regulation. In both periods, public facilities served as a comparison group. DESIGN: A cross-sectional study conducted in 2010-12 that incorporates data collected in 1995-2000. SETTINGS: Random samples of private and public facilities from two regions of Quebec. PARTICIPANTS: Random samples of disabled residents aged 65 years and over. In total, 451 residents from 145 care settings assessed in 1995-2000 were compared with 329 residents from 102 care settings assessed in 2010-12. INTERVENTION: Regulation introduced by the province in 2005, effective February 2007. MAIN OUTCOME MEASURE: Quality of care measured with the QUALCARE Scale. RESULTS: After regulation, fewer small-size facilities were in operation in the private market. Between the two study periods, the proportion of residents with severe disabilities decreased in private facilities whereas it remained >80% in their public counterparts. Meanwhile, quality of care improved significantly in private facilities, while worsening in their public counterparts, even after controlling for confounding. CONCLUSIONS: The private industry now provides better care to its residents. Improvement in care quality likely results in part from the closure of small homes and change in resident case-mix.

Conroy S., Parker S. (2014). Acute care for frail older people: time to get back to basics? *Age and Ageing,* 43 (4) : 448-449.

Abstract: Readers of *Age and Ageing* will be well aware that systematic reviews reporting on >6500 patients in 13 well-conducted RCTs have demonstrated that comprehensive geriatric assessment (CGA) improves outcomes for older people [1]. The evidence that CGA is effective in older people in a range of settings, including acute care is now well established [2, 3]. However, most acute medical

units (AMUs) in England and Wales continue to operate an integrated approach [4], with a variety of physicians contributing to the care of frail older people. In the current economic climate, new forms of team working which improve efficiency without adversely affecting mortality or re-admission rates are to be welcomed. This is an area of research which in which studies are often 'small-scale, without rigorous study design or the ability to generalise to other settings' [5], and which attempts to demonstrate approaches …
http://ageing.oxfordjournals.org/content/43/4/448.short

Dent E., Chapman I., Howell S., Piantadosi C., Visvanathan R. (2014). Frailty and functional decline indices predict poor outcomes in hospitalised older people. *Age and Ageing,* 43 (4) : 477-484.

Abstract: Background: admission to a Geriatric Evaluation and Management Unit (GEMU) can optimise a patient's chance of functional recovery. Objective: to evaluate the ability of several commonly used frailty and functional decline indices to predict GEMU outcomes, both at discharge and at 6 months. Design: prospective, observational study. Setting and participants: consecutive GEMU patients aged ≥70 years. Methods: patients were classified as 'frail' or 'at high risk of functional decline' using several frailty and functional decline instruments. Predictive ability was evaulated using logistic regression and area under receiver operator characteristic (ROC) curves ($_{au}$ROC). Results: a total of 172 patients were included. Frailty prevalence varied from 24 to 94% depending on the instrument used. Several instruments predicted patients at risk of poor outcome, including the Frailty Index of Accumulative Deficits (FI-CD), Fried's Cardiovascular Health Study index, the Study of Osteoporotic Fractures index, an adapted Katz score of activities of daily living (ADL), Instrumental ADL, the Score Hospitalier d'Evaluation du Risque de Perte d'Autonomie (SHERPA) and grip strength [odds ratio (OR) range of 2.06–6.47]. Adequate discriminatory power for discharge outcome was achieved by the FI-CD ($_{au}$ROC = 0.735, P < 0.001) and an adapted Katz score ($_{au}$ROC = 0.704, P = < 0.001). The FI-CD also showed adequate discriminatory power for a poor 6-month outcome ($_{au}$ROC = 0.702, P < 0.001). Conclusion: frailty and functional decline instruments can predict older patients at risk of poor outcome. However, only the FI-CD showed adequate discriminatory power for outcome prediction at both follow-up time-points.
http://ageing.oxfordjournals.org/content/43/4/477.abstract