

Reproduction sur d'autres sites interdite mais lien vers le document accepté :
<http://www.irdes.fr/documentation/veille-bibliographique-en-economie-de-la-sante.html>

Any and all reproduction is prohibited but direct link to the document is accepted:
<http://www.irdes.fr/english/documentation/watch-on-health-economics-literature.html>

DOC VEILLE

Veille bibliographique en économie de la santé / Watch on Health Economics Literature

25 novembre 2016 / November the 25th 2016

Réalisée par le centre de documentation de l'Irdes, Doc Veille, publication bi-mensuelle, rassemble de façon thématique les résultats de la veille documentaire en économie de la santé : articles, littérature grise, rapports...

Vous pouvez accéder à la version électronique des articles sur notre portail EJS (à l'exception des revues françaises) :

<http://ejournals.ebsco.com/Home.asp> (Accès réservé à l'Irdes)

Les autres documents sont soit accessibles en ligne, soit consultables à la documentation (voir mention à la fin de la notice). Aucune photocopie ne sera délivrée par courrier.

Un historique des Doc Veille se trouve sur le web de l'Irdes :

<http://www.irdes.fr/documentation/veille-bibliographique-en-economie-de-la-sante.html>

Produced by the Irdes documentation centre, Doc Veille, a bimonthly publication, presents by theme the latest articles and reports in health economics: both peer-reviewed and grey literature.

You can access to the electronic version of articles on our EJS portal (except for the French journals):
<http://ejournals.ebsco.com/Home.asp> (Access limited to Irdes team).

Other documents are accessible online, either available for consultation at the documentation center (see mention at the end of the notice). Requests for photocopies or scans of documents will not be answered. Doc Veille's archives are located on the Irdes website:

<http://www.irdes.fr/english/documentation/watch-on-health-economics-literature.html>

Contacts

Espace documentation : documentation@irdes.fr

Marie-Odile Safon : safon@irdes.fr

Véronique Suhard : suhard@irdes.fr

Sommaire

Assurance maladie / Health Insurance	7
Boes, S. et Gerfin, M. (2016). "Does Full Insurance Increase the Demand for Health Care?"	7
Sergi, J.-M., et al. (2016). "Interactions between Private Health and Long-term Care Insurance and the Effects of the Crisis: Evidence for Spain."	7
Van Winssen, K. P. M., et al. (2016). "Potential determinants of deductible uptake in health insurance: How to increase uptake in The Netherlands?"	7
Economie de la santé / Health Economics.....	7
Ogundeji, Y. K., et al. "The effectiveness of payment for performance in health care: A meta-analysis and exploration of variation in outcomes."	7
E-santé / E-Health	8
(2016). "La m-santé, à l'ère de la e-santé. Promesses, enjeux et responsabilités. / M-health in an age of e-health. Promises, challenges and liabilities."	8
Cresswell, K. M., et al. (2016). "Sustained User Engagement in Health Information Technology: The Long Road from Implementation to System Optimization of Computerized Physician Order Entry and Clinical Decision Support Systems for Prescribing in Hospitals in England."	8
Durupt, M., et al. (2016). "La télémédecine en zones rurales : représentations et expériences de médecins généralistes.".....	8
Etat de santé / Health Status.....	9
Hone, T., et al. (2016). "Association of searching for health-related information online with self-rated health in the European Union."	9
Kassebaum, N. J., et al. "Global, regional, and national disability-adjusted life-years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 2013-2015: a systematic analysis for the Global Burden of Disease Study 2015."	9
Lim, S. S., et al. "Measuring the health-related Sustainable Development Goals in 188 countries: a baseline analysis from the Global Burden of Disease Study 2015.".....	9
Vos, T., et al. "Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015.".....	10
Wang, H., et al. "Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015.".....	10
Géographie de la santé / Geography of Health.....	10

Delaunay, M., et al. (2016). "Geographic dimensions of a health network dedicated to occupational and work related diseases."	10
Gianino, M. M., et al. (2016). "Declining Amenable Mortality: Time Trend (2000-2013) and Geographic Area Analysis."	10
Hôpital / Hospitals	10
(2016/10). "GHT et pratiques médicales."	11
Brammli-Greenberg, S., et al. "Why and how did Israel adopt activity-based hospital payment? The Procedure-Related Group incremental reform."	11
Chin, D. L., et al. (2016). "Rethinking Thirty-Day Hospital Readmissions: Shorter Intervals Might Be Better Indicators Of Quality Of Care."	11
Leung, I., et al. (2016). "Participation des médecins généralistes dans les prises en charge de leurs patients en hospitalisation à domicile."	11
Ramos, P. et Almeida, A. (2016). "The Impact of an Increase in User Costs on the Demand for Emergency Services: The Case of Portuguese Hospitals."	11
Verzulli, R., et al. (2016). "Price Changes in Regulated Healthcare Markets: Do Public Hospitals Respond and How?"	12
Inégalités de santé / Health Inequalities.....	12
Arora, V. S., et al. (2016). "An examination of unmet health needs as perceived by Roma in Central and Eastern Europe."	12
Ruhm, J.C. (2016). "Health Effects of Economic Crises."	13
Clair, A., et al. (2016). "The impact of the housing crisis on self-reported health in Europe: multilevel longitudinal modelling of 27 EU countries."	13
Katikireddi, S. V., et al. (2016). "Employment status and income as potential mediators of educational inequalities in population mental health."	13
Lundqvist, A., et al. (2016). "Socioeconomic inequalities in breast cancer incidence and mortality in Europe—a systematic review and meta-analysis."	13
Coveney, M. et al. (2016). "Health Disparities by Income in Spain Before and After the Economic Crisis."	14
Médicaments / Pharmaceuticals.....	14
Armeni, P., et al. (2016). "The simultaneous effects of pharmaceutical policies from payers' and patients' perspectives: Italy as a case study."	14
Busse, R. (2016) "Assessing the benefit of new pharmaceuticals: Are we talking the same language, can we explain disagreement, and would it be better to do it together?"	14
Fischer, K. E. et Stargardt, T. (2016). "The diffusion of generics after patent expiry in Germany."	15

Pilorge, C. (2016). "Monopole officinal et concurrence en prix pour la délivrance des médicaments non remboursables : l' exemple français."	15
Salas-Vega, S., et al. "A comparative study of drug listing recommendations and the decision-making process in Australia, the Netherlands, Sweden, and the UK."	15
Politique de santé / Health Policy	15
Busse, R. "Pay-for-performance: Time to act but also to provide further evidence."	15
Milstein, R. et Schreyoegg, J. "Pay for performance in the inpatient sector: A review of 34 P4P programs in 14 OECD countries."	16
Oberlander, J. (2016). "From Obamacare to Hillarycare — Democrats' Health Care Reform Agenda."	16
Politique publique / Public Policy	16
Ben Lakhdar, C., et al. (2016). "Does smoke cross the border? Cigarette tax avoidance in France."	16
Spach, M. (2016). "Enjeux économiques et politiques publiques de lutte contre la consommation nocive d'alcool en France."	16
Politique de santé / Health Policy	17
Gwyn, B. (2016). "What Can We Learn from the UK's "Natural Experiments" of the Benefits of Regions?"	17
Yves Bergevin, Bhejssrj, L. D. et Denis, R. (2016). "Transforming Regions into High-Performing Health Systems Toward the Triple Aim of Better Health, Better Care and Better Value for Canadians."	17
Prévention / Prevention	17
Azzopardi-Muscat, N. (2016). "The future of public health practice in Europe."	17
Barnay, T. et Videau, Y. (2016). "Regards d'économistes sur les déterminants de la santé et les mécanismes d'incitations à la prévention."	18
Prévision – Evaluation / Prevision - Evaluation.....	18
Wildman, J., et al. (2016). "Economic evaluation of integrated new technologies for health and social care: Suggestions for policy makers, users and evaluators."	18
Psychiatrie / Psychiatry.....	18
Costa, C. (2016). "Shortage Of Mental Health Professionals."	18
Dreger, S., et al. (2016). "Gender inequalities in mental wellbeing in 26 European countries: do welfare regimes matter?"	18
Jacobs, R., et al. (2016). Funding of mental health services. Do available data support episodic payment?	19

Ösby, U., et al. (2016). "Mortality trends in cardiovascular causes in schizophrenia, bipolar and unipolar mood disorder in Sweden 1987–2010." 19

Soins de santé primaires / Primary Health Care..... 19

Bodenheimer, T. et Bauer, L. (2016). "Rethinking the Primary Care Workforce - An Expanded Role for Nurses." 19

Lizuka, T. et Watanabe, Y. (2016). "The Impact of Physician Supply on the Healthcare System: Evidence from Japan's New Residency Program." 19

Shapiro, J. (2016). "Gatekeeping must go beyond the linear referral model." 20

Wise, J. (2016). "Having a named accountable GP does not improve continuity of care, study finds." 20

Systèmes de santé / Health Systems 20

Everson, J., et al. (2016). "Achieving Adherence to Evidence-Based Practices: Are Health IT and Hospital-Physician Integration Complementary or Substitutive Strategies?" 20

Goodrick, E. et Reay, T. (2016). "An Institutional Perspective on Accountable Care Organizations." 20

Gregory, P. M. (2016). "Regionalization: What Have We Learned?" 21

Lohmann, J., et al. (2016). "Crowding out or no crowding out? A Self-Determination Theory approach to health worker motivation in performance-based financing." 21

Martin, L. T., et al. (2016). "Strengthening Integration Of Health Services And Systems." 21

Mick, S. S. et Shay, P. D. (2016). "Accountable Care Organizations and Transaction Cost Economics." 22

Nembhard, I. M. et Tucker, A. L. (2016). "Applying Organizational Learning Research to Accountable Care Organizations." 22

Bhattacharyya, O. et Wendy, L. (2016). "Building Bridges to Integrate Care (BRIDGES): Incubating Health Service Innovation across the Continuum of Care for Patients with Multiple Chronic Conditions." 22

Shortell, S. M. (2016). "Applying Organization Theory to Understanding the Adoption and Implementation of Accountable Care Organizations: Commentary." 22

Vogus, T. J. et Singer, S. J. (2016). "Creating Highly Reliable Accountable Care Organizations." 23

Vogus, T. J. et Singer, S. J. (2016). "Unpacking Accountable Care: Using Organization Theory to Understand the Adoption, Implementation, Spread, and Performance of Accountable Care Organizations." 23

Walter, P. W. (2016). "Performance Measurement for People with Multimorbidity and Complex Health Needs." 23

Travail et santé / Occupational Health24

Banefelt, J., et al. (2016). "Work productivity loss and indirect costs associated with new cardiovascular events in high-risk patients with hyperlipidemia: estimates from population-based register data in Sweden."24

Hessel, P. et Avendano, M. (2016). "Economic downturns during the life-course and late-life health: an analysis of 11 European countries."24

Schneider, U., et al. "Long-term sick leave and graded return to work: What do we know about the follow-up effects?"24

Seuring, T., et al. (2016). The impact of diabetes on labour market outcomes in Mexico. a panel data and biomarker analysis.,24

Vieillessement / Ageing25

Bien, B., et al. (2013). "Disabled older people's use of health and social care services and their unmet care needs in six European countries."25

Peña-Longobardo, L. M., et al. "The Spanish long-term care system in transition: Ten years since the 2006 Dependency Act."25

Assurance maladie / Health Insurance

Boes, S. et Gerfin, M. (2016). "Does Full Insurance Increase the Demand for Health Care?" *Health Econ* **25**(11): 1483-1496.

We estimate the causal impact of having full health insurance on healthcare expenditures. We take advantage of a unique quasi-experimental setup in which deductibles and co-payments were zero in a managed care plan and nonzero in regular insurance, until a policy change forced all individuals with an active plan to cover a minimum amount of their expenses. Using panel data and a nonlinear difference-in-differences strategy, we find a demand elasticity of about -0.14 comparing full insurance with the cost-sharing model and a significant upward shift in the likelihood to generate costs. Copyright (c) 2015 John Wiley & Sons, Ltd.

Sergi, J.-M., et al. (2016). "Interactions between Private Health and Long-term Care Insurance and the Effects of the Crisis: Evidence for Spain." *Health Econ* **25**(0): 159-179.

This paper analyzes the reasons for the scarce development of the private long-term care insurance market in Spain, and its relationship with health insurance. We are also interested in the effects the crisis has had both on the evolution of the demand for long-term care insurance and on the existence of regional disparities. We estimate bivariate probit models with endogenous variables using Spanish data from the Survey on Health and Retirement in Europe. Our results confirm that individuals wishing to purchase long-term care insurance are, in a sense, forced to subscribe a health insurance policy. In spite of this restriction in the supply of long-term care insurance contracts, we find its demand has grown in recent years, which we attribute to the budget cuts affecting the implementation of Spain's System of Autonomy and Attention to Dependent People. Regional differences in its implementation, as well as the varying effects the crisis has had across Spanish regions, lead to the existence of a crowding-in effect in the demand for long-term care insurance in those regions where co-payment is based on income and wealth, those that have a lower percentage of public long-term care beneficiaries, or those with a smaller share of cash benefits over total public benefits. Copyright © 2016 John Wiley & Sons, Ltd.

Van Winssen, K. P. M., et al. (2016). "Potential determinants of deductible uptake in health insurance: How to increase uptake in The Netherlands?" *The European Journal of Health Economics* **17**(9): 1059-1072. <http://dx.doi.org/10.1007/s10198-015-0745-2>

In health insurance, voluntary deductibles are offered to the insured in return for a premium rebate. Previous research has shown that 11 % of the Dutch insured opted for a voluntary deductible (VD) in health insurance in 2014, while the highest VD level was financially profitable for almost 50 % of the population in retrospect. To explain this discrepancy, this paper identifies and discusses six potential determinants of the decision to opt for a VD from the behavioral economic literature: loss aversion, risk attitude, ambiguity aversion, debt aversion, omission bias, and liquidity constraints. Based on these determinants, five potential strategies are proposed to increase the number of insured opting for a VD. Presenting the VD as the default option and providing transparent information regarding the VD are the two most promising strategies. If, as a result of these strategies, more insured would opt for a VD, moral hazard would be reduced.

Economie de la santé / Health Economics

Ogundeji, Y. K., et al. "The effectiveness of payment for performance in health care: A meta-analysis and exploration of variation in outcomes." *Health Policy* **120**(10): 1141-1150. <http://dx.doi.org/10.1016/j.healthpol.2016.09.002>

Schemes evaluated based on processes (compared to outcomes) appear to have larger effects. Larger

incentives are likely to have greater effects than smaller incentives. Better evaluated P4P schemes show smaller estimates of effects.

E-santé / E-Health

(2016). "La m-santé, à l'ère de la e-santé. Promesses, enjeux et responsabilités. / M-health in an age of e-health. Promises, challenges and liabilities." *Annales Pharmaceutiques Françaises* 74(6): 421-430.

Notion difficile à apprécier et à définir, la e-santé offre des perspectives tant pour les patients, les professionnels de santé que le système de santé. Toutefois, des incertitudes persistent quant à la performance de ces outils et la sécurité qu'ils présentent notamment en matière de données personnelles des patients. On assiste alors à l'émergence de nouvelles responsabilités, non seulement s'agissant du développement de ces nouveaux outils que de leur dispensation. E-Health offers perspectives for patients, healthcare professionals and healthcare system, although this concept appears difficult to appreciate and to define. Uncertainties remain on the efficiency of these tools and their safety in particular with respect to personal data of the patients. Thus, we can observe the emergence of new categories of liabilities, not only with respect to the development of these new tools, but also regarding their distribution.

Cresswell, K. M., et al. (2016). "Sustained User Engagement in Health Information Technology: The Long Road from Implementation to System Optimization of Computerized Physician Order Entry and Clinical Decision Support Systems for Prescribing in Hospitals in England." *Health Serv Res.* [Epub ahead of print]

OBJECTIVE: To explore and understand approaches to user engagement through investigating the range of ways in which health care workers and organizations accommodated the introduction of computerized physician order entry (CPOE) and computerized decision support (CDS) for hospital prescribing. STUDY SETTING: Six hospitals in England, United Kingdom. STUDY DESIGN: Qualitative case study. DATA COLLECTION: We undertook qualitative semi-structured interviews, non-participant observations of meetings and system use, and collected organizational documents over three time periods from six hospitals. Thematic analysis was initially undertaken within individual cases, followed by cross-case comparisons. FINDINGS: We conducted 173 interviews, conducted 24 observations, and collected 17 documents between 2011 and 2015. We found that perceived individual and safety benefits among different user groups tended to facilitate engagement in some, while other less engaged groups developed resistance and unsanctioned workarounds if systems were perceived to be inadequate. We identified both the opportunity and need for sustained engagement across user groups around system enhancement (e.g., through customizing software) and the development of user competencies and effective use. CONCLUSIONS: There is an urgent need to move away from an episodic view of engagement focused on the preimplementation phase, to more continuous holistic attempts to engage with and respond to end-users.

Durupt, M., et al. (2016). "La télémédecine en zones rurales : représentations et expériences de médecins généralistes." *Santé Publique* 28(4): 487-497.

<http://www.cairn.info/revue-sante-publique-2016-4-page-487.htm>

Introduction : La télémédecine constitue une nouvelle forme de pratique médicale dont le développement est aujourd'hui en pleine expansion. Elle trouve un écho particulier dans certains territoires lorrains où le déficit en médecins généralistes et spécialistes nécessite le développement de nouvelles formes de pratiques. L'objectif de cette étude était d'explorer les représentations de la télémédecine, et de la téléconsultation en particulier, des médecins généralistes exerçant en zones déficitaires en offre de soins en Lorraine et d'identifier les avantages et désavantages perçus de son développement. Méthodes : Une analyse qualitative a été faite à partir de cinq focus groupes réalisés avec 32 médecins entre juin 2014 et juillet 2015 dans un territoire à faible densité médicale.

Résultats : Cette étude montre qu'il existe une méconnaissance générale de la télémédecine. Les médecins expriment leur désir de préserver leur rôle de pivot et d'être acteurs de cette télémédecine qui ne devra pas leur être imposée. Les réticences en termes d'aspects juridiques et financiers sont des freins à son développement. Enfin, la télémédecine devra respecter un cadre légal en termes de responsabilité médicale et de sécurisation des données. Discussion : Chaque mois, plus de cent actes de télémédecine sont réalisés en Lorraine. Bien qu'il s'agisse d'une solution permettant de faciliter l'accès aux soins dans les zones déficitaires, les médecins semblent vouloir préserver leur relation médecin-patient et ne se sentent pas prêts à modifier leur pratique.

Etat de santé / Health Status

Hone, T., et al. (2016). "Association of searching for health-related information online with self-rated health in the European Union." *The European Journal of Public Health* 26(5): 748-753.
<http://eurpub.oxfordjournals.org/content/eurpub/26/5/748.full.pdf>

Background: The Internet is widely accessed for health information, but poor quality information may lead to health-worsening behaviours (e.g. non-compliance). Little is known about the health of individuals who use the Internet for health information. Methods: Using the Flash Eurobarometer survey 404, European Union (EU) citizens aged ≥ 15 ($n = 26\ 566$) were asked about Internet utilisation for health information ('general' or 'disease-specific'), the sources used, self-rated health, and socioeconomic variables. Multivariable logistic regression was employed to assess the likelihood of bad self-rated health and accessing different health information sources (social networks, official website, online newspaper, dedicated websites, search engines). Results: Those searching for general information were less likely to report bad health [odds ratios (OR) = 0.80; 95% confidence intervals (CI): 0.70–0.92], whilst those searching for disease-specific information were more likely (OR = 1.22; 95% CI: 1.07–1.38). Higher education and frequent doctor visits were associated with use of official websites and dedicated apps for health. Variation between EU member states in the proportion of people who had searched for general or disease-specific information online was high. Conclusions: Searching for general health information may be more conducive to better health, as it is easier to understand, and those accessing it may already be or looking to lead healthier lives. Disease-specific information may be harder to understand and assimilate into appropriate care worsening self-rated health. It may also be accessed if health services fail to meet individuals' needs, and health status is currently poor. Ensuring individuals' access to quality health services and health information will be key to addressing inequalities in health.

Kassebaum, N. J., et al. "Global, regional, and national disability-adjusted life-years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 2013-2015: a systematic analysis for the Global Burden of Disease Study 2015." *The Lancet* 388(10053): 1603-1658.
[http://dx.doi.org/10.1016/S0140-6736\(16\)31460-X](http://dx.doi.org/10.1016/S0140-6736(16)31460-X)

Background: Healthy life expectancy (HALE) and disability-adjusted life-years (DALYs) provide summary measures of health across geographies and time that can inform assessments of epidemiological patterns and health system performance, help to prioritise investments in research and development, and monitor progress toward the Sustainable Development Goals (SDGs). We aimed to provide updated HALE and DALYs for geographies worldwide and evaluate how disease burden changes with development.

Lim, S. S., et al. "Measuring the health-related Sustainable Development Goals in 188 countries: a baseline analysis from the Global Burden of Disease Study 2015." *The Lancet* 388(10053): 1813-1850.
[http://dx.doi.org/10.1016/S0140-6736\(16\)31467-2](http://dx.doi.org/10.1016/S0140-6736(16)31467-2)

In September, 2015, the UN General Assembly established the Sustainable Development Goals (SDGs). The SDGs specify 17 universal goals, 169 targets, and 230 indicators leading up to 2030. We provide an analysis of 33 health-related SDG indicators based on the Global Burden of Diseases, Injuries, and Risk

Factors Study 2015 (GBD 2015).

Vos, T., et al. "Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015." *The Lancet* **388**(10053): 1545-1602.
[http://dx.doi.org/10.1016/S0140-6736\(16\)31678-6](http://dx.doi.org/10.1016/S0140-6736(16)31678-6)

Wang, H., et al. "Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015." *The Lancet* **388**(10053): 1459-1544.
[http://dx.doi.org/10.1016/S0140-6736\(16\)31012-1](http://dx.doi.org/10.1016/S0140-6736(16)31012-1)

Improving survival and extending the longevity of life for all populations requires timely, robust evidence on local mortality levels and trends. The Global Burden of Disease 2015 Study (GBD 2015) provides a comprehensive assessment of all-cause and cause-specific mortality for 249 causes in 195 countries and territories from 1980 to 2015. These results informed an in-depth investigation of observed and expected mortality patterns based on sociodemographic measures.

Géographie de la santé / Geography of Health

Delaunay, M., et al. (2016). "Geographic dimensions of a health network dedicated to occupational and work related diseases." *International Journal of Health Geographics* **15**(1): 34.
<http://dx.doi.org/10.1186/s12942-016-0063-7>

Although introduced nearly 40 years ago, Geographic Information Systems (GISs) have never been used to study Occupational Health information regarding the different types, scale or sources of data. The geographic distribution of occupational diseases and underlying work activities were always analyzed independently. Our aim was to consider the French Network of Occupational Disease (OD) clinics, namely the "French National OD Surveillance and Prevention Network" (rnv3p) as a spatial object in order to describe its catchment.

Gianino, M. M., et al. (2016). "Declining Amenable Mortality: Time Trend (2000-2013) and Geographic Area Analysis." *Health Serv Res.*

OBJECTIVE: To update amenable mortality in 32 OECD countries at 2013 (or last available year), to describe the time trends during 2000-2013, and to evaluate the association of these trends with various geographic areas. DATA SOURCES: Secondary data from 32 countries during 2000-2013, gathered from the World Health Organization Mortality Database. STUDY DESIGN: Time trend analysis. DATA COLLECTION: Using Nolte and McKee's list, age-standardized amenable mortality rates (SDRs) were calculated as the annual number of deaths over the population aged 0-74 years per 100,000 inhabitants. We performed a mixed-effects polynomial regression analysis on the annual SDRs to determine whether specific geographic areas were associated with different SDR trajectories over time. PRINCIPAL FINDINGS: The OECD average annual decrease was 3.6/100,000 ($p < .001$), but slowed over time (coefficient for the quadratic term = 0.11, $p < .001$). Eastern and Atlantic European countries had the steepest decline (-6.1 and -4.7, respectively), while Latin American countries had the lowest slope (-1.7). The OECD average annual decline during the 14-year period was -0.5 ($p < .001$) for cancers and -2.5 ($p < .001$) for cardiovascular diseases, with significant differences among countries. CONCLUSION: Declining trend of amenable SDRs was continuing to 2013 but with steepness change compared with previous periods and with a slowdown.

Hôpital / Hospitals

(2016/10). "GHT et pratiques médicales." *Gestions hospitalières*(559): 590.

Chevilles ouvrières de l'hôpital et souvent très impliqués dans son fonctionnement au jour le jour, les médecins n'ont pas toujours une vision très claire des changements que ne manqueront pas d'induire les groupements hospitaliers de territoire (GHT). Et pourtant, si la loi est totalement appliquée, il est clair qu'elle aura un impact non seulement sur l'organisation du travail des praticiens et de leurs services, mais également sur les patients et probablement même sur la médecine ambulatoire.

Bramli-Greenberg, S., et al. "Why and how did Israel adopt activity-based hospital payment? The Procedure-Related Group incremental reform." *Health Policy* 120(10): 1171-1176.
<http://dx.doi.org/10.1016/j.healthpol.2016.08.008>

Since 2002, Israel has been adopting "Procedure-Related Group" (PRG) as hospital payments. It also set consistent costing and pricing mechanisms. One objective was to improve regulators' capacity to set policy, supervise and control. Regulators, purchasers and providers were involved in the designing the reform. PRGs are a simple alternative to DRGs when no sufficient data is available.

Chin, D. L., et al. (2016). "Rethinking Thirty-Day Hospital Readmissions: Shorter Intervals Might Be Better Indicators Of Quality Of Care." *Health Aff (Millwood)* 35(10): 1867-1875.

Public reporting and payment programs in the United States have embraced thirty-day readmissions as an indicator of between-hospital variation in the quality of care, despite limited evidence supporting this interval. We examined risk-standardized thirty-day risk of unplanned inpatient readmission at the hospital level for Medicare patients ages sixty-five and older in four states and for three conditions: acute myocardial infarction, heart failure, and pneumonia. The hospital-level quality signal captured in readmission risk was highest on the first day after discharge and declined rapidly until it reached a nadir at seven days, as indicated by a decreasing intracluster correlation coefficient. Similar patterns were seen across states and diagnoses. The rapid decay in the quality signal suggests that most readmissions after the seventh day postdischarge were explained by community- and household-level factors beyond hospitals' control. Shorter intervals of seven or fewer days might improve the accuracy and equity of readmissions as a measure of hospital quality for public accountability.

Leung, I., et al. (2016). "Participation des médecins généralistes dans les prises en charge de leurs patients en hospitalisation à domicile." *Santé Publique* 28(4): 499-504.
<http://www.cairn.info/revue-sante-publique-2016-4-page-499.htm>

Objectifs : L'hospitalisation à domicile (HAD) se développe en France et nécessite la participation des médecins généralistes pour la prise en charge de leurs patients. L'objectif de l'étude est d'identifier les incitatifs et les obstacles à la participation des médecins généralistes en HAD. Méthodes : Une étude qualitative a été réalisée à partir d'entretiens semi-dirigés au cours d'un focus groupe auprès de 12 médecins généralistes franciliens. Tous les entretiens ont été enregistrés puis retranscrits sous la forme de verbatims et l'analyse des données a utilisé la méthode de la théorie enracinée (Grounded Theory). Résultats : Les médecins généralistes avaient une bonne connaissance des indications et des lieux d'intervention de l'HAD mais ils exprimaient des difficultés sur le circuit de la demande d'entrée. Les médecins généralistes identifiaient des difficultés de positionnement dans les prises en charge de leur patients mais améliorées par leur expertise clinique à domicile. Les médecins insistaient sur la complexité des soins à domicile mais ils pouvaient s'appuyer sur l'expertise du médecin coordonnateur et ils étaient demandeurs de formation. Conclusions : Cette étude a identifié les incitatifs et les obstacles à la participation des médecins généralistes en HAD. Il apparaissait indispensable de simplifier le circuit de la demande d'entrée en HAD via la médecine de ville, de renforcer les incitations pour les visites à domicile et de soutenir les médecins généralistes dans les prises en charge des soins complexes.

Ramos, P. et Almeida, A. (2016). "The Impact of an Increase in User Costs on the Demand for Emergency Services: The Case of Portuguese Hospitals." *Health Econ* 25(11): 1372-1388.

Evidence on the impact of user costs on healthcare demand in 'universal' public National Health Services (NHS) is scarce. The changes in copayments and in the regulation of the provision of free patient transportation, introduced in early 2012 in Portugal, provide a natural experiment to evaluate that impact. However, those changes in user costs were accompanied with changes in the criteria that determine which patients are exempt from copayments, implying that simple comparisons of user rates would be biased. In this paper, we develop a new methodology to evaluate the impact of increases in direct and indirect user costs on the demand for emergency services (ES) in the presence of compositional changes in co-payment exempt and non-exempt populations. Our results show that the increase in copayments did not have an effect in moderating ES demand by paying users, but we find significant effects of the change in transport regulation. Thus, our results support the conclusion that indirect costs may be more important than direct costs in determining healthcare demand in NHS-countries where copayments are small and wide exemption schemes are in place, especially for older patients. Copyright (c) 2015 John Wiley & Sons, Ltd.

Verzulli, R., et al. (2016). "Price Changes in Regulated Healthcare Markets: Do Public Hospitals Respond and How?" *Health Economics* : Ahead of print.

This paper examines the behaviour of public hospitals in response to the average payment incentives created by price changes for patients classified in different diagnosis-related groups (DRGs). Using panel data on public hospitals located within the Italian region of Emilia-Romagna, we test whether a 1-year increase in DRG prices induced public hospitals to increase their volume of activity and whether a potential response is associated with changes in waiting times and/or length of stay. We find that public hospitals reacted to the policy change by increasing the number of patients with surgical treatments. This effect was smaller in the 2 years after the policy change than in later years, and for providers with a lower excess capacity in the pre-policy period, whereas it did not vary significantly across hospitals according to their degree of financial and administrative autonomy. For patients with medical DRGs, instead, there appeared to be no effect on inpatient volumes. Our estimates also suggest that an increase in DRG prices had no impact on the proportion of patients waiting more than 6 months. Finally, we find no evidence of a significant effect on patients' average length of stay. Copyright (c) 2016 John Wiley & Sons, Ltd.

Inégalités de santé / Health Inequalities

Arora, V. S., et al. (2016). "An examination of unmet health needs as perceived by Roma in Central and Eastern Europe." *The European Journal of Public Health* 26(5): 737-742.

Background: Roma comprise the largest ethnic minority in Europe, with an estimated population of 10–12 million. Roughly 50–60% of European Roma live in the countries of Central and Eastern Europe. In this study, we set out to quantify and explain disparities in unmet health needs for Roma populations relative to non-Roma populations, using self-reported access to health care. Methods: The United Nations Development Programme/World Bank/European Commission 2011 regional Roma survey was used for this study (12 countries, 8735 Roma and 4572 non-Roma living in same communities), with self-reported unmet health need (did not consult a doctor or health professional when they felt it was necessary in past year) as the primary outcome. Multivariable logistic regressions were performed to study the determinants of unmet health need for Roma populations relative to non-Roma populations. Covariates controlled for included sociodemographic characteristics, economic ability, health status and healthcare access. Results: We found in unadjusted models that Roma throughout Central and Eastern Europe, with the exception of Montenegro, are two to three times more likely to report having an unmet health need in the past 12 months than non-Roma living nearby. These disparities largely remain significant, even after adjusting for gender, age, marital status, employment status, education, number of chronic conditions, health insurance status and geographical proximity to medical providers. Conclusions: Controlling for conventional measures of access to medical care (i.e. geographic access to providers and health insurance) does not eliminate

observed disparities in unmet need. Although improving funding and routine access to healthcare services for Roma is important in its own right as a means of increasing inclusion, there is a need for detailed assessments of the barriers that exist in each country, within and outside the health system, coupled with measures to implement existing commitments on Roma rights.

Ruhm, J.C. (2016). "Health Effects of Economic Crises." *Health Econ* 25(0): 6-24.
<http://ejournals.ebsco.com/direct.asp?ArticleID=42589D0A1E2045E07158>

This analysis summarizes prior research and uses national, US state and county-level data from 1976 to 2013 to examine whether the mortality effects of economic crises differ in kind from those of the more typical fluctuations. The tentative conclusion is that economic crises affect mortality rates (and presumably other measures of health) in the same way as less severe downturns – leading to improvements in physical health. The effects of severe national recessions in the USA appear to have a beneficial effect on mortality that is roughly twice as strong as that predicted by the elevated unemployment rates alone, while the higher predicted rate of suicides during typical periods of economic weakness is approximately offset during severe recessions. No consistent pattern is obtained for more localized economic crises occurring at the state level – some estimates suggest larger protective mortality effects while others indicate offsetting deleterious consequences. Copyright © 2016 John Wiley & Sons, Ltd.

Clair, A., et al. (2016). "The impact of the housing crisis on self-reported health in Europe: multilevel longitudinal modelling of 27 EU countries." *The European Journal of Public Health* 26(5): 788-793.

Background: Many EU nations experienced a significant housing crisis during the Great Recession of 2008–10. We evaluated the consequences of housing payment problems for people's self-reported overall health. Methods: We used longitudinal data from the EU Statistics on Income and Living Conditions survey covering 27 countries from 2008 to 2010 to follow a baseline sample of persons who did not have housing debt and who were employed (45 457 persons, 136 371 person-years). Multivariate linear regression and multilevel models were used to evaluate the impact of transitions into housing arrears on self-reported health, correcting for the presence of chronic illness, health limitations, and other potential socio-demographic confounders. Results: Persons who transitioned into housing arrears experienced a significant deterioration in self-reported overall health by – 0.03 U (95% CI – 0.01 to – 0.04), even after correcting for chronic illness, disposable income and employment status, and individual fixed effects. This association was independent and similar in magnitude to that for job loss (–0.02, 95% CI: –0.01 to – 0.04). We also found that the impact of housing arrears was significantly worse among renters, corresponding to a mean 0.11 unit additional drop in health as compared with owner-occupiers. These adverse associations were only evident in persons below the 75th percentile of disposable income. Discussion: Our analysis demonstrates that persons who suffer housing arrears experience increased risk of worsening self-reported health, especially among those who rent. Future research is needed to understand the role of alternative housing support systems and available strategies for preventing the health consequences of housing insecurity.

Katikireddi, S. V., et al. (2016). "Employment status and income as potential mediators of educational inequalities in population mental health." *The European Journal of Public Health* 26(5): 814-816.

We assessed whether educational inequalities in mental health may be mediated by employment status and household income. Poor mental health was assessed using General Health Questionnaire 'caseness' in working age adult participants (N = 48 654) of the Health Survey for England (2001–10). Relative indices of inequality by education level were calculated. Substantial inequalities were apparent, with adjustment for employment status and household income markedly reducing their magnitude. Educational inequalities in mental health were attenuated by employment status. Policy responses to economic recession (such as active labour market interventions) might reduce mental health inequalities but longitudinal research is needed to exclude reverse causation.

Lundqvist, A., et al. (2016). "Socioeconomic inequalities in breast cancer incidence and mortality in Europe – a systematic review and meta-analysis." *The European Journal of Public Health* 26(5): 804-813.

Background: Breast cancer is the leading cause of female cancer in Europe and is estimated to affect more than one in 10 women. Higher socioeconomic status has been linked to higher incidence but lower case fatality, while the impact on mortality is ambiguous. Methods: We performed a systematic literature review and meta-analysis on studies on association between socioeconomic status and breast cancer outcomes in Europe, with a focus on effects of confounding factors. Summary relative risks (SRRs) were calculated. Results: The systematic review included 25 articles of which 8 studied incidence, 10 case fatality and 8 mortality. The meta-analysis showed a significantly increased incidence (SRR 1.25, 1.17–1.32), a significantly decreased case fatality (SRR 0.72, 0.63–0.81) and a significantly increased mortality (SRR 1.16, 1.10–1.23) for women with higher socioeconomic status. The association for incidence became insignificant when reproductive factors were included. Case fatality remained significant after controlling for tumour characteristics, treatment factors, comorbidity and lifestyle factors. Mortality remained significant after controlling for reproductive factors. Conclusion: Women with higher socioeconomic status show significantly higher breast cancer incidence, which may be explained by reproductive factors, mammography screening, hormone replacement therapy and lifestyle factors. Lower case fatality for women with higher socioeconomic status may be partly explained by differences in tumour characteristics, treatment factors, comorbidity and lifestyle factors. Several factors linked to breast cancer risk and outcome, such as lower screening attendance for women with lower socioeconomic status, are suitable targets for policy intervention aimed at reducing socioeconomic-related inequalities in health outcomes.

Coveney, M. et al. (2016). "Health Disparities by Income in Spain Before and After the Economic Crisis." *Health Econ* 25(0): 141-158.

<http://ejournals.ebsco.com/direct.asp?ArticleID=473788165AB0EF2A47E8>

Little is known about how health disparities by income change during times of economic crisis. We apply a decomposition method to unravel the contributions of income growth, income inequality and differential income mobility across socio-demographic groups to changes in health disparities by income in Spain using longitudinal data from the Survey of Income and Living Conditions for the period 2004–2012. We find a modest rise in health inequality by income in Spain in the 5 years of economic growth prior to the start of the crisis in 2008, but a sharp fall after 2008. The drop mainly derives from the fact that loss of employment and earnings has disproportionately affected the incomes of the younger and healthier groups rather than the (mainly stable pension) incomes of the groups over 65 years. This suggests that unequal distribution of income protection by age may reduce health inequality in the short run after an economic recession. Copyright © 2016 John Wiley & Sons, Ltd.

Médicaments / Pharmaceuticals

Armeni, P., et al. (2016). "The simultaneous effects of pharmaceutical policies from payers' and patients' perspectives: Italy as a case study." *The European Journal of Health Economics* 17(8): 963-977.

<http://dx.doi.org/10.1007/s10198-015-0739-0>

This paper aims at covering a literature gap on the effects of copayments, prescription quotas and therapeutic reference pricing on public and private expenditures and volumes (1) When these policies are implemented in different areas at different times, (2) estimating their impact in the short and long run, (3) assessing the extent to which these impacts are interdependent, (4) scrutinising the extent to which the effects are mediated by prescribers' and patients' behaviours.

Busse, R. (2016) "Assessing the benefit of new pharmaceuticals: Are we talking the same language, can we explain disagreement, and would it be better to do it together?" *Health Policy* 120(10): 1101-1103.

<http://dx.doi.org/10.1016/j.healthpol.2016.10.006>

Fischer, K. E., et al. "Health benefit assessment of pharmaceuticals: An international comparison of decisions from Germany, England, Scotland and Australia." *Health Policy* 120(10): 1115-1122.

<http://dx.doi.org/10.1016/j.healthpol.2016.08.001>

We identified substantial disagreement between the FJC and NICE, SMC and PBAC. FJC and each agency agreed in 40%, 47.6% and 48.7% of ratings. Agreement improved moderately when comparing decisions on effectiveness only. Generally, the FJC tends to appraise stricter than NICE.

Fischer, K. E. et Stargardt, T. (2016). "The diffusion of generics after patent expiry in Germany." *The European Journal of Health Economics* 17(8): 1027-1040.
<http://dx.doi.org/10.1007/s10198-015-0744-3>

To identify the influences on the diffusion of generics after patent expiry, we analyzed 65 generic entries using prescription data of a large German sickness fund between 2007 and 2012 in a sales model. According to theory, several elements are responsible for technology diffusion: (1) time reflecting the rate of adaption within the social system, (2) communication channels, and (3) the degree of incremental innovation, e.g., the modifications of existing active ingredient's strength. We investigated diffusion in two ways: (1) generic market share (percentage of generic prescriptions of all prescriptions of a substance) and, (2) generic sales quantity (number of units sold) over time. We specified mixed regression models. Generic diffusion takes considerable time. An average generic market share of about 75 % was achieved not until 48 months. There was a positive effect of time since generic entry on generic market share ($p < 0.001$) and sales ($p < 0.001$). Variables describing the communication channels and the degree of innovation influenced generic market share (mostly $p < 0.001$), but not generic sales quantity. Market structure, e.g., the number of generic manufacturers ($p < 0.001$) and prices influenced both generic market share and sales. Imperfections in generic uptake through informational cascades seem to be largely present. Third-party payers could enhance means to promote generic diffusion to amplify savings through generic entry.

Pilorge, C. (2016). "Monopole officinal et concurrence en prix pour la délivrance des médicaments non remboursables : l' exemple français." *Revue économique* 67(5): 1057-1084.
<http://www.cairn.info/revue-economique-2016-5-page-1057.htm>

Cette étude analyse l'existence d'une concurrence en prix sur le marché des médicaments non remboursables, dans un cadre de monopole officinal en France. À partir de données de prix mensuelles pour trente médicaments pour un échantillon de 4 700 pharmacies, entre 2006 et 2008, le niveau des prix est comparé selon le degré de concurrence dans l'environnement proche de la pharmacie, mesurée à partir d'un indicateur fin de densité communale. Les résultats indiquent que la concurrence s'exerce très peu sur ce segment de marché. Alors que le degré de concurrence est très variable entre les pharmacies, la plupart d'entre elles vendent au même prix. Ces résultats interrogent sur les effets d'une ouverture de ce marché à de nouveaux entrants, au regard des expériences étrangères.

Salas-Vega, S., et al. "A comparative study of drug listing recommendations and the decision-making process in Australia, the Netherlands, Sweden, and the UK." *Health Policy* 120(10): 1104-1114.
<http://dx.doi.org/10.1016/j.healthpol.2016.08.006>

Globally, there is growing interest in value-based decision-making in drug care. Agreement in drug listing is low, but is affected by appraisal and indication. Agreement in drug listing is biased downwards by low-value therapies. Discrepancies in listing reflect differences in appraisal and concern for value.

Politique de santé / Health Policy

Busse, R. "Pay-for-performance: Time to act but also to provide further evidence." *Health Policy* 120(10): 1123-1124.

Milstein, R. et Schreyoegg, J. "Pay for performance in the inpatient sector: A review of 34 P4P programs in 14 OECD countries." *Health Policy* 120(10): 1125-1140.
<http://dx.doi.org/10.1016/j.healthpol.2016.08.009>

Pay-for-performance is an integral part of hospital reimbursement in the OECD. Programs are very heterogeneous in their design. They do not account for a large part of the hospital budget. The effects of pay-for-performance are mixed and evidence is scarce. Programs are seldom designed in a promising way.

Oberlander, J. (2016). "From Obamacare to Hillarycare — Democrats' Health Care Reform Agenda." *New England Journal of Medicine* 375(14): 1309-1311.
<http://www.nejm.org/doi/full/10.1056/NEJMp1610712>

Politique publique / Public Policy

Ben Lakhdar, C., et al. (2016). "Does smoke cross the border? Cigarette tax avoidance in France." *The European Journal of Health Economics* 17(9): 1073-1089.
<http://dx.doi.org/10.1007/s10198-015-0746-1>

This paper examines the impact on cigarette sales of the successive increases in cigarette prices in France from 2002 to 2004. Since the price differential between France and neighboring countries increased over the period in question, cross-border purchases became more financially attractive for smokers living near borders. Results from difference-in-differences estimates indicate that the decrease in cigarette sales observed in French border departments was around 20 % higher from 2004 to 2007 compared to non-border departments. The loss of fiscal revenue due to cross-border shopping since the tax increase amounts to 2 billion euros over the period 2002–2007. Our findings highlight the need for improved coordination of policies aimed at reducing tobacco consumption across European Union countries.

Spach, M. (2016). "Enjeux économiques et politiques publiques de lutte contre la consommation nocive d'alcool en France." *Santé Publique* 28(4): 461-470.
<http://www.cairn.info/revue-sante-publique-2016-4-page-461.htm>

Objectif : Analyser le poids du marché alcoolier sur la mise en place de politiques publiques volontaristes, au travers d'une revue de la littérature critique des politiques publiques de lutte contre l'abus d'alcool. Méthode : Une recherche documentaire et une analyse des données économique du marché alcoolier en France ont été réalisées. Le panorama des politiques publiques de lutte contre l'abus d'alcool a été élaboré d'un point de vue historique, en distinguant les politiques de lutte contre l'ivresse, de protection des populations vulnérables, de lutte contre l'alcoolémie au volant ou encore en milieu professionnel. Résultats : Les politiques publiques de lutte contre l'abus d'alcool visent principalement à diminuer les conséquences nocives de l'alcool survenant à l'issue d'un épisode de consommation (accident de la route, accidents de la voie publique, etc.), en négligeant les conséquences de long terme (cancer, cirrhose, etc.). De plus, tandis que la taxation figure parmi les outils de santé publique les plus efficaces pour diminuer le coût que l'alcool fait supporter à la société, l'État exerce une protection législative et fiscale sur les boissons alcooliques françaises. En particulier, le vin bénéficie d'une taxation inférieure aux autres alcools dont le titre alcoométrique volumique est supérieur (eaux-de-vie, liqueurs, etc.). Une explication quant à l'orientation des politiques publiques de lutte contre l'abus d'alcool réside dans le poids économique de l'alcool. Conclusion : Au regard de la mortalité engendrée par l'abus d'alcool, l'engagement de la France dans une politique publique volontariste est nécessaire. Dans ce sens, une politique de taxation de l'alcool selon la quantité d'alcool contenue, l'instauration d'un prix-plancher du gramme d'alcool ou encore l'augmentation des taxes sur l'alcool sont autant de politiques à considérer en vue d'infléchir la mortalité liée à l'alcool.

Politique de santé / Health Policy

Gwyn, B. (2016). "What Can We Learn from the UK's "Natural Experiments" of the Benefits of Regions?" HealthcarePapers **16**(1): 16-20.
<https://www.longwoods.com/content/24768>

Marchildon highlights the lack of evidence on policies of regionalization in Canada: with regionalization being in favour in the 2000s followed by disillusion and the abolition of regions by some provincial governments. This paper looks at evidence from the UK's single-payer system of the impacts of regions on the performance of the delivery of healthcare. In England, regions were an important part of the hierarchical structure of the National Health Service (NHS) from its beginning, in 1948, to the introduction of provider competition, in the 1990s. Since then, in England, governments have understood that the NHS cannot be run from Whitehall and have tried to replace hierarchical control by provider competition. The consequence was that regions in England were subjected to frequent reorganizations from the mid-1990s with their abolition being announced in 2010. In contrast, the devolved countries of the UK have always been organized as "regions"; in the form of their historic national boundaries. This paper argues that changes in the NHS in the UK in the 1990s and 2000s offer three "natural experiments", in terms of funding, organization and models of governance, that give evidence of the impacts of stable regions in the UK. It also considers the lessons of this evidence for Canada.

Yves Bergevin, Bhejssrj, L. D. et Denis, R. (2016). "Transforming Regions into High-Performing Health Systems Toward the Triple Aim of Better Health, Better Care and Better Value for Canadians." HealthcarePapers **16**(1): 34-52.
<https://www.longwoods.com/content/24767>

A study on the impact of regionalization on the Triple Aim of Better Health, Better Care and Better Value across Canada in 2015 identified major findings including: (a) with regard to the Triple Aim, the Canadian situation is better than before but variable and partial, and Canada continues to underperform compared with other industrialized countries, especially in primary healthcare where it matters most; (b) provinces are converging toward a two-level health system (provincial/regional); (c) optimal size of regions is probably around 350,000–500,000 population; (d) citizen and physician engagement remains weak. A realistic and attainable vision for high-performing regional health systems is presented together with a way forward, including seven areas for improvement: 1. Manage the integrated regionalized health systems as results-driven health programs; 2. Strengthen wellness promotion, public health and intersectoral action for health; 3. Ensure timely access to personalized primary healthcare/family health and to proximity services; 4. Involve physicians in clinical governance and leadership, and partner with them in accountability for results including the required changes in physician remuneration; 5. Engage citizens in shaping their own health destiny and their health system; 6. Strengthen health information systems, accelerate the deployment of electronic health records and ensure their interoperability with health information systems; 7. Foster a culture of excellence and continuous quality improvement. We propose a turning point for Canada, from Paradigm Freeze to Paradigm Shift: from hospital-centric episodic care toward evidence-informed population-based primary and community care with modern family health teams, ensuring integrated and coordinated care along the continuum, especially for high users. We suggest goals and targets for 2020 and time-bound federal/provincial/regional working groups toward reaching the identified goals and targets and placing Canada on a rapid path toward the Triple Aim.

Prévention / Prevention

Azzopardi-Muscat, N. (2016). "The future of public health practice in Europe." The European Journal of Public Health **26**(5): 732-732.
<http://eurpub.oxfordjournals.org/content/eurpub/26/5/732.full.pdf>

Barnay, T. et Videau, Y. (2016). "Regards d'économistes sur les déterminants de la santé et les mécanismes d'incitations à la prévention." *Santé Publique* 28(4): 435-437.
<http://www.cairn.info/revue-sante-publique-2016-4-page-435.htm>

En France, les mauvais résultats en termes de mortalité prématurée évitable et l'aggravation des inégalités sociales de santé, malgré un investissement public élevé, justifient de s'interroger sur la promotion d'actions de prévention efficaces. L'apport de l'analyse économique en matière de santé publique est alors de tenter de mesurer la « rentabilité » de certaines stratégies de santé.

Prévision – Evaluation / Prevision - Evaluation

Wildman, J., et al. (2016). "Economic evaluation of integrated new technologies for health and social care: Suggestions for policy makers, users and evaluators." *Social Science & Medicine* 169: 141-148.
<http://www.sciencedirect.com/science/article/pii/S0277953616305408>

With an ageing population there is a move towards the use of assisted living technologies (ALTs) to provide social care and health care services, and to improve service processes. These technologies are at the forefront of the integration of health and social care. However, economic evaluations of ALTs, and indeed economic evaluations of any interventions providing both health benefits and benefits beyond health are complex. This paper considers the challenges faced by evaluators and presents a method of economic evaluation for use with interventions where traditional methods may not be suitable for informing funders and decision makers. We propose a method, combining economic evaluation techniques, that can accommodate health outcomes and outcomes beyond health through the use of a common numeraire. Such economic evaluations can benefit both the public and private sector, firstly by ensuring the efficient allocation of resources. And secondly, by providing information for individuals who, in the market for ALTs, face consumption decisions that are infrequent and for which there may be no other sources of information. We consider these issues in the welfarist, extra-welfarist and capabilities frameworks, which we link to attributes in an individual production model. This approach allows for the valuation of the health component of any such intervention and the valuation of key social care attributes and processes. Finally, we present a set of considerations for evaluators highlighting the key issues that need to be considered in this type of economic evaluation.

Psychiatrie / Psychiatry

Costa, C. (2016). "Shortage Of Mental Health Professionals." *Health Affairs* 35(10): 1934.
<http://content.healthaffairs.org/content/35/10/1934.2.short>

Dreger, S., et al. (2016). "Gender inequalities in mental wellbeing in 26 European countries: do welfare regimes matter?" *The European Journal of Public Health* 26(5): 872-876.

Background: Nature and extent of welfare regimes and social policies are important determinants of health and health inequalities. This study examines the association of gender and mental wellbeing in European countries and investigates whether type of welfare regime plays a role in this association. Method: Data of 19 366 women and 14 338 men of the third round of the European Quality of Life Survey (2011–12) was used to analyse mental wellbeing, assessed by the World Health Organization 5—Mental Wellbeing Index. Multilevel logistic regression analyses were performed to analyse the association between gender and good mental wellbeing first at country-level, and secondly the between country variation was analysed and welfare regimes were included as explanatory variables. Results: We observed cross-national variation in good mental wellbeing. At country levels gender inequalities in good mental wellbeing were observed in 7 out of 26 countries. In analyses considering all countries together gender inequalities in good mental wellbeing were identified independent of further individual socio-demographic variables and independent of the welfare regimes that people

lived in [women vs. men: OR = 0.76; (95% CI = 0.71–0.81)]. Gender inequalities in good mental wellbeing were not modified by welfare regimes. Conclusion: There are cross-national differences in good mental wellbeing between European countries. Gender inequalities with a lower prevalence of good mental wellbeing among women are common in European countries. This study suggests that welfare regimes do not modify these gender inequalities in mental wellbeing

Jacobs, R., et al. (2016). Funding of mental health services. Do available data support episodic payment?

Centre for Health Economics: 1-82.

https://www.york.ac.uk/media/che/documents/papers/researchpapers/CHERP137_mental_health_data_episodic_payment.pdf

The primary method of funding NHS mental health services in England has been block contracts between commissioners and providers, with negotiations based on historical expenditure. There has been an intention to change the funding method to make it similar to that used in acute hospitals (called the National Tariff Payment System or NTPS, formerly known as Payment by Results (PbR)) where fixed prices are paid for each completed treatment episode. Within the mental health context this funding approach is known as episodic payment. Patients are categorised into groups with similar levels of need, called clusters. The mental health clustering tool (MHCT) provides a guide for assignment of patients to clusters. Fixed prices could then be set for each cluster and providers would be paid for the services they deliver within each cluster based on these fixed prices, although the emphasis to date has been on local pricing. For this episodic payment system to work, the MHCT needs to assign patients to clusters, such that they are homogenous in terms of 1) patient need, and 2) resource use.

Ösby, U., et al. (2016). "Mortality trends in cardiovascular causes in schizophrenia, bipolar and unipolar mood disorder in Sweden 1987–2010." *The European Journal of Public Health* 26(5): 867-871.

Introduction: People with severe mental illness have increased risk for premature mortality and thus a shorter life expectancy. Relative death rates are used to show the excess mortality among patients with mental health disorder but cannot be used for the comparisons by country, region and time. Methods: A population-based register study including all Swedish patients in adult psychiatry admitted to hospital with a main diagnosis of schizophrenia, bipolar or unipolar mood disorder in 1987–2010 (614 035 person-years). Mortality rates adjusted for age, sex and period were calculated using direct standardization methods with the 2010 Swedish population as standard. Data on all residents aged 15 years or older were used as the comparison group. Results: Patients with severe mental health disorders had a 3-fold mortality compared to general population. All-cause mortality decreased by 9% for people with bipolar mood disorder and by 26–27% for people with schizophrenia or unipolar mood disorder, while the decline in the general population was 30%. Also mortality from diseases of the circulatory system declined less for people with severe mental disorder (–35% to –42%) than for general population (–49%). The pattern was similar for other cardiovascular deaths excluding cerebrovascular deaths for which the rate declined among people with schizophrenia (–30%) and unipolar mood disorder (–41%), unlike for people with bipolar mood disorder (–3%). Conclusions: People with mental health disorder have still elevated mortality. The mortality declined faster for general population than for psychiatric patients. More detailed analysis is needed to reveal causes-of-death with largest possibilities for improvement.

Soins de santé primaires / Primary Health Care

Bodenheimer, T. et Bauer, L. (2016). "Rethinking the Primary Care Workforce - An Expanded Role for Nurses." *N Engl J Med* 375(11): 1015-1017.

Lizuka, T. et Watanabe, Y. (2016). "The Impact of Physician Supply on the Healthcare System: Evidence from Japan's New Residency Program." *Health Econ* 25(11): 1433-1447.

Using a 2004 Japanese natural experiment affecting physician supply, we study the physician labor market and its effects on hospital exits and health outcomes. Although physicians play a central role in determining the performance of a healthcare system, identifying their impacts are difficult because physician supply is endogenously determined. We circumvent the problem by exploiting an exogenous shock to physician supply created by the introduction of a new residency program - our natural experiment. Based on panel data covering all physicians in Japan, we find that the introduction of a new residency program substantially decreased the supply of physicians in some rural markets where local hospitals had relied on university hospitals for filling physician positions. We also find that physician market wages increased in the affected markets relative to less affected markets. Finally, we find that this change in physician market wages forced hospitals to exit affected markets and negatively affected patient health outcomes in those markets. These effects may be exacerbated by the fact that the healthcare market was rigidly price-regulated. Copyright (c) 2015 John Wiley & Sons, Ltd.

Shapiro, J. (2016). "Gatekeeping must go beyond the linear referral model." *Bmj* 355.
<http://www.bmj.com/content/bmj/355/bmj.i5793.full.pdf>

Wise, J. (2016). "Having a named accountable GP does not improve continuity of care, study finds." *Bmj* 354:
i5048.

Systèmes de santé / Health Systems

Everson, J., et al. (2016). "Achieving Adherence to Evidence-Based Practices: Are Health IT and Hospital-Physician Integration Complementary or Substitutive Strategies?" *Med Care Res Rev* 73(6): 724-751.

In response to evolving policies and conditions, hospitals have increased health information technology (HIT) adoption and strived to improve hospital-physician integration. While evidence suggests that both HIT and integration confer independent benefits, when combined, they may provide complementary means to achieve high performance or overlap to offset each other's contribution. We explore this relationship in the context of hospital adherence to evidence-based practices (EBPs). Using the American Hospital Association's Annual and IT Supplement surveys, and Centers for Medicare and Medicaid Services's Hospital Compare, we estimate the independent relationships and interactions between HIT and hospital-physician integration with respect to EBP adherence. HIT adoption and tight (but not loose) integration are independently associated with greater adherence to EBPs. The interaction between HIT adoption and tight integration is negative, consistent with an offsetting association between HIT adoption and integration in their relationship to EBP adherence. This finding reveals the need to be aware of potential substitutive effects from simultaneous pursuit of multiple approaches to performance improvement.

Goodrick, E. et Reay, T. (2016). "An Institutional Perspective on Accountable Care Organizations." *Med Care Res Rev* 73(6): 685-693.

We employ aspects of institutional theory to explore how Accountable Care Organizations (ACOs) can effectively manage the multiplicity of ideas and pressures within which they are embedded and consequently better serve patients and their communities. More specifically, we draw on the concept of institutional logics to highlight the importance of understanding the conflicting principles upon which ACOs were founded. Based on previous research conducted both inside and outside health care settings, we argue that ACOs can combine attention to these principles (or institutional logics) in different ways; the options fall on a continuum from (a) segregating the effects of multiple logics from each other by compartmentalizing responses to multiple logics to (b) fully hybridizing the different logics. We suggest that the most productive path for ACOs is to situate their approach between the two extremes of "segregating" and "fully hybridizing." This strategic approach allows ACOs to develop effective responses that combine logics without fully integrating them. We identify three ways that ACOs can embrace institutional complexity short of fully hybridizing disparate logics: (1) reinterpreting

practices to make them compatible with other logics; (2) engaging in strategies that take advantage of existing synergy between conflicting logics; (3) creating opportunities for people at frontline to develop innovative ways of working that combine multiple logics.

Gregory, P. M. (2016). "Regionalization: What Have We Learned?" *HealthcarePapers* 16(1): 8-14.
<https://www.longwoods.com/content/24766>

Regionalization is arguably the most significant health reform in Canada since Medicare. Although a majority of provinces continue to have regionalized systems in Canada, the policy is more contested today than it was a decade ago. Since Ontario's implementation of local health integration networks (LHINs) in 2006 and Alberta's elimination of regional health authorities (RHAs) in favour of Alberta Health Services in 2008, Canada has had differing approaches to regionalization. However, due to the centralization of physician budgets in provincial health ministries, primary care has not been integrated into any regionalization model in Canada. This factor has severely constrained the performance of RHAs and their ability to meet their respective legislative mandates. Moreover, the lack of research on regionalization has meant that provincial governments are working from an extremely limited evidence base on which to make critical decisions on the structuring of health systems in Canada.

Lohmann, J., et al. (2016). "Crowding out or no crowding out? A Self-Determination Theory approach to health worker motivation in performance-based financing." *Social Science & Medicine* 169: 1-8.
<http://www.sciencedirect.com/science/article/pii/S0277953616305044>

Performance-based financing (PBF) is a common health system reform approach in low and middle income countries at present. Although increasing evidence on the effectiveness of PBF and knowledge of principles of good design are available, research is still lacking in regards to other aspects. Among these are a yet limited understanding of the complex role of health worker motivation in PBF and of potential side effects, for instance on intrinsic motivation. Our article aims to support meaningful future research by advancing the theoretical discussion around health worker motivation and PBF. We argue that an in-depth understanding of the motivational mechanisms and consequences of PBF at health worker level are of high practical relevance and should be at the heart of the PBF research agenda, and that predominant unidimensional conceptualizations of health worker motivation and descriptive rather than explanatory research approaches are insufficient to fully understand whether, how, and why PBF schemes alter health workers' motivational structures, mindsets, affect, and behavior. We introduce and apply Self-Determination Theory to the context of PBF as a valuable theoretical framework for future empirical exploration. From this, we conclude that PBF interventions are unlikely to have a generally adverse effect on intrinsic motivation as feared by parts of the PBF community. Rather, we posit that PBF can have positive and negative effects on both intrinsic and extrinsic motivation, to varying degrees depending on the specific design, implementation, and results of a particular intervention and on health workers' perceptions and evaluations of it.

Martin, L. T., et al. (2016). "Strengthening Integration Of Health Services And Systems." *Health Aff (Millwood)* 35(11): 1976-1981.

New care delivery models that hold providers more accountable for coordinated, high-quality care and the overall health of their patients have appeared in the US health care system, spurred by recent legislation such as the Affordable Care Act. These models support the integration of health care systems, but maximizing health and well-being for all individuals will require a broader conceptualization of health and more explicit connections between diverse partners. Integration of health services and systems constitutes the fourth Action Area in the Robert Wood Johnson Foundation's Culture of Health Action Framework, which is the subject of this article. This Action Area conceives of a strengthened health care system as one in which medical care, public health, and social services interact to produce a more effective, equitable, higher-value whole that maximizes the production of health and well-being for all individuals. Three critical drivers help define and advance this Action Area and identify gaps and needs that must be addressed to move forward. These drivers are access, balance and integration, and consumer experience and quality. This article discusses each

driver and summarizes practice gaps that, if addressed, will help move the nation toward a stronger and more integrated health system.

Mick, S. S. et Shay, P. D. (2016). "Accountable Care Organizations and Transaction Cost Economics." Med Care Res Rev 73(6): 649-659.

Using a Transaction Cost Economics (TCE) approach, this paper explores which organizational forms Accountable Care Organizations (ACOs) may take. A critical question about form is the amount of vertical integration that an ACO may have, a topic central to TCE. We posit that contextual factors outside and inside an ACO will produce variable transaction costs (the non-production costs of care) such that the decision to integrate vertically will derive from a comparison of these external versus internal costs, assuming reasonably rational management abilities. External costs include those arising from environmental uncertainty and complexity, small numbers bargaining, asset specificity, frequency of exchanges, and information "impactedness." Internal costs include those arising from human resource activities including hiring and staffing, training, evaluating (i.e., disciplining, appraising, or promoting), and otherwise administering programs. At the extreme, these different costs may produce either total vertical integration or little to no vertical integration with most ACOs falling in between. This essay demonstrates how TCE can be applied to the ACO organization form issue, explains TCE, considers ACO activity from the TCE perspective, and reflects on research directions that may inform TCE and facilitate ACO development.

Nembhard, I. M. et Tucker, A. L. (2016). "Applying Organizational Learning Research to Accountable Care Organizations." Med Care Res Rev 73(6): 673-684.

To accomplish the goal of improving quality of care while simultaneously reducing cost, Accountable Care Organizations (ACOs) need to find new and better ways of providing health care to populations of patients. This requires implementing best practices and improving collaboration across the multiple entities involved in care delivery, including patients. In this article, we discuss seven lessons from the organizational learning literature that can help ACOs overcome the inherent challenges of learning how to work together in radically new ways. The lessons involve setting expectations, creating a supportive culture, and structuring the improvement efforts. For example, with regard to setting expectations, framing the changes as learning experiences rather than as implementation projects encourages the teams to utilize helpful activities, such as dry runs and pilot tests. It is also important to create an organizational culture where employees feel safe pointing out improvement opportunities and experimenting with new ways of working. With regard to structure, stable, cross-functional teams provide a powerful building block for effective improvement efforts. The article concludes by outlining opportunities for future research on organizational learning in ACOs.

Bhattacharyya, O. et Wendy, L. (2016). "Building Bridges to Integrate Care (BRIDGES): Incubating Health Service Innovation across the Continuum of Care for Patients with Multiple Chronic Conditions." Healthcare Quarterly 19(2): 60-66.
<https://www.longwoods.com/content/24701>

Integrating care for people with complex needs is challenging. Indeed, evidence of solutions is mixed, and therefore, well-designed, shared evaluation approaches are needed to create cumulative learning. The Toronto-based Building Bridges to Integrate Care (BRIDGES) collaborative provided resources to refine and test nine new models linking primary, hospital and community care. It used mixed methods, a cross-project meta-evaluation and shared outcome measures. Given the range of skills required to develop effective interventions, a novel incubator was used to test and spread opportunities for system integration that included operational expertise and support for evaluation and process improvement.

Shortell, S. M. (2016). "Applying Organization Theory to Understanding the Adoption and Implementation of Accountable Care Organizations: Commentary." Med Care Res Rev 73(6): 694-702.

This commentary highlights the key arguments and contributions of institutional theory, transaction

cost economics (TCE) theory, high reliability theory, and organizational learning theory to understanding the development and evolution of Accountable Care Organizations (ACOs). Institutional theory and TCE theory primarily emphasize the external influences shaping ACOs while high reliability theory and organizational learning theory underscore the internal factors influencing ACO performance. A framework based on Implementation Science is proposed to consider the multiple perspectives on ACOs and, in particular, their ability to innovate to achieve desired cost, quality, and population health goals.

Duckett, S. (2016). "Regionalization as One Manifestation of the Pursuit of the Holy Grail." *HealthcarePapers* **16**(1): 53-57.
<https://www.longwoods.com/content/24770>

Regionalization has strengths and weaknesses. The balance of the two will vary over time, differing in different contexts and with different implementations. Alberta's implementation of a centralized structure had some strengths: economies of scale and expertise; opportunities for province-wide learning; internalization of geographic politics; and improved geographic equity. It also had weaknesses: diseconomies of scale, remoteness from communities and politicization. In any implementation of regionalization, policy makers should attempt to realize the benefits of alternative paths not travelled and minimise the weaknesses of the chosen structure.

Vogus, T. J. et Singer, S. J. (2016). "Creating Highly Reliable Accountable Care Organizations." *Med Care Res Rev* **73(6): 660-672.**

Accountable Care Organizations' (ACOs) pursuit of the triple aim of higher quality, lower cost, and improved population health has met with mixed results. To improve the design and implementation of ACOs we look to organizations that manage similarly complex, dynamic, and tightly coupled conditions while sustaining exceptional performance known as high-reliability organizations. We describe the key processes through which organizations achieve reliability, the leadership and organizational practices that enable it, and the role that professionals can play when charged with enacting it. Specifically, we present concrete practices and processes from health care organizations pursuing high-reliability and from early ACOs to illustrate how the triple aim may be met by cultivating mindful organizing, practicing reliability-enhancing leadership, and identifying and supporting reliability professionals. We conclude by proposing a set of research questions to advance the study of ACOs and high-reliability research.

Vogus, T. J. et Singer, S. J. (2016). "Unpacking Accountable Care: Using Organization Theory to Understand the Adoption, Implementation, Spread, and Performance of Accountable Care Organizations." *Med Care Res Rev* **73(6): 643-648.**

Walter, P. W. (2016). "Performance Measurement for People with Multimorbidity and Complex Health Needs." *Healthcare Quarterly* **19(2): 44-48.**
<https://www.longwoods.com/content/24698>

This paper reviews approaches to performance measurement in health systems with particular attention to people with multimorbidity and complex health needs. Performance measurement should be informative and used by multiple stakeholders in order to align performance improvement efforts. System performance measures must allow for macro-system and meso-organization and provider-level reporting, and they should be relevant and important to stakeholders at each level, as well as to patients and all potential care recipients. Measures that assess health outcomes and individuals' experiences with providers, including care planning and coordination of care across providers, are essential to assess value for people with multimorbidity and complex health needs. I suggest that performance measurement for this population should be motivated by the Complexity Framework and organized by the Triple Aim. Based on the care needs and appropriate goals for the health system for this population, applicable measures and suggestions for implementing and using performance measurement systems are identified. Particularly in the case of people with multimorbidity and complex health needs, performance measures must move beyond measures

specific to individual encounters to track care for people over time and space. Measures must be rooted in individuals' own needs and goals for care. New systems are required to enable collection and reporting of these measures.

Travail et santé / Occupational Health

Banefelt, J., et al. (2016). "Work productivity loss and indirect costs associated with new cardiovascular events in high-risk patients with hyperlipidemia: estimates from population-based register data in Sweden." *The European Journal of Health Economics* 17(9): 1117-1124.
<http://dx.doi.org/10.1007/s10198-015-0749-y>

To estimate productivity loss and associated indirect costs in high-risk patients treated for hyperlipidemia who experience cardiovascular (CV) events.

Hessel, P. et Avendano, M. (2016). "Economic downturns during the life-course and late-life health: an analysis of 11 European countries." *The European Journal of Public Health* 26(5): 766-771.

Background: Research has shown that individual socio-economic circumstances throughout life affect health in older ages. However, little attention has been paid to the broad economic context affecting individual's life-chances. This paper examines whether economic downturns experienced during young and mid-adulthood have long-run effects on physical health. Methods: We exploit data on economic fluctuations in the period 1945–2010 in 11 European countries, linked to longitudinal data from three waves of the Survey of Health, Ageing and Retirement in Europe. We estimate a country fixed effect model assessing whether downturns experienced at 5-year intervals between ages 25 and 54 are associated with levels and onset of new limitations with Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) in older age (55–80). Results: Experiencing an economic downturn at ages 45–59 is associated with increased risk of having at least one disability limitation in later-life (odds ratio [OR] for ADL = 1.66, 95% CI [Confidence Interval] 1.24, 2.22; OR for IADL = 1.46, 95% CI 1.10, 1.94). Economic downturns at ages 40–44 and 45–49 also increase the risk of a new functional limitation in later-life (OR for IADL ages 40–44 = 1.20, 95% CI 1.03, 1.40; OR for IADL ages 45–49 = 1.44, CI 1.10–1.88). Economic downturns experienced around these ages are also associated with significantly greater risks of smoking and excessive alcohol consumption as well as lower incomes in older age. Conclusions: Exposure to an economic downturn at ages 40–49 is associated with poorer health in older ages, possibly by increasing risk of unhealthy behaviours and low incomes persisting into older age.

Schneider, U., et al. "Long-term sick leave and graded return to work: What do we know about the follow-up effects?" *Health Policy* 120(10): 1193-1201.
<http://dx.doi.org/10.1016/j.healthpol.2016.09.001>

We analyzed differences in outcome variables between participants and non-participants of the German RTW program after returning to work. We found significant but rather small differences in selected medical expenditures with higher expenditures for participants than for non-participants. Reasons behind these differences in outcome variables may represent different perceptions of the own health care status and higher needs for medical services.

Seuring, T., et al. (2016). *The impact of diabetes on labour market outcomes in Mexico. a panel data and biomarker analysis.*, Centre for Health Economics, University of York: 1-37.
<http://ftp.iza.org/dp10123.pdf>

There is limited evidence on the labour market impact of diabetes, and existing evidence tends to be weakly identified. Making use of Mexican panel data to estimate individual fixed effects models, we find evidence for adverse effects of self-reported diabetes on employment probabilities, but not on wages or hours worked. Complementary biomarker information for a cross section indicates a large

diabetes population unaware of the disease. When accounting for this, the negative relationship of self-reported diabetes with employment remains, but does not extend to those unaware. This difference cannot be explained by more severe diabetes among the self-reports, but rather worse general health.

Vieillessement / Ageing

Bien, B., et al. (2013). "Disabled older people's use of health and social care services and their unmet care needs in six European countries." *Eur J Public Health* 23(6): 1032-1038.
<https://www.ncbi.nlm.nih.gov/pubmed/23334818>

BACKGROUND: The national health and social care systems in Europe remain poorly integrated with regard to the care needs of older persons. The present study examined the range of health and social care services used by older people and their unmet care needs, across six European countries. **METHODS:** Family carers of older people were recruited in six countries via a standard protocol. Those providing care for disabled older people (n = 2629) provided data on the older person's service use over a 6-month period, and their current unmet care needs. An inventory of 21 services common to all six countries was developed. Analyses considered the relationship between older people's service use and unmet care needs across countries. **RESULTS:** Older people in Greece, Italy and Poland used mostly health-oriented services, used fewer services overall and also demonstrated a higher level of unmet care needs when compared with the other countries. Older people in the United Kingdom, Germany and Sweden used a more balanced profile of socio-medical services. A negative relationship was found between the number of different services used and the number of different areas of unmet care needs across countries. **CONCLUSIONS:** Unmet care needs in older people are particularly high in European countries where social service use is low, and where there is a lack of balance in the use of health and social care services. An expansion of social care services in these countries might be the most effective strategy for reducing unmet needs in disabled older people.

Peña-Longobardo, L. M., et al. "The Spanish long-term care system in transition: Ten years since the 2006 Dependency Act." *Health Policy* 120(10): 1177-1182.
<http://dx.doi.org/10.1016/j.healthpol.2016.08.012>

The Dependency Act has changed the structure of the LTC system in Spain. The economic and political context of the reform has adversely affected the performance of the LTC system. A large number of people are evaluated to be eligible for benefits but do not receive them. Monetary benefits have become usual practice rather than an exceptional resort. The political consensus on which the LTC system rested has weakened since 2006.