2014

Health Economics, Management & Policy Abstracts

13th Annual International Conference on Health Economics, Management & Policy 23-26 June 2014, Athens, Greece

Edited by Gregory T. Papanikos

THE ATHENS INSTITUTE FOR EDUCATION AND RESEARCH

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Preface

This abstract book includes all the summaries of the papers presented at the 13th Annual International Conference on Health Economics, Management & Policy 23-26 June 2014, Athens, Greece, organized by the Health Research Unit of the Athens Institute for Education and Research. In total there were 46 papers, coming from 24 different countries (Australia, Belgium, Brazil, Canada, China, Denmark, France, Germany, Hungary, India, Indonesia, Malaysia, New Zealand, Poland, Portugal, Russia, Serbia, South Africa, Spain, Switzerland, the Netherlands, Turkey, UK and USA). The conference was organized into 12 sessions that included areas of Health Economics and other related fields. As it is the publication policy of the Institute, the papers presented in this conference will be considered for publication in one of the books of ATINER.

The Institute was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet in Athens and exchange ideas on their research and consider the future developments of their fields of study. Our mission is to make ATHENS a place where academics and researchers from all over the world meet to discuss the developments of their discipline and present their work. To serve this purpose, conferences are organized along the lines of well established and well defined scientific disciplines. In addition, interdisciplinary conferences are also organized because they serve the mission statement of the Institute. Since 1995, ATINER has organized more than 150 international conferences and has published over 100 books. Academically, the Institute is organized into four research divisions and nineteen research units. Each research unit organizes at least one annual conference and undertakes various small and large research projects.

I would like to thank all the participants, the members of the organizing and academic committee and most importantly the administration staff of ATINER for putting this conference together.

Gregory T. Papanikos
President

Athens Institute for Education and Research
Human Development Research Division
Research Unit of Health

13th Annual International Conference on Health Economics, Management and Policy 23-26 June 2014, Athens, Greece

PROGRAM

Conference Venue: Titania Hotel Address: Panepistimiou 52, 106 78 Athens, Greece

Organization and Scientific Committee

1. Dr. Gregory T. Papanikos, President, ATINER.
2. Dr. Paul Contoyannis, Head, Health Research Unit, ATINER & Associate Professor, McMaster University, Canada.
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7. Dr. Nicholas Pappas, Vice-President of Academic Affairs, ATINER & Professor, Sam Houston State University, USA.
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11. Dr. Belal Rahhal, Academic Member, ATINER & Head of Psychology Department, Medical School, AN-Najah National University, Palestine.
12. Dr. Abdel-Badeeh Salem, Academic Member, ATINER & Professor, Ain Shams University, Egypt.
13. Dr. Andy Stergachis, Academic Member, ATINER & Professor, University of Washington, USA.
14. Dr. Anil Mandal, Academic Member, ATINER & Courtesy Clinical Professor, Department of Medicine, University of Florida, USA.
15. Dr. Nilgun Sarp, Academic Member, ATINER & Professor, Ankara University, Turkey.
16. Dr. Sue Coffey, Academic Member, ATINER & Associate Professor and Director of the Nursing Program, University of Ontario Institute of Technology, Canada.
17. Dr. Siddharth Gupta, Academic Member, ATINER & Associate Professor, ITS Dental College, Greater Noida, India.
18. Dr. Eliza LY Wong, Academic Member, ATINER & Assistant Professor, The Chinese University of Hong Kong, Hong Kong.

19. Dr. Janet Dzator, Academic Member, ATINER & Lecturer, University of Newcastle, U.K.
20. Dr. Maria Tsouroufli, Academic Member, ATINER & Lecturer in Medical Education, School of Medicine, Health Policy and Practice, University of East Anglia, U.K.
21. Dr. Joseph I. Esformes, Academic Member, ATINER & Lecturer, University of Wales Institute, Cardiff (UWIC), U.K.
22. Dr. Emmanouil Mentzakis, Lecturer, University of Southampton, UK.
23. Dr. Dipane Hlalele, Academic Member, ATINER & Senior Lecturer, University of the Free State, South Africa.
24. Dr. Melina Dritsaki, Academic Member, ATINER & Research Fellow, Brunel University, U.K.
25. Dr. Upali W. Jayasinghe, Academic Member, ATINER & Senior Research Fellow, University of New South Wales, Australia
26. Dr. Allison Joye Tracy, Academic Member, ATINER & Senior Research Scientist and Methodologist, Wellesley Centers for Women, USA.
27. Dr. Anna Tsaroucha, Academic Member, ATINER & Senior Research Officer Fellow of the Higher Education Academy (FHEA), School of Social Work, Allied and Public Health, Faculty of Health Sciences, Staffordshire University, U.K.
28. Ms. Brenda L. Lovell, Academic Member, ATINER & Instructor/ Researcher, University of Manitoba, Canada.

Administration

Fani Balaska, Stavroula Kiritsi, Eirini Lentzou, Konstantinos Manolidis, Katerina Maraki, Celia Sakka, Konstantinos Spiropoulos & Ioanna Trafali

Monday 23 June 2014

08:30-09:00 Registration

09:00-09:30 Welcome and Opening Remarks

- Dr. Gregory T. Papanikos, President, ATINER
- Dr. George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.
- Dr. Nicholas Pappas, Vice-President of Academic Affairs, ATINER & Professor, Sam Houston State University, USA.
- Dr. Paul Contoyannis, Head, Health Research Unit, ATINER & Associate Professor, McMaster University, Canada.
- Dr. Zoe Boutsioli, Deputy Head, Health Research Unit, ATINER.

09:30-11:00 Session I (Room A): Healthcare Equity Aspects
Chair: Zoe Boutsioli, Deputy Head, Health Research Unit, ATINER.

1. Lorna Butler, Dean, University of Saskatchewan, Canada & Heather Exner-Pirot, Strategist for Outreach & Indigenous Engagement, University of Saskatchewan, Canada. Creating an Aboriginal Nursing Workforce: Equity in Education to Remote Northern Communities in Canada.
2. Eva Orosz, Head of Department of Health Policy and Health Economics, Eotvos Lorand University, Hungary. Opportunism of Public Policies as an Underlying Determinant of Health Inequalities in Hungary.
3. *Ana Pinto Borges, Assistant Professor, Lusiada University, Portugal & Micaela Pinho, Assistant Professor, Lusiada University, Portugal. Different Views on the Establishment of Priorities among Patients: The Main Principles Mentioned in the Choice.
4. Bora Kim, Ph.D. Student, K.U. Leuven, Belgium. The Inequality of Opportunity for Health among the Elderly in Europe.

11:00-12:30 Session II (Room A): Health Economics I
Chair: *Ana Pinto Borges, Assistant Professor, Lusiada University, Portugal

1. *Luke Connelly, Professor, University of Queensland, Australia & Ha Trong Nguyen, Professor, University of Queensland, Australia. The Dynamics of Informal Care Provision in the Australian Household Panel Survey: Previous Work Characteristics and Future Care Provision.
2. Mette Wier, Professor, Roskilde University, Denmark & Kirsten Bregn, Associate Professor, Roskilde University, Denmark. Can Behavioral Economics Improve Public Health Policy? The Case of Denmark.
3. Pinka Chatterji, Associate Professor, University at Albany, USA, Peter Brandon, Professor, University at Albany, USA & Sara Markowitz, Associate Professor, Emory University, USA. Job Mobility among Parents of Children with Chronic Health Conditions.

11:00-12:30 Session III (Room B): Quality in Healthcare
Chair: *Dimitra Alexiou, Analyst, Health Economics and Outcomes Research and Real World Evidence Solutions, UK.

1. Claus Zippel, Ph.D. Student, Witten/HerdeckeUniversity, Germany & Sabine Bohnet-Joschko, Professor, Witten/Herdecke University, Germany. Quality and Innovation through Post Marketing Knowledge: Status and Perspectives of Post Marketing Instruments in the German Medical Device Market.
2. Siew Siang Chua, Associate Professor, University of Malaya, Malaysia, Jey Vonn Kho, Pharmacy Graduate, University of Malaya, Malaysia & Siti Zawiah Omar, Professor, University of Malaya, Malaysia. A Cross-Sectional Study on Medications used by Pregnant Women: any Safety Concern? (Monday 23 of June, Session III).
3. *Christian Lako, Associate Professor, Radboud University Nijmegen, the Netherlands. Why Don't the Dutch Use Quality Information in their Hospital Choice? Results from a Survey among 479 Patients from a Dutch Hospital.
4. Marlene Guillon, Ph.D. Student, Paris School of Economics, France. Universal Access to ARV Treatment in South Africa: Economic and Behavioral Challenges.

12:30-14:00 Session IV (Room A): Public Healthcare Issues
Chair: *Luke Connelly, Professor, University of Queensland, Australia

1. Sappho Gilbert, Graduate Student, Dartmouth College, USA. Athens' "Nephos": A Heating Oil Tax Hike, Particulate Matter, & Public Health.
2. Lore Pil, Doctoral Researcher, Ghent University, Belgium. The Cost-Effectiveness of a Kindergarten-Based, Family-Involved Internation to Prevent Obesity in Early Childhood. (Monday 23 of June).
3. Boris Roland Wiesenfarth, Ph.D. Student, Heidelberg University, Germany. Preventive Health-Care Measures under Ambiguity.
4. Peng Nie, Ph.D. Candidate, University of Hohenheim, Germany, Sousa-Poza Alfonso, Chair, University of Hohenheim, Germany & Xiaobo He, Postdoctoral Research Fellow, University of Adelaide, Australia. Do Chinese People "Keep up with the Jones"? Evidence from Peer Effects on Childhood and Adolescent Bodyweight in China.

12:30-14:00 Session V (Room B): Pharmaceutical Economics
Chair: *Christian Lako, Associate Professor, Radboud University Nijmegen, the Netherlands

1. Simone Aquino,Professor, Nove University of Julho, Brazil, WalquiriaBarcelos de Figueiredo, M.A. Student, Nove University of Julho, Brazil & Marcia Cristina Zago Novaretti, Professor, Nove University of Julho, Brazil. Prescription Profile and Costs of Employment of Antifungal Drugs in a Brazilian Intensive Care Unit.
2. Mihajlo B Jakovljevic, Head of Health Economics Carriculum, University of Kragujevac, Serbia. Public Expenditure Growth in Antineoplastic Pharmaceuticals and Oncology Monoclonal Antibodies - Nine Year Trend in Serbia.
3. Joao Gregorio, Research Assistant, Nova University of Lisboa, Portugal, Giuliano Russo, Research Fellow, Nova University of Lisboa, Portugal & Luis Velez Lapao, Assistant Professor, Nova University of Lisboa, Portugal. Resource Inputs and Costs in Community Pharmacy Services: Insights from a Time-Driven Activity based Costing Strategy of Pharmacy Services in Portugal.

14:00-15:00 Lunch

15:00-16:30 Session VI (Room A): Health Economics II
Chair: Dr. Paul Contoyannis, Head, Health Research Unit, ATINER & Associate Professor, McMaster University, Canada

1. Yan Guo, Professor, Peking University, China. Strategy Modeling Exploration for Maternal and Child Health Improvement in Rural Western China: a Study Based on the Lives Saved Tool Assessment and Application.
2. *Dimitra Alexiou, Analyst, Health Economics and Outcomes Research and Real World Evidence Solutions, UK. How the Assessment of Burden of Illness Might Change NICE Decisions: A Retrospective Analysis under Value-Based Pricing.
3. Sebastian Gatzer, Research Assistant, RWTH Aachen, Germany, Stefan Weinandy, Research Assistant, RWTH Aachen, Germany, Lisanne Rongen, Research Assistant, RWTH Aachen, Germany & Stefan Jockenhovel, Professor, RWTH Aachen, Germany. How Health Economics Can Help to Guide Research Investment Decision - an Example from a Novel BioStent Technology.

4. Elias Asfaw, Ph.D. Student, University of KwaZulu Natal, South Africa, Naod Mekonnen, Researcher, Ethiopian Economic Policy Research Institute, Ethiopia, Ben Benjamin, Associate Scientist, Abt Associates, USA, Wendy Wong, Researcher, Abt Associates, USA, Abebe Bekele, Health System Researcher, Ethiopian Public Health Institute, Ethiopia, Yibeltale Assefa, Director, Ethiopia Public Health Institute, Ethiopia, John Palen, Principal Associate, Abt Associates, USA, Amha Kebede, General Director, Ethiopia Public Health Institute, Ethiopia & Shara Domin, Associate Specialist, Abt Associates, USA. Economic Analysis of ART Task Shifting in Limited Resource Setting using Econometric Model: Ethiopia Case Study.
5. Sabine Bohnet-Joschko, Professor, University Witten/Herdecke, Germany & Gergana Ivanova, Researcher, University Witten/Herdecke, Germany. Managing Acute Care for Nursing Home Residents: A Health Economic Review of Concepts and Practice. (Monday, 23 of June).
6. *Anita Antal, Associate Professor, Budapest Business School, Hungary & Monika Lambertne Katona, Senior Lecturer, Budapest Business School, Hungary. Health Economics Analysis – Individual Cost Estimation Models in Practice for Type 2 Diabetes in Hungary.

15:00-16:30 Session VII (Room B): Hospital Economics and Management
Chair: Dr. Nicholas Pappas, Vice-President of Academic Affairs, ATINER & Professor, Sam Houston State University, USA

1. Gary Young, Director, Northeastern University, USA & Simone Singh, Ph.D. Student, University of Michigan, USA. The Role of US Hospitals in Promoting Population Health. (Monday 23 of June)
2. Donald Haley, Associate Professor, University of North Florida, USA. Health Care Reform in the United States: Are Hospitals Ready?
3. Stefan Meyer, Researcher, University of Basel, Switzerland. Payment Schemes and Cost Efficiency: Evidence from Swiss Public Hospitals.
4. Mario Alexander Pfannstiel, Researcher, University of Bayreuth, Germany. Unexpected Productivity Potentials in Municipal Hospital Groups.
5. Viktor Dombradi, Ph.D. Student, University of Debrecen, Hungary & Sandor Godeny, Associate Professor, University of Debrecen, Hungary. Quality Management in Hospitals: Does It Contribute to High Quality of Care?

16:30-18:00 Session VIII (Room A): Healthcare Management I
Chair: *Anita Antal, Associate Professor, Budapest Business School, Hungary

1. Lajos Kovacs, Managing Director, Derkon Management Consulting, Hungary. Capacity Building in Health Management and Introducing the Kazakh Health Management Standards.
2. Ingrid Franz, Leuphana University, Germany & Mirella Cacace, Head, Leuphana University, Germany. Eliciting Preferences for Occupational Health Services in Small - and Microenterprises. (Monday, 23 of June).
3. Christopher A. Devine, MPhil Student, University of Cambridge, UK & Nicholas J. Cork, MB BChir Student, University of Cambridge, UK. Educating the Next Generation of Leaders in Health Care: A US-UK Comparison.

21:00–23:00 Greek Night (Details during registration)

Tuesday 24 June 2014

09:00-10:30 Session IX (Room A): Economic Evaluation
Chair: *Harshad Thakur, Professor/Chairperson, Tata Institute of Social Sciences, India

1. Helen-Maria Vasiliadis, Associate Professor, University of Sherbrooke, Canada. The Treatment of Depression: A Cost-Effective Population Strategy to Reduce Suicide, in Canada.
2. Paula Andrade, Health Outcomes Scientist, Eli Lilly & Co, Spain, Minghan Dai, Research Analyst, Stanford University, USA, Tatiana Dilla, Head of Health Outcomes, Stanford University, USA, Michael Happich, Sr. Research Scientist, Stanford University, USA & John Hornberger, Adjunct Clinical Professor, Stanford University, USA. Cost-Effectiveness of Florbetapir-PET in Alzheimer's disease: A Spanish Societal Perspective.
3. Lukasz Tanajewski, Researcher, University of Nottingham, UK. Trial of an Elderly Acute Care Medical and Mental Health Unit (TEAM): Economic Evaluation Comparing with Current Practice, From an NHS and Personal Social Services Perspective.
4. Anne Dezetter, Ph.D. Student, University of Sherbrooke, Canada. Costs and Benefits of Improving Access to Psychotherapies for Adults Suffering from Common Health Disorders in Canada.

10:30-12:00 Session X (Room A): Healthcare Reforms
Chair: Helen-Maria Vasiliadis, Associate Professor, University of Sherbrooke, Canada.

1. Sergey Gatsura, Professor, Moscow State University, Russian Federation & Oxana Gatsura, Associate Professor, Moscow State University, Russian Federation. Early Changes in Moscow Physicians' Choice of Medicines after Regulatory Introduction of International non-Proprietary Name based Prescription in Russia.
2. Sergey Shishkin, Director, the National Research University, Russia. Development of Private Health Care Sector in the Post-Semashko System.
3. Somi Shin, Lecturer, Massey University, New Zealand. Health Care Provider Response to System Reform: Effects of Capitation on the Inter-District Movement of Patients and Health Outcomes.

12:00-13:30 Session XI (Room A): Healthcare Management II
Chair: *Piotr Romaniuk, Assistant Professor, Medical University of Silesia, Poland

1. *Harshad Thakur, Professor/Chairperson, Tata Institute of Social Sciences, India & Soumitra Ghosh, Assistant Professor, Tata Institute of Social Sciences, India. Evaluating Rashtriya Swasthya Bima Yojana (National Health Insurance Scheme) In Maharashtra India Using SPEC–by–Steps Tool.
2. Juliana Pires De Arruda Leite, Professor, University of Campinas, Brazil & Ana Maria Alves Carneiro Da Silva, Researcher, University of Campinas, Brazil. Healthcare Networks in Metropolitan Areas: The Case of the Health System in Brazil.
3. Heni Wahyuni, University of Gadjah Mada, Indonesia. Mother's Participation in Community Groups, Prenatal Care Utilization, and Infant Health: The Implications for Policy Decision Making.
4. Patrick Vanneste, Ph.D. Student, University of Mons, Belgium. Management of the Relation between a General Practitioner and a Psychotherapist, in Belgium.

13:30-14:30 Lunch

14:30-16:00 Session XII (Room A): Health Economics III
Chair: Paul Contoyannis, Head, Health Research Unit, ATINER & Associate Professor, McMaster University, Canada.

1. Peter Hilsenrath, Professor, University of the Pacific, USA. Mergers and Acquisitions in US Retail Pharmacy. (Tuesday 24 June 2014)
2. *Piotr Romaniuk, Assistant Professor, Medical University of Silesia, Poland & Tomasz Holecki, Assistant Professor, Medical University of Silesia, Poland. The Potential and Outcomes of Clustering In Healthcare – Expectations of Polish Health Care Providers.
3. Sezer Alcan, Expert, under Secretariat of Turkish Treasury, Turkey. Effect of Health on Wages in Turkey.

17:30-20:30 Urban Walk (Details during registration)

21:00-22:00 Dinner (Details during registration)

Wednesday 25 June 2014
Cruise: (Details during registration)

Thursday 26 June 2014
Delphi Visit: (Details during registration)

Sezer Alcan
Expert, Under secretariat of Turkish Treasury, Turkey

Effect of Health on Wages in Turkey

The purpose of this study is to estimate the impact of health on hourly wages on Turkish panel data. In most of the previous studies, education is time-invariant and therefore its coefficient cannot be estimated through the within estimator. This paper complements previous studies by utilizing a panel where education variable measured by degree obtained varies over time. With such data, open to criticism instrumental variables techniques are not needed.

The analysis draws on individual level data from 4 waves of Turkish Income and Living Conditions Survey. The samples consist of employed adults aged 18 to 66 years. The data is used in estimation of well-established earnings function where the natural logarithm of an individual's hourly wage is a function of a number of individual specific characteristics such as work experience, academic attainment (degree), occupation, work experience and health, for men and women separately. Three health variables are included: self assessed health status, health limitation and nutrition. Endogeneity of self assessed health variable was tested and rejected. Therefore, estimates obtained from pooled ordinary least squares, random effects and fixed effects panel models are reported.

Dimitra Alexiou
Analyst, Health Economics and Outcomes Research and Real World Evidence solutions, UK

How the Assessment of Burden of Illness Might Change NICE Decisions: A Retrospective Analysis under Value-Based Pricing.

Background: In healthcare, value based pricing (VBP) is a principle through which the price of a medical technology reflects the value to patients, carers, society, economy and other beneficiaries of the health benefits. In the UK, these health benefits need to exceed the predicted health benefits that are displaced elsewhere in the NHS. VBP will replace the existing Pharmaceutical Price Regulation Scheme (PPRS) in September 2014, and is expected to consist of the wider societal benefits (WSB) and the burden of illness (BoI).

Objective: To identify existing literature, research and available guidance on what the VBP will entail. To establish VBP's key criteria and what tools need to be in place in order to assess true "value" under the new system. Finally, to address the question of how moving to a VBP system from the current PPRS system might change selected old not recommended and optimised NICE appraisal decisions.

Methodology: Systematic and targeted literature reviews were conducted in order to identify all aspects of VBP and the specifics it entails, concluding that BoI is expected to be the key driver of decisions regarding a technology's value. Two disease classification measures for evaluating the degree of BoI were identified (QALYs lost and DALYs) and combined to categorise recent optimised and not recommended NICE technology appraisals dependent on higher, medium and lower BoI for the indicated diseases that the technologies aim to treat. A categorisation matrix was constructed along with the cost and clinical effectiveness of each TA and an analysis was applied to evaluate how NICE recommendations might have changed under the new VBP system.

Results: 13NICE TA's were evaluated. In 8 NICE TAs, it was concluded no change in the decisions to be occurred under VBP due to either clinical or cost ineffectiveness. 5 NICE TAs were likely to have been changed to recommend if a higher threshold will be considered for the disease with medium to high or high burden of illness.

Discussion: No certain and accurate conclusion can be drawn before the formal decisions are published by NICE for VBP. The most significant aspect for NICE to deal with, is to develop a classification and a proper and specific definition of BoI otherwise BoI becomes a meaningless aspect of VBP.

Paula Andrade
Health Outcomes Scientist, Eli Lilly & Co, Spain
Minghan Dai
Research Analyst, Stanford University, USA
Tatiana Dilla
Head of Health Outcomes, Stanford University, USA
Michael Happich
Sr. Research Scientist, Stanford University, USA
&
John Hornberger
Adjunct Clinical Professor, Stanford University, USA

Cost-Effectiveness of Florbetapir-PET in Alzheimer's disease: A Spanish Societal Perspective

Objectives: Florbetapir F 18 is a radiopharmaceutical indicated for Positron Emission Tomography (PET) (florbetapir-PET). It images β-amyloid neuritic plaque density in the brain of adult patients with cognitive impairment, who are being evaluated for Alzheimer's disease and other causes of cognitive impairment. The aim of this study was to evaluate the cost-effectiveness of florbetapir-PET adjunctive to standard clinical evaluation (SCE) versus SCE alone from the societal perspective in Spain.

Methods: A lifetime Markov model was developed in compliance with Good Research Practices and CHEERS guidelines (SMDM/ISPOR). The target population is Spanish patients with an average Mini-Mental State Examination (MMSE) score of 20 undergoing initial assessment for cognitive impairment. Parameters included test characteristics, rate of cognitive decline, effect of drug treatments on cognition and community dwelling status, direct and indirect costs, and patient's quality of life. Sensitivity analyses were performed to assess the robustness of findings and identify the factors that most influenced outcomes. Additional scenarios included: (1) earlier initial evaluation; or (2) fluorodeoxyglucose-PET (FDG-PET) adjunctive to SCE, as the comparator.

Results: Compared with SCE alone, adjunctive florbetapir-PET increased quality-adjusted life years (QALYs) and costs by 0.008 years and €36, respectively, leading to an incremental cost-effectiveness ratio (ICER) of €4,769 per QALY gained. Earlier evaluation (MMSE, 22) increased QALYs by 0.019 years and reduced costs by €1,534 per patient. Compared with FDG-PET, florbetapir-PET increased QALYs (0.004 years) and yielded cost-savings of €1,012 per patient. Sensitivity analyses showed that florbetapir-PET was cost-effective across a range

of parameters; >81% of the probabilistic simulations under the base case fell below the Spanish ICER threshold (€30,000 per QALY gained).

Conclusions: From a Spanish societal perspective, florbetapir-PET adjunctive to SCE represents a cost-effective option compared to SCE alone. Under the earlier initial evaluation scenario and using FDG-PET as a comparator, florbetapir-PET is still the dominant option.

Anita Antal
Associate Professor, Budapest Business School, Hungary
&
Monika Lambertne Katona
Senior Lecturer, Budapest Business School, Hungary

Health Economics Analysis – Individual Cost Estimation Models in Practice for Type 2 Diabetes in Hungary

Within the framework of New Hungary Development Plan, the goal of Hungary's Social Renewal Operational Program (NHDP/ TÁMOP) was to implement successful projects in the period of 2007- 2013 that concern the country's society as a whole. The projects supported by the operative program of NHDP also include international research collaboration. Thus, under the aegis of NHDP a health economics-related project titled, "IT supported comprehensive multipurpose, medical, economic and educational use of clinical data" with the name MEDIC SPHERE was carried out. The main components of the project were the following:

1. Data security alert, analysis-centered data collection and integration
2. Implementation of a case-dependent clinical cost-benefit model
3. Implementation of case-dependent, economically aware clinical protocols
4. Implementation of video analytical solutions for simulated data generation
5. Generation of simulated 3D environment for educational and preparatory purposes

The present study focuses on the results connected to the second stage of the project. The present purpose of the project is to prepare the benefit-based measuring model of clinical cases involved in the research: the disclosure of direct and indirect expenses related to the cases, the implementation of measuring methods, and the preparation of related "health benefit (gain)" methods at the social level.

The cost-benefit analysis is considered as a less broadly used method not only in the economic evaluation of health related technologies in Hungary, but also internationally. The reason for this is the lack of detailed elaboration of its methodology and the lack of experience based on its application in practice. The goal of the project was to fill in this gap by elaborating and applying the method of cost-benefit analysis for one particular disease type, namely diabetes.

During the implementation, a simulation model is prepared for the cost-benefit analysis of the different methods of treatment. When performing a cost-benefit analysis, health-benefit (gains) is complemented by direct effects (benefits), alternative costs occurring on a social or individual level, which are compared with costs and thus the model offers an economically optimal solution.

In case of successful implementation, the preparation of the patient journey can involve significant added sources for the budget and the Hungarian economy as a whole. This way the results of clinical treatment can be measured, and by including and adjusting patients and environmental effects, the social benefit of the health sector can be expressed in a complex way, in addition to the formerly used statistical figures.

Simone Aquino
Professor, Nove University of Julho, Brazil
WalquiriaBarcelos de Figueiredo
M.A. Student, Nove University of Julho, Brazil
&
Marcia Cristina Zago Novaretti
Professor, Nove University of Julho, Brazil

Prescription Profile and Costs of Employment of Antifungal Drugs in a Brazilian Intensive Care Unit

Nosocomial infections are serious public health problems in Brazil and Candida albicans is an important agent of infections in the hospital setting due to the large number of invasive procedures and intensive use of broad-spectrum antibiotics. Several authors, with some species resistant to fluconazole, have documented the frequent occurrence of systemic infections by non-albicans species. In Brazil, there are still questions about when to treat a fungal infection in patients in an intensive care unit, as clinical practice. The recommendations of the Infectious Diseases Society of America says that we should use intravenous fluconazole or amphotericin B for empirical therapy in non-neutropenic patients with suspected disseminated candidiasis if isolation of Candida in more than two foci in the body, and other factors risk for candidemia. However, whenever in choosing the best therapy, it should also be take into consideration costs and availability of drugs in the hospital pharmacy and the balance between using a drug that can be nephrotoxic patient (amphotericin B) or another drug that may have fewer side effects, but it can induce resistance to various Candida species, especially non-albicans. The objective of the proposed study was to analyze the costs and main antifungal drugs prescribed in the intensive care unit of a Brazilian public hospital, during the six month period in 2013. The total amount invested in antifungal drug therapy was almost $ 60,000 and the liposomal amphotericin B was the most prescribed antifungal during the study period (42%), followed by fluconazole (37%) and voriconazole (12,5%).

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John Palen
Principal Associate, Abt Associates, USA
Amha Kebede
General Director, Ethiopia Public Health Institute, Ethiopia
&
Shara Domin
Associate Specialist, Abt Associates, USA

Economic Analysis of ART Task Shifting in Limited Resource Setting using Econometric Model: Ethiopia Case Study

Objective: To estimate the cost difference associated with task shifting of anti-retroviral therapy across different health professional and health facility types, and to show the association between length of visit/cost of visit with the determinant factors in Ethiopia.

Method: A stratified random sample of health facilities across four regions of Ethiopia was covered. An ordinary least square econometric model was applied. The dependent variables were the 'cost of one visit' and 'length of visit', while the independent variable were the type of the professional (physician, health officers, nurses), health facility types (hospitals, health centers) and type of visit (initiation, follow-up).

Result: Seventy nine health facilities were covered during the survey. From 665 interviews, the majority of the patients (77.0%) were seen by a nurse; while 19.6% and 3.5% were seen by health officers and doctors, respectively. The average time spent by patients for ART services visit was estimated to be 8.46 minutes, with the minimum of less than one minute and maximum of 60 minutes. The patients had longer visits at hospitals (8.68 minutes) than at health centers (8.32 minutes). From the OLS model, the cost per length of visit for doctors was found to be 16 percent higher than that of nurses, when controlling for type of facility and type of visit.

No statistically significant differences was found in the cost per visit or length of a visit between hospitals and health centers after controlling for type of visit and staff.

Recommendation: We found that ART services were less costly when delivered by nurses and health officers, as compared to doctors. Since task-shifting to the less specialized health-care workers has economic significance, the expansion of ART task-shifting should be considered by all concerned stakeholders, but must be done so as to not undermine patients' benefits and public health outcomes.

Sabine Bohnet-Joschko
Professor, University Witten/Herdecke, Germany
&
Gergana Ivanova
Researcher, University Witten/Herdecke, Germany

Managing Acute Care for Nursing Home Residents: A Health Economic Review of Concepts and Practice

Introduction: Medical device manufacturers are subject to strict post marketing requirements once their products start being used widely on the market. Although these activities may provide valuable information on approved devices and play an important role in learning about device performance and problems, little is known about the manufactures' use of post marketing surveillance systems. We aimed to explore and categorize post marketing instruments used by manufactures selling products on the German medical device market.

Methods: Following an international literature review, we prepared an exploratory guided interview for experts from companies producing products of all risk groups including active implantable medical devices and in vitro diagnostics. Seven experts, each responsible for post marketing surveillance in their company, were interviewed between November 2013 and January 2014.

Results: We found significant differences between the number and types of post marketing instruments which were not attributable either to product or risk categories. The measures taken were based on the use of external data, such as literature screening, vigilance reporting related to medical devices and post-market clinical follow-up studies, customer knowledge management, observation of similar devices, and analysis of health care data, e.g. through automated surveillance of clinical registries and databases, but also of internal company data, mainly from production and quality management.

Discussion: Medical device manufactures use a wide range of methods to conduct post marketing surveillance. However, these are considered primarily as instruments for quality and regulatory management. So far, little attention is paid to the operational use of this knowledge to develop innovative, effective and safe medical devices and processes.

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Creating an Aboriginal Nursing Workforce: Equity in Education to Remote Northern Communities in Canada

Decades of data have consistently demonstrated that health outcomes are much poorer for northern, Aboriginal Canadians than non-Aboriginals, despite the fact that more funding is devoted to First Nations and northern health service delivery; a profound indication of public policy failure. Two avenues within the scope of the public sector mandate could produce a sustainable and positive impact: better access to health education and better access to health care services. The current models of health sciences education and health service delivery rely on northern and Aboriginal residents travelling long distances to urban areas to access secondary/tertiary health services. Predictably, this has led to few students pursuing health sciences degrees and an underuse of services.

The College of Nursing at the University of Saskatchewan launched a new nursing education program in two northern Saskatchewan communities using advanced Information Communications Technologies (ICT). The decision to move to northern Saskatchewan was predicated on an identified need by the communities and health regions providing care to northerners. The goal was to provide high quality, accessible education in support of the health human resources plans for the regions. For nursing students to "learn where you live" yet be exposed to the same professorial as their southern counterparts, an innovative ICT system using remote presence telementoring (robotics) was implemented (RP). The expectation was to extend the use of the RP to medical and dental service providers in the health regions.

This paper will discuss the need to assess the cost benefits and quality of service in the use of RP for both nursing education in northern Saskatchewan as well as its capacity for clinical service delivery within the health regions. The goal is to inform a pathway for rural, remote and northern health equity using eHealth innovations, from education, service delivery and community-based, primary health care.

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Job Mobility among Parents of Children with Chronic Health Conditions

We estimate the effect of childhood psychiatric disorders on adult labor market outcomes using data from the US National Comorbidity Survey – Replication (NCS-R). The NCS-R is a nationally representative survey which includes diagnostic batteries for psychiatric disorders as well as extensive socio-demographic and economic data and personality measures. We focus on three childhood onset mental disorders: Attention Deficit Hyperactivity Disorder, Conduct Disorder, and Oppositional Defiant Disorder. The adult labor market outcomes analyzed include: current employment status, weeks worked in the past year, work hours, and work absences in the past month.

Initially, we estimate baseline models in which we measure childhood mental disorders using dichotomous indicators. We examine co-morbidity across disorders, and study how childhood disorders affect labor market outcomes through intermediate channels such as educational attainment and occupational choice. We also address the possibility of unmeasured factors that affect both childhood disorder and adult labor market outcomes using bivariate probit models. Using bivariate probit models, we estimate the childhood mental disorder and adult labor market outcome equations jointly, using family history of mental illness as an exclusion restriction to sharpen the identification.

Next, we move to an alternative empirical approach in which we estimate the effect of childhood psychiatric disorders on adult labor market outcomes using a structural equation model with a latent index for childhood mental illness, an approach that acknowledges the continuous nature of psychiatric disability. This way, we can isolate specific childhood symptoms that are important factors in affecting future labor market outcomes, both among individuals meeting and not meeting diagnostic criteria for a childhood psychiatric disorder. This identification of specific key symptoms is important from a policy perspective, as there is growing awareness that childhood experiences are critical to later economic outcomes and these experiences can potentially be improved through public programs and policies.

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A Cross-Sectional Study on Medications used by Pregnant Women: Any Safety Concern?

Background: Medication use during pregnancy is widespread and should be considered as a public health concern. This study was conducted to determine the types and safety of medications used by pregnant women.

Methods: A cross-sectional study was conducted on pregnant women who attended the antenatal clinic of a major teaching hospital in Kuala Lumpur. Data was collected via face-to-face interviews using a structured questionnaire from January to April 2013.

Results: Of the 500 respondents, 62% (95% confidence interval, CI: 57.7%, 66.3%) used at least one medication during their pregnancy while 30.8% (95% CI: 26.8%, 34.8%) took the medications during the first trimester. The classes of medications commonly used by the pregnant respondents were analgesics (26.8% of the respondents), followed by cough and cold medications (18.6%) and medications for gastrointestinal disorders (11.8%). Among the 697 medications used by the respondents during pregnancy, 0.1% was classified under pregnancy safety category A, 51.8% were under category B, 14.3% were under category C, 0.7% under category D and 0.1% under category X. In addition, eight potentially teratogenic medications were used by the pregnant women in this study.

Conclusion: The findings of this study show that potentially teratogenic medications were used by pregnant women. This calls for healthcare providers to be more vigilant in educating pregnant women on the safe use of medications.

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The Dynamics of Informal Care Provision in the Australian Household Panel Survey: Previous Work Characteristics and Future Care Provision

This study contributes to a small literature of informal care dynamics by examining the dynamics of informal care provision of working age Australians. We focus on the impact of previous work characteristics (including work security and flexibility) on subsequent care provision decisions. We distinguish between care provided to people who cohabit or are resident elsewhere and between individuals providing care on a primary or secondary caring role. Our dynamic framework of informal care provision accounts for state dependence, unobserved heterogeneity and initial conditions. For both males and females, we find the existence of positive state dependence in all care states in short and medium-term. Furthermore, the inertia in care provision appears to be stronger for more intensive care. We also find previous employment statuses have some significant deterrent impact on current care provision decisions. The employment impacts, however, differ by type of previous work, type of current care, and gender. We additionally find that workers with higher job security perceptions are less likely to provide some type of care in subsequent years. Workers' perceptions about work flexibility or overall work satisfaction are found to have no impact on their subsequent decisions to provide care of any type.

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Educating the Next Generation of Leaders in Health Care: A US-UK Comparison

Data suggest that hospitals managed by physician CEOs attain better quality outcomes for their patients than those led by non-physicians. Indeed, clinical leadership is important at all levels of medical training and patient care. In the context of modern health care institutions and services, there is a growing implication that physicians should seek to acquire a more comprehensive understanding of the traditional managerial subjects, including finance, accounting, quality improvement, organizational design and resource distribution.

In the United States (US), exposure to these topics can take place in the following settings: as modules selected during an undergraduate liberal arts curriculum, during medical school in the form of joint MD/MBA programs, during residency, and as training offered to hospital executives. MD/MBA programs have emerged as the gold standard of health care management education, providing the next generation of physician-leaders with the high-quality training expected of professional managers. These programs aspire to produce students equipped to improve patient care and deliver more efficient, cost-effective health services.

In contrast, there is comparatively limited opportunity for students to acquire management skills during undergraduate medical education in the United Kingdom (UK). While some schools have developed intercalated Bachelor degrees with a focus on health management principles, no programs offer the same breadth of training as the US MD/MBA model. Notable efforts continue to integrate leadership themes into undergraduate curricula, preparing graduates to deliver a sustainable National Health Service (NHS), yet formal training in clinical and management competencies remains separated.

Here, we investigate the effect of physician leadership on health care delivery, present analyses of management training opportunities in the US and UK, and propose recommendations for UK curricular improvements and longitudinal studies of graduate performance.

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Costs and Benefits of Improving Access to Psychotherapies for Adults Suffering from Common Health Disorders in Canada

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Quality Management in Hospitals: Does It Contribute to High Quality of Care?

Health policy-makers all around the world are facing the problem of ever increasing costs in health care. In addition, the demand for high quality of care is greater than ever. Since there is no indication, that these trends will stop in the near future, the policy-makers have to find methods to mitigate these problems. One possible solution is the development of efficient quality strategies, including external quality assessment and improvement systems that focus on clinical effectiveness, the implementation of evidence based practice, patient safety programs and clinical audit.

The aim of this paper was to identify and summarize research studies, which investigate the impact of different quality strategies and quality improvement methods on healthcare activities and outcomes, and to determine if these are clinical effective methods or not. For this reason, a systematic search was carried out in various databases.

The literature suggests that having an external quality assessment system does contribute to better health care. However, most of the studies focus on accreditation alone, and only one relatively low sample study compares accreditation with ISO certification. Related to clinical-effectiveness limited relevant results were found.

Health policy-makers should consider different quality models as valid methods to provide high quality of care in hospitals, but they should also be aware, that the clinical effectiveness of these have not yet been proven. More outcome oriented, high sample studies should be carried out, which compare one technique to another and find out if some of them could be implemented simultaneously.

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Eliciting Preferences for Occupational Health Services in Small - and Microenterprises

Demographic change will lead to a tremendous decrease in Germany's labour supply. At the same time, structural changes lead to a growing share of older workers. In particular small and medium enterprises (SME) with limited personnel resources and a high demand for skilled workers will need to focus on health promotion to support workability. So far, however, SME lack appropriate support structures. Our aim is to conceptualize the creation of service units providing this support, tailored to the specific needs of SME.

We conduct an Adaptive Choice Based Conjoint (ACBC) analysis to assess the stated preferences of 80 CEO in SME – 50% microenterprises – from urban and rural areas in the region of Lueneburg. We investigate what services comply best with demand as well as SMEs' willingness to pay (WTP) for it. In order to take into account the complexity of the subject, we chose the adaptive version of choice-based conjoint experiments, the ACBC. Interviews were conducted between January 13th and February 15th 2014. ACBC reveals the relative importance of attributes and the part-worth utilities of each attribute level. The conjoint analysis is preceded by qualitative research including expert interviews and focus groups.

According to our results, the most important aspect is the kind of services offered, followed by the approach to whom (e.g. to the employees or the CEOs) and where (e.g. "on the job" or in training centers) the training shall be provided. SME prefer a combination of physical and mental health support. Further, SME prefer individualized support at the company level. Trainings should be provided to the employees at the specific workplace, not in training centers. Finally, we found out that the majority is willing to pay for the preferred service combination. The estimated contribution is between 5 and 10 Euros per employee.

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Early Changes in Moscow Physicians' Choice of Medicines after Regulatory Introduction of International non-Proprietary Name based Prescription in Russia

Background: Administration of expensive original medicines in presence of reliable generic substitutes substantially increases medication costs for individual patients and public health system as a whole. In order to reduce inefficient waste of personal and public funds the Ministry of Health of Russia introduced mandatory international non-proprietary name (INN) use in prescriptions issued by authorized healthcare professionals since July 2013. The aim of our study was to estimate the effect of abovementioned regulatory measure on prescribers' choice of medicines they routinely recommend to their patients.

Methods: 219 non-specialist physicians from Moscow were surveyed from September 2013 to April 2014. The respondents were offered to indicate as they recommend to their patients individually preferred specific drug from each of 5 routinely employed in ambulatory practice classes: oral antibiotics, angiotensine-converting enzyme inhibitors (ACEIs), statins, beta-blockers, proton pomp inhibitors (PPIs) and non-steroidal anti-inflammatory drugs (NSAIDs). The results were compared to the data from our earlier similarly designed study conducted on 452 primary care physicians in 2011-2012 (Gatsura and Gatsura, 2013). Common descriptive statistics and chi-square test were used.

Results: The introduction of INN based prescribing was associated with statistically highly significant increase in generic names utilization by our respondents. Thus cumulative INN use was increased from 19,3% to 42,1% during the 1st year since the abovementioned regulation was entered into force. Statistically significant increase of INN use was also shown for oral antibiotics (from 16,8% to 31,1%), ACEIs (from 16,9% t0 50,8%), statins (from 15,7% to 47,1%), beta-blockers (from 13,75 to 43,15), PPIs (from 25,4% to 37,4%) and NSAIDs (from 26,0% to 44,7%). These findings were also associated with increase of generic name ratings inside each group of medicines.

Conclusions: Official introduction of INN based prescription in Russia produced statistically significant changes in personal formularies of Moscow physicians within 1 year since implementation. In addition educatory interventions aimed at promotion of INN based prescription to physicians would be most desirable. Further improvement in prescription and dispensing of pharmacological drugs would diminish expenses for medical treatment, prevent self medication and ultimately contribute to the patient's benefit and safety.

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How Health Economics Can Help to Guide Research Investment Decision - An Example from a Novel BioStent Technology

Background and objective: Our novel cardiovascular stent concept based on a cell seeded fibrin matrix and a textile nitinol structure offers the opportunity to increase patency rate and to minimize thrombus formation after stenting. We generate viable, self-expanding stent structures with functional endothelial cell lining. However, with regard to the large investments needed for tissue engineering applications, it is crucial to prioritize between competing research projects and to channel scarce resources to their most efficient use. Health economic techniques used in early stages of the development process can help to address this challenge. Thus, to get a health economic perspective on the potential of our concept as a clinical product we conduct a cost analysis and estimate cost-effectiveness. In our paper, we want to show the benefits of addressing the question of translation potential in such a prospective way.

Methodology: We conduct a detailed bottom-up cost analysis to estimate the cost of BioStent treatment. We develop a cost model for the required production processes under GMP conditions, covering cell biopsy, cell processing, fibrin scaffolding, stent manufacturing, and bioreactor handling. Total cost of production is calculated for three different scenarios and sensitivity analysis discusses how the level of automation and the assumed annual volumes drive unit cost. We further evaluate the effectiveness of the BioStent technology needed to meet historical thresholds for reimbursement.

Conclusion: Our approach shows the benefits of using health economics in a prospective way. As a result, our analysis has clear implications for how to guide research investment and allows the definition of targets for process engineering. The approach can be applied to other tissue engineering applications and can help to focus on translation early in the development process by taking a product-oriented view – a view which is classically lacking in early tissue engineering research.

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Athens' "Nephos": A Heating Oil Tax Hike, Particulate Matter, & Public Health

This paper focuses on the human health impacts of increasing smog in Athens, Greece following a tax hike on home heating oil. The purpose of this work is to determine whether the Greek government should lessen the current heating oil taxes to reduce Athenian smog and the subsequent effects of particulate matter on public health. This work contains a risk assessment, synthesis of scientific and epidemiologic findings, exploration of tax and health policy options, and a final, evidence-based policy recommendation.

In the wake of Greece's national debt crisis and supranational 2010-11 bailout negotiations, the Greek government raised heating oil taxes in late 2012. As a result, many Greeks have resorted to burning scrap wood, firewood, and even garbage for home heating. Biomass burning releases particulate matter, sulfur dioxide, carbon monoxide, and other carcinogens into the air, which becomes trapped in and around Athens as smog. This can be especially noxious to certain sub-populations (those with heart disease, hypertension, asthma, etc.).

Two particulate matter types, PM2.5 and PM10, are of particular interest due to their established potency in human health and previous measurements in the Greek capital. The paper's synthesis of evidence summarizes strong dose-response relationships (in 10 ug/m3 intervals) for PM2.5 and PM10 with morbidity measures or proxies (such as risk of hospitalization); this echoes Dockery et al.'s seminal 1993 paper that found fine particular matter significantly contributed to higher mortality in 6 different United States cities.

Greek political leadership is in no public health or ethical position to gamble with harmful aerosols over matters of taxation. Given the health impacts of PM2.5 and PM10 released by burning cheap fossil fuel alternatives, it is vital and time-sensitive that Ministers and public officials of the Hellenic Republic come together and enact the recommended home heating oil tax relief.

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Resource Inputs and Costs in Community Pharmacy Services: Insights from a Time-Driven Activity based Costing Strategy of Pharmacy Services in Portugal

Background: The increasing economic uncertainty, demographic trends and technology development are pressing health systems and institutions to control costs, while maintaining service standards. Pharmacists have experienced an expansion of their role in the last decades, developing the scope of services offered. However, little research has been conducted on the economic costs and benefits of new pharmaceutical services.

This paper reports on the work in progress in the ePharmacare project, which aims at exploring the value of pharmaceutical services (PS) offered through the internet in Portugal. Analysing the resource inputs of current PS is one of the project's research objectives, aimed at providing a cost-basis for future cost-effectiveness analysis. Results from this analysis are expected to understand and improve community pharmacy (CP) organizational business models.

Methods: Because of its focus on the provision of PS by CP, the present study uses a provider perspective as a framework to calculate costs. Time-driven Activity Based Costing (TDABC) was the study's selected methodology. PS supply and demand patterns were studied through direct observation. The study was conducted in four pharmacies during a weekday's full shift. The data collector registered the details of each activity's execution, including time spent by the pharmacist. Data on pharmacy costs were obtained through pharmacies' accounting records.

Results: Through direct observation of time spent with service provision and pharmacy's accounting records, aggregated costs were obtained, allowing a top-down costing model for pharmacy resource inputs. In the following months data will be analysed to quantify the resource inputs and calculate the cost of specific PS. The results from the analysis will help: (a) inform CP management; (b) conduct cost-

effectiveness analysis for PS provision, and; (c) produce evidence to influence policy making and regulation.

Conclusion: This study provides evidence of the importance of PS' costing, to better inform the pharmaceutical policy in Portugal. Its results are expected to guide the design of new cost-effective PS using information technologies.

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Universal Access to ARV Treatment in South Africa: Economic and Behavioral Challenges

Background: With 5.1 millions of infected adults and a prevalence rate of 17 % in adults, South Africa is one of the most affected countries by HIV/AIDS. The preventive effect of antiretroviral therapy was demonstrated in 2011 by the results of the HPTN 052 trial which proved that ARV could reduce infection risk by more than 96 % in discordant couples. The objective of this study is to assess the economic and public health impacts of a universal HIV testing and treatment program in South Africa.

Methods: An epidemiological model including a non linear incidence function is built to simulate the effect of the policy in presence of prevalence elastic preventive behaviors. Several implementation scenarios of the policy program and different behavioral responses in the general population are considered. These scenarios are evaluated from both a public health and an economic point of view.

RESULTS: The model highlights three key factors for the success of a large-scale HIV treatment program in South Africa: screening must reach a sizeable part of the population repeatedly, patients' adherence to ARV treatment must be very high and preventive behaviors in the general population should not relapse facing the greater availability of treatment. If screening and adherence appear as substitutable success factors, the absence of preventive behaviors' relapse seem to be a complementary factor essential for success of the policy from an economic and public health point of view.

CONCLUSION: Given the uncertainty about implementation conditions, it seems essential that a universal HIV treatment program in South Africa should be carefully prepared and monitored to avoid potential perverse effects in terms of prevalence, incidence and costs. The rate of treatment initiation, patients' adherence and preventive behaviours in the general population must constitute key monitoring indicators for the implementation of a universal HIV treatment program.

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Strategy Modeling Exploration for Maternal and Child Health Improvement in Rural Western China: a Study Based on the Lives Saved Tool Assessment and Application

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Health Care Reform in the United States: Are Hospitals Ready?

Background: The United States health care industry is experiencing unprecedented transformation and reform. The goals of this reform are to improve quality, increase transparency, and reduce costs. Historically, unplanned hospital readmissions have been an indicator of hospital quality. As a result of the Patient Protection and Affordable Care Act, the Secretary of Health and Human Services was required to develop a methodology called a Total Performance Score (TPS) to assess the quality of care provided in each hospital. A typical indicator for hospital quality has been an assessment of a hospital's unplanned readmissions for Acute Myocardial Infarction (AMI), Heart Failure (HF), and Pneumonia (PN). However, with the implementation of the TPS methodology little is known about the relationship between unplanned hospital readmissions and TPS.

Purpose: The purpose of this study is to gain a better understanding of the relationship between a hospital's TPS and unplanned readmissions.

Methodology: The 2012-2013 American Hospital Association (AHA) database, the 2013 Hospital Value-Based Purchasing (HVBP) Total Performance Scores (TPS) Database, and the 2013 Hospital Readmission Reduction (HRR) database through CMS were merged. Multivariate linear regression analysis was used to examine the relationship between hospital TPS and readmission rates for AMI, HF, and PN.

Findings: Hospital TPS was significantly and inversely related to AMI, HF, and PN readmission rates. The higher the hospital TPS, the lower the readmission rates for AMI, HF, and PN patients. Hospitals with higher Medicare and Medicaid patients had higher readmission rates for all three conditions.

Practice Implications: Hospital TPS methodology was a good indicator of hospital quality as it relates to unplanned readmissions. This methodology will likely evolve to include additional measures or dimensions in order to more comprehensively assess hospital quality and payment. Policymakers should consider other structure elements and process measures to assess and improve patient safety and quality.

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Mergers and Acquisitions in US Retail Pharmacy

Background: The retail pharmacy industry is the primary source of prescription medication for Americans. It has transformed from a cottage industry of independent pharmacies and consolidated toward chain drug stores and mail order. The market is characterized by a complex set of relationships with varying degrees of market power between pharmaceutical manufacturers, insurers, pharmacy benefit managers and consumers. The causes and consequences of mergers and acquisitions in retail pharmacy are not fully understood.

Study Questions: Increased market concentration and industry consolidation are commonly public policy concerns. We hypothesize that market and profit pressure may be driving consolidation in retail pharmacy. Rising input prices and constrained retail prices squeeze margins and may lead to consolidation to generate countervailing power as a defensive strategy. Falling profit rates and favorable equity market response to mergers and acquisitions would lend support to this hypothesis.

Methods: We use secondary data to study a sample of 87 large acquisitions in the industry. Standard event study methods are employed to assess acquisitions exceeding ten million dollars. The capital asset pricing model is used to assess returns.

Results: Findings indicate that in spite of rapid growth, profitability eroded. Consolidation appears to be defensive affording greater market power. Equity markets respond positively to merger and acquisition announcements for both acquiring and acquired firms and negatively for rival firms not party to such transactions.

Conclusions and Health Policy Implications: Consolidation is defensive in nature, driven by scale economies and pursuit of countervailing power. The extensive network of retail pharmacy provides convenient access but does not optimally utilize pharmacists. Excess capacity may become evident if mail order and other cost control measures supplant traditional retail pharmacy.

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Public Expenditure Growth in Antineoplastic Pharmaceuticals and Oncology Monoclonal Antibodies - Nine Year Trend in Serbia

Monoclonal antibodies applied in clinical oncology present a therapeutic promise for many patients with cancer. Nevertheless these expensive protocols are associated with extremely high acquisition and administration costs. The issue of societal affordability of such treatment options is particularly at stake among middle income European economies.

Medicines Agency of Serbia issues regular annual reports on public expenditure on pharmaceuticals since 2004. According to these official data total public expenditure on drugs doubled from 2004-2012 (from € 339,279,304 to €742,013,976). During the same nine years public expenditure on antineoplastic pharmaceuticals was rising at much faster pace, approximately five times from € 10,297,616 in 2004 to € 51,223,474 in 2012. Absolutely record growth belongs to the value of turnover of monoclonal antibodies indicated in diverse malignancies. These costs became almost twenty times higher in 2012 compared to 2004 (€ 19,687,454 towards € 1,033,313 in the past). National pharmaceutical expenditure trend projections in this country show strong recovery in 2012 after severe blow to the overall health care market imposed by the worldwide crisis.

Universal health insurance coverage and sustainable health care financing provision will remain difficult issues for Balkan economies in years to come. Although monoclonal antibodies exhibit undisputed therapeutic efficiency in certain malignant disorders, cost-effectiveness estimates must be taken into consideration by policy makers deciding on reimbursement.

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The Inequality of Opportunity for Health among the Elderly in Europe

We investigate the unfair inequality of opportunity (IO) for healthy aging in Europe. Using SHARE data, we analyze various determinants for health status of the elderly population in ten states—Denmark, Sweden, Switzerland, Austria, Germany, France, the Netherlands, Belgium, Spain and Italy. Most of existing literatures investigate socio-economic inequality in health, mainly focusing on a single SES indicator such as education, occupation, or income. However, international comparisons inspired by this 'partial approach' are inconsistent with each other. For this reason, our study applies a general approach based on a structural model, which is proposed by Fleurbaey and Schokkaert (2009). We disentangle all predictors into fair (effort) and unfair (circumstance) components. After direct and indirect standardizations, we quantify an overall unfairness in health distribution in each society.

We choose an objective measure for health to avoid a reporting bias. Our dependent variable is the maximum hand grip strength. Independent variables of our interest sketch an individual's lifetime trajectories. We consider gender, age, parental occupation, childhood residential area, height, educational attainment, initial occupation, and adulthood lifestyles. We employ the fixed effect vector decomposition estimation (Plümper and Troeger, 2007) on our panel data, to deal with an unobserved heterogeneity. Our result demonstrates the greatest inequality of opportunity for health in Austria and Spain. Except for Belgium, France, and Switzerland, 35-45% of overall inequalities in health are considered unfair in all samples. After plotting our results with some policy indicators, we conclude that the magnitude of IO is strongly correlated with the early retirement and the barriers to primary healthcare. Our research aims to provide useful resources for policy makers to perceive the best practice for the equity in health from neighboring societies.

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Capacity Building in Health Management and Introducing the Kazakh Health Management Standards

The strengthening of health service management is internationally considered as being one of the most critical factors in bridging the gap that exists between policy and implementation (WHO 1990). Training health professionals on the key principles and practices of effective health management has been seen as one of the most important steps in the process of developing a decentralised, equitable and comprehensive health system in Kazakhstan.

As a consequence of the sweeping reform which Kazakhstan is introducing in its healthcare system, especially with the establishment of the "unified national healthcare system", growing attention is being paid to the skills needed to tackle future challenges and the skills currently available. These should be considered particularly in light of the previous practice of the appointment of senior clinicians with little training in modern management techniques as managers in Kazakhstan, like in most post-Soviet health systems. While some thrive and perform effectively, the majority need further development to obtain the necessary competence, knowledge and skills in health management. The heavily regulated healthcare system the country inherited from the Soviet Union implied managers had a very limited discretion in how resources could be deployed, and consequently did not require sophisticated management skills. However, this picture is changing. Kazakhstan is already increasing to a significant degree the amount of resources invested in the healthcare system.

This positive development is posing new managerial challenges. Further, the "unified national healthcare system" envisages the establishment of health care providers as stand-alone entities, able to exercise a much broader degree of autonomy, as the state economic enterprises are based on the right to implement more effective and efficient management. Thus, health managers (will) have the right to allocate revenues to the expenditures they consider most appropriate, including workforce incentives, and managers will be accountable for the results they achieve. Based on the reform efforts, there is a growing need for a national health management training system for both present management personnel and a new generation of hospital managers, who will contribute to the achievement of affordable and high quality health care services that meet international standards.

Within the framework of the World Bank's Kazakhstan Health Technology Transfer and Institutional Reform Project the objective of Component "Twinning Arrangement for Health Management Capacity Building" is to create a permanent, sustainable and efficient system for training health care managers at all levels, taking into account international experience and specific characteristics of the Republic of Kazakhstan.

Key activities within the framewotk of the World Bank Project were as follows: health management training and developing human resource planning and management in health by sharing international experience and best practice as well as designing and delivering training courses; establishing the institutional framework for capacity building in health management by designing the Centre for Health Management, a training, research and consulting body, as well as by developing the Kazakh Health Management Standards, a set of qualification standards and a manual for human resource managers in health.

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Why Don't the Dutch Use Quality Information in their Hospital Choice? Results from a Survey among 479 Patients from a Dutch Hospital

The development of relevant information about the quality of hospitals increases. As a result patients are increasingly able to use this information in their hospital choice.

Surveys into hospital choice however reveal that patients do not or barely use quality information in their hospital choice whereas it is unclear why they don't.

This study was designed to discover why the Dutch patients don't use quality information. It aimed to reveal factors that actually explain the differences between those using quality information and those not using this information.

In May 2013, a sample was drawn from patients who were seeking out-patient care from hospital-based clinics in a hospital in the eastern part of the Netherlands. Some sought screening or testing that was too complicated to be performed in a doctor's office. Others were at the hospital for outpatient procedures. It was a convenience sample.

A total of 479 patients visiting the hospital clinics were included in the sample and were questioned as to the use of quality information in their hospital choice. The response rate was 81.9 %.

A considerable portion of the patients (44%) reported that they were not aware of the existence of quality information whereas almost only 50% had heard about it. The remaining 6% of the interviewees did not answer the question. Only somewhat more than 5% (n=22) of the patients had actually seen the quality information and 4% (n=17) had used it in their hospital choice.

Several factors are relevant, but most important regression analysis shows that nonusers compared to users significantly more often trust GP's and more often distrust quality information. Hospital choice seems to be a decision making process that is heavily dependent on GP's playing an important role in this process.

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Payment Schemes and Cost Efficiency: Evidence from Swiss Public Hospitals

Background: Over the last decade, rising healthcare costs have become a matter of public concern in most industrialised countries. Economic theory suggests that on the supply side, we can promote cost efficiency by offering accurate financial incentives to the healthcare providers. We study the impact of inpatient payment schemes on cost efficiency of acute care hospitals in Switzerland.

Method: Using a panel of 121 public hospitals, we analyse the efficiency effects of four types of payment methods, which differ in terms of the amount and the accurateness of the prospective rates. Unlike previous studies, we are able to simultaneously analyse and isolate the efficiency effects of different payment systems within a country. By means of stochastic frontier analysis, we estimate a hospital cost frontier. Using a two-stage approach by Battese and Coelli (1995), we then analyse the impact of the payment scheme - and other covariates - on hospital-level cost efficiency.

Results: Controlling for hospital characteristics, the local market environment in the Swiss states, and time trends, we show that, compared to per diem, hospitals which apply prospective reimbursement schemes, perform better in terms of cost efficiency. Furthermore, our results suggest that mixed payment schemes create incentives for cost containment as well, although to a lesser extent. In addition, our findings indicate that the local healthcare market also affect cost efficiency. On the one hand, cost efficient hospitals are likely to be located in cantons with competitive markets, as measured by bed density in acute care. On the other hand, consistent with previous literature, the level of demand for inpatient services is negatively correlated with hospital efficiency, possibly related to increased market power of the providers.

Discussion: These findings suggest that local remuneration policy can have a considerable effect on hospital cost efficiency. Moreover, even semi-prospective payment schemes may offer financial incentives that positively affect provider behaviour.

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Do Chinese People "Keep up with the Jones"? Evidence from Peer Effects on Childhood and Adolescent Bodyweight in China

This study examines whether peer effects exist with regards to bodyweight in a sample of 3-18 year-olds in China using data from the China Health and Nutrition Survey (CHNS). A specific mechanism of how peer effects work via self-reported perceptions of body weight is further explored. Using a community-level definition for peers, this paper presents supporting evidence that peer effects related to childhood and adolescent body mass index (BMI, kg/m2) exist, even after controlling for a rich set of community-level covariates. The magnitude of peer effects is much stronger among individuals at the upper BMI distribution, especially for females. Pathway analysis indicates that self-reported perceptions of overweight by female adolescents are significantly affected by peer effects.

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Opportunism of Public Policies as an Underlying Determinant of Health Inequalities in Hungary

Steep health gradient is a key characteristic of the Hungarian population's health status. The "health gap" between Hungary and the EU15 countries is greater now than at the end of the 1980's. By now social inequalities – including health inequalities – have became a major obstacle to economic development, social progress and political stability. The purpose of this presentation is to highlight the processes through which opportunism of public policies and its effects on social determinants of health have contributed to increasing health inequalities on the one hand, and to the ignorance of the problem, on the other. The presentation is based on the authors' contribution to the project on „Health inequalities and social determinants of health in Hungary" commissioned by the WHO Regional Office for Europe.

The paper reveals key features of public policies in the past decades, including as follows. The governments' decisions have mainly been driven by budget constraints and short-term political interests. As to labour-market policy, the least effective measures get the biggest weight, instead of complex programs. The education system intensifies the inequalities originating from the family background of the students. The tax and welfare system produces inverse redistribution of income. Severe cuts of public spending on healthcare since the mid-1990s have contributed to poor performance of the health system, including inequalities in access to and quality of care. The paper presents basic indicators of social and health gradient in Hungary that can be partly attributed to the public policies discussed. When possible, indicators are presented in an international comparison.

Finally two scenarios are outlined. The positive scenario summarizes the conditions needed for a fundamental change in public policies that could result in a comprehensive strategy to tackle social determinants of health inequalities. The negative scenario is basically a projection of current trends and their probable consequences.

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Unexpected Productivity Potentials in Municipal Hospital Groups

Background: Hospitals have to expand their scope of services while reducing costs, saving time, and raising quality delivered. In order to achieve these goals hospitals establish cooperation's with other medical care facilities. By a joint coordination of work organizations total expenditures should be reduced. How the goals of individual members within these hospital groups affect the overall purpose of cooperation, has not been explored so far. Consequently it is necessary to identify and quantify the productivity potentials of municipal hospital groups as well as the critical success factors.

Method: We conducted a qualitative survey in 20 municipal hospital groups in Germany. We considered only hospital groups which formed after the year 2003. The interviews comprised general questions about the legal form, the year of foundation, the number of municipal hospital group partners, the contractual obligations, the form of cooperation (horizontal, vertical) and its purpose. In particular, the centering of medical and non-medical services inside the municipal hospital group, the common use of equipment, staff, and workspaces as well as the existence of further forms of cooperations were questioned. Additionally, critical factors of success within given cooperation conditions were examined.

Results: As a result, this study shows the requirement for an activation of productivity potentials in municipal hospital groups. Main productivity potentials exist in the division of work, case management, standardization of workflows and in the optimization of the resource allocation. The analysis reveals that hospitals establish cooperation due to financial, medical, economical, organizational and supply chain aspects. Successful cooperations are characterized by geographical proximity, trust, continuously exchange, coordination between partners, a centralized coordination, the specification of liabilities, the commitment of the management, and by available resources within a hospital.

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The Cost- Effectiveness of a Kindergarten-Based, Family-Involved Internation to Prevent Obesity in Early Childhood

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Different Views on the Establishment of Priorities among Patients: The Main Principles Mentioned in the Choice

There is considerable debate about the appropriation of setting priorities in health at the micro level on the basis of the utilitarian principles followed by health economics. The aim of this study was to elicit public's general ethical principles through quantitative and qualitative data. Data were collected from a convenience sample of 180 students and 60 health professionals (doctors, nurses, pharmaceutical technicians, health technicians) using a questionnaire. Respondents were faced with a hypothetical rationing choice scenario of four patients differentiated by personal characteristics. Respondents should order them and justify their options. The results pointed to the support of three main rationing principles, namely, the 'fair inning principles' that gives priority in order to ensure the equality of lifetime health; the clinical criterion based on need or in extreme the 'rule of rescue' principle and the utilitarian principles that give priorities to those who benefit most from treatment. Interestingly was to find some difference between the two samples. Doctors seem more sensible to the maximization criterion than students or other professionals.

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Healthcare Networks in Metropolitan Areas: The Case of the Health System in Brazil

The health care system in Brazil - given its size and geographic scope - is an example of the complexity and often fragmentation in the health policy implementation. In the middle of this health systems' fragmentation, the concept of Healthcare Networks emerges and consolidates. The notion of healthcare networks proposes that the health system must be organized through a coordinated points to provide a continuous and integrated care, based on cooperation between managers, providers and users. In Brazil, in order to address most of the difficulties of fragmentation, in 2010, the Ministry of Health enacted an ordinance defining the healthcare network as a management model to be pursued by the national health policy. The Brazilian health policy is decentralized and is the responsibility of municipalities to implement it through federal funds. However, a defining feature of healthcare networks is their regional character, as it becomes necessary to go beyond the municipal boundaries for resource optimization. This scenario of inter-regional relations gains greater density when the territory is configured in an urban superstructure, as it is in the case of metropolitan areas. In this sense, a deeper analysis of the governance forms of Healthcare Networks in metropolitan scale becomes very fruitful. Thus, this paper proposes to discuss the cases of Healthcare Networks in Brazilian metropolitan regions, characterizing its implementation process as well as identifying management problems in the various cases. The study, which is part of a post-doctoral research, is grounded on data provided by agencies responsible for health management in the federal and state levels, as well as the current literature on healthcare networks. Results include the analysis of metropolitan networks implemented within their different stages, challenges and advances.

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The Potential and Outcomes of Clustering In Healthcare – Expectations of Polish Health Care Providers

Introduction: Clusters attract a growing attention and start to constitute a new paradigm in business organisation. The same is happening in Poland. In healthcare clustering is not yet so much widespread, however started to grow, with over 20 clusters being established in recent years. The aim of the study was to investigate expectations of Polish healthcare providers regarding the potential and outcomes of clustering in healthcare.

Methods: We used an original questionnaire addressed to a representative randomised sample of Polish healthcare units. Statistical data was analysed using chi2 test.

Results: In general, respondents has assessed the potential of clustering as bad or very bad (79,3% in total), although units already being cluster members were much more optimistic (p=0,01). Unfavourable law and lack of will to access the partnership are perceived as basic barriers (24% each). Cluster members were also more optimistic (p=0, 00) in regard to potential influence of clustering on health system, expecting better needs recognition and system coordination (41,4% and 24,1% respecitvely). The expected own benefits, are social capital (trust and partnership network; 13,2%) and higher competitiveness (12,2%). Social capital was also showed as the basic determinant of cluster success (34%), while the state assistance was the second most popular (14, 8%). Interestingly, cluster members have had different opinions in this regard, being concentrated on reduction of internal competition (34, 8%).

Conclusions:

1. The potential of clustering in healthcare is perceived as low. The expected ways to increase it, is State's assistance in terms of legal preferences and stimulation of networks leadership.

2. Healthcare providers expect mainly themselves, along with the local communities to gain profits of clustering. The most expected benefits are social capital and increase in terms of competitiveness. In case of local communities, improved accessibility of health services and higher health system efficiency is expected to occur.

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Health Care Provider Response to System Reform: Effects of Capitation on the Inter-District Movement of Patients and Health Outcomes

I study how health care providers in New Zealand responded to the system reform that reintroduced capitation scheme, which pays the providers a fixed amount per each enrollee, regardless of the actual usage. Using data on every publicly funded hospital discharge in New Zealand over the 1999–2011 period, I find that the new capitation scheme decreased the movement of patients between districts, especially those whose conditions are more severe. The data used in this study include over ten million discharges, which comprise nearly 80 percent of the total admission in New Zealand. The findings show that high-skilled providers, in particular, are less likely to receive patients from another district under capitation than low-skilled providers. A cause for the reduction seems to be the reduced inter-district transfer sent by low-skilled providers, who receive greater funding under capitation. The results indicate that sicker patients are less likely to be treated by high-skilled providers since the reform. However, the reform has actually increased the transfer of patients in diagnoses with the higher probabilities of mortality, suggesting that low-skilled providers may selectively treat patients in more severe but less fatal conditions.

Overall, the decrease in inter-district movement seems to have negative effects on health outcomes. I find that the probability of mortality within 30 days of discharge declined during the research period, while readmission increased. The length of stay has decreased since the reform took place. Mortality may have decreased because the cases prone to fatality are still likely to be transferred to the high-skilled providers under the capitation system. On the other hand, the decrease in the length of stay and increase in the probabilities of readmission suggest that patients are more likely to be readmitted to hospital because they are discharged earlier under the new system. Although this study uses data from New Zealand hospitals, its findings are applicable to the health sector in other countries where capitation and universal coverage are in place.

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Development of Private Health Care Sector in the Post-Semashko System

The private sector emerged in the Russian health care during transition from a planned economy to a market one, and in 2012 already 10%t of patients used private facilities. The data of the Russia Longitudinal Monitoring Survey for 1994-2012 and the survey of 1063 private facilities conducted in 2011 demonstrate that private sector has become a competitor to the public one and has pulled a part of effective demand of the middle class. The share of patients from middle class applied for private medical services increased from 9% in 2000 to 19% in 2011.

In terms of provided care, private sector is partially supplements the public one, offering other types of health services, but for the most part the private providers substitute the public ones.

There are three type of constraints for development of private sector in Russia: (i) administrative barriers to the implementation of health activities, (ii) obstacles in the implementation of public-private partnerships, (iii) unequal competition with public facilities providing chargeable medical services by dumping prices. Private sector has developed out of the public health care financing system, and in 2012 less than 1% of compulsory health insurance funds were allocated to private facilities.

The further development of private sector and its role will be largely determined by the government policy to modernize the health care system. If, as before, the changes in the organization of health care and its financing are slow and inconsistent, a strengthening of social differentiation of the post-Semashko health care system can be expected. The middle class will focus on the private sector and get it higher quality services for its own account, while the rest of the population will receive health care of lower quality in the public sector. In an alternative scenario the private sector can be a tool for modernization and an organic part of an integrated health care system.

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Trial of an Elderly Acute Care Medical and Mental Health Unit (TEAM): Economic Evaluation Comparing with Current Practice, From an NHS and Personal Social Services Perspective

A specialist medical and mental health unit (MMHU), aimed at older (65+) people with an episode of acute physical illness complicated by cognitive impairment, was established in Nottingham (UK). The objective was to assess cost-effectiveness of MMHU compared to standard care.

In the trial-based economic evaluation, 599 (MMHU: 309) participants were analysed at 90-day follow-up. Health (inpatient, day-case, outpatient, and primary care) and social services resource-use data was collected and combined with unit costs to estimate total cost, including per-patient additional cost of MMHU. Primary care data was obtained for 468 (78.1%) participants. Additionally, baseline secondary care cost (1 year prior to trial follow-up) was collected for 597 (99.7%) patients. Quality-adjusted life years (QALYs), based on EQ-5D valuations at baseline and follow-up, were obtained for 272 (45.4%) participants (MMHU: 139). Cost and QALYs were adjusted by baseline characteristics using regression methods. Incremental cost-effectiveness ratios (ICER) were analysed, handling uncertainty by non-parametric bootstrapping. Multiple imputation by chained equations was applied to deal with missing data.

In the subgroup of 209 (34.9%) patients (MMHU: 109) with complete data, comparing MMHU to standard care, total adjusted cost was lower (-£206, 95%CI: -£591, 153), no QALY gain was observed (0.000, 95%CI: -0.011, 0.011), with 47%-probability of MMHU care being dominant (81%-probability of ICER≤£20,000/QALY). In the whole sample, total adjusted cost for MMHU was lower (-£149, 95%CI: -298, 4) with no QALY gain (0.001, 95%CI: -0.006, 0.008), and 58%-probability of MMHU care being dominant (94%-probability of ICER≤£20,000/QALY).

MMHU care was cost-effective. No significant effect on QALY gain was reported, but considerable savings were observed. This suggests that specialist mental health care, adjacent to standard physical-illness hospital treatment, may lead to better allocation of public spending on elderly care. Moreover, since QALY is an insensitive indicator of health in frail cognitively-impaired people, health benefits of MMHU could be underestimated.

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Evaluating Rashtriya Swasthya Bima Yojana (National Health Insurance Scheme) In Maharashtra India Using SPEC–by–Steps Tool

Introduction: This study is part of the multi-country Health Inc Project, funded by the European Commission (www.healthinc.eu). Government of India launched one of the world's largest social health protection initiatives called Rashtriya-Swasthya-Bima-Yojana (RSBY) in 2008 for BPL (Below Poverty Line) households. The objectives were to evaluate the current status of RSBY in Maharashtra, India in terms of proportions covered at each step like awareness, enrolment and utilization and identify Social, Political, Economic and Cultural (SPEC) factors responsible for the disparities.

Methods: The data collection was done during 2012-2013. A cross-sectional study was conducted with systematic multi-stage sampling covering 6,000 households (29585 individuals) across 22 districts. Additionally 16 Focused Group Discussions and 34 In-Depth Interviews were conducted to supplement the findings. The data was analyzed using innovative SPEC–by-Steps tool (developed by Health Inc.).

Results: Out of 6000 households, only 1781 (29.7%, range 28.5%-30.8%) were aware about RSBY, only 716 (11.9%, range 11.1%-12.8%) had enrolled for RSBY and only 21 (0.4%, range 0.2%-0.5%) had actually utilized the benefits during hospitalization. The participants felt that such schemes didn't reach their intended beneficiaries due to various SPEC factors (e.g, illiteracy, poverty, poor planning, improper implementation, neglect of vulnerable people, etc.).

Conclusions: The proportion of awareness, enrolment and utilization of RSBY among BPL households was quite, low decreasing with each step. Many such schemes are simultaneously operated creating confusion for common man. These schemes in India can definitely learn few important lessons like – need to improve awareness and coverage, issuing prompt cards with proper details, achieving universal enrolment, ongoing and prompt renewal, etc. by proactively

educating the vulnerable sections. There is a need to monitor currently existing healthcare financing schemes at various levels. SPEC-

by-Step tool was found to be quite useful and it can be useful for monitoring of similar community based schemes.

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Management of the Relation between a General Practitioner and a Psychotherapist, in Belgium

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The Treatment of Depression: A Cost-Effective Population Strategy to Reduce Suicide, in Canada

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Mother's Participation in Community Groups, Prenatal Care Utilization, and Infant Health: The Implications for Policy Decision Making

Objectives: To investigate the effect of mothers' participation in community groups on the utilization of maternal health care services and infant health, and the implications for policy decision making.

Methods: Estimate the relationship between mothers' participation and outcome variables (prenatal visit and birth weight), while controlling for the factors that affect mothers' participation in the community groups. The estimation uses community fixed effect to control for unobserved community characteristics. The findings are used to design recommendations for policy decision making.

Lessons Learned: Mothers' participation in an informal women gathering group has a significant impact on the outcomes. The results suggest that trust and sharing of health knowledge from participation is important for increasing the utilization of prenatal care services and birth weight, especially in the context of a lack of access to health information through government channels.

Implications: Advertising/dissemination of the government programs related to maternal and infant health in the community groups will have a multiplier effect-affecting the behaviour on the utilization of prenatal care services and infant health. Also, through these community groups, the health providers may share tools to educate women about the treatment of pregnancy. These tools address issues such as where and with whom to get prenatal care services and give birth, any financial support that the mothers can use to access the services, prevention and treatment for high risk or complicated pregnancies, and postpartum treatment and services. Thus, the participation in community groups may offer an effective way for health promoting activities to mothers.

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Can Behavioral Economics Improve Public Health Policy? The Case of Denmark

Insights from behavioural economics demonstrate that what people do often deviate in a systematic way from what is rational according to standard economic theory. The aim of our paper is to examine whether insights from behavioural economics can improve the design of public health policy in Denmark.

The Danish case is particularly interesting as life expectancy is significantly lower than the OECD average and does not match health spending per capita. Furthermore, social differences in life expectancy are growing, in contrast to other universal welfare regimes. This is a paradox since Danish health policy has been increasingly professionalized and prioritized during the last 10 years.

The question whether insights from behavioural economics can improve the design of health policy is answered from a theoretical as well as an empirical angle. Theoretically, the question is examined by taking departure in a number of deviations from rational behaviour according to standard economics which we group under the labels non-standard preferences, limited cognitive abilities and nonstandard decision-making. We identify deviations with potential relevance for the design of public health policy measures. Further, drawing on existing empirical evidence we explore the possibilities to assess the effects of taking such deviations in consideration when designing public health policy measures.

Finally, the design of Danish public health policy measures is assessed in the light of the existing knowledge to identify strengths and shortcomings. The need for further empirical research on the effect of taking deviations, which theoretically might improve health policy measures, in consideration, is identified. The implications for future health policy and research in public health policy are discussed, and recommendations are provided. Finally, perspectives for health policy in other countries are considered.

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Preventive Health-Care Measures under Ambiguity

Preventive health-care measures enable decision-makers to actively influence disease probabilities. This paper is divided into three parts. In the first part, I am going to analyze the role of a decision maker's risk attitude on the selection of optimal prevention levels. I find that a higher degree of relative risk-aversion increases demand for prevention. As a second step I analyze the effect of compulsory insurances with fair premia on preventive efforts. Risk-averse agents reduce preventive efforts, whereas risk-loving agents increase their preventive efforts as soon as compulsory insurances are introduced, yielding a standard moral hazard result.

In the second part of the paper, I relax the assumption that decision-makers have perfect knowledge about the relationship between preventive efforts and disease probabilities. Ambiguity aversion seems a suitable tool to account for such imperfections. Making use of neo-additive capacities, I derive optimal prevention levels and investigate the influence of ambiguity and ambiguity attitude on optimal preventive efforts.

In the third part of the paper, I am going to analyze a principal agent model. The principal provides the agent with health insurance coverage and offers ambiguous preventive-health care measures. The agent selects simultaneously a level of coverage and one of the ambiguous preventive health-care measures offered by the principal. After selecting the measure, the agent selects an optimal prevention level.

Finally, I am going to discuss a variety of applications of this model, as e.g. drug and alcohol prevention programs or workout and nutritional programs offered by health insurances.

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The Role of US Hospitals in Promoting Population Health

Research Objectives: Population health is a key principle embraced by the Patient Protection and Affordable Care Act (ACA), the sweeping health care reform law that the US passed into law in 2010. However, little is known about the role of US hospitals, which have long been a cornerstone of the US healthcare delivery system, in promoting population health through the conduct of community health promotion activities. This study provides critical and timely information regarding hospitals' investment in community health promotion activities and whether the investment in such activities is aligned with community need based on health status and outcomes measures.

Study Design: Using data from hospital tax filings, national hospital surveys, the US Census, state-level vital statistics databases, and county health rankings, this study investigated (a) how much hospitals spent on community health promotion activities in 2009 and 2010 and the types of activities that were targeted for investment, and (b) the relationship between hospital expenditures on community health promotion activities and various health status and outcome measures that relate to community need. The study comprised approximately 1,500 US general hospitals for which complete data were available on study variables.

Key Findings: Study findings indicate that hospitals, on average, spent less than 1 percent of their operating budgets on community health improvement activities. No relationship was observed between hospital expenditures on community health improvement activities and community need based on health status and outcome indicators.

Conclusions and Policy Implications: Currently, most US hospitals spend little on community outreach activities and there is no alignment between the level and pattern of hospitals expenditures and community need for health promotion activities. This may change as the US begins to change provider payment methods from those that focus on volume to those that focus on value including improving population health.

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Quality and Innovation through Post Marketing Knowledge: Status and Perspectives of Post Marketing Instruments in the German Medical Device Market

Introduction: Medical device manufacturers are subject to strict post marketing requirements once their products start being used widely on the market. Although these activities may provide valuable information on approved devices and play an important role in learning about device performance and problems, little is known about the manufactures' use of post marketing surveillance systems. We aimed to explore and categorize post marketing instruments used by manufactures selling products on the German medical device market.

Methods: Following an international literature review, we prepared an exploratory guided interview for experts from companies producing products of all risk groups including active implantable medical devices and in vitro diagnostics. Seven experts, each responsible for post marketing surveillance in their company, were interviewed between November 2013 and January 2014.

Results: We found significant differences between the number and types of post marketing instruments which were not attributable either to product or risk categories. The measures taken were based on the use of external data, such as literature screening, vigilance reporting related to medical devices and post-market clinical follow-up studies, customer knowledge management, observation of similar devices, and analysis of health care data, e.g. through automated surveillance of clinical registries and databases, but also of internal company data, mainly from production and quality management.

Discussion: Medical device manufactures use a wide range of methods to conduct post marketing surveillance. However, these are considered primarily as instruments for quality and regulatory management. So far, little attention is paid to the operational use of this knowledge to develop innovative, effective and safe medical devices and processes.