



International Research on Financing Quality in Healthcare

Newsletter 1, February 2012

Welcome to InterQuality

Spend not more, but smarter!



Welcome to the first edition of the InterQuality project newsletter!

The InterQuality project was initiated by the observation that the current system of financing healthcare services does not favour quality but quantity of healthcare services.

Reforms in the area of healthcare have proven to be difficult to implement, and there is an urgent need for technical and scientific support for change.

Financed by the European Union's 7th Framework Programme and coordinated by the Medical University of Warsaw,

InterQuality aims to develop guidelines for health policy and funding mechanisms to improve quality and increase patient satisfaction.

With our project newsletter we invite you to meet the InterQuality consortium and find regular updates on our activities.

We encourage you to contact us for further information and look forward to your contribution to the discussions!

Sincerely,

Prof. Dr. Hab. Tomasz Hermanowski,
Medical University of Warsaw
Project leader

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International Research on Financing Quality in Healthcare

Start: December 2010

Duration: 36 months

Budget: 3.7 mio. EUR



This project is funded by the Framework Programme 7 of the Euro-

Consortium

Medical University of Warsaw (MUW) - coordinator

Hannover Medical School (MHH)

University of Southern Denmark (SDU)

University of Catania (UniCT)

Urban Institute Washington (UI)

University of York (UY)

Sopharm Sp.z o.o. (SPH)

Standing Committee of European Doctors (CPME)

European Patients' Forum (EPF)

Why InterQuality?

by Prof. Dr Hab. Tomasz Hermanowski (MUW)

The International Research Project on Financing Quality in Healthcare – InterQuality is focused on the broadly defined field of health economics and management. John Goodman's reflections, describing fundamental differences between the economic and the engineering approach to complex social systems, may serve as a starting point of our research. A social engineer sees society as a passive and chaotic formation, devoid of own desires and organizational skills. He wants experts to study the problem, discover what should be done and plan how to do it. Social engineers believe that a plan devised by people at the top can work, even though those at the bottom has a self interest in defeating it. Implicitly, they assume that incentives don't matter. Or, if they do matter, they don't matter very much.

To the economist, by contrast, incentives are everything. To have the best chance of good social outcomes, people at the bottom must discover that when they pursue their own interests they are meeting the needs of others. Perverse incentives almost always lead to perverse outcomes. An economist believes that appropriately motivated individuals, realizing their aspirations provide a solid basis for the functioning of the society.

Fortunately disastrous experiments of social engineering, characteristic for 20th century, are behind us. But blind faith that everyone will follow the 'plan' and vision of people in power, even if these plans and vision are contrary to the interest of people who are to implement them, still seems to be dominant in many healthcare systems.

The power of incentives as the main driving force of good social outcomes is often forgotten or neglected.

These incentives, both financial and non-financial, indeed social, are the central interest of researchers in InterQuality project.

It seems that perverse incentives are in many cases the major cause of inefficiency in healthcare. Current payment systems reward volume regardless of quality and outcomes of health services. This is true both for countries with high expenditure on healthcare and the most modern technology such as the USA as well as the countries of Central and Eastern Europe. These systems tend to pay for procedures regardless if they

are appropriate or needed. Therefore increased funding devoted to healthcare may be wasted, if not accompanied by improved management and organizational changes, providing proper and consistent incentives for patients, doctors, nurses, social workers and administrators forming together the healthcare system.

“Health care can be described as a sea of mediocrity, punctuated by islands of excellence. The islands of excellence always spring from the bottom up, never from the top down; they are the result of enthusiasm, leadership and entrepreneurial skills of a small number of people.”

Effort incurred by many researchers shows that there is no magic bullet, an ideal payment system that would improve quality of care. Initial studies conducted in the framework of the InterQuality Project suggest that institutional arrangements as well as complex factors associated with payment models affect significantly health services providers behavior. However, one thing is sure- to get to better quality, we don't need to pay more: we need to pay smarter.

Being aware of the complexity and difficulty of issues which InterQuality project faces, thanks to the excellent consortium partners and dedicated project team we have all the prerequisites to succeed. According to John Goodman “health care can be described as a sea of mediocrity, punctuated by islands of excellence. The islands of excellence always spring from the bottom up, never from the top down; they are the result of enthusiasm, leadership and entrepreneurial skills of a small number of people”. We believe that efficient, effective and equitable care does not have to be the exclusive domain of the few “islands”. The InterQuality Project's purpose is to identify the most efficient models of financing quality in healthcare and define the institutional settings necessary for their successful implementation.

Project Objectives

1. Investigate ways of funding and incentive systems affecting the quality, effectiveness and equity of access to healthcare in four areas:

- Pharmaceutical care
- Hospital care
- Outpatient care
- Integrated health care

2. Develop practical integrated models of healthcare financing

3. Determine the feasibility and effectiveness of the developed models for the determinants of the health systems in the countries of the project partners.

To achieve these goals the study will address the following specific areas of research:

- Incentive Measures
- Clinical issues: quality, clinical efficacy, and safety
- Economic issues: cost control, cost effectiveness, resource utilization
- Equity of access

Meet the Consortium



Prof. Dr Hab. Tomasz Hermanowski, InterQuality Project Leader, graduated in economics from the Main School of Commerce (SGH), Warsaw, obtained his PhD in 1974 and Habilitation in Economics in 1988. He completed university training in socio-economic evaluation of medicines at the University of York, UK. As Health Economist, he is the Head of

Pharmacoeconomics Department, Faculty of Pharmacy, Medical University of Warsaw and a Professor of Warsaw University of Technology Business School, supervising the post-graduate Advanced Management Training Programme in Pharmacoeconomics, Pharmaceutical Marketing and Law. He is a prolific author and co-author of books, articles and reports regarding international transfer of technology, pharmacoeconomics, drug policy and management. His main research interests include the application of marketing concepts to pharmaceutical policy formulation and strategic management in international business, drug

utilization studies and pharmacoeconomics. He is a founding member, Past President and acting member of the Executive Board of the Polish Society For Pharmacoeconomics (Polish Branch of the International Society For Pharmacoeconomics and Outcomes Research ISPOR). He is also a member of ISQuA, AcademyHealth, IHEA and ISPOR as well as a European Union expert, evaluating 7th Framework Programme proposals, regarding Public Health. His private interests include gardening, cross-country skiing and sailing.

Meet the Consortium



Dr. Volker Amelung is Professor for International Healthcare System Research at the Medical University of Hannover. Professor Amelung is also the president of the German Managed Care Association (BMC), Berlin. BMC, a leading independent healthcare as-

sociation, elaborates innovative concepts in healthcare management and healthcare policy. He is a member of several national and international healthcare associations and internationally affiliated with healthcare management profession-

als. His research focuses on healthcare policy, managed care, and healthcare systems. He is a prolific author on issues of managed care, healthcare policy, new technologies, and integrated delivery systems.



Robert Berenson, M.D., is an Institute Fellow at the Urban Institute. He is an expert in health care policy, particularly Medicare, with experience practicing

medicine, serving in senior positions in two Administrations, and helping organize and manage a successful preferred provider organisation. From 1998-2000, he was in charge of Medicare payment policy and private health plan contracting in the Centers for Medicare and Medicaid Services. Previously, he served as an Assistant Director of the Carter White House Domestic Policy Staff and recently was a member of the Obama transition team. Effective July

2009, Dr. Berenson became a Commissioner of the Medicare Payment Advisory Commission (MedPAC). In July 2010, he became vice chair of MedPAC. Dr. Berenson is a board-certified internist who practiced for twenty years, the last twelve in a Washington, D.C. group practice, and is Fellow of the American College of Physicians. He helped organise and manage a successful preferred provider organisation serving the Washington, D.C. me-

tropolitan area. He was co-author, with Walter Zelman, of *The Managed Care Blues & How to Cure Them*, published in 1998, and, with Rick Mayes, *Medicare Payment Policy and the Shaping of U.S. Health Care* in 2006. He is a graduate of the Mount Sinai School of Medicine and on the faculty at the George Washington University Schools of Medicine and Public Health and the Fuqua School of Business at Duke.

Malgorzata Chmielewska, Sopharm General Manager, is the leader of WP 3 in charge of all aspects of SPH participation in the project. She is a graduate of the Human Nutrition Faculty at the Warsaw University of Life Sciences, specializing in Human Physiology, and a lecturer of Warsaw University of

Technology Business School, Advanced Training Programme in Pharmacoeconomics, Pharmaceutical Marketing & Law. She is an experienced manager in the medical sector and pharmaceutical industry as she has been responsible for the promotion and distribution of pharmaceutical products and PR, and has

worked as a Managing Director of a network of retail and internet pharmacies in Poland. She has profound knowledge regarding the Polish medical and pharmaceutical sector, as well as expertise in all aspects of both Public Relations and Customer Relations, as well as Human resources Management issues.



Meet the Consortium



John Hutton is professor of health economics in the Department of Health Sciences at the University of York and Director of the York Health Economics Consortium (YHEC).

He directs a programme of applied research, training and consultancy on health technology assessment (HTA) and the economics of innovation in healthcare, for government, NHS, and industrial clients, including the National Institute for Health and Clinical Excellence (NICE). His career has included periods in local government and the private sector— for

12 years he was vice-president for European Operations at MEDTAP international Inc. Directing HTA studies across Europe. Since 2004 he has been Vice-Chairman of York Teaching Hospitals NHS Foundation Trust. He is also a Non-Executive Director of MEDIPEX, the Yorkshire NHS Innovation Hub, and has recently been appointed to the NICE

Technology Appraisal Committee. He has published extensively on methods of economic evaluation and on applications in a wide range of disease areas. He is also a founding co-editor of *Health Economics*



Christian Kronborg holds an MSc in economics and a PhD in health economics from the University of Southern Denmark. His current research focuses on the performance of pharmaceutical markets. He also has research interests in developing and applying health economic

evaluation to trials. He is the representative of The Research Unit for Health Economics at the University of Southern Denmark for InterQuality Programme. The unit is the leading health economics department in Denmark and one of the leading centres for health economics in the Nordic countries. The research unit conducts research at a high international level and provide research based teaching in health economics and related subjects to a long line of educations at the University of Southern Denmark. The unit has a long tradition of re-

search based interaction with authorities and the business community. It is a declared objective of the research unit to contribute to the society from undertaking applied and policy relevant research in addition to its main objectives of research and teaching. The research unit undertakes research in financing and organisation of healthcare systems, equity, health economic evaluation and health technology assessment, and health policy. Furthermore, the research unit has participated in several EU-projects: ECuity I, ECuity II.

ECuity III, AHEAD, AGIR, ERGHO, DEMHOW, EUROVAC. The research unit employs approximately 20 persons (professors, associate professors, assistant professors, and PhD students). The researchers have a significant international standing, which has been achieved from an explicit aim to publish research results in peer-reviewed international journals.

Meet the Consortium

Joanna Lis graduated from the Faculty of Mathematics and Physics at the Jagiellonian University in Krakow. Her special interests include pharmaco-economics, health policy & decision making processes, statistics and its wide use in industry and medicine. She wrote a PhD thesis on the scope of medical statistics, computer modeling and artificial intelligence methods (neural networks, genetic algorithms, fuzzy sets, etc..) and decision analysis in medicine. She holds a degree of Master of Business Administration at the School of Business and Management. L. Kozminski Warsaw.

She has been professionally involved in healthcare systems and medical statistics for over 10 years, initially as an adjunct in the

Institute of Biocybernetics and Biomedical Engineering Polish Academy of Science (PAS) in Warsaw and specialist at the Medical Centre of Postgraduate Education (CMKP) in Warsaw (also as a member of the Ethics Committee), then as coordinator and administrator of clinical research at Eli Lilly Poland. She combines these results with the experience of pharmaco-economics work as a manager of pharmaco-economics and statistics of the Department of Health Economics in Poland Eli Lilly, and in Public Affairs and Market Access in the sanofi group.

She also worked as a lecturer at many institutions, like the Public Health School in Krakow, Medical University

in Warsaw, and the Business School of Warsaw University of Technology - College of Pharmaco-economics, Marketing and Pharmaceutical Law in Warsaw. She is the author of books (e.g.: "ISPOR Taxonomy of Patient Registries: Classification, Characteristics and Terms", "Pricing: pharmaceuticals' prices, negotiations and risk sharing agreements", "Health Insurance Systems") and peer-review publications and abstracts in the field of health economics methodologies, health policy and health technology assessment. She has been the author or presenter of abstracts at scientific meetings and symposia on health economics research for the respective medical technologies or medicines.



She is the president-elect of the Polish Society for Pharmaco-economics (PTFe) and member of the International Society for Pharmaco-economics and Outcomes Research (ISPOR). She is furthermore a member of the International Society for Clinical Biostatistics (ISCB).



G i a c o m o Pignataro (B.A., Economics, Univ. of Catania; M.Sc., Economics, Univ. of

York; Ph.D., Economics, Univ. of York) is the coordinator of the Italian team. He is full professor of Public Finance at the University of Catania, where he also teaches Health Economics. He is the President of the Italian Association of Health Economics (Associazione Italiana

di Economia Sanitaria, AIES). He is member of the Scientific Board of the Italian journal "Politiche Sanitarie". He has written and published many articles on various aspects of health economics, economics of cultural heritage, public procurement and local public finance.

Furthermore he has been the coordinator of several national research projects.

Meet the Consortium



Dr. Konstanty Radziwill was born in 1958 in Wrocław, Poland. He graduated from the Medical University in Warsaw in 1983. Since 1984 he has worked as a pri-

mary care physician in Warsaw. From 1983 till 1991 he also worked in emergency and occupational medicine; since 2005 he has been a lecturer in the Family Medicine Department of the Medical University of Warsaw. Since 1996 he practices in his private practice in family medicine in Warsaw. He is a family medicine specialist. He also graduated from the Postgraduate Faculty of Bioethics in the Cardinal Stefan

Wyszynski University of Warsaw and the Postgraduate Faculty of Health Care Economics in Warsaw University. He is a member of the College of Family Physicians in Poland and the Polish Society of Family Medicine. Since 1993 he has been active in the Polish Chamber of Physicians and Dentists, of which he was Vice-President from 2001 to 2010 and is currently Vice-President. During his

mandate, he made it a priority to work on medical ethics, medical CPD, the health care system reform in Poland, and the implementation of the *acquis communautaire* in Poland when entering to the EU in 2004. He was a chairman of the CPME Ethics and Professional Codes subcommittee from 2004 to 2005, CPME Vice-President from 2008 to 2009 and has been CPME President since 2010.

Liуска Sanna is EPF's Programme Manager. She has a BA in Philology and an MA in management of non-profit organisations. She has worked for various NGOs such as the European Women's Lobby dealing with gender issues

and the European Network of the International Planned Parenthood Federation in the field of sexual and reproductive health. She has sound expertise in project and programme development, in particular in managing multi-partner European pro-

jects, monitoring and evaluation, capacity building, dissemination and patient involvement. She has coordinated or been directly involved in all projects EPF has participated in thus far.



To contact members of the InterQuality consortium, please visit www.interqualityproject.eu



Activity Reports

Work Package 1 – Incentives and Payment models

by Dr Robert Berenson (UI)

The aim of WP 1 is to provide the broader InterQuality consortium with a thorough, systematic review of the existing knowledge base on the effects of provider payment methods on quality, cost, and access. In pursuit of this aim, the first two objectives of WP 1 were to produce: 1) a typology of major payment systems, including a discussion of the issues and choices involved in formulating a typology, and the definitions involved; and 2) a systematic review of the empirical, quantitative literature to ascertain what is known about the effect of provider payment systems on quality, cost/efficiency/utilization, and equity of access. Both the typology and the systematic review focused on payment systems used to reimburse four categories of care: physician (and physician substitute) care; hospital care; non-hospital, short-term facility care; and integrated care.

The eight-person research team began work in June 2011. To ensure a high level of rigor, the systematic review followed the Cochrane Collaboration's methodological framework, a process which involved screening nearly 11,000 titles and abstracts, acquiring and scanning over 1,000 full texts, and constructing evidence tables for 129 studies. The report on the team's findings, along with the typology, was submitted in early January 2012. This final report includes seven chapters:

Chapter 1: Executive summary

Chapter 2: Developing a typology of payment methods

Chapter 3: Literature review methodology

Chapter 4: The Effect of physician payment systems on quality, cost/utilization/ efficiency, and access

Chapter 5: The Effect of hospital payment systems on quality, cost/utilization/ efficiency, and access

Chapter 6: The Effect of non-hospital short-term facility payment systems on quality, cost/utilization/efficiency, and access

Chapter 7: The Effect of integrated care payment systems on quality, cost/utilization/ efficiency, and access

The **next steps** in WP 1 will involve:

A comparative analysis of incentives and provider payment models. This analysis will provide a summary of the perceived strengths and weaknesses of twelve payment models, discuss areas of consensus and disagreement, and provide country-specific considerations that make particular payment approaches desirable or problematic.

Development of specific criteria that can be used to evaluate current and proposed payment models. Though this criteria would ideally be uniform across health systems, the assessment of how different payment models would fare against this criteria might vary based on differing political and provider cultures, health insurance schemes, available resources for reform implementation, etc.

WP 1 Incentives

WP 2 Value Benefits

WP 3 Pharmaceutical Care

WP 4 Hospital care

WP 5 Outpatient, Home care

WP 6 Integrated care

WP 7 Dissemination

WP 8 Scientific Coordination

WP 9 Management

Activity Reports

Work Package 2 – Value/Benefits

by Dr Joana Lis (MUW)

The objective of the work of WP 2 (Value/Benefits) is to solve methodological challenges raised by the analysis of patient-level data in international comparative research of payment systems in four specific types of healthcare: (i) outpatient care, (ii) inpatient care, (iii) integrated care, and (iv) pharmaceutical care. Main objectives are to develop consensus and guidelines on common terminology and the conceptual framework for outcomes, cost & economic efficiency measurement with a review of methods of measuring quality & equity of healthcare.

The team of WP2 began work in early 2011. The team consists of 13 people with different expertise, background and experience. It includes economists, pharmacists, statisticians, experts on HTA, people experienced in pharmaceutical industry and students of Medical University of Warsaw.

The work was divided into sub-teams, who conducted the relevant research in the following areas: outcomes, costs, efficiency quality and equity. In order to avoid misunderstandings of definitions of terms and the conceptual framework of contemplated research, a literature and methodology review were performed. The task focused on a review of basic reference sources. Subsequently a literature review was performed covering a wide range of the fields mentioned above.

An integral part of our work is a warehouse database of all the terms that have been identified within the work. The table contains the definitions, indicators, methods and tools with the relevant references. We have managed to identify, describe and characterise almost six hundred terms.

In order to facilitate and accelerate the work we will implement a new tool, based on a Content Management System for remote work on shared documents. It will allow the simple inserting of comments, up-dating, editing of text and exchange of opinions regarding the reports and publications in one website-based document by multiple partners. We expect it will very significantly improve research cooperation between partners and stimulate discussion on important issues.

WP 1 Incentives

WP 2 Value Benefits

WP 3 Pharmaceutical Care

WP 4 Hospital care

WP 5 Outpatient, Home care

WP 6 Integrated care

WP 7 Dissemination

WP 8 Scientific Coordination

WP 9 Management

Main areas of current WP 2 research:

- Strengths and limitations of outcome indicators in health-care systems
- Common terminology, conceptual framework and method for cost measurements
- Identification of methods for economic efficiency in health-care systems
- Measuring quality in health-care systems
- Equity: status-quo in the field of measuring the equity of healthcare systems, proposing measures and indices for the further project activities

Meeting Report



On 7 November 2011 the InterQuality consortium met in Madrid to review progress made on the project's deliverables and look ahead to the second year of cooperation.

Since the InterQuality project's kick-off in December 2010 activities have started in all Work Packages. Several preliminary results could be shared at the November meeting.

Work Package 1, led by the Urban Institute, has been reviewing academic evidence on incentives and impact of payment models. The preliminary findings of the literature review were presented to the project partners. The analysis centres around four focal points, i.e. hospitals, non-hospital settings, integrated care and physicians' payment, and looks into studies on the implications of payment models as regards cost, utilization and access, and quality, in each of these contexts. While the review is still being finalised, one of the findings so far points to a need to clarify the definitions of terms used in the specific field of payment models, so as to establish a clear framework of reference for the project's consequent activities. The consolidated findings of Work Package 1 will be presented at the next project meeting.

The activities of Work Package 2, under the lead of the Medical University of Warsaw, have focussed on the methodological challenges in the analysis and comparison of payment models with a view to establishing a set of indicators to assess, i.a., outcomes, costs, efficiency and quality and equity. The preliminary report presented illustrates the methodology according to which indicators were identified and discuss their application to the project's four focal areas, these being inpatient care, outpatient care, integrated care and pharmaceutical care. Following the consolidation of the report, these indicators will feed into the activities developed under Work Packages 3 to 6.

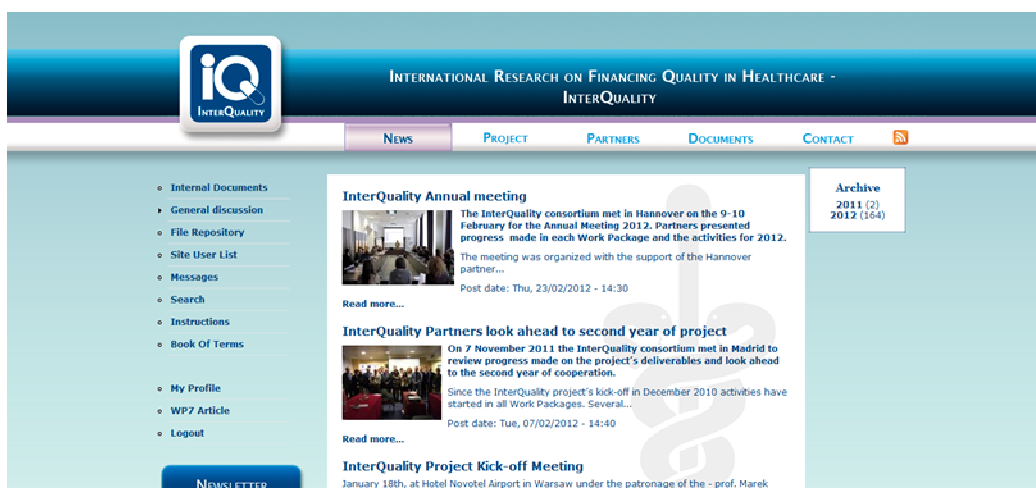
In support of the activities of Work Package 1 and 2, Work Package 3 on pharmaceutical care, led by Sopharm Sp. z o.o., has drafted complementary analyses. The consortium was presented with a report on the classification of pharmaceutical payment methods classifying different methods and their effects as well as relative advantages and disadvantages as studied by academic literature. The report furthermore identifies innovative approaches in this field and determines opportunities for further research. In support of Work Package 2, Sopharm introduced a second report in which indicators on quality, equity, outcomes and efficiency in pharmaceutical care were identified on the basis of available academic research. The findings of both these reports will be integrated into the input of Work Packages 1 and 2 to the work on the project's core deliverables.

Work Package 7, led by the European Patients' Forum, presented the project's dissemination strategy and set out proposals as to its implementation. So as to ensure that news and findings of the InterQuality project reach a wide range of relevant stakeholders across the EU and beyond, all partners have pooled their dissemination capacities. These communication channels will now be put to use. One of the main tools is the newly created InterQuality newsletter which will bring regular up-dates on project developments to an audience of regional, national and European stakeholders. In parallel to this work on dissemination, Work Package 7 is also developing guidelines on communication strategies for healthcare financing reforms. Progress made on this deliverable will be presented at the third project meeting.

The InterQuality consortium now looks forward to a successful second year of project activities in 2012!

Visit our website

www.interqualityproject.eu



For further information,
please contact:
interquality@interqualityproject.eu

The InterQuality consortium looks forward to welcoming you again soon.



THE UNIVERSITY of York



sopharm
CROSSING THE BORDERS



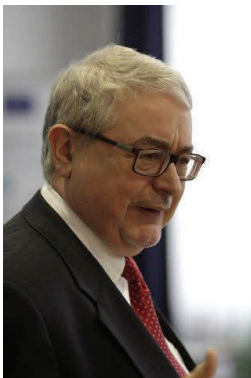
europeanpatients' forum



Welcome to InterQuality

Spend not more, but smarter!

Welcome to the second InterQuality newsletter!



The InterQuality consortium has made progress in the deliverables and in the analysis of partners' countries, producing some more material about healthcare financing systems in Europe and the US. In this issue of the newsletter, you will find a report from the meeting in Hannover, where partners evaluated progress of the project. Professor Amelung, from Hannover Medical University, provided us with an article about German system of healthcare financing and its challenges. Dr Zawada and I would like to present an analysis on the challenges and opportunities of integrated care. Professor Berenson, leader of WP1, gives an update on progress and findings achieved so far. Project partners will disseminate results in different events, and meet again in Catania, Sicily.

We encourage you to contact us for further information and look forward to your contribution to the discussions!

Sincerely,

Prof. Dr Hab. Tomasz Hermanowski
Medical University of Warsaw
Project Leader

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February 2012

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Care System

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Project Information

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Meeting Report: Hannover 9-10 February 2012

The InterQuality consortium met in Hannover on 9 and 10 February 2012. Partners presented progress made in each Work Package and the activities for 2012.



Organised by the Hannover Medical School, the meeting was attended by project partners and also welcomed external keynote speakers. The event was opened with a general overview of the **German healthcare system**,

For more information and all conference photos, please visit www.interqualityproject.eu

as well as presentations on more specific details as to the German insurance system, with thanks to Volker Amelung and Dr. Elisabeth Siegmund-Schulze (KKH-Allianz, sickness fund). Furthermore, Professor John Hutton

gave an introduction to the Quality and Outcomes Framework (QOF) applied in the UK. After an overview of project achievements in 2011 and next steps for this year, InterQuality partners presented progress made in their work packages. In particular, the meeting focused on the literature reviews of **WP1** and **WP2**, carried out by Robert Berenson, Anna Zawada and Krzysztof Rogalski, with comments and suggestions by the reviewers. The official dinner was opened with a speech by Prof. Dr Matthias P. Schönermark (CEO SKC Consulting; Professor for Management at the Hannover Medical School), who shared his experience on quality in healthcare from a physician's point of view. Following this all partners could enjoy their delicious German meal.

Partners are optimistic that the work will proceed as scheduled during the second year of the project, and are confident that good results will be achieved thanks to the collaboration of the very highly skilled professional members of the consortium.



The InterQuality consortium will meet next in Catania on 24 and 25 May 2012

Financing the German Health Care System: What Should be Done with all the Money....

by Prof. Dr Volker Amelung (MHH)

Scarcity. Deficits. Cost explosion. These are common words which connote health care systems' financing situation. Internationally, health care systems support cost containment strategies to cope with increases of supply, such as pharmaceuticals, prices, physicians' salary, etc. This was true for Germany until 2012. Now the question is: why does this "problem" occur in the first place and what can we do with a 20 billion Euro-surplus?

Germany has one of the oldest social insurance systems, based on the solidarity principle. It was constituted by the German statesman Otto von Bismarck's initial "Health insurance bill", passed in 1883. Since then, employers and employees contribute to the insurance system on almost equal terms (since 2011 employers pay 7.3% of employee's salary, employees pay 8.2% of their salary). This automatically leads to a close relation between employees' earnings and the amount of money in the health care system.

Effective since January 2009, government enforced a new finance-model for Germany with fixed contribution rates for everyone. Now, employers, employees, and tax payers contribute to a so called central health care fund. Money is then distributed among all insurance companies, taking into consideration risk adjustment, i.e., age, sex, reduction of earning capacity, and 80 selected diseases. Depending on government's intervention to set contribution rates, a finance surplus or a deficit can result. In case of the former, insurance companies can choose to pay back a certain contribution-fraction to their insured. In case of the latter, a deficit, insured can be obliged to pay an additional contribution.

Doubts arise. How come Germany's health

care system is almost bursting (due to money) although there have neither been any effective new forms of health care, nor have there been any restrictions concerning health care provision? Obviously, there is a strong dependency of financing health care and the labor market in Germany. In other words, the success of the German economy in combination with raised contribution rates by government has led to the pleasant financial situation.

But how pleased is the German system really and more importantly, what are the options to deal with the money? The most obvious options are the reduction of co-payments for the insured (e.g., by eliminating the "10-Euro-practice-fee" that patients have to pay when seeking their GP or specialist) or to partially return the contribution (which would be a minor amount). Other options are to build up reserves or to withdraw money from the statutory health system in order to compensate debts.

Lessons learned, yet too late. The powerful linkage between financial management of health care and the labor market, thus economic development, can entail risks, such as erratic variation of the financial situation of the health care system. Furthermore, decisions made by government are subject to political variation and must be viewed in the context of the election year 2013. Most likely, the next legislation will bring on developments in (the financial management of) health care. At this point it seems most valuable and sustainable to build up reserves for future challenges. It becomes apparent from demographic developments in Germany that the solidarity principle cannot be promoted in this current form forever.

Optimising Quality Through Integrated Care

by Prof. Dr Hab. Tomasz Hermanowski and Dr Anna Zawada (MUW)

Hardly any topic dominates the international discussion platform as much as the debate on integrated care. Integrated care encompasses the systematic design of health care processes across different sectors and professional guilds. The greatest challenge in the design of health care systems is to optimize communication between and to coordinate the activities of different health care providers. The need to optimize care for chronic and mostly multi-morbid patients presents the most significant challenge in the design of modern health care systems. Integration of care across existing boundaries is increasingly challenging. Complexity in this regard lies not only in the optimization of the individual unit services, but in the interaction of different providers in delivering coordinated healthcare (for instance in the form of disease management programs). Integrated healthcare represents an ideal type of selective contracting that requires the search and engagement of appropriate partners as well as the implementation of incentive structures such as P4P.

The New Institutional Economics, provides an informative basis to critically analyze individual contracts in the health care sector. This theory does not negate the potential of individual contracts to respond to conflicts in the delivery market. It provides a basis to analyze the governance instrument of the same. Principal-agent framework, which is becoming a standard approach to modelling relationships between payers and providers in healthcare, can be applied to the analysis of reimbursement schemes.

A problem in the principal-agent setting arises when the principal compensates the agent for performing certain acts that are useful to

the principal but costly to the agent and difficult to observe. The problem is thus associated with asymmetry of information meaning that the agent has more information about his or her actions or intentions than the principal does. The principal and the agent have also divergent goals.

Information asymmetry poses no problem when the goals of contract parties correspond. Opportunistic behaviour of the parties only occurs when the goals of the principal and those of the agent differ. The design of contracts must harmonize these diverging goals. To guarantee this harmony, the capacity for the service provider to attain performance goals must be made dependent on the goals of the payer (health schemes). The contracts must be drawn to guarantee that either the agent's attainment of set goals would increase agent's benefit level or that the penalty for failing to attain goals would reduce agent's benefit level. An incentive-based contract provides a leeway for the payer to minimize his risk that could result from poor provider performance. Two payment modalities can be differentiated in this regard:

- Payment models that relate the level of payment directly to the services. The level of payment directly correlates with the amount of services
- Payment models that indirectly relate the level of payment to the services. The level of payment is independent of the services, such as the availability of personnel or the number of registered patients.

The risk structure of the providers plays a vital role in P4P. A prerequisite for optimal incentive-based service models is a (partial) dependence of the agent's returns on the provider's gain level. The principal (payer)

Optimising Quality Through Integrated Care ctd.

does not bear the entire risk of health care service financing, but shifts this risk partially to the agent (provider). Such risk-sharing contracts call for flexibility in the design of core contract parameters that define the mode and level of payment. In addition, the type, quality and quantity of services must be clearly defined. Increase in the aggregate and quantity of expected services inevitably increases risk for the provider. A larger population base increases the morbidity level and with it the risk level.

A central problem for the provider presents itself in the lack of a clearly defined basis for performance measurement. The fact that

outcomes depend also on exogenous factors outside the physician's control makes risk-sharing payment models unfavourable for the provider. The smaller the population base the greater the variance in the cost structure. This risk may be minimized by offering risk premiums. It is however important to note that increase in risk levels enhances the potential for risk selection and insufficient health service provision. Effective risk management is imperative in order to minimize the probability of negative financial consequences and to facilitate the attainment of clinical and financial goals.

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Activity Reports: Work Package 1

Incentives and Payment models

by Dr Robert Berenson (UI)

The Work Package 1 research team is currently developing two final deliverables :

- 1) A comparative analysis of 10 provider payment models. This analysis will provide a short description of each model, a summary of their perceived advantages and disadvantages, and discuss design approaches that can mitigate those weaknesses.
- 2) Development of specific criteria that can be used to evaluate current and proposed payment models. Ideally, these criteria would be uniform across health systems. However, in practice different payment models are likely to fare differently against these criteria depending on the political and provider cultural context, the structure of particular health insurance schemes, and the resources that countries make available for reform implementation, among other variables.

Drafts of these deliverables will be circulated to InterQuality consortium members for comment, which will then be incorporated into the final versions.

As part of its research dissemination strategy, the WP1 team is also adapting the findings of the systematic literature review for publication in peer-reviewed journals, as well as on the Urban Institute's website.

Impressions from Hannover



More photos can be found at www.interqualityproject.eu



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International Research on Financing Quality in Healthcare

Newsletter 3, August 2012

Welcome to InterQuality

Spend not more, but smarter!

Welcome to the third issue of the InterQuality project's newsletter!

We are glad to inform you that the InterQuality team has entered the empirical phase of the project. The first two Work Packages prepared theoretical background. Now, Work Packages 3-6 are ready to perform core analytical work by building and testing sector-specific models and delivering recommendations to EU Member States. To assist InterQuality consortium partners a dedicated Data Warehouse will be launched and opened to interested researchers. The empirical phase's research will be conducted in Poland, Italy, Denmark, Germany and the United Kingdom. Some of the empirical Work Packages have already started their activities. Preliminary results will be presented at the 29th Conference of the International Society for Quality in Health Care, to be held in Geneva in October 2012. All partners will meet again at the General Assembly in 2013 to be hosted by the University of Southern Denmark in Odense. The InterQuality consortium will continue to disseminate the results using the project's website and newsletter. We encourage you to contact us for further information and look forward to your contribution to the on-going debate on the recommended methods of financing quality in healthcare.

Sincerely,

Prof. Dr Hab. Tomasz Hermanowski
Medical University of Warsaw
Project Leader

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Discussing InterQuality – Agenda of Public Events

Project Information

International Research on Financing Quality in Healthcare

Start: December 2010

Duration: 36 months



This project is funded by the Framework Programme 7 of the European Union.

Consortium

Medical University of Warsaw (MUW) - coordinator

Hannover Medical School (MHH)

University of Southern Denmark (SDU)

University of Catania (UniCT)

Urban Institute Washington (UI)

University of York (UY)

Sopharm Sp.z o.o. (SPH)

Standing Committee of European Doctors (CPME)

European Patients' Forum (EPF)

Meeting Report: Catania, 24-25 May 2012

InterQuality partners came together on 24-25 May for the second general meeting of 2012, which took place in the beautiful city of Catania in Sicily.

The project is now reaching its second half and partners evaluated the results achieved so far, particularly concerning the theoretical analysis of financing mechanisms and methods of healthcare quality, effectiveness and equity measurement. The InterQuality consortium also discussed the future direction of research, with the idea of focusing more on practical and empirical analysis and the development of effective financing models in healthcare.

The meeting opened with a welcome by Professor [Tomasz Hermanowski](#), Project Coordinator, who presented the status quo of the project. [Giacomo Pignataro](#), who organized the meeting in Catania, gave an overview of healthcare financing mechanisms in Italy.

Niek Klazinga, member of the Advisory Board, went on to present the Health Care Quality Indicators (HCQI) Project, developed by the OECD Health Division. Turning to the progress made in the project, partners discussed the principles for payment systems presented by [Robert Berenson](#) as a result of [WP1](#) work. Furthermore, Stanisław Brzozowski and Krzysztof Rogalski from [WP2](#) presented a possible data warehouse for the project.

For more information and all meeting photos, please visit www.interqualityproject.eu

[John Hutton](#), Urszula Cegłowska and [Christian Kronborg](#) gave an overview of the collaborative work

they are doing to complete the results of [WP1](#) and [WP2](#), and a summary of [WP6](#) achievements and integrated care in Germany was presented. Victor Bystrov spoke about WP2 findings on risk adjustments, insurance systems and hospital quality measurements, while Sarada Das asked opened the discussion on the draft survey on physicians' views on payment systems.



The second day opened with a workshop on measuring quality and institutional settings of Healthcare Quality Policy in EU Member States, where partners were asked for their feedback. Furthermore, the keynote speaker David Parkin gave an overview of the English [NHS PROMS](#) project.

For [WP3](#) collaborative work, participants split in two focus groups, on financing access to medicine and pharmacy benefit management respectively. The meeting concluded with a workshop on measuring costs and efficiency, final tips by Niek Klazinga as member of the Advisory Board, and an overview on progress made by the dissemination strategy. After this successful meeting, partners are looking forward to the second half of the project, to focus more on WP 3-6 empirical analysis.

The next InterQuality General Assembly will take place in Denmark in 2013.

Activity Report

Work Package 3: Report on Catania workshops & action points

by Ms Malgorzata Chmielewska MSc. (SPH)

The objective of Work Package (WP) 3 is to validate pharmaceutical benefit financing models used in tax or social health insurance systems, as well as private or mixed ones.

In the previous period **WP3** has contributed to the project in terms of collaborative work for Work Packages 1 and 2. A report on “Pharmaceutical Financing Methods” was a contribution to the research of WP1. As the result of the study a new practical classification of pharmaceutical payment methods was suggested. An abstract based on the report was accepted for a poster presentation at the ISPOR Annual European Congress in Berlin. The second report was a contribution to the research of WP2 on the measuring quality, equity, efficiency and outcomes in pharmaceutical care. Systematic and a more targeted non-systematic literature review were executed for the purpose of identifying indicators of quality, equity, outcomes and efficiency, specific for pharmaceutical care and drug policy.

In result, a comprehensive list of indicators was developed and indicators were assigned to the Donabedian model perspective.

At present, Tasks 3.1., 3.2 and 3.3 are being executed. The objective of the first task is to identify and describe pharmaceutical benefit financing models in selected countries: UK, US, Poland, Italy, Germany and Denmark. The objective of the second task is to analyze different aspects of financing access to medicines and their consequences. The objective of the third task is to perform review of drug distribution financing models in EU and US. As a result of a literature review performed for these tasks, the following key areas of potential influence on the quality of pharmaceutical policy and pharmaceutical care were identified: Pharmaceutical Benefit Management schemes, e-Health, generic substitution, quality of pharmaceutical services and pharmaceutical care, pharmacovigilance systems, transparency, personalized medicine, distribution costs, financing access to medicines – especially pricing and reimbursement issues, co-payment models restricting moral hazard, pharmaceutical pricing regulating schemes and value-based pricing and risk-

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sharing agreements, access to innovative and orphan drugs. As a supplement, a case study is prepared by WP3 team on health care systems’ responses to cost-saving innovations and generic substitution schemes, illustrated by the example of statins. Another area of research contemplated is equity of access to medicines, based on the household panel data and national statistical data. Additional research steps, suggested in the framework of collaborative work, were presented and discussed with IQ consortium partners in Catania. For the purpose of planning collaborative work, partners were split in two focus groups, on financing access to medicines and on distribution and pharmacy benefit management. Valuable suggestions, produced by Focus Groups will be implemented in WP3 research.

The UK Experience with the Quality and Outcomes Framework (QOF)

by Prof. John Hutton (UY)

Background

In the UK General Practitioners (GPs) are private contractors to the National Health Service (NHS) for primary care. The General Medical Services Contract (GMS) is negotiated by the British Medical Association (BMA) and the NHS Employers organisation. Historically, individual GPs' remuneration was based on capitation – the number of patients on their list – but since the 1980s extra payments have been introduced for achieving target levels in 'enhanced services', such as immunisations and cervical smear testing. In 2004 the new GMS contract introduced a further element of pay for performance (P4P). GP practices can increase their income through meeting performance targets in the Quality and Outcomes Framework (QOF). The aims of the QOF are to reward good practice and to offer incentives for poorly performing practices to raise standards. As a result it is hoped that there will be a reduction in geographical variations in primary care provision, thereby reducing health inequalities and improving NHS efficiency.

The Design of QOF

The principle behind the QOF is that practices can earn extra revenue by achieving target levels in specific, measurable indicators of performance. A number of points is awarded for each achievement level, and a point is given a monetary value, adjusted every year. There is a minimum threshold which must be reached before any points are awarded, then points increase with performance up to a maximum threshold. This is usually less than 100%, reflecting the difficulty of complete achievement in clinical practice. The indicators relate to organisational matters, patient experience and access to services, but the majority of points are available for clinical indicators (550 out of 1050 in 2004). At the start of the scheme in 2004 the main clinical focus was on cardiovascular disease, in line with national policy, with indicators in this area accounting for 45% of the clinical points. Diabetes and asthma indicators were also given significant weight. The indicators were initially developed from clinical guidelines by an expert panel, and extra domains were added over time, e.g. in mental health.

Most indicators define performance in terms of "...the percentage of patients registered with the practice

who have...". For example in hypertension there is an indicator measuring the number of patients who have had their blood pressure measured within the last 15 months. For 25% practices receive 1 point but at the upper threshold of 90% they receive 7 points. A further indicator in this area is the percentage of patients with hypertension whose latest blood pressure reading was 150/90 or lower. One point is awarded for the minimum threshold of 25%, but for achieving the maximum threshold of 70%, 19 points are available. The presumption is that successful control of blood pressure, rather than simply monitoring it, will produce more health benefits for patients and is deserving of a greater reward. Calculation of the achievement levels is adjusted to exclude some patients where it is judged that it is not the fault of the practice that the patient was not managed to the target. For example, if a patient does not respond to three invitations for a consultation or declines the management offered.

NICE Management of the QOF

In 2009 the National Institute for Health and Clinical Excellence (NICE) took over the management of the QOF programme on behalf of the Department of Health in England and the health departments of the devolved governments in Scotland, Wales and Northern Ireland (QOF applies throughout the UK). This led to changes in the process by which indicators were developed, emphasising the need for them to be evidence-based and cost-effective. An independent Advisory Committee has been established to recommend changes to the indicators. In the new process the indicator list is reviewed annually, new clinical domains are proposed and new indicators suggested, to replace existing ones or to add to the list. Proposed new indicators are piloted to test their acceptability and feasibility and their potential cost-effectiveness, to assist the committee to reach its decisions. The final decision on such changes is still the result of negotiations between the BMA and NHS Employers.

The general trend has been to raise the performance levels required to earn points by replacing process indicators by indicators more directly linked to clinical outcomes, while keeping the total points available

The UK Experience with the Quality and Outcomes Framework (QOF) ctd.

constant. Between 2009 and 2011 of 29 new indicators recommended by the committee, 22 were adopted by the negotiators, but of the 22 recommended for withdrawal only 10 were completely retired from the QOF.

Impact of QOF

The reviews conducted within [WP1](#) of the InterQuality project have found very few rigorous evaluations of the QOF programme. However, there is some evidence on its impact. When introduced in 2004, maxi-

imum achievement of the QOF targets could increase practice income by 25%. Achievement levels were high in the first year at 83% and continued to rise, although probably no faster than they were rising before 2004. There is some evidence that smaller practices have reduced performance variation and that in some disease areas, e.g. diabetes, care levels have improved. As experience with the QOF is extended and new data emerge, the impact of the QOF will be studied in more detail within [WP5](#).

Discussing InterQuality — Agenda of Public Events

Past events

- On 9 May 2012, InterQuality was presented at a summer school at the University of Southern Denmark. Participants were academic staff from ministries, regional official authorities, and municipalities.
- On 21 May 2012, InterQuality was presented at a opening seminar of a new research centre at the University of Southern Denmark, Centre of Health Economics Research (COHERE). COHERE is a result of almost 40 years of research in health economics at the university. It comprises 40 researchers and is organised in association with two departments, the Department of Business and Economics and the Institute of Public Health. COHERE's aim is among others to contribute with policy relevant knowledge on population health, health care and health care systems.

Future events

- Join us at the presentation of InterQuality at the 29th International Conference of the International Society for Quality in Health Care (ISQua) in Geneva from 21-24 October 2012!
- The InterQuality consortium will also be represented at the 15th Annual European Congress of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) in Berlin from 3-7 November 2012.

The InterQuality consortium looks forward to welcoming you again soon.



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International Research on Financing Quality in Healthcare

Newsletter 4, March 2013

Welcome to InterQuality

Spend not more, but smarter!

Welcome to the fourth issue of the InterQuality project's newsletter!

We are delighted to start the new year with news of first results in InterQuality! The project partners reviewing the literature on project methodology guidelines have produced their final deliverables on 'incentives and payment models' and 'values/benefits'. In this issue, you will find short summaries of the outcomes of these tasks.

Our research in the area of pharmaceutical care is advancing as well. The comparative analysis of pharmaceutical benefit financing models is already finalised. We are also advancing on our work on financing access to medicines and equity of access to healthcare. You will find more detailed information on these in the following pages.

Finally, this newsletter brings you an up-date on our work on communication strategies of healthcare reforms. This comparative study aims to explore how healthcare financing reforms are communicated to the public in different countries and identify good and bad practices related to these communication strategies.

Please also visit our website for updates and do not hesitate to contact us for further information on our activities. In our next newsletter, among other updates, we will share with you the outcomes of our upcoming project meeting on 4-5 March in Odense.

Sincerely,

Prof. Dr Hab. Tomasz Hermanowski
Medical University of Warsaw
Project Leader

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Save the Date

Project Information

International Research on Financing Quality in Healthcare

Start: December 2010

Duration: 36 months



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Activity Report

Work Package 1: The Effect of Provider Payment Systems on Quality, Cost, Efficiency and Access

by Dr Robert Berenson (UI)

In recent years, there has been renewed interest in considering payment reforms to improve the value of health care services health professionals and health care organizations provide to patients. In short hand, many national health systems have adopted the important policy objective of attempting to obtain greater value in quality and positive patient experiences for the substantial financial commitment health systems make paying providers for their services.

To help establish the basis for additional work that will be conducted by the InterQuality consortium of policy research centers, the charge to the Urban Institute based in Washington, DC, was to explore what is known about how best to pay hospitals, physicians and other health professionals, and entities providing “integrated care” within the remit of [WP1](#). The core activity performed was an extensive literature review, going back 25 years, on what high quality studies show about the impact of different payment approaches on quality, costs, and patient access to and experience with care.

To complement the literature review, we also considered the various factors other than the payment incentives themselves that influence the actual behavior of physicians and other providers in providing health care services. For example, physicians are motivated by professional ethics to act in their patients’ best interests, whatever the incentives found in different payment approaches. How well physicians adhere to their obligations as professionals varies of course. Nevertheless, we considered the various professional, regulatory, and other influences that interact with the incentives found in various payment approaches, sometimes in a complementary manner and sometimes at cross purposes.

Our analysis also pointed to the context in which payment models are applied as an important influence on how the incentives affect professional and institutional provider behavior. Payment structures that work well in one institutional context often operate differently when transferred elsewhere, mostly because of different organizational cultures. For example, in some circumstances, compensation to physicians by salary supports efficient, patient-oriented practice styles, whereas elsewhere, salaried physicians slacken off and are not attentive to patient needs or organizational objectives.

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A final modulating factor on provider behavior under alternative payment approaches lies within the specific design decisions that any payment approach must have. For example, the relative generosity of the payment can influence to a great extent how providers will respond to the incentives of any payment approach. Thus, a payment approach called capitation, that is, payment ahead of time of a fixed amount per patient served, regardless of the actual use of services, can produce underuse of services if the payment is constrained but more services with a more generous payment amount. It is difficult to disentangle the effects of the basic payment approach from the specific design elements, in this case, the generosity of the payment.

All of these factors make the task of characterizing the behavioral responses of the variety of commonly used and proposed payment models challenging. The confluence of all the various influences described here lead to the conclusion that there is no best payment approach that can apply in all countries and in all situations within any country. Although the results of our

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systematic review of the literature permit some tentative conclusions about the effect of different payment models, there is a dearth of literature examining how particular payment implementation designs and health system contexts affect the results. Accordingly, policy-

makers should be very careful to distinguish intended from actual results. To help policy makers, we developed a set of attributes of 10 different payment models as well as design options that can assist policy makers in determining whether and how to modify current payment approaches within their respective countries.

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Activity Report

Work Package 2: Guidelines for further project activities on comparative evaluation of quality, economic and equity issues in healthcare systems

by Dr Joanna Lis (MUW)

In the first phase of the project, a wide review of methodologies of measuring quality in healthcare systems was performed under [WP2](#). There is no consensus on the definition of 'quality of healthcare' nor its aspects that should be measured to assess quality. The definitions are rather general; so research on the quality in healthcare systems should start with establishing the proper measures to be used to enforce and to monitor quality in healthcare systems. Adopting Dona-

bian's division of quality measures into structure, process and outcome indicators, the latter are of central interest for patients and payers. The validity and stability of such indicators (e.g. survival, recovery, restoration of function) is irrefutable. However a number of considerations limit the use of these outcome indicators. The most commonly used indicators concern hospital care, focusing on hospital mortality and serious surgical complications. Thus, many outcome measures are not relevant to outpatient care and chronic diseases which are not lethal or acute but lead to decrease of quality of life or disability. A fundamental issue is the dependence of outcomes on many other factors besides quality of care. In order to compare outcome measures of alternative healthcare providers, risk adjustment has to be applied.

Another important aspect of quality seems to be efficiency, as it is an economic concept coupling effects and costs in one measure. However, it is important to be aware of certain dualities and difficulties. The construction of an efficiency measure should take into account both the cost-effectiveness of a procedure per se and its effectiveness as measured in health gain both per patient and per society.

According to the principal-agent model used in the framework of the New Institutional Economy, two levels are interconnected:

1. The healthcare provider has to ensure that he/she is being paid, both for the current and future services by adherence to certain institutional standards of the services performed.

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2. The healthcare payer, be it an institution, an insurance company or patient, has to ensure that the paid-for-services met a certain standard at least, or else he/she would not seek the services of this particular healthcare provider in the future.

The costs of a procedure or a treatment – another measure influencing efficiency – are crucial factors both for the decision to perform the service as well as whether to pay for it fully or partially. Accounting costs connected to a business transaction – e.g. the rendering of a healthcare service – are easy to estimate. On the other hand, when assessing the real life meaning of cost in healthcare systems it is important to consider opportunity cost – which means the cost of lost opportunity (e.g. the same amount of money may be allocated to end-of-life treatment of a group of oncology patients or as one-year budget of pediatric ward). In addition, there are also costs, which are harder to estimate, called societal costs. This category includes costs of premature death and productivity losses due

to absenteeism or presenteeism – costs of underperformance of employees, executives or business owners due to illness or adverse effects of treatment; and it matters not only to them but also to their families.

When balancing above described issues, InterQuality researchers strive to incorporate another quality aspect, commonly overlooked or underestimated: Equity. The conclusion of WHO 2003 report was that “there is a growing consensus that improvement in average levels of health is not a sufficient indicator of health systems performance”. The InterQuality project will utilize the concept of ‘health equity’ focussing attention on the distribution of resources and other processes that drive a particular kind of health inequality – that is, a systematic inequality in health (or in its social determinants) between more and less advantaged social groups, in other words, a health inequality that is unjust or unfair. We believe that this may reveal and document significant disparities among European national healthcare systems.

Discussing InterQuality: conferences & events

On 21-24 October 2012, Prof. Tomasz Hermanowski from the Medical University of Warsaw attended the [29th ISQua International Conference](#) in Geneva. Prof. Hermanowski presented research findings of WP2 to a scientific community of approximately 50 participants. The topic of his presentation was “Proposed law on healthcare quality in Poland and institutional settings of healthcare quality policy in EU member states”.

On 3-7 November 2012, Aleksandra Krancberg represented the InterQuality consortium at the [15th ISPOR Annual European Congress](#), which took place in Berlin with the participation of more than 3500 attendees (doctors, pharmacists, patients, government officials, professionals interested in pharmacoeconomics, etc.). The objectives of the event were to present new methodologies and outcomes related to research in pharmacoeconomics and improve the quality of decision-making through better utilisation of studies on pharmacoeconomics. The abstract presented at the congress was titled “New classification of traditional and innovative pharmaceutical payment methods”.

On 8-10 November, 2012 Dr Christian Krauth and Sören Jensen from the Hannover Medical School (MHH) participated in the [2012 European Public Health Conference](#) in Malta, organised by the [European Public Health Association](#). More than 1000 research scientists from all over the world attended in this event. At this event, the WP6 research on pay-for-performance (P4P) programmes was presented. Dr Christian Krauth and Sören Jensen drew attention to the three essential components of successful P4P programmes: “what to incentivise”, “whom to incentivise”, and “how to incentivise”.

Activity Report

Work Package 3: Report on workshops and action points

by Ms Malgorzata Chmielewska MSc. (SPH)

The objective of [WP3](#) is to validate pharmaceutical benefit financing models used in tax or social health insurance systems, as well as private or mixed ones.

In the second half of 2012, the [WP3](#) research team worked on three tasks – (1) a comparative analysis of pharmaceutical benefit financing models, (2) financing access to medicines, and (3) drug distribution financing models respectively. These tasks demanded a very precise specification of the area of exploration to avoid observations and eventual conclusion from becoming too general and superficial and endangering their practical applicability.

After a literature review on these topics, we decided to focus on a limited number of specific issues, which are the most relevant and characteristic ones with regard to our objectives. The choice of the issues for further exploration was based on expert judgment, since we could not find any objective or hard indicators that would allow us to just simply evaluate and rank them. Nevertheless, to assure the judgment process to be optimal and scientific, we decided to apply a combination of two qualitative research methods in the process of defining the final list of topics: the Focus Group Discussion (FGD) and the Delphi Panel Method. As a result of these exercises, we decided to focus on ten topics, to be further evaluated: pricing and reimbursement issues, access and equity, promotion of innovation, distribution, pharmacy benefit manager, eHealth and electronic prescribing (e-prescribing), personalized medicine, transparency, pharmacovigilance, and pharmaceutical care and quality of pharmaceutical services.

The objective of the first task – “comparative analysis of pharmaceutical benefit financing models” – was to identify and describe pharmaceutical benefit financing models in the UK, the US, Poland, Italy, Germany and Denmark. A final report is currently being finished .

The objective of the second task – “financing access to medicines” – is to analyse different aspects of financ-

ing access to medicines and their consequences. For this, missing knowledge was identified, a questionnaire for collaborative work was developed, and the statistical analysis on equity of access to healthcare was planned. The detailed methodology of this task is being discussed with interested project partners.

The objective of the third task – “drug distribution financing models” – is to perform a review of drug distribution financing models in the EU and the US. For this task, missing information was also identified and a questionnaire was developed for partners. These were presented and discussed with other project partners during the project meeting in Catania in May 2012.

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The next InterQuality General Assembly will take place in Odense on 4 and 5 March 2013.

Activity Report

Work Package 7: Communicating Healthcare Financing Reform

by the European Patients' Forum (EPF) and the Standing Committee of European Doctors (CPME)

As in many areas, good communication is an essential ingredient in high quality healthcare. In particular when progress depends on launching a new course of action, deciding between different options or resolving a crisis situation, communication and its set-up takes on a decisive role. Remarkably, this holds true as much for each individual patient-doctor relationship as it does for healthcare on a systemic level. In the broad scope of communication on healthcare policy, which may also include the implementation of public health campaigns for instance, healthcare reforms pose a special challenge. Actors, tools and messages each come together to form a complex web, while the intricate context of pressures and interests in which a reform is set likewise influences expectations, capacities and choices. Communication can thus become a vital tool to determine failure or success.

Realising the potential impact communication can thus have on the content and implementation of a reform, the InterQuality project has dedicated a task to looking into healthcare financing reforms' communication strategies. The objective is to identify good and bad practices in planning, integrating and executing communication strategies and the resulting recommendations in Communication Guidelines.

The task of drafting the Communication Guidelines is being taken forward within [WP7](#) on 'Dissemination'. Starting in 2011, activities first focussed on research into existing reflections on communication campaigns relating to healthcare reforms. While a plethora of guidelines exists on implementing public health campaign communication, far less research has been dedicated to healthcare reform communication.

To better determine the scope of the Communication Guidelines' basis, [WP7](#) agreed on a definition of 'healthcare reform' setting out that

"By healthcare financing reform we mean implementation of a major innovation in healthcare management and financing, radically changing the way in which healthcare services are produced and consumed, in particular implementation of new financing models, like: integrated healthcare or shared saving schemes, on the supply side [and] high deductible health insurance and Health Savings Accounts, on the demand side."

Against the background of this definition, a search for case studies was launched, which focussed on the countries already targeted by InterQuality activities with a view to potentially creating cross-references to other project outputs. Several reforms were chosen for their potential to provide a useful example of a real-life implementation of a communication campaign. It is aimed to collect national level information both from literature and direct contact with selected stakeholders.

To support the examination of these case studies, work has also been invested into identifying decisive elements of communication campaigns as discussed in the literature available. These elements have been processed into a matrix which shall be used as a point

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of reference to deconstruct the case studies' campaigns. The analysis conducted thus would produce helpful findings to determine good and bad practices. A progress report shall be shared at the forthcoming InterQuality partners' meeting in March 2013.



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The InterQuality consortium looks forward to welcoming you again soon.





International Research on Financing Quality in Healthcare

Newsletter 5, August 2013

Welcome to InterQuality

Spend not more, but smarter!

Welcome to the fifth issue of the InterQuality project's newsletter!

I am pleased to welcome you to the 5th issue of the InterQuality newsletter. The empirical Work Packages' research has entered into a near-final stage. The team around WP 4 is close to completing its in-depth analysis of the Italian hospital system. Starting with a study of Italian hospitals' technical efficiency and extending the research to measure the quality of care by outcome indicators, the team is now working to identify undesirable financial stimuli which decrease hospitals' efficiency. Great variability in the financial and organisational settings between Italian regions makes this research a "natural experiment", allowing the exploration of crucial design and institutional features affecting payment systems.

In WP 6 an analysis of the effectiveness of patient education programmes is being conducted. The aim of the study is to identify environmental and population factors that may influence the effectiveness of these programmes. The study covers three metropolitan areas - Warsaw, London and Berlin.

In this issue you can also find a report on the progress made as regards a study on equity in access to medicines and healthcare services in Denmark, Germany and Poland. Researchers involved intend to produce an 'umbrella study' for the project, assessing the holistic effects of financing models as regards equity.

These examples are only a small part of the research and show how wide and complex the scope of the InterQuality project is. In the coming months researchers will face a difficult task of key importance for the success of the project - the development of common conclusions and the translation of research results into policy recommendations.

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Activity Report: WP 3

Activity Report: WP 6

Activity Report: WP 4

Meeting Report: Brussels, 10-11 June 2013

Sincerely,

Prof. Dr Hab. Tomasz Hermanowski
Medical University of Warsaw
Project Leader

Project Information

International Research on Financing Quality in Healthcare

Start: December 2010

Duration: 36 months



This project is funded by the Framework Programme 7 of the European Union.

Consortium

Medical University of Warsaw (MUW) - coordinator

Hannover Medical School (MHH)

University of Southern Denmark (SDU)

University of Catania (UniCT)

Urban Institute Washington (UI)

University of York (UY)

Sopharm Sp.z o.o. (SPH)

Standing Committee of European Doctors (CPME)

European Patients' Forum (EPF)

Meeting Report: Odense, 4-5 March 2013

In a meeting hosted by the University of Southern Denmark, InterQuality partners came together in Odense on 4 and 5 March 2012 to discuss progress made in the Work Package's activities.

Project coordinator Prof. Tomasz Hermanowski welcomed all meeting participants. The meeting was opened with an introduction to the history and activity of the University of Southern Denmark (SDU) by Prof. Christian Kronborg. Prof. Terkel Christiansen of the Centre of Health Economics Research (COHERE) of the SDU then presented an overview of the Danish healthcare system, highlighting its de-centralised structure and explaining its financing, as well as its organisation of and access to care services.

The following session saw a series of presentations on Work Packages' current activities. For Work Package 4, Dr Domenico Lisi presented the results of research into the economic efficiency of hospital care, presenting a comparison of national systems, which laid the foundation for an analysis of retrospective and prospective payment systems' impact on efficiency and quality of care, depending on different systems characteristics.

Prof. John Hutton presented the research agenda of Work Package 5, which focuses on reviewing the use and impact of financial incentives in outpatient care, which is defined as all care which is not delivered in a hospital setting, e.g. primary and community-based care. While the research will include a comparison of different national practices, the British Quality and Outcomes Framework will be focus of more detailed analysis.

With its focus on integrated care, Work Package 6 presented progress made in several work streams. Ms Kirsten Hoepfer outlined the preliminary outcomes of a literature review of studies on the impact of integrated care of quality and cost effectiveness. A similar systematic review was carried out for pay-for-performance, looking into quality and cost-effectiveness, while trying to identify features which facilitate the system's success. In a third presentation, Dr Christian Krauth outlined on-going work on patient education programmes in metropolitan areas, which will be based on a literature review, complemented by expert interviews and comparisons between systems.

The final part of the session was dedicated to Work Package 7 at its activities on dissemination. For the work on dissemination of project results Ms Liuska Sanna outlined the work carried out so far, e.g. through the project newsletter. This was followed by a discussion on the communication of the project's final reports, looking into academic publishing and broader

dissemination. For the Work Package's second work stream, Ms Sarada Das presented the interim results of the research on the communication strategies of healthcare reforms, which shall include a series of case studies to identify good practices for successful communication.

The session was concluded with a discussion of the project's internal technical and managerial issues.

The second day saw a series of discussions on focal tasks within the project. Introducing their work on equity, which is carried out by Work Packages 2 and 3 in collaboration, Dr Anna Zawada and Dr Katarzyna Kolasa outlined the scope and methodology of the study, which intends to explore the impact the design and institutional features of health care systems have on equity, i.a. looking at financing, access, utilisation and health status. Meeting participants discussed approaches to data collection and processing for a multi-country comparison.



Turning to pharmaceutical care, as addressed in Work Package 3, Dr Chris Pashos presented an introduction to pharmacy benefit management as established in the USA. He outlined to scope of services and structure of these schemes, highlighting its effects on pricing and patient care. The following discussion, looked into European healthcare systems' characteristics and their potential compatibility with pharmacy benefit

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management schemes.

This discussion was followed by a presentation by Dr Zbigniew Tytko into the research of Work Package 3 into rebate negotiation in pharmaceutical care, looking into a Polish case study in particular. Mr Andrzej Szczyplior discussed approaches to data collection to support the research into pharmaceutical care systems in different countries.

In a final presentation, Ms Sarada Das presented an up-date on the creation and launch of a survey on doc-

tors' views on payment systems. The survey will look into views on and experiences with different payment systems and their impact on, i.a. utilisation, access to healthcare, quality of outcomes and patient satisfaction.

The meeting was concluded by Prof. Tomasz Hermanowski, who thanked the hosts and all contributors for the fruitful discussions. It was announced that the consortium would next meet in June 2013 in Brussels.

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Activity Report

Work Package 3: Up-date on research into equity in healthcare

by Ms Urszula Cegłowska (SPH)

According to Whitehead's definition "*equal access to available care for equal need implies equal entitlement to the available services for everyone, a fair distribution throughout the country based on health care needs and ease of access in each geographical area, and the removal of other barriers to access. An extreme example of unequal access arises when people are turned away from or are unable to use health services because of their lack of income, race, sex, age, religion, or other factors not directly related to the need for care.*"

Equity has long-since been considered an important goal in healthcare. The increased popularity of equity in healthcare as a research topic during the past 35 years reflects the growth of interest of health policy makers in this field. A key policy objective in all European countries, often explicitly endorsed in legislation, is to achieve adequate access to healthcare for all people on the basis of need. Egalitarian equity goals distinguish between horizontal equity and vertical equity. Horizontal equity is a measure of equal treatment for those with equal need. Vertical equity measures the extent to which individuals with unequal needs receive appropriately differentiated levels of care. Another understanding of equity in health financing is that households should be protected against catastrophic medical expenditures, defined as the out-of-pocket payments, which may disrupt the material living standards of the household. The crucial issue is that the relative contribution made out-of-pocket is not too high,

as it can lead to a reduction of basic spending on other items or even prevent people from seeking or obtaining care. For the purposes of the Work Package 3 research, the focus is on measuring horizontal inequity in the delivery of healthcare and the incidence of household catastrophic healthcare payments.

As a part of the equity research a systematic review was performed with aim to identify studies measuring inequity in healthcare delivery and financing for European countries and the United States. The results revealed that up-to-date studies measuring healthcare inequity focused on the countries involved in the InterQuality project are almost non-existent. Previous studies by Wagstaff and Van Doorslaer measuring inequity in healthcare for Europe and the US date from the late 20th/ early 21st century.

In order to fill the gap identified in the systematic review, it is intended to measure the level of inequity in healthcare financing and delivery for Poland, Denmark and Germany using data from national household budget surveys. The methods used in the equity study is conceptually identical to those used in Wagstaff and Van Doorslaer's previous studies for measuring inequity in healthcare delivery, and to those used by World Bank Group for measuring the incidence of catastrophic healthcare payments. Currently, the study is at an advanced stage and it is expected that results should be available shortly.

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Activity Report

Work Package 6: Patient education

by Ms Kirsten Hoepfer, M.Sc. (MHH)

Chronic diseases are the leading cause of mortality and morbidity in Europe and will impose an even larger burden in the future. As expenditure on chronic care rises across Europe, it takes up increasingly greater needs of long-term and complex response, coordinated by different health professionals. Chronic diseases have traditionally included the following: cardiovascular disease, diabetes and asthma or chronic obstructive pulmonary disease.

The world is urbanizing at an unprecedented rate. In 1950, only 29% of the world's population was classed as urban dwellers. By 2050, the UN predicts that this will have risen to 69%. In 2000, 16 of the world's top 30 most populous cities had over 10 million inhabitants; the UN predicts that by 2025 only one of the top 30 will have fewer than 10 million (World Urbanisation Prospects 2009 Revision, File 11a). Very little is known about health differences that exist within cities. To understand urban health, available information has to be analysed according to defining characteristics of the cities and their inhabitants, such as their economic status or geographical location within the cities (WHO 2010).

To contemplate the problem of health inequity within cities rather than countries will provide a better understanding of what the problems are, where they lie and how best to address them. For example high levels of pollution as well as social inequalities tend to be higher in urban regions than in rural areas (Liebhart, J., J. Malolepszy, et al. 2007). On the other hand, cities offer a better access to medical centres and pharmacies than the countryside. London, Warsaw and Berlin were chosen due to the fact that they are Capitals within the framework of partners of this project. Among the three cities selected, London stands out as one of ten Alpha World Cities, whereas Warsaw and Berlin are ranked as Gamma World Cities by the Globalization and World Cities Research Group and Network (GaWC) (Beaverstock, Taylor et al. 1999). Nonetheless, whether there is an impact of different population sizes or surface areas, the influence of health care characteristics or which factors might influence effectiveness, accessibility and quality of patient education programs remains open.

Based on this gap of knowledge we aim to evaluate the effects of various already implemented patient education programs in diabetes type 2 and asthma bronchiale in children on quality, efficiency and equity of access to the healthcare. The overall aim that we

set in this work was to compile an in-depth assessment of the response to the rising burden of chronic disease in terms of patient education programs in each of the three European cities, by focusing on three key areas: following a detailed description of the current situation, an empirical analysis with expert interviews based on a questionnaire developed by our group will be performed. The first round of interviews is scheduled in Warsaw on may 27th/28th 2013 with valuable input from Tomasz Hermanowski and his group. The interviews in Berlin and London will be scheduled accordingly. Finally, an international comparison based on the empirical data will complete this task.

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WP 2 Value/Benefits

WP 3 Pharmaceutical Care

WP 4 Hospital Care

WP 5 Outpatient Care

WP 6 Integrated Care

WP 7 Dissemination

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Activity Report

Work Package 4: Efficiency in Hospital Care Services in Italy

by Dr Domenico Lisi (UniCT)

The main purpose of WP4 of the InterQuality project is to investigate the effects of different payment systems on hospital performance and quality of care, taking into account how they are affected by relevant features of health care systems. For this purpose, in the first part of the project we discussed the potential role of different relevant features (both design and institutional features) of national systems in affecting the actual realization of expected incentives provided by standard Prospective Payment Systems (PPS).

The general picture emerging from our analysis is that the main features of the context in which a payment system is implemented are certainly relevant in driving hospitals' behaviour and, in turn, in affecting the level of efficiency and quality induced by that payment system. In particular, we find that the public-private mix of hospitals, the extent of competition and the extent of non-financial motivations turn out to be crucial in establishing which payment systems are likely to induce the best performance in terms of both efficiency and quality. Similarly, relevant design features, such as the readmission policy, and the degree of soft budget constraint also appear to be very important. Therefore, in the second part of the project we moved towards the real data investigation, in order to see how our theoretical conclusions on the effects of these features on hospitals' performance can be enriched with the help of empirical evidence. To this extent, we conducted an analysis of the impact of different payment systems implemented in the Italian regions in both hospital efficiency and quality of care, trying also to consider the main differences among the regional health care systems. Indeed, the Italian national health service (NHS) is an especially interesting case, since it has been subject to a considerable decentralization process with wider responsibilities devolved to regional governments.

Therefore, great variability exists not only among payment systems, but also in the way regions settled important features of the system (such as tariff, extent of case payment, public-private mix and other characteristics of supply). In the first part of the empirical analysis we focused on the efficiency of Italian hospitals. For this purpose, we initially employed the Data Envelopment Analysis (DEA) on a large panel of hospitals (2000 – 2010) to determine our measure of technical efficiency. The primary fact emerging from the data is a great variability both within and between regional systems. Indeed, our preliminary evidence suggests

that a significant part of this variability could be explained also by the difference in hospital payment systems. Then, we moved to the analysis of the impact on quality of care, measured by different mortality and readmission indicators.

In particular, the empirical analysis of the Italian hospital system was carried out using data from the National Program for Outcome Assessment on mortality and readmissions for Acute Myocardial Infarction (AMI), Congestive Heart Failure (CHF), stroke and Chronic Obstructive Pulmonary Diseases (COPD) in the years 2009–2010. Our results show that hospitals operating in regions where PPS are used more extensively are generally associated with better quality of care.

Finally, to the extent that higher cesarean section rates (CS) are usually considered an indicator of hospital inappropriateness, we analyzed the impact of tariff differentials on risk-adjusted cesarean delivery rates. Indeed, the great variation emerging from the data both over regions and providers can not be fully explained by clinical motivations. Our main finding is that, after controlling for other relevant factors, differences in the tariff paid to providers seem to contribute in explaining the variation in CS, suggesting that a more adequate tariff regulation may be able to increase the appropriateness of birth treatments, implying also a higher containment of costs in the Italian NHS.

Overall, our findings suggest that in designing the optimal regulation in the healthcare market, particular attention must be paid to the incentives given to providers in terms of efficiency and quality. In our view the presence of our comprehensive theoretical framework, along with the results of the empirical part, should form an ideal basis to provide policy recommendations related to the peculiarities of a country's system.

For more information on the project
and its partners, please visit
www.interqualityproject.eu

Meeting Report: Brussels, 10-11 June 2013

InterQuality Partners met in Brussels on 10-11 June in a meeting hosted by the Standing Committee of European Doctors (CPME). The project is now entering its final phase and project partners debated how to translate research results into policy recommendations. The consortium members also discussed the interrelations between findings of different Work Packages and the development of common conclusions.

The meeting was opened with a word of welcome by Prof. Tomasz Hermanowski, Project Coordinator, who summarised interim results and outlined the main challenges the project team still faces.

Dr Konstanty Radziwiłł, Immediate Past-President of CPME, introduced participants to the mission and history of this organisation, highlighting the main areas of its activity and its cooperation with many international and regional institutions.



The opening session of the meeting was concluded with the presentation by Katja Neubauer, Deputy Head of Unit 'Healthcare Systems' in the DG Health & Consumers of the European Commission. Ms Neubauer presented patient safety and quality of care as one of the priorities of the Directorate. She went on to describe the main actions aimed at improving safety of healthcare and main challenges in this area faced by the EU Member States.

The following sessions saw a presentation and discussion on the interim results of the project's core Work Packages. Prof. John Hutton, leader of Work Package 5, underlined the importance of health system context for the quality of outpatient care and discussed principles for assessing payment methods, previously developed by the team of Dr Bob Berenson from the Urban Institute. He then went on to present the analysis of the effectiveness of outpatient care in UK, Germany, Denmark and Poland assessed on the basis of epidemiological and biomedical parameters among the popu-

lation.

Prof. Giacomo Pignataro, leader of Work Package 5, and Dr Domenico Lisi from University of Catania presented the results of the analysis of caesarian delivery rates in different Italian regions. The researchers are exploring the relationship between different DRG tariffs for this procedure and value of this indicator in Italian hospitals in terms of utilisation.

Ms Line Kongstad from University of Southern Denmark presented her work on the specificity of teaching hospitals seeking an answer to the question: are they providing higher quality care than regular ones?

The following speaker, Prof. Volker Amelung, leader of Work Package 6 from Hannover Medical School (MHH), outlined the concept of two studies which will be performed in order to determine features of an optimal pay-for-performance model. In a first step, a mail survey targeted at 2500 general practitioners in Lower Saxony will aim to identify their experiences and problems with the current payment system as well as to assess their attitude towards P4P. In a second phase, using contingent valuation method, it is intended to assess the impact of different bonus volumes in a P4P system.

The last speaker in this session was Zbigniew Tytko MD from Sopharm who outlined the state of progress in Work Package 3. The Sopharm team has completed work on the comparative analysis of financing pharmaceutical benefit models and access to medicines. Currently Work Package 3 is conducting research on drug distribution models and pharmaceutical care.

The first day of the meeting ended with an overview of project's financial and management tasks, provided by Mr Jakub Rutkowski and Mr Michał Skrzek, Project Manager and Financial Manager. Mr Marc De Cock and Mr Oliver Jeanjean, InterQuality's project officers from the Directorate-General for Research and Innovation of the European Commission, were present to inform and advise on decisions.

The second day of the meeting saw focused discussions on on-going work. The day was opened with a discussion on dissemination of project results, moderated by Ms Liuska Sanna, leader of Work Package 7 from the European Patients' Forum (EPF).

Ms Anna Zawada from Sopharm presented the state of work on the study on equity of expenditures on health care and availability of health care services. The equity Study is going to be an „umbrella study” for the project, assessing the effects of financing hospital care, outpatient care, coordinated care and pharmacological treatment on equity.

Meeting Report: Brussels, 10-11 June 2013

The following speaker, Ms Sarada Das from CPME, presented the interim results of the analysis of various



strategies to communicate healthcare reforms by governments and other actors to major health stakeholders in different countries. Using the case-study method, the CPME team has identified strengths and weaknesses of the healthcare reform in Poland in 1999, while EPF has been studying the reform in the US in 2010.

Dr Victor Bystrov, from the Medical University of War-

saw (MUW), presented results of the analysis of readmission rates across Polish hospitals, which was performed using administrative data of the National Health Fund. This is the first wide-scale study of readmission rates in Poland and the results show much variation across hospitals that requires further investigation.

Ms Stanisław Brzozowski, from MUW, presented the functionality of the project's Data Warehouse, launched to collect and analyse statistical data in a uniform format.

Prof. Christian Krauth from MHH introduced their work on a study which aims to evaluate the effects of various patient education programmes for type 2 diabetes mellitus and asthma bronchiale. The study, using the expert interviews method, will cover the metropolitan areas of Berlin, London and Warsaw.

The meeting was concluded with closing remarks by the project coordinator Prof. Tomasz Hermanowski.

The partners look forward to the final stage of the project. The upcoming months will be very busy for the InterQuality researchers summarizing their work, drawing final conclusions and preparing publications.

The next issue of the InterQuality newsletter will be published in November 2013

The InterQuality consortium looks forward to welcoming you again soon.



MHH



THE UNIVERSITY of York

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European Patients Forum





International Research on Financing Quality in Healthcare

Newsletter 6, February 2014

Welcome to InterQuality

Spend not more, but smarter!

SAVE THE DATE
InterQuality
FINAL CONFERENCE

Brussels, 24 April 2014

Find more information on
www.interqualityproject.eu

In this issue

Save the date: final conference,
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Project Information

International Research on Financing Quality in
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Consortium

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InterQuality - Reflections on the project

by Prof. Dr Hab. Tomasz Hermanowski, Project Leader (MUW)

I am pleased to welcome you to the 6th issue of the InterQuality newsletter. Our three-year research is now coming to an end and the time has come for an attempt to formulate policy recommendations. The research of [WP3](#) on pharmaceutical care investigated pricing and reimbursement of medicinal products in the wider context of health systems performance assessment, and analysing the impact of pharmaceutical expenditure on life expectancy.



Differences in access to appropriate medicines attributed to social inequalities proved to be an urgent issue in some of the EU Member States. Thus, reimbursement and delivery of pharmaceuticals should reflect patients' rights to equitable and timely access to appropriate medicines. In pursuing this paradigm, adequate, equitable and sustainable financing models are essential. Reimbursement decisions should take into account patients' annual out-of-pocket payments on all drugs they should receive in order to best meet their individual health needs. Simple co-payment on each transaction should be replaced by deductibles and caps on annual out-of-pocket spending on pharmaceuticals, preferably adjusted on an annual basis, and accompanied by protection mechanisms covering highly vulnerable groups of patients. The EU Member States should investigate the feasibility of innovative reimbursement models offering better ways to contain moral hazards, such as Medicare Part D coverage gap (informally known as the Medicare donut hole), i.e. the difference between the initial coverage limit and the catastrophic-coverage threshold.

The implementation of advanced reimbursement schemes providing for more equitable and sustainable

access to medicines requires active investment and incorporation of e-health solutions. Most EU Member States promote implementation of selected e-Health tools, such as e-prescribing, but there is still little understanding that, without a proper institutional framework providing for their integration, there is a chance that these tools will not yield results comparable to those in the US. Pharmacy benefit management (PBMs) technology provides an integrated package of cost-containment methods implemented within a transparent institutional framework and powered by strong motivation of the agent. Without integration, selected e-Health tools will not work as a coherent logical and operational entity and may not yield results comparable to cost and quality improvements obtained thanks to the implementation of PBMs in the US. Innovation is often regarded as the main cost driver responsible for the rising prices of new medicines, but in parallel to inventing new active substances, innovation produces also new management and financing models which reduce costs and improve the quality of care. In this respect, a mixed health care system, as prevails in the US, seems to be more flexible and open to implementation of radical, new and creative management and financing models, such as integrated care or PBM, than EU social security or tax-based healthcare systems.

It should be also remarked that improvements in pharmaceutical care financing may be limited or compromised by the lack of flexibility of the EU Member States national or regional administrative regulations. Relaxation of these restrictions and innovative changes in the traditional pharmacy business model may help improve patient access to appropriate pharmaceutical care. Instead of focusing on administrative regulations regarding ownership and location of pharmacies, which may create barriers to vertical and horizontal integration of pharmacies and wholesalers, or prohibit direct deliveries or distribution of prescription medicines by mail order pharmacies, the traditional pharmacy business model, still prevailing in most EU Member States, should be changed. Retail distribution margins should not be pharmacies' only source of revenue. If Italian or Polish pharmacies are expected not only to sell medicines but also to provide pharmaceutical care, their business model cannot be the same as a business model of a shoe shop. Following the UK example, pharmaceutical care services should be re-

InterQuality - Reflections on project findings ctd.

munerated, and pharmacies should have a share in savings resulting from generic substitution. The medicines produced by 21st century technology may not be efficiently distributed by 19th century distribution channels.

This outline of recommendations for the pharmaceutical sector is to give you a foretaste of the project outcomes, which will be presented in full at the InterQual-

ity final conference to be held on 24 April 2014 at the EU Committee of the Regions in Brussels. On behalf of the InterQuality consortium partners, I would like to invite you to join us there. Details, regarding the final conference registration, are available at:

<https://interqualityproject.eu/final-conference>

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Activity Report

Work Package 3: Deliverable D 3.1 Report on “Report on financing pharmaceutical care”

by Dr Zbigniew Tytko (SPH)

This deliverable focused primarily on the description of evidence found for the identification of favourable attributes of pharmacy benefit financing schemes. It was intended for internal purposes of the InterQuality project, pointing out the main direction of further research aimed at identification of the recommended model. It also pointed out some promising solutions already implemented in European partner countries and the US. With the aid of the findings presented in this document, a model of pharmaceutical benefit financing will be designed and described by [WP3](#) in deliverable 3.2.

In order to achieve our goals and to collect a set of information, a standard systematic literature review in medical databases was performed, followed by manual search, consisting of searching relevant literature, following interesting links related to chosen full texts as well as performing interviews with experts working in areas of our interest about other relevant papers they were familiar with. The gathered information and data were extracted to a pre-defined table. Then the assessment of the quality of literature included was conducted. On this basis, the literature data was evaluated to identify data which were considered sufficient and of adequate quality for our reports.

As a result of our work, we have identified two broad directions for the future development of the recommended pharmaceutical benefit financing model. We achieved this using bibliographic approach, identifying and summarising accessible information about pharmaceutical benefit financing models used in partner countries. Our work also revealed some promising

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solutions, which will probably help achieve the above mentioned goals, when implemented in a healthcare system.

The first important direction of further research should be on progressive reimbursement schemes with the introduction of deductibles (possibly annually adjusted caps on out-of-pocket spending on pharmaceuticals

Activity Report

Work Package 3: Deliverable D 3.1 Report on “Report on financing pharmaceutical care” ctd.

and protection mechanisms for especially vulnerable groups of patients). This should go together with implementation of e-prescribing solutions supplemented by online adjudication of pharmacy claims and very wide access to pharmaceutical services in community pharmacies as well as improving pharmacovigilance. For this purpose a new pharmaceutical distribution financing model should be developed, to remunerate pharmacists for pharmaceutical care services.

The second important direction of further research should be the introduction of professional third-party administrators for pharmaceutical benefits supply (model solutions are pharmaceutical benefit managers in US), having enough power to negotiate pharmaceuticals' prices and gaining rebates from producers, thus

improving the transparency of distribution process and transferring profits to payers and patients to achieve slowdown in dramatically increasing pharmaceuticals costs. Third-party administrators should share savings with clients for better incentives to gain a decrease of pharmaceutical expenditure, and compete for contracts with insurers. All aspects of pharmaceutical's provision should be in the hands of a single agent responsible for financing and organising beneficiaries access to medicines.

Both solutions might be implemented together, since they are not mutually exclusive, thus probably producing more gain in terms of curbing down the pharmaceuticals costs and diminishing the known effect of decreasing equity of access in managed care settings.

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Activity Report

Work Package 4: Hospital Care

by Prof. Giacomo Pignataro (UniCT)

The main aim of the “Report on financing hospital care – [WP4 Deliverable 4.1](#)” of the InterQuality project is to investigate the effects of different prospective payment systems (PPS) on quality of hospital care, taking into account how they are affected by relevant features of the health care systems. This comprehensive task has been conducted by the research group of the University of Catania, in collaboration with the University of Southern Denmark and the University of York.

The first part of the report offers an overview of the organisation and financing of hospital care provision in three European countries: Denmark, Italy and the UK. The characteristics of these payment systems are framed within the general features of prospective payment mechanisms. The description of the healthcare arrangements in place in each of the three countries under consideration has highlighted some broad similarities but also many substantial differences among them. In terms of similarities, all the three countries rely on tax-funded, publicly administered national health care systems, provide universal coverage and health services free at the point of use and deliver services mainly through public providers. Moreover,

they have all opened up their national health systems to internal competition to diversify supply as well as to increase purchasing power and have devolved health responsibilities to subnational governments, albeit with different emphasis and modalities. There are, however, substantial cross-country disparities in how activity-based funding has been actually implemented and developed over time, since each country has tried to tailor hospital payment mechanisms to its local context. In particular, the cross-country comparison of the hospital diagnosis-related groups (DRG)-based payment schemes has found differences with regards to many DRG design features such as number of groups, type of costing, funding characteristics of particular hospital activities, specific adjustments, reimbursement of outliers and so on. Nonetheless, considering these dissimilarities alone does not allow to fully appreciate the effect of a country-specific DRG-based payment scheme on the achievement of the typical PPS incentives for cost efficiency, quality and equity of access.

Evidence on the impact of the hospital funding reforms implemented in the last decades, usually intro-

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ducing some form of PPS and reducing the scope for retrospective global budgeting, does not seem to have established very clear-cut results. In particular, factors that might affect the actual realisation of the expected incentives provided by PPS are potentially quite numerous. To this extent, the second part of the report is devoted to theoretically evaluate those features of the health system which are considered to be particularly crucial in affecting the result of PPS on hospital efficiency and quality. In particular, the discussion is divided into “design features”, those concerning the specification of the payment system (e.g., prospective budget vs. prospective price, readmission policies, etc), and “institutional features”, those concerning the context in which the PPS is implemented (e.g., degree of competition, public-private mix, etc.). The general picture emerging from the analysis is that the main features of the context in which a given payment system is implemented are certainly relevant in driving hospitals’ behaviour and, in turn, in affecting the level of efficiency and quality induced by that payment system. Specifically, the public-private mix of hospitals, the degree of competition and the extent of non-financial motivations turn out to be crucial in establishing what payment system should induce the best performance in terms of both efficiency and quality. Similarly, relevant design features as readmission policies and the degree of soft budget constraint also appear to be very important in affecting the results expected from PPS.

Finally, in the last part of the report, empirical analyses of the effects of the PPS adoption on different efficiency and quality issues in Italy are carried out, using various methodological (parametric and non-parametric) approaches. Firstly, the efficiency of Italian hospitals is considered. For this purpose, a two-stages efficiency analysis is conducted, where in the first-stage the Data Envelopment Analysis (DEA) efficiency scores are estimated for all Italian hospitals and, then, in the second-stage, the above scores are regressed on different explanatory variables, aiming at capturing the role of regional financing systems. Indeed, evidence is found that hospitals financed through PPS tend, on average, to be more efficient than those financed through glob-

al budget. As a further step, an analysis of the impact of PPS on different dimensions of hospital quality, such as standard outcome-based indicators, diffusion of medical technology and inappropriateness, is carried out. As far as the investigation of outcome-based indicators is concerned, the analysis of the Italian hospital system relies on data from the National Programme for Outcome Assessment on mortality and readmissions for acute myocardial infarction (AMI), congestive heart failure (CHF), stroke and chronic obstructive pulmonary diseases (COPD) in the years 2009–2010. Results show that hospitals operating in regions where PPS are used more extensively are generally associated with better quality of care. A similar empirical analysis has been then replicated for Denmark, where the impact of an activity-based hospital financing system on readmissions for chronic obstructive pulmonary disease (COPD) is considered.

All in all, empirical findings for Italy tend to confirm theoretical predictions and further strengthen the positive impact of PPS on hospital efficiency, quality (as measured by outcome-based indicators), medical technology diffusion and appropriateness of care (as measured by cesarean section rates). The analysis for Denmark also shows that key design elements of the prospective hospital reimbursement system (i.e. operating above baseline and having high reimbursement rates) do have an impact on quality of health care as measured by the risk of readmissions for COPD.

In our view, the comprehensive theoretical framework presented in the report along with the results of the empirical part should form an ideal basis to provide policy recommendations related to the peculiarities of a country’s system. Therefore, as a further contribution to the InterQuality Project, the research group of the University of Catania will develop policy recommendations on the desirability of the adoption of PPS for hospital care, as related to the country-specific features of the health care system. These policy recommendations will be included in the final report on “Recommended financing models – WP4 Deliverable 4.2” of the InterQuality Project.

Find more information on all InterQuality deliverables on www.interqualityproject.eu

Meeting Report: Odense 18-19 November 2013

The final InterQuality partners' meeting took place on 18-19 November in Odense and was hosted by the University of Southern Denmark (SDU). As the project has reached its final phase, the meeting focused on planning dissemination activities and formulating policy recommendations emerging from the InterQuality team's research.

Prof. Hermanowski, the project leader, opened the meeting, summarised the project status quo and pointed out challenges of spreading the project results to policy-makers and main stakeholders.

The session of [WP3](#) on pharmaceutical care included presentations by Dr Anna Zawada (MUW) and Dr Zbigniew Tytko (SPH). Under the 'smarter spending' leitmotif, Dr Tytko presented specific 'islands of excellence' that offered best practices for improving pharmaceutical care financing in an attempt to efficiently and effectively provide greater access to high quality care. These "islands" included pharmacy benefit management in the United States, progressive reimbursement in Denmark, and reimbursement reform in Poland. Anna Zawada presented the results of a collaborative empirical study on health care expenditure and equity of healthcare usage in Denmark, Germany and Poland.

The next session, featuring presentations by Mr Tomasz Pawłęga (MUW) and Prof. Volker Amelung (MHH), [WP6](#) leader, was dedicated to integrated care. The speakers focused on financial incentives for integrating care, integrated care models and obstacles for developing such models in Europe.

The first day of the meeting was concluded with an overview of financial and management issues of the project, provided by Jakub Rutkowski and Michał Skrzek, project manager and financial manager respectively.

The second day opened with the session on hospital care. Dr Domenico Lisi (UniCT) presented the main findings of a theoretical analysis of relations between crucial features of healthcare systems and prospective payment schemes implemented in Italy, Denmark and the UK. He then moved on to the results of a study on the impact of prospective payment system on hospital efficiency and quality conducted in Italian hospitals.

Dr Lu Han (UY) presented the results of an analysis of the relationship between total income generated by payment-by-results tariff and the probability of survival and readmission after stroke, hernia repair, and hip replacement in UK hospitals. Results of a similar study, focused on the effects of activity-based funding on 30-day readmission after COPD in Denmark, was present-

ed by Prof. Christian Kronborg (SDU).

Prof. John Hutton (UY), [WP5](#) leader, discussed the effects of two main payment methods in outpatient care — capitation and fee-for-service — on access, effectiveness and patient experience. He also summarised existing evidence from the UK Quality and Outcomes Framework. Prof. Hutton drew attention to the dual and contradictory effects of payment methods on different dimensions of the quality of outpatient care. Ms Sarada Das (CPME) presented the results of a snapshot exercise on doctors' opinions on different pay-



ment methods, which gave rise to a number of questions for further research.

The basic functionality of the InterQuality data warehouse was discussed by Mr Stanisław Brzozowski (MUW), who explained how to import healthcare data from the data warehouse to Excel and how to perform a comparative analysis with graphical visualisation.

The last session, dedicated to the dissemination of the Project results, took the form of a brainstorming discussion and was moderated by Ms Liuska Sanna (EPF), [WP7](#) leader. For the second work stream of [WP7](#), Ms Das presented a discussion on the strengths and weaknesses of the healthcare reform in Germany in 2004, focusing on the introduction of a 'surgery fee'.

The meeting was concluded with wrap-up and closing remarks by the project leader, Prof. Hermanowski.

After the meeting partners are now looking forward to presenting and discussing the project results and policy recommendations at the final conference, which will take place in Brussels on 24 April 2014.

Activity Report

Work Package 2: Survey on doctors' views on payment systems

by Dr Konstanty Radziwill (CPME)

The reimbursement of doctors and other healthcare professionals for services rendered in the scope of their professional practice forms a significant factor in every healthcare system's financial structure and is a frequent focus of healthcare reforms. Reforms affect not only the volume of payment, but often address the system on the basis of which payments are calculated and issued. Here, certain assumptions as regards doctors' and patients' behaviour in response to a specific payment system and its effect on healthcare in general inform the political decisions.

While previous research has examined to what extent these assumption hold true once a reform has been implemented, as was explored in the activities of WP1, only little data exists on doctors' and patients' first-hand views on different payment systems and their effect on healthcare.

To gain a 'snapshot' of these opinions, CPME and MUW collaborated within WP2 to create a survey which aimed to collect an insight on doctors' views on payment systems. The survey hoped to provide an impression of practitioners' perceptions and experiences to gain a better understanding of their attitudes towards and acceptance of payment systems. While it was expected to achieve qualitative rather than quantitative insight, it was hoped that the findings could contribute to the discussion on payment systems' effect on healthcare systems, in particular with regard to quality of care.

The survey covered a variety of topics, including time spent on reporting on activities to determine volume of pay and the involvement of national medical associations in healthcare reform policy.

A main focus however was on payment systems and the respective systems' positive or negative impact on healthcare. By way of indicators, a number of objectives were identified addressing quality, cost, utilisation and access to/of healthcare. Doctors were asked to assess the payment systems' impact on these objectives based on their experience.

In line with the overall InterQuality approach, the following payment systems included for assessment: salary, capitation, fee-for-service, and pay-for-performance.

On average respondents showed only moderate preferences for one payment system over the other as regards their impact on the objectives listed.

With regard to quality of care, two main indicators were included in the questionnaire. To achieve the

best quality of clinical outcomes, respondents showed a preference for pay-for-performance systems, with capitation ranking as most negative in terms of impact on clinical outcomes.

In terms of achieving best patient satisfaction, a slight preference for fee-for-service systems was indicated, while capitation again ranked as least positive.

As regards cost to the system, respondents were asked to indicate which payment system could be expected to be most effective at minimising costs. The favoured system here was pay-for-performance while reimbursement on the basis of fee-for-service was estimated to impact negatively on the objective.

Similarly, pay-for-performance was estimated to cause the least negative impact as regards the prevention of overuse of healthcare systems, while fee-for-service systems were attributed the most negative impact; however none of the systems included were assessed as having a positive impact on minimising utilisation.

Respondents were furthermore asked to assess payment systems' impact on assuring best access to the services for patients. Here fee-for-service systems were the preferred option, while salary-based systems were deemed to affect patients' access to healthcare negatively.

Lastly, it was asked to identify the payment systems' positive impact on public health. Here the salary system scored most positive, while capitation was found to be the least positive.

As described, the low variance of median scores limits the validity of the tendencies shown. In addition the imbalanced mix as regards countries' participation in the survey, together with the small overall sample size must qualify any commentary on the results.

Nonetheless these 'snapshots' give rise to interesting impressions to complement the work of WPs 1-6. The more detailed analysis of the survey results will look into the specifics of the responses received and discuss, for example, whether the involvement of doctors in healthcare reform policy results in more positive attitudes towards the introduction of payment systems.

Discussing InterQuality:

Click here to view the consortium's video message

www.youtube.com/watch?v=-yYTLS4iTaE



The InterQuality consortium looks forward to welcoming you again soon.



THE UNIVERSITY of York





WP 1 / WP 2:

A Review of Financing Methods and Quality Measures in Healthcare

Introduction

For the purpose of further project activities, systematic reviews of payment methods in healthcare systems and of studies on the influence of financing model on costs and quality of healthcare services have been performed. While reviewing indicators of quality in healthcare systems, specific dimensions of quality have been identified, such as quality in its organizational and process aspects, efficiency aspect covering outcomes (with risk adjustment procedures when needed) coupled with costs, and equity of access - their mutual relations and influences have been assessed.

Background

The objective of the InterQuality Project to recommend healthcare system financing models enforcing quality has called for a review of research on healthcare financing models performed up to date, and of the quality indices used nowadays at different levels of healthcare system management. Well known payment methods such as salary, fee for service (FFS) or capitations have been in use for decades. In the meantime, attempts to improve health service quality while keeping costs under control have resulted in new concepts like pay for performance (P4P) methods.

We have been looking for general indexes of quality and its components (efficiency, outcomes, costs, and equity) adequate for financing models developed instead of quality indexes specific for clinical situation or individual diseases.

The project has been based on the Principal-Agent Model theory, where a principal, or healthcare system payer, delegates tasks to agents (healthcare providers) through contracts involving specific incentives.

Methods

Healthcare Financing Methods

The standard PICOTS conceptual schema has been used to search PubMed and Embase. In review search, PICOTS stands for: **P**opulation - individuals who received care under provider payment system(s) of interest; **I**ntervention and **C**omparator - comparison of two or more payment systems for individual setting, as specified below; **O**utcomes - the impact of payment system on quality, cost/utilization/efficiency and/or access; **T**ime - 1986 (first studies on DRGs in US) or later; **S**etting - hospitals; physicians; non-hospital, short-term facilities or integrated care). Of 10,950 de-duplicated publications, 1 031 have been included into full text review, of which 129 have been taken into consideration. In the final group of 129 studies, 73 evaluated physician payments, 34 — hospital payments, 24 — payment systems for non-hospital, short-term facilities, and 6 — payment for integrated care.

As a supplement to theoretical research on categorization of payment models, methods used in practical settings have been reviewed through search in the European Observatory and OECD sources. Payment models in 23 European OECD countries for physicians in primary care, outpatient and inpatient specialist care as well as hospital care have been assessed against categorization of the InterQuality project.

Quality Measures

While a systematic literature review for identification of indicators and measures was planned, it was agreed not to be the proper method for general search for the indicators as the objective was not “to find all possible indicators” but “to find the most popular ones”, for which data can be internationally available. Therefore, the wildest possible reviews based on previous experience of project partners were performed, complemented by hand searching of books, monographs and websites as well as references of publications found, to identify concepts, terminology, indicators, methods, and tools used in the evaluation of quality of healthcare.

Findings – Healthcare Financing Methods

The systematic literature review strongly suggests that the impact of a payment method on provider behaviour depends crucially on a number of factors independent of the payment method itself. In the description of review results, we often point to factors that help explain the findings, such as the relative generosity of the payment level and the institutional context in which the payment model is being implemented.

In short, just as it is difficult to recommend the ‘best’ typology of payment methods, it is not easy to summarize the literature findings; high-quality studies have taken place under unique circumstances and with specific interventions that make generalizations challenging. Nevertheless, it is useful to provide an overall assessment of the findings of the literature review. For physicians and hospitals, the two provider categories for which large numbers of qualified studies have been identified, we generally found either that there were no statistically significant effects on quality, cost and utilization, or access, or that the effects were significant and in the anticipated direction, based on the objectives of the payment method in use. Studies for physicians’ payment did not generally demonstrate FFS to be more expensive than capitation or salary, contrary to expectations; studies of the effect of including more services within capitation did show savings, as expected; P4P programs focused on quality improvement were generally cost-increasing. For hospital payment, no substantial effect of P4P has been found on selected measures nor on patient experience; case rate payments were shown to lead to shorter lengths of stay compared to other payment approaches.

One more observation deserves mention. Using conservative inclusion criteria to ensure only studies with rigorous methods have been included into the literature review, we undertook a very extensive review in which we developed evidence tables for 129 papers. Yet, many of the qualified studies were relatively recent pay-for-performance studies, as if the effects of basic payment approaches on quality, cost and access had been already settled. The remaining question is whether the current body of rigorous studies combined with other studies and, more likely, practical experience provides enough information on which to set payment policies. This may be ameliorated to the extent that governments, public and private insurers, provider organizations, and other interested parties have available proprietary analyses to help affect policy decisions, although the extent of these parties’ research activities (and their findings) are generally not publicly available.

In short, a formal review of the literature provides only one input to forming practical judgment on implementing payment methods. Studying the impact of payment incentives on outcomes of interest is very challenging; having done so, we conclude that these studies can provide some guidance but will rarely be decisive.



Table 1 Provider payment systems

Payment system category	Name of payment system	Description
Physician	Salary	Payment of an agreed amount of money in return for working a given amount of hours
	Fee-for-service (FFS)	Payment of a separate price for each relatively small unit of service provided
	Capitation	Fixed, prospective payment made to cover the cost of care for a defined population over a predetermined period
	DRG-based payments	Prospective, fixed payment for each DRG is based on an estimate of required physician time multiplied by an hourly rate
	Episode-based payment	Time-limited payment made to providers for episodes of care for specific conditions
	Informal payments	Payment made directly by patients outside of the health authority's or health insurer's approved payment approach
	Lump sum payments	Lump payment typically made to general practitioners (GPs) to cover some of the fixed costs of their practice; made irrespective of the number or case-mix of the patients seen
Hospital	Line-item budgets	Prospective annual budget with the amount to be spent on particular expenses, such as salaries or equipment, specified
	Global budgets	A prospective annual budget with no external stipulation of the amount to be spent on each cost category
	Per diem payment	Fixed, pre-determined rate for each day a patient is in a hospital
	FFS for inpatient care	Retrospective, activity-based payment to hospitals with a separate amount billed for each relatively small unit of service provided
	DRG/per-stay payment	Pre-determined, fixed total lump sum for each inpatient stay. The amount paid for each stay is differentiated primarily by the patient's main illness, the objective being to provide the average amount of resources required for care during the inpatient stay
Integrated care	Bundled-episode payment	Single, pre-determined sum paid to a group of providers for all the care associated with an entire episode of illness or procedural intervention
	Global/integrated capitation	Payment to one provider entity of a predetermined, fixed, periodic payment for all care services, which include hospital and physician care and some portion of all other medical expenses needed by a defined population for a fixed period
	Shared savings	Variation on FFS, in which providers receive bonuses if they spend below a target amount while meeting quality targets
Mixed or blended	Capitation + FFS (partial capitation)	Payments of roughly comparable amounts are made by capitation and FFS in an attempt to balance the incentives of each pure model
	Lump sum + FFS	Lump sum payment intended to cover some of the fixed operating costs of care, combined with reduced FFS payments that better reflect the marginal cost of care
	Pay for performance (P4P)	Health care payment systems that offer financial rewards (or extract financial penalties) to providers who achieve, improve, or exceed their performance on specified quality, cost, and other benchmarks (or are deficient on the benchmarks)
	Salary + additional income	Salaried employees of public hospitals who are permitted to have private patients in the hospitals at which they work

Findings – Quality Measures

As there is no general consensus on the ‘**quality** of healthcare’ definition, nor on the aspects of care that should be measured to assess quality, the definition of the Institute of Medicine (IOM, [2]) was adopted by the InterQuality Project: “Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”. Quality of health service depends on structural aspects (the potential to ensure quality), process (performance) and outcomes. Organisational and clinical quality assessment are two dimensions of measuring quality; the former include accreditations, ISO, EFQM (European Foundation for Quality Management), EPA-PM (European Practice Assessment Practice Management) certificates, while the later — peer review procedures, clinical practice guidelines, consumer surveys, rankings, as well as monitoring patients adherence.

From health care system economy point of view, the main aspect of quality seems to be **efficiency**, which stands for economic concept coupling effects and costs in one measure. However, one should be aware of a certain dualities and difficulties while tackling this problem. The first and probably most puzzling difficulty is the perceived lack of interrelation between output (e.g. number of GPs visits) and outcome (e.g. improved health status attributed to better glycaemia control) in health production. The second one is the apparent conflict between standardized, average outcome advocated by NICE or IQWIG, and individual patient’s outcome which may or may not be optimal from the standpoint of a nationwide or regional healthcare provider. Accordingly, a distinction between the optimal usage of production resources in order to perform the procedure and the end result of such an action – i.e. distinction between output and outcome, should be kept in mind. Moreover, the construction of an efficiency measure should take into account both the cost-effectiveness of a procedure and its effectiveness as measured in health gain both per patient and per society.

Outcomes are in the central interest of patients and payers. Validity and stability of such indicators (e.g. survival, recovery, restoration of function) is irrefutable; their concreteness allows precise measurement. Outcome measures, in contrast to structure and process indicators, can reflect aspects of care which are observable as well as unobservable to the payer (physicians’ involvement, effort, expertise etc.); however, being indicative of beneficial or adverse events in healthcare, they usually do not identify its cause or nature. Still, there are a number of considerations limiting the use of outcome indicators: most of the commonly used quality indicators concern hospital care, which makes them irrelevant in relation to outpatient care and chronic diseases, which are not fatal or acute but lead to decrease in quality of life or disability.

Aspects of quality measure in healthcare systems

- **Organizational and process quality**
- **Efficiency**
- **Outcomes (standardised by risk adjustment)**
- **Costs**
- **Equity**

Fundamental issue is the dependence of outcomes on many other factors apart from quality of care. Therefore the difference in case-mix of patients must be taken into account if outcomes based comparison between providers is to be considered valid. In order to compare outcome measures of alternative healthcare providers **risk adjustment** has to be applied. The definition of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO): “the use of severity-of-illness measures, such as age, to estimate the risk (measurable or predictable chance of loss, injury or death) to which a patient is subject before receiving some healthcare intervention”[3] is recommended.



The **costs** of a procedure or a treatment – another measure influencing efficiency – are a crucial factor both in the decision of performing a service as well as in paying for it fully or partially. While the markets for medical services are far from economic freedom and many shortcomings exist, one can measure only the costs of a single chosen procedure with a 100% certainty, and even that only *ex post*. Furthermore, the process for services is usually locked, either locally or at the nationwide level. This makes us doubly cautious when approaching the topic of costs and costing.

There are definitely a lot of costs' taxonomies, but one of the most important fact is that when dealing with economic costs, not social ones, one usually deals with an artificial category called 'the accounting cost' – i.e. costs as they were registered in the books of the healthcare provider. These costs represent an approximation of financial value of outlays and resources that were expended in the process of providing a service. When assessing the real life meaning of costs in healthcare system one should remember about opportunity costs – which means the cost of lost opportunity to finance a procedure or provider when reimbursing another one. Additionally, one should remember the costs which are harder to estimate - societal costs; these are costs of underperformance due to illness or adverse effects of treatment, and it goes not only for patients but for their families as well.

Another quality aspect, commonly overlooked or underestimated is **equity**. The InterQuality project understood 'inequality' as referring to the description of differences in health observed in populations and its distribution. However, the conclusion of WHO2003 report is that "There is a growing consensus that improvements in average levels of health is not a sufficient indicator of health systems performance"[4]. The InterQuality project focused attention on the distribution of resources and other processes that drive a particular kind of health inequality – that is, a systematic inequality in health (or in its social determinants) between more and less advantaged social groups, in other words, a health inequality that is unjust or unfair (as in [5]).

The World Bank methodology provides a horizontal inequities index to detect potential sources of disparities in healthcare systems and to check if they are unfair in the meaning of deepening health disparities. As healthcare spending is one of the most common causes of health inequalities, the redistributive effect of healthcare payments, e.g. its progressiveness or regressiveness may be assessed. Another measure of healthcare system fairness is the index of catastrophic health spending measuring the impact of direct out-of-pocket expenditures on healthcare services on households' financial stability (for details of equity measures and InterQuality research, see "Equity in Healthcare Systems" InterQuality Policy Brief).

Recommendations – Healthcare Financing Methods

- There is no ‘golden standard’ among healthcare financing methods that reinforces quality instead of increasing costs.
- For every individual setting, a specific mix should be fitted based on long-term evidence.
- Long-term rating should be the basis for financing incentives.
- The incentives for desirable performance should be noticeable, promoting investment rather than current spending (like small increase of remunerations).
- Financial incentives should be strengthened by transparency of the incentive system and peer pressure.

Recommendations – Quality Measures

- Quality in healthcare systems is a complex concept whose meaning differs depending on the organizational level and clinical setting to be assessed. Thus, while choosing the method of measuring quality, one should try to understand its components and their role in the setting of interest.
- The quality of health care systems should be assessed taking into consideration such aspects as costs and outcomes (adjusted by baseline risk), assessing efficacy and equity in health care access and payments; these have to be widely deliberated and cross checked for their interrelationship in the influence on final quality of health care.
- To develop internationally comparable indices to assess health care quality the agreement on standard data gathered should be sought.

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WP3: Financing Pharmaceutical Care

Introduction

The aim of Work Package 3 was to validate pharmaceutical benefit financing (pricing and reimbursement) models. Financing models' effect on the quality, cost and equity of access to medicines and investment, human resources and education issues was explored and addressed.

Statement of Issue

WP3 consisted of a comparative analysis of pharmaceutical benefit financing models, description and evaluation of pricing and reimbursement schemes, different aspects of financing access to medicines and their consequences, drug distribution models, as well as organizational, financial and regulatory aspects of Pharmaceutical Care (meant both as pharmaceutical policy and as service provided in pharmacies) in the EU partner countries (UK, Poland, Germany, Denmark, Italy) and the US. The recommended pharmaceutical benefit financing models were proposed.

Methods and Findings

Both theoretical and empirical studies (equity studies and research model of effect of expenditures on life expectancy) were conducted, with the addition of appropriate standard systematic literature reviews, followed by manual searching of relevant literature. In both equity studies we counted the indicators of equity of access to healthcare services and/or out-of-pocket spending on healthcare to compare the horizontal and vertical equity in healthcare systems of Denmark, Germany and Poland. In research model of effect of expenditures on life expectancy, we studied common trends in per-capita GDPs, per-capita healthcare expenditures, per-capita pharmaceutical expenditures and life expectancies of women and men aged 60 and 65 years across OECD countries to answer the questions if there are long-run relations between life expectancy, total healthcare expenditures and pharmaceutical expenditures in OECD countries.

Our work revealed two promising solutions, the first being the progressive reimbursement scheme (as the one in Denmark) with caps on out-of-pocket spending on pharmaceuticals and protection mechanisms for especially vulnerable groups of patients together with very wide access to pharmaceutical services in community pharmacies, and implementation of e-prescribing solutions supplemented by online adjudication of pharmacy claims and pharmacovigilance improvement, and the second being the introduction of professional third-party administrators for pharmaceutical benefits supply (model solutions are Pharmaceutical Benefit Managers in the US), providing an integrated package of cost-containment methods and having enough power to negotiate pharmaceuticals' prices and gaining rebates from producers and competing with one another for contracts, thus improving the transparency of distribution process and probably transferring profits to payers and patients to achieve a slowdown in dramatically increasing pharmaceuticals costs.

Recommendations

1. Access to health care allowing for proper level of healthcare quality is recognized as a primary goal for all aspects of health care – for pharmaceutical care as well as care provided in hospitals, by physicians and via other health care providers. Thus, pharmaceutical care reimbursement, as with other aspects of health care reimbursement, should work in tandem

- and be well aligned with pharmaceutical care delivery systems to support satisfactory levels of patient access.
- a. Thus, the reimbursement as well as the delivery of pharmaceuticals, should reflect the patients` right of access to appropriate medicines, and as much as possible, enhance patient access to appropriate medicines in a timely manner.
 - b. Although EU Member States differ with respect to the cultural and legal organization of pharmaceutical care delivery and financing, delivery will best meet the Member State`s goals for patient access when the reimbursement system is appropriately aligned. Thus, each Member State should examine its pharmaceutical financing system to identify ways to structure it so that patient access is improved.
2. When an EU Member State determines or acknowledges that equity in access to medicines is an important objective, the level of reimbursement should depend on the health and income status of the patient.
- a. In general, a progressive drugs reimbursement scheme (like the one in Denmark) should be implemented. In situations where this is not the case, Member States (such as Poland) should examine the positive aspects of changing reimbursement toward a system characterized by more equity.
 - b. Various specific solutions may be implemented. In such a situation, for example, reimbursement decisions could take into account the patients` annual out-of pocket payments on all drugs needed for individuals` health status. Therefore, all consecutive reimbursement transactions, executed with a given patient over a year, should be maintained in his Electronic Health Record (EHR) or in a separate electronic record that may be linked with his EHR, and therefore accessible also to the prescribing physician and the dispensing pharmacist.
3. EU Member State, or societal, objectives should be aligned with personal patient or citizen objectives. Moral hazard should be avoided or reduced by appropriate means. For example, implementation of a program characterized by a simple co-payment on each transaction could be replaced by introduction of deductibles and caps on out-of-pocket spending on pharmaceuticals, desirably adjusted every year, and with protection mechanisms for highly vulnerable groups of patients (see 5.1.1.2).
4. Implementation of patient-oriented reimbursement system would be enhanced by active investment and incorporation of e-health solutions.
- a. Member States should actively pursue development of e-prescribing supplemented by online adjudication of pharmacy claims. This could include use of a central register of insurance validity and patient`s EHR, to calculate current level of reimbursement of his prescriptions.
 - b. Advantages of e-health solutions lie in both improved quality of care, due to better safety, and more appropriate reimbursement. Apart from pharmaceutical care-specific cost savings, such a system should also lead to decreases in drug-drug interactions and drug-disease interactions or overdose, causing even greater savings in healthcare. Avoidance of drug adverse events would also be complemented by improved pharmacovigilance, and the possibility of more accurate reporting of drug adverse events.
5. While most EU Member States promote implementation of selected E-health tools, like e-prescribing, they may not be integrated. More attention should be paid by Member States as to how to integrate the various e-health tools, so as to enhance their individual and collective benefit to the Member State society. Member States should consider development of a central platform or an alternative means of integrating these tools. One model is the "Pharmacy benefit management" model, which provides an integrated package of cost-containment methods, implemented within a transparent institutional framework, powered by



strong motivation of the agent. Without integration, individual E-health tools will not work as productively to achieve Member State goals related to cost and quality of pharmaceutical care.

6. Short term improvements in pharmaceutical care financing may be inhibited by EU Member State national or regional administrative regulations. These may include restrictions on any of various factors, such as ownership and location of pharmacies (e.g., barriers to vertical and horizontal integration of pharmacies and wholesalers), prohibition of distribution of prescription medicines by mail order pharmacies or compelling pharmacists to sell generics. Modifications of these Member State restrictions and changes to the prevailing and/or traditional pharmacy business model, may help improve patient access to appropriate pharmaceutical care, and should be modernized.

Modifying these restrictive regulations may help Member States, as noted above, to better align pharmaceutical care delivery with pharmaceutical care financing. As one example, Member States could be attentive to the United Kingdom's policy, whereby pharmacists are remunerated for providing pharmaceutical care services, and pharmacies have a share in savings resulting from generic substitution.

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WP3: Equity in Health Care Systems

Introduction

Inequity in health care system exists when health disparities between particular social groups are considered systematic and unfair. This is when worse-off individuals systematically use fewer medical services or — in systems involving limitations in public health services usage — use more out-of-pocket paid services than the better-off. Another example is when out-of-pocket co-payment for medical care or drugs is so high that it exceeds households' capacity-to-pay (e.g. disposable income after covering the basic living expenses).

Background

A well defined methodology of analyzing health equity using household survey data was developed at the end of 20th century [1] and employed in many OECD countries in Europe, Americas and Asia [2,3,4,6]. The main measure of equity is the “horizontal equity index” (HI) whose value is indicative of whether those of equal medical needs get equal treatment: if HI=0, equity is achieved. If HI<0, there are “pro-poor” inequities, i.e. poor people use proportionally more health care services. HI>0 means “pro-rich” inequities when rich people have a better chance to fulfil their health needs.

Another measure of health care system fairness is the index of catastrophic out-of-pocket spending. People may suffer impoverishment as a result of facing high health care costs. Financial catastrophe depends not only on the amount of spending as even little expenses may be catastrophic for poor people with minimal income. Thus “catastrophic” means exceeding predefined share of income (usually 10%) or of “capacity to pay” (e.g. income diminished by spending on food; in this case the share of 40% is most commonly used) [7,8,9]. The percentage of people facing catastrophic out-of-pocket spending (catOOP) can be regarded as an indicator of how good the health care financing system protects people from spending more for their health needs than they can afford.

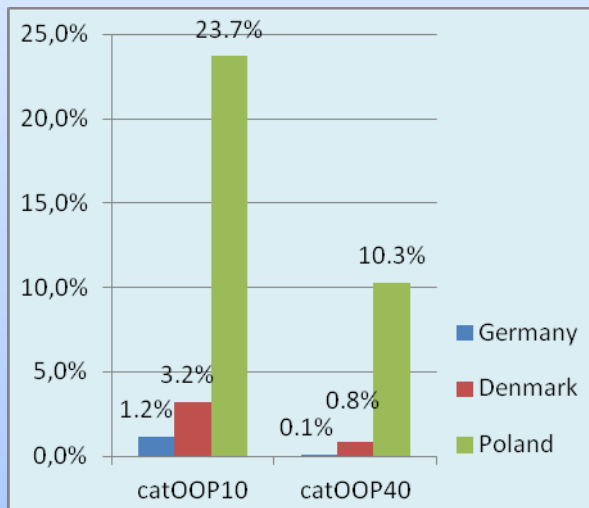
Methods and Findings

Under the InterQuality Project, we have performed Equity Study assessing catOOP and HI indexes using national statistical data from Denmark, Germany and Poland (Statistics Denmark[10], SOEP[11], GUS[12]). We compared the results with our pilot study on SHARE wave 2 (for population over 50 y.o.)[13] as well as previously performed published studies, and in case of Poland — with the analysis of similar kind performed on data from households survey Social Diagnosis[14,15].

Table 1 Equity indexes used in InterQuality Equity Study

Index	How is it counted	What does it mean
Catastrophic out-of-pocket health care spending index	% of households with health care expenses exceeding 10% of income (catOOP10) or 40% of capacity-to-pay (catOOP40)	Reveals the impact of out-of-pocket health spending on households financial self-sufficiency and stability
Horizontal inequity index	Usage of medical services by society groups ranged by their income additionally weighted by the extent of health needs	Reveals disparities between poor and rich society groups with regard to the extent of health needs met

Fig 2 Share of households with catastrophic out-of-pocket health spending in Germany, Denmark and Poland in 2009/2010



Available data enabled to assess HI of access to GPs and hospital care in 2006 and 2010. In both 2006 and 2010 in Germany, the utilization of GP care was equitable in poor and rich, but the probability of seeking GP care was pro rich. In Poland, pro rich distribution was maintained in 2006, while in 2010, it turned to more equitable. In Denmark, the probabilities of seeking GP care in 2006 and 2010 were equally distributed, while the numbers of visits remains significantly pro poor. In both 2006 and 2010, HI revealed pro poor use of hospital services in Germany and in Denmark while equitable distribution of hospital stays in both 2006 and 2010 was demonstrated in Poland.

This results revealed some diversity when compared with the ones from SHARE database and publications found. As previously suggested[5], the international comparisons need highly unified data gathered with the use of a similar methodology - which was not the case in our study.

Our results on catOOP in Germany (2009), Denmark (2010) and Poland (2010) were much more consistent, showing much higher share of households with catastrophic out-of-pocket health spending in Poland than in Germany and Denmark in 2009/2010. Catastrophic out-of-pocket spending was highly concentrated among poor population groups in Poland, much less pro poor in Germany, and was concentrated more among rich people in Denmark. Time trends analysis revealed that in 2000, catOOP10 index for Poland (0.8%) was lower than the one for Denmark (3.5%). In consecutive years, the index for Denmark changed slightly while in Poland, it grew to 10.8% in 2004, 24.3% in 2006 and decreased slightly in 2010 (Fig. 1).

Recommendations

- Equity and fairness should be carefully considered as a health policy strategic objective in the process of making decisions regarding financing healthcare from public funds.
- More in depth studies to understand origins of disparities in access towards healthcare as well as its impact on life expectancy of society should be initiated. Health policy makers should be perhaps guided by these findings in their efforts to reform the healthcare system according to the equity and fairness paradigm.
- Horizontal inequity index can be a valuable tool in monitoring changes in time of the distribution of access to health care services between poor and rich within a single system; international comparisons of HIs is sensitive to data type and the data collecting methodology.
- Catastrophic out-of-pocket health spending indexes are a consistent measure that may be used for international comparison of fairness of health expenses in health care systems. Systems with relatively low and stable catOOP indexes may constitute a benchmark for the emerging, less stable ones that have problems with preserving people from spending more for their health needs than they can afford.



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WP4: Financing Hospital Care

Introduction

The ultimate goal of the Working Package 4 has been to develop policy recommendations on the desirability of the adoption of Prospective Payment System (PPS) for financing hospital care and, in turn, to define a set of financial (and non-financial) tools, which could be used to design and fine tune the financing systems for hospital care providers, once the peculiarities of health care systems are taken into account. The final policy recommendations are, therefore, expected to be able to support EU Member States in responding to their particular challenges and context priorities when designing and modifying PPSs for enhancing quality of hospital care. Following the structure of the InterQuality Project, policy recommendations refer to different aspects of hospital care, namely hospital efficiency, hospital quality, diffusion of medical technology and inappropriateness of hospital care.

Statement of Issue

Starting from the '80s, DRGs have gradually become the prospective case-based hospital payment system in many European and non-European countries. It was expected that the implementation of the new system would have primarily resulted in a more efficient use of resources by hospital providers (micro-efficiency) compared to the previous retrospective payment systems. Over the time, however, concerns have been raised that DRG-based payment systems might not contain enough incentives to improve the quality of hospital care. In particular, the empirical evidence on the impact of the hospital funding reforms of the last decades does not seem to have established very clear-cut results. To this extent, the core of the WP4 research activity has been devoted to the identification and analysis of a set of crucial features of health care systems, especially of health care provision, which may affect the actual realization of the expected incentives of PPSs. The final policy recommendations included in the "Report on Recommended Financing Models for Hospital Care" are, therefore, the logical implications of our analysis of the role of these important features in affecting the overall hospital performance.

Methods and Findings

In the "Report on Financing Hospital Care" we have analyzed the role of some relevant features in affecting the impact of PPSs, on both theoretical and empirical ground. In the first part, we have provided a comparative analysis of the organization and financing of hospital care in three European countries: Denmark, Italy and the UK. This descriptive analysis has enabled us to isolate some relevant design and institutional features, which are expected to play a role in explaining the effects of PPSs on quality of hospital care.

In regard to the theoretical analysis, we have relied upon our theoretical model of hospital behaviour, general enough to evaluate the impact of many features of the health care

Relevant Features of the Healthcare systems		
	Design Features	Institutional Features
Efficiency	Extent of PPS Soft-budget	Public-Private mix Competition Non-financial context
Quality	Extent of PPS Readmission Soft-budget	Public-Private mix Competition Non-financial context
Appropriateness	DRG tariff design	Public-Private mix Non-financial context

Empirical outcome indicators considered in the analyses:

- DEA efficiency scores
- Mortality rates
- Readmission rates
- Index of medical technology diffusion
- Risk-adjusted caesarean rates

system on different dimension of hospital performance. In particular, we have divided the analysis in “design features”, those concerning the specification of the payment system, and “institutional features”, those concerning the context in which the PPS is implemented, trying to shed a light on the way in which providers’ behaviour might be affected by each of these features and, therefore, how the latter might help or hinder providers from gaming the system. The general picture emerging from our analysis is that the main context features (e.g. the degree of competition, the public-private mix) in which a payment system is implemented are certainly relevant in driving hospitals’ behaviour; similarly, relevant design features (e.g. the readmission policy, the degree of soft budget constraint) also appear to be very important.

On the other hand, in the empirical part different analyses have been carried out according to the specific questions under investigation as well as data availability. These have been implemented using various methodological approaches, both parametric and non-parametric. The case of the highly decentralized Italian health care system has been used as a “natural laboratory” for testing the impact of different regional tariff

schemes on providers’ behaviour, so as to take into account how the different characteristics of the regional systems may affect and eventually distort the typical incentives attributed to the DRG-based financing mechanisms. Firstly, we have carried out a two-stages DEA efficiency analysis to study the role of regional financing systems on the Italian hospital efficiency. The results of our efficiency analysis seem to support the hypothesis that the introduction of a PPS financing system gives the right incentive to hospitals for being more efficient. As far as quality analysis is concerned, we have examined the relationship between the regional use of DRG-based payments and quality of hospital care, as measured by different outcome based indicators such as mortality and readmissions for selected clinical conditions. We found evidence that reimbursement systems for hospital providers might affect quality of care. In particular, controlling for several factors and employing different measures of the PPS extension within the regional health systems, we found that quality of care turns out to be significantly higher in those hospitals that operate in Regions where PPSs are used more extensively. Furthermore, we have investigated the impact of PPSs on the inappropriateness of hospital care, by analyzing the effects of DRG tariff differentials on Italian caesarean delivery rates at the hospital level. In particular, our results highlight the importance of tariff policies as an effective tool to influence hospital providers’ choices and to control for their clinically inappropriate and costly behaviours. Finally, one of the empirical analyses carried out for the Italian hospital system has been replicated also for Denmark. All in all, empirical findings seem to confirm theoretical predictions and further strengthen the positive impact of PPSs on hospital efficiency, quality (as measured by outcome-based indicators), medical technology diffusion and appropriateness of care (as measured by caesarean section rates).

In our view, the presence of a comprehensive theoretical framework, along with the results of the empirical analyses, should form an ideal basis to provide policy recommendations related to the different aspects of hospital performance. The overall conclusion coming out from our research is that, despite the effects of PPSs are not all desirable, is not the time yet to abandon PPSs for financing hospital care; rather, the right direction is to consider more carefully the role of the specific design features of the payment system, as well as the features of the context where the payment system is implemented. Indeed, the role of the specific design features should be viewed as a tool in the hand of the regulator and, more specifically, incentives should be designed exactly to counteract the undesirable, and to reinforce the desirable, effects of a typical PPS. To this extent, we believe that the results of our research and, in particular, the policy recommendations provided will be certainly useful for policy makers for moving a step toward an optimal design of DRG-based PPSs.



Recommendations

POLICY PRESCRIPTIONS
Hospital Efficiency
<p>PP 1. <i>The financial responsibility of each hospital is crucial for the overall efficiency of the system. Therefore, in those systems where the extent of the PPS is rather limited, it should be extended to expect the realization of its typical effect on cost-efficiency. Furthermore, stringent penalties for hospital management in case of bankruptcy should be introduced, to counteract the negative effect of the lenient budget constraint in the hospital sector.</i></p>
<p>PP 2. <i>Those countries with a considerable presence of private or, more generally, small hospitals should not expect from PPS the ability to induce a considerable high cost-efficiency in the system. Instead, along with the implementation of PPS, the structure of supply should be organized with a contained number of providers characterized by a dimension around the optimal scale of production.</i></p>
<p>PP 3. <i>Healthcare policies aiming at reducing hospitalization, while avoiding inefficient waste of resources, should ensure that the induced reduction in outputs would not generate an excess of capacity, but would come together with a corresponding reduction in inputs.</i></p>
Hospital Quality
<p>PP 4. <i>Especially in those countries characterized by low competition and pervasively debauched working environment, the implementation of a DRG-based PPS should always go along with specific P4P programmes introducing incentives for quality. However, the evidence on the previous P4P programmes shows that the specific design features of a programme turn out to be important in shaping the strength of the actual incentives given by that programme and, thus, in affecting the final results. Therefore, the P4P programme should be designed according to the design features concerning: size of incentive, type of incentive, target unit of incentive, communication strategy, and involvement of stakeholders.</i></p>
<p>PP 5. <i>Especially in those contexts characterized by a low degree of professionalism and altruism, the risk of physicians selecting the cheapest medical practices under a PPS might be somewhat worrying. In this regard, a plausible tool to encourage high quality and cost-effective hospital care could be to introduce, still in the context of a PPS, the so-called Best Practice Tariffs. Presumably, in those areas of hospital care where the above-mentioned criteria are satisfied, the BPT design should provide hospitals with an effective financial incentive to move toward better medical practices and, in turn, to improve the overall quality of care.</i></p>
<p>PP 6. <i>It would seem appropriate to combine a DRG-based PPS with a specific design for readmissions. Indeed, a reasonable readmission policy should be to provide a somehow reduced DRG tariff for patients readmitted within 30 days of a discharge.</i></p>

Medical Technology
<p>PP 7. <i>The process of adoption of new medical technology equipment should go along with a specific procedure, partially untied from the typical mechanism of PPS. In particular, this specific procedure should be based on two main cornerstones: a transitory add-on payment on the basis of periodic hospital applications and a periodic revision of DRG tariffs to include the additional costs of new technologies.</i></p>
Inappropriateness in Hospital Care
<p>PP 8. <i>Whenever providers have an effective elbowroom in the choice among competing medical treatments, active policies should design incentives to minimize the risk of providers strategically inducing the most expensive ones. In this regard, a concrete option for attenuating the risk of strategic behaviour could be slightly under-reimbursing the most expensive medical treatment and, correspondingly, slightly over-reimbursing the cheapest one.</i></p>
<p>PP 9. <i>Attention should be even greater for those financial incentives addressed to private providers, as they tend more than other providers to respond strategically in terms of profit maximization. To this extent, for those countries having a considerable share of healthcare services provided by private hospitals, the possibility to discriminate tariffs across providers could contribute to mitigate the problem.</i></p>
<p>PP 10. <i>A system characterized by a considerable number of small hospitals providing the full range of healthcare services might imply a higher level of clinical inappropriateness. Instead, the structure of supply should be organized with a contained number of providers characterized by a sufficient degree of specialization in the healthcare services provided.</i></p>

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WP5: Financing Outpatient Care

Introduction

The aim of this Work Package was to review the evidence on the impact of financial incentives on the quality of care delivered outside the hospital setting, and to identify the most appropriate financial mechanisms to enhance quality in these services in European health care systems. The work was based on the comprehensive literature reviews conducted in WP1 on the general impact of reimbursement mechanisms and the specific impact of financial incentives in out of hospital care. The definition of outpatient care used included traditional primary care provided by General Practitioners (GPs) as well as community support services provided to patients before and after hospital treatment. Community-based specialist services and the non-hospital elements of independently run services, such as mental health care, were also considered.

Statement of Issue

The main literature reviews in WP1 did not identify many high quality studies of incentives in outpatient care. However, studies of incentives to individual medical practitioners in a community setting were found, including several relating to GPs in the UK and other European countries. The main problem with studies was the lack of a good controlled comparator to give confidence that the changes observed could be attributed to the financial incentives offered. Supplementary reviews were conducted (using less rigorous inclusion criteria) to include more recent studies of important examples of financial incentives in primary care in Europe. Collaborative work was undertaken with partners in Poland, Denmark and Germany to identify case studies of incentives in different health systems, but the best documented examples were found in the UK NHS.

Methods and Findings

Applying the general findings from WP1 to outpatient care confirmed the importance of the health system context - type of health service, basic remuneration method - in designing financial incentives. The general health policy context was also found to be important e.g. are budgets increasing or decreasing, are there plans to shift the location of care from hospitals to the community?

The best published evidence from a European context was found for the UK Quality and Outcomes Framework (QOF), an ambitious scheme to link implementation of evidence-based clinical guidelines to GP reimbursement, through monitoring performance against a series of measurable performance indicators. The QOF has been

Table 1 Health System Context and Dimensions of Quality

	Tax-Funded system	Social Insurance system
Effectiveness	Care provided at most effective location	More patient choice of provider – risk of non-optimal choice
Access	Variable access to specialised services	Choice of provider eases access
Patient Experience	Professionally-led patient pathways	Potential competition between providers – more attention to patients’ needs

Factors of health policy context to consider in designing financial incentives:

- Macro-economic situation
- Demographic trends
- Public awareness
- Focus on outcomes
- Care closer to patients' home
- Competition and choice
- Integration and rationalisation

running for nearly 10 years and several studies have shown that performance against the indicators has improved over time (Steel and Willems, 2010; Doran et al., 2011; Campbell et al., 2009). More recent studies have tested whether the extra expenditure on the QOF has been cost-effective in terms of delivering better health outcomes for patients, and, contrary to the expectations of some commentators, the results appear positive (Walker et al., 2010). Implementation of the QOF has also shed light on the importance of the operational feasibility of incentive schemes, their acceptance by professionals and the generosity of the incentives (relative to the difficulty of meeting the performance targets). Two other important findings are that a rigorous system of monitoring performance is needed to reduce the risk of "gaming", and that the specificity and challenge of the targets needs to be continually increased, as the evidence base increases and achievement of quality standards becomes an accepted part of routine practice (Sutcliffe et al., 2012).

The WP5 team also carried out collaborative work with WP4 on the impact of the introduction of DRG-type funding for hospitals in the UK NHS. Individual patient-level data was analysed for a sample of acute and chronic conditions, controlling for hospital, patient and disease characteristics. No significant impact on the quality of care was found from the use of DRG-type funding as opposed to block contracts.

Recommendations

- A mix of reimbursement mechanisms is likely to give the maximum flexibility to incentivise appropriate care.
- Financial incentives to improve quality of outpatient services must be specific to the type of health care system and the current health policy context in a particular country.
- To achieve integrated care it is necessary to identify the appropriate location of each stage of care and to design a financing system which provides incentives for care to be delivered at those locations.
- Performance indicators should be determined by evidence-based analysis of effectiveness and cost-effectiveness.
- Effective monitoring is essential to ensure that performance targets linked to payments are being met.

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WP 6.2 + 6.4: Integrated Care

Task 6.2 Criteria development: Risk-Adjustment

Introduction

Effective risk adjustment is an aspect that is more and more given weight on the background of competitive health insurance systems and vital healthcare systems^[1]. The objective of risk adjustment is to generate and provide information about risks of morbidity and risk factors within a specific population group as well as on crucial weights in risk adjustment. Moreover, the predictive performance of selected methods in international healthcare systems should be analyzed. Based on the obtained risk structure the expected utilization as well as its costs in future periods shall be predicted. Accountable care organizations (ACOs) in the US and similar concepts in other countries are advocated as an effective method of improving the performance of healthcare systems^[2]. ACOs outline a payment and care delivery model that intends to tie provider reimbursements to predefined quality metrics. By this the total costs of care shall be reduced^[3].

Risk Adjustment Most relevant risk factors to consider:

- Age
- Gender
- Diagnosis (inpatient and/or outpatient)
- Disability
- Drug use/Drug prescription
- Medicaid/Medicare eligibility
- Employment status
- Self-reported health status and/or HRQL
- Entitlement for sickness allowances

Methods and Findings

Systematic literature review on methods of risk adjustment was conducted in terms of an encompassing, interdisciplinary examination of the related disciplines. In general, several distinctions can be made: in terms of risk horizons, in terms of risk factors or in terms of the combination of indicators included. Within these another differentiation by three levels seems reasonable: methods based on mortality risks, methods based on morbidity risks as well as those based on information on (self-reported) health status.

In total seven (disease-specific) mortality risk scores, eight scores based on pharmaceutical information (including Chronic Disease Score, Rx Groups, PCG: Pharmacy-based Cost Groups and DxCG Rx Groups) have been identified. Additionally 11 main risk adjustment methods based on diagnostic information were detected as well as several derivatives, accounting for 18 different risk adjustment mechanisms. After the final examination of different methods of risk adjustment it was shown that the methodology used to risk adjust varies and that it differs greatly in terms of their included morbidity indicators.

Recommendations

Looking at the results of the literature review it seems to be reasonable to make a differentiation by three levels:

- (1) Risk adjustment with information on individual person (age, sex, ethnical group, disability etc.),
- (2) Risk adjustment with information on utilization (ACG, DCG, DCG/HCC, PIP-DCG, AAPCC, CDPS-Rx, CMS- HCC, PCG, etc.) and
- (3) Risk adjustment with information on health status.

The basic principle of risk adjustment is to identify the crucial health risks, and to compare the various groups of insured persons to forecast their future costs and utilization for health services^[4].

Task 6.4: Contract Design

Introduction

New institutional economics^[5-8] provides sufficient points of reference to enable the discussion of the problems of healthcare contracts. An in depth theoretical analysis of contractual designs is required to successfully design this new kind of contracts and to avoid pitfalls. Some of the basic assumptions need to be clarified and united to more general picture about the main policy implications. The discussion is often dominated by micro policy whereas the more fundamental questions about the framework are ignored^[2]. Economic contract theory is based upon property rights theory and transaction cost theory^[9-17]. Contract theory analyses the incentive issues of contractual relations due to asymmetric information. Information asymmetry between the contracting partners and third parties can be investigated using the theory of incomplete contracts^[18, 19].

Healthcare Contracts

The integration of healthcare services is based on the assumption that internal transaction costs within a network of service providers (with altered structures of governance) are lower than the external transaction costs between legally independent and non-cooperating service providers. This implies two things:

- *Hierarchy and organization are more efficient in a transsectoral entrepreneurial amalgamation of integrated care networks than in a sectoral and highly compartmentalized healthcare market.*
- *Unfettered, deregulated negotiation between independently-acting payers and networks of service providers are more efficient than regulated monopolistic collective contracting^[2, 20].*

A healthcare contract is a relational contract, which determines the level of reimbursement, the scope of services and the quality between service providers and payers, taking account of the risks relating to population and performance. A relational contract is an agreement based upon assumption of a longer timeframe^[21, 22]. Upon conclusion of the contract only a framework is agreed, the specific details are only finalized over the course of the agreed contractual period. Healthcare contracting between providers and payers will have a major impact on the overall design of future healthcare systems^[2].

A major obstacle to the practical implementation of healthcare contracts is the prognosis of the inflows and outflows due to the actuarial risks of the insured population. Financing conditions and reimbursement arrangements that are based on a prospectively determined fixed price have a significant drawback: it is very difficult to take the differences in health status and the utilization of distinct insured clientele (panel) into account.

Recommendations

In the future selective individual contracts will be completed in a competitive procurement process. Potential providers are identified and invited to tender. In the sense of solution options of information asymmetries prior to concluding detailed bids will be requested (**screening**), certificates on evaluations and external quality management measures will be sifted (**signaling**), several agreements for the purpose of self-selection by the health insurance will be put forward (**self-selection**) and offers will be evaluated regarding the trustworthiness (**reputation**). So that market forces can produce efficient allocation on the market for healthcare reimbursement contracts, the care provider need to state how they plan to guarantee the desired quality at an appropriate price-performance ratio (**cost-effectiveness**) for a specific population over a given period before signing a contract. Health insurance companies and care providers must be able to organize this process.



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Deliverable 6.2: Patient education

Background

Chronic diseases are the leading cause of mortality and morbidity in Europe and will impose an even greater burden in the future. As expenditure on chronic care rises across Europe, it takes up increasingly greater needs of long-term and complex response, coordinated by different health professionals. Among the most common chronic diseases are cardiovascular diseases, diabetes and asthma or chronic obstructive pulmonary disease.

This part of the EU-Project addresses the effectiveness, accessibility and quality in patient education programs for patients with type 2 diabetes mellitus and children with bronchial asthma. To approach the research question three metropolitan areas in Europe were selected: London, Warsaw and Berlin.

To focus on the problem of health inequalities within cities rather than countries provides a more thorough understanding of what the problems are, where they lie in and how best to address them. Cities not only offer a better access to medical care, health conditions also strongly vary between urban and rural areas. Studies from Poland and Germany indicate a regional variation of both asthma and diabetes within the respective countries, with the prevalence of asthma in children being higher in big cities than in the countryside^{1,2}.

Education for people with chronic diseases aims to improve their knowledge and skills, enabling them to take control of their own condition and to integrate self-management into their daily lives. In contrast to other measures of health promotion patient education is not considered as primary prevention in this context, but is designed for patients with an already existing, usually chronic condition. So far, there is no standard definition of self-management available. Patient education or self-management can be described as a measure to assist patients in changing their behavior in such a way that it minimizes restrictions or makes the chronic disease more manageable³. Deccache et al. (2001) define patient education as follows: *“patient education concerns all the educational activities directed to patients, including aspects of therapeutic education, health education, and clinical health promotion”*⁴. Hence, patient education *“is designed to help patients and their families understand the disease and the treatment, cooperate with health care providers, live healthily, and maintain or improve their quality of life”*⁵.

Management of most chronic illnesses is characterized by extensive responsibility that patients need to take in terms of day-to-day decisions about what actions are to be taken. Barlow et al. (2002) define self-management as *“the individual’s ability to manage the symptoms, treatment, physical and psychosocial consequences and life style changes inherent in living with a chronic condition”*. Barlow further states that for self-management to be effective, it needs to encompass the *“ability to monitor one’s condition and to affect the cognitive, behavioral and emotional responses necessary to maintain a satisfactory quality of life”*. This definition implies that self-management is more than simple adherence to treatment guidelines because, in addition, it incorporates the psychological and social management of living with a chronic illness⁶.

Methods

The empirical analysis of patient education programs for type 2 diabetes and asthma in children in Berlin, London and Warsaw is based on the assumption that there are differences in the provision of educational programs for these two conditions in the three selected metropolises.

In order to gain a thorough understanding of patient education in the three countries, an extensive literature search was conducted to allow for an in-depth description of the design and actual organization of patient education in the respective countries.

A further literature search helped at identifying the relevant quality indicators (quality, access and efficiency) of patient education. Based on this list of quality indicators, a questionnaire for conducting the expert interviews was developed. In order to retrieve both quantitative and qualitative information, the questionnaire combines open-ended and multiple choice questions.

For analyzing the open-ended questions a qualitative content analysis according to Mayring was conducted, meaning that the data will be paraphrased in a first step, In a second step, less relevant part was removed⁷. The different categories, to which the answers were assigned, were counted and weighted for being able to illustrate and interpret the results. Additionally, to support the qualitative analysis, a mind mapping was conducted so as to illustrate the range of different opinions, the structures and relationships

Results

The implementation of the patient education programs as well as the basic conditions for implementing educational programs vary considerably in the cities of Warsaw, Berlin and London. Patient education can be offered within two different settings in Berlin (Germany), the Disease Management Programs (DMPs) or as complementary services within medical rehabilitation. If the patient education program is offered within the DMP the providers must follow implementation guidelines. Expenses are reimbursed by the statutory health insurance. Within the DMPs, education is only provided in the outpatient setting, whereas in medical rehabilitation it can be provided either in the inpatient setting or in day hospitals.

In London (United Kingdom) there are no mandatory regulations for the implementation of patient education programs. However, the NICE issues guidelines and recommendations which serve as a basis for most of the programs. The NHS finances patient education programs. In addition, pharmaceutical companies can financially contribute. Patients do not have to pay any co-payments. Patient education can, just as in Germany, be conducted in different settings. Education for type 2 diabetes is provided in the outpatient setting whereas education for asthmatic children is predominantly provided in hospitals after an acute attack.

Legal provisions for the implementation of patient education programs also do not exist in Warsaw (Poland). Non-profit organizations such as the Polish Diabetes Association issue guidelines for the implementation of educational programs. These non-profit organizations and/or pharmaceutical companies finance the programs, as neither the state nor the National Health Fund financially contribute to patient education programs. Co-payments for patient education do not exist in Warsaw. The educational programs can also be provided both within the outpatient and the inpatient setting.

In Warsaw the institution or persons drawing the patient's attention to the programs and taking the initiative of their participation in the programs are mainly the patients themselves. In addition to that, physicians hospital staff and the patient's social environment were named. In Berlin, on the other hand, all experts stated that specialists are the persons taking the initiative of the patients' participation. In London, patients also become aware of the patient education programs through their GP. Asthmatic children are predominantly informed about educational offers by the hospital staff. In all of the cities both active and passive approaches are used to draw the patients' attention to the programs. While in Berlin and London personal conversation with physicians is the most common means of information, in



Warsaw, the most important means of information are word-to-mouth recommendations of patients. The use of posters and brochures as well as the internet represent the passive approach used in all cities.

The key findings concerning the categories financial aspects, organization and trainers and access are summarized in the table below.

Table 1: Patient education in the metropolitan areas at a glance

	Warsaw		Berlin		London	
	Asthma in children and adolescents	Diabetes type 2	Asthma in children and adolescents	Diabetes type 2	Asthma in children and adolescents	Diabetes type 2
Key data						
Targets	-	-	+	+	+	+
private suppliers	+	+	+	+	+	+
State-run	+	-	-	0	+	0
Standardized	0		+	0	0	0
Financial aspects						
Main cost bearer	Non-profit organisations, pharmaceutical companies		Statutory Health insurances		NHS	
Co-payments	-	-	(+)	(+)	-	-
Financial incentives	-	-	-	-	-	+
Organization and service						
Patients' attention drawn	Patients, Physicians (specialists!), hospital staff, patient's social environment		Specialists, General practitioners, health insurances, hospital staff		Specialists, General practitioners, hospital staff, patient's social environment	
Active means of information	Word-of-mouth recommendation of patients		Personal conversation with physicians		Personal conversation with physicians or nurses	
Passive means of information	Posters, brochures, new media					
Trainers						
Profession	Physicians, nurses		Physicians, nurses, employees of doctor's offices	Physicians, nurses, employees of doctor's offices, diabetes assistant, diabetes advisor	Physicians, respiratory nurse	GPs, dietitians, Nurses, lay people
Train the trainer-seminars conducted by	?	Pharmaceutical companies	AG asthma education	Central Research Institute of Ambulatory Health Care	?	?
Materials used published by	?	Pharmaceutical companies	AG asthma education	Deutscher Ärzte-Verlag",	British Lung Foundation	?
Access						
Training facilities	4-6	6 hospitals; doctor's offices unknown	8	>60 practices	every hospital	?
Equal distribution	+	0	+	0	+	0
Factors influencing the access	Provider density, sociodemographic factor	Provider density	Provider density, proportion of migrants	Provider density	-	provider density, sociodemographic factor
Waiting times	0	0	0	-(marginal)	-	+

+ Yes, it is, - No, it isn't, 0 varying, ? no information

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