

Equity In Health
Provider Behaviour
General Practice
Financial Incentives



Can doctors be incentivised to improve efficiency, quality and equity?

Due to increased specialization in the hospital sector and the demographic challenge caused by increasing numbers of senior citizens and patients with multiple diseases, the role of the general practitioner (GP) is becoming more important in the healthcare sector. In Denmark, as well as in other countries, there is a tendency towards controlling the behavior of providers of public services through increased control and supervision or through financial incentives. Kim Rose Olsen's research is addressing empirical questions around these issues. Some of his studies and work in progress is described below.

Efficiency and organizational issues in primary care

The increased need for primary care services improves the focus on efficient use of the capacity in the sector – especially of physicians who will often be the scarcest resource. Hypothesis of scale effects suggests that larger practices may increase capacity and many countries have relied on increased use of practice personnel to solve scarcity issues. Kim's research has shown that scale effects is not necessarily present in primary care and that practice personnel may actually be complementary resources rather than substitutes. This means that, for example practice nurses, will increase supply of services that complements supply from physicians – hence they will not necessarily solve the capacity problem, but offer more services to patients. Another study shows that increased access to non-hospital specialised care may increase the efficiency of the primary care sector. This indicates that the structure of the health care sector in general,

may be at least as important for primary care efficiency as remuneration schemes and other incentive mechanisms.

Capitation and fee for service schemes in primary care

Primary care is in many countries operated by private practicing GP's. In these systems GPs are remunerated through capitation (fixed annual fee per patient), fee for services (FFS), or a mix of these. Capitation systems increase budget control but may reduce efficiency, whereas FFS increase efficiency but makes budget control difficult and may introduce problems of supply-induced demand. Supply induced demand is defined as unnecessary supply of services to patient being induced by the GP only to generate his own income. A blended FFS and capitation system, as the Danish, may balance the side effects for each of the two systems. Kim's research has shown that blended systems may favour GPs having less deprived patients and disfavor GPs with more deprived patients and hence may involve inequity in access to services. Other of his studies argue that differentiated capitation may solve this problem and that larger group practices serving deprived patients may be able to escape the problem as well.

Pay for performance and disease management programs

Primary care throughout the world, experiences an increased use of pay for performance (P4P) schemes, where GPs are paid bonuses, if they achieve certain treatment targets for patients with chronic diseases, as e.g. diabetes, COPD etc. The evidence of the effects of this mechanism is mixed,

but studies from e.g. the UK Quality and Outcomes Framework (QOF) suggest that it may improve quality of care, as measured by a reduction in hospitalizations. P4P systems are often introduced together with electronic health record (EHR) systems and disease management programs, including feedback to the GP on the quality of his/her treatment of patients with chronic disease. The simultaneous introduction of pay for performance, EHR and disease management makes it difficult to disentangle which of the three that actually drives the results. Some evidence from California suggests that EHR alone may reduce hospitalization for diabetes patients at a level comparable to the UK QOF. This imposes the question as to whether it is necessary to introduce additional payments in a sector where the average income is fairly high. Kim is currently principal investigator in projects that studies the effect of EHR systems in Denmark on quality of diabetes care. So far results suggest that effects in Denmark are comparable to the Californian study and hence reduce hospitalization at a level comparable to the effect of P4P in the UK. Explanations may rest on the fact that EHR and disease management programs without financial incentives (as opposed to P4P) incentivises the GP's intrinsic motivation rather than the extrinsic motivation – a hypothesis, which can be found in psychological research decades ago. In other projects Kim studies the link between disease management and use of EHR and equity in access to primary care. This study is based on a hypothesis that disease management programs may increase the GPs awareness of deprived patients needs and in this way reduce inequity.



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Research Profile

Kim Rose Olsen

Kim Rose Olsen is Associate Professor at Department of Business and Economics (DBE), SDU. At DBE he is connected to the **Applied Economics Research Group** and **COHERE**. He is also connected to the Research Unit for General Practice, SDU.

Before joining DBE, he was Assistant Professor at the Institute for Health Services Research, SDU. Before that, he spent 7 years at the Danish Institute for Health Services Research (now a part of KORA).

Kim has huge experience in working with interdisciplinary teams, health economics and with managing large research projects. As a part of his Associate Professorship, he acts as director for IVØ Analysis at DBE. IVØ Analysis undertakes research based consultancy for public and private authorities.

Kim has published more than 30 peer reviewed articles, among them top field health economic journals as *Health Economics* and *Social Science and Medicine*. He is also author of a large number of reports for public health authorities.

Pro-social behaviour

Adherence

Provider motivations



Hosting environment profile

The Applied Economics Research Group

The Applied Economics Research Group has decades of experience in conducting research within the area of health economics, and has strong collaborations with other health economic environments.

The group is placed at Department of Business and Economics, University of Southern Denmark, but has strong links to the Department of Public Health and other clinical environments.

The group conducts high quality research in behavioral and experimental health economics. The behavioral aspect covers all behavioral mechanisms related to the production

of health and the performance of the health care sector.

Topics are for example: the public's adherence to health life styles, patients' adherence to treatment, the impact of co-payment on purchase of health care services, the effect of remuneration systems on the behavior of physicians, and the public's willingness to finance the health care sector.

We evaluate all types of experiments: natural field experiments, designed field experiments, laboratory experiments and stated preference experiments. In evaluating such experiments we focus on health impacts, resource

implications as well as distributional aspects including equity in health.

The group is currently involved in several large-scale multidisciplinary projects such as the Fair and Efficient Health Care under tight budgets (FAIRCARE) project, the LOOP project on improving a trial fibrillation, and the European Collaboration for Health Optimization (ECHO). The research group was also involved in the Hospital of the Future project, which aimed to develop appropriate incentive structures in hospitals.

The group is strongly associated with the Centre of Health Economics Research (COHERE).



COHERE generates important contributions to the development of theory and methods relevant to health economics and to economics in general. Moreover, the center provides and disseminates policy relevant knowledge on population health, health care and health care systems. The center is a joint venture between the Department of Business and Economics and the Department of Public Health.

COHERE has seven well-defined research programs, covering a number of applied economics and business disciplines including behavioral economics, microeconomics, econometrics, operation research, production economics, public and

political economics and game theory. Many of the projects involve collaboration with health professional researchers from medical science and public health.

Some current important areas of research are research on the determinants of and measurement of health inequality, health care financing, choice and behavior related to health, and evaluation of health care policies using natural and controlled field experiments.

► www.sdu.dk/cohere