

Conference  
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Towards patient-centered, proactive and coordinated systems of care**

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**Country Case Study:  
Primary care in Denmark**

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## **1. Summary information**

### **1.1 Governance in primary care**

The Danish healthcare sector (DHS) is mainly public and financed by a combination of taxes and out-of-pocket payments, with about 80% coverage coming from taxation. All consultations to physicians, ambulatory care and hospitals are free without patient-copayment. Copayments mainly cover pharmaceuticals, dentist care and physiotherapy. The underlying principles for the DHS are equal and free access for all. More than 97% of the Danish population lists with a specific GP setting. The rest have chosen not to be on a doctor list and have a little copayment for free access to any primary care physician whether GP or a specialist working in primary care.

The government regulates the overall direction of the healthcare and to a certain extent defines specific goals and objectives. The National Board of Health supervises all Danish healthcare facilities including GP offices. The National Board of Health licenses GPs. GPs have a main role as gatekeepers regarding referral to hospital or specialist treatment. The number of GPs in Denmark is 3.680 and corresponds to one per 1.467 inhabitants in 2003 in a nation with approximately 5.5 million inhabitants.

The Institute on Quality and Accreditation in Healthcare was established in 2005. The institute's purpose is to take care of the accreditation scheme for public as well as private health care in Denmark.

### **1.2 Financing / remuneration in primary care**

The five regions are responsible for financing the private practitioners including GPs and practicing specialists for their public sector work. All GPs have a contract with the public health insurance and more than 90% of their earnings come from the public health insurance and is paid by the regions. The regions are paid by negotiated state tax money.

Private practitioners and GPs are self-employed and reimbursed by their regions with whom they have a contract by a combination of fee-for-service and capitation 2/3 and 1/3 respectively, without risk adjustment.

### **1.3 HHR in primary care**

Many GPs employ nurses and/or secretaries. It is becoming more popular to delegate various clinical responsibilities from GPs to nurses. The regions politically support this change. Now there is a staff – GP ratio of 1:1, but the number of staff is rising rapidly in these years partly due to more emphasis on chronic care.

### **1.4 Main drivers for reform in primary care**

The regions are the main drivers for healthcare reforms and in general changes in the DHS.

The Danish Colleges for GPs also play an important role on the political scene, especially regarding structural recommendations for planning of care for patients with chronic conditions.

Political parties also play an important role in the public debate and have a strong influence on public discussions. Patient organizations also have a strong impact in the public debate.

Patient organizations, especially the big ones with many members and therefore also with the resources to influence the debate, often are important drivers for discussions in the media. Many of them have a track record of heavy involvement in health policy and support for changes and new healthcare initiatives.

Data on healthcare system performance also has an impact on discussions as well as on decisions. An example is the monitoring of average life expectancy compared to other OECD countries, which has led to focusing on the eight big folk diseases. Possible strategies to support a positive development of life expectancy were described by a working group and published in a publication entitled “Health throughout life 2002-2010”.

Regular publications of waiting times for various surgical procedures have also drawn much interest and have been subject for discussions.

### **1.5 Barriers to primary care reform**

The DHS is divided into three different organizational structures: municipalities, GP settings and hospitals with different payment schemes, cultures, objectives etc. and the division is more or less linked to tradition. Municipalities are run by their own tax and municipality councils, while regions run GPs and hospitals but from 2 different and often separated departments. Different cultures and traditions are the main barrier to a more logical straightforward organization of health care in Denmark.

The economic incentive structure associated with the three organizational entities are not aligned: to some extent the lack of incentive alignment has not been seen as important for the fragmented patient care pathways and only recent years have increased awareness of creating more seamless care pathways. The new public management wave has also induced the additional fragmentation of the health sector – of both organizations and of payment. This fragmentation has many implications for both payment schemes that do not reward quality but support an agenda of economical cost containment and productivity (but not necessarily effective) especially for hospital budgets. To some extent, the lack of specific performance measures such as rates of various chronic conditions such as for example type-2 diabetes, chronic obstructive pulmonary disease, musculoskeletal diseases, etc. also represents a barrier to primary care reform. It has been estimated that about 1.3-1.5 million out of the Danish adult population of 5.4 million people suffer from one or more chronic conditions. Knowledge about the impact of chronic disease on society, healthcare spending and on quality of life for the patients is not general knowledge among health professionals, administrators or decision makers.

## **2. Macro level**

### **2.1 The health system**

- Which policies are in place that promote better cooperation and coordination between providers of health and social care?

The Danish healthcare sector is rather decentralized with the regions having the main responsibility. Therefore the system needs a careful coordination scheme between the municipalities and the regions. In 2007 a new structural reform was launched which divided the responsibility for prevention between municipalities, regions and general practice (which belong under the regions). It is anticipated that the collaboration between municipalities, general practice and regions will mainly focus on chronic care management. Part of the recent agreement is an annual reporting of plans to the National Board of Health.

- If in place how do chronic primary and specialist care health policies impact on meso- and micro levels of care?

Regarding the meso level the healthcare system provides care for patients with chronic conditions mostly through the GP who acts both as the gatekeeper but also as a coordinator and gate advisor for patients with chronic conditions. Patients with complications are often followed in shared care

pathways for which the GP has the main responsibility. Patients with complicated conditions and or several co-morbidities receive their care in outpatient clinics in the hospital. Although, the patient care path is often defined it is well known that continuity as well as proactive care and follow-up is often not in place.

- In how far does the remuneration system for primary care providers reward or induce better cooperation between providers?

The remuneration system for GPs does not in itself support or reward cooperation between providers. There are few incentives for coordination with the social system. However, a newly introduced financial incentive for diabetes patients in the primary care sector was initiated with the goal to improve care and support continuity of the care path in diabetes patients. To receive the payment taking care of diabetes patients in this special payment construction the GP has to take care of the following: review the patient's care plan regarding DM; screen for DM complications and make sure that medications is updated and meet the patients need; ensure that the patient receives relevant advise regarding the DM disease and possible complications both regarding medication and lifestyle factors, etc.; refer the patient to checkups with other specialists such for check of eye- and feet- status, rehabilitation, smoking cessation, dietician for diet advises; decide how often the patient needs to be seen for routine check-ups in the GP's office. An important part of the DM incentive is the automatic reporting to a central register of the DM data obtained during the consultation including the diagnosis, various laboratory test results, as well as other tests.

- What are the remuneration schemes or incentives for prevention, follow-up care and continuous patient care and continuous patient support?

There is an old tradition for preventive child and maternity care in GP. Coverage for more different types of preventive care has been introduced during the last few years. E.g., GPs now receive fee-for-service payments for special preventive consultations, which are rapidly growing in number. Preventive counseling has always been an essential part of the GP's usual work in relation to disease treatment. A stable GP-patient relationship where 97 % of the Danish population is registered with a GP further improves the possibilities for continuous preventive work.

- How are structure, process and outcomes of primary care measured?

A national model for quality assessment and improvement, the Danish Healthcare Quality Assessment Program, was introduced in 2002. One of the main goals is to monitor and develop important healthcare dimensions including structure, process and outcome. The program is under development. Right now about 10% of GPs have their diabetes care assessed by an automated data recording IT program for which results are reported to the GP on a regular basis. The performance measures include both structure and process measures. The plan is to expand the program to cover other chronic conditions.

- How are providers encouraged to evaluate their performance?

GPs are not especially encouraged to evaluate their performance. At the national level, plans are under development for regular structured and defined measurement of various central performance indicators in primary care based on accreditation standards. It is expected that these measures become part of the general accreditation scheme of the DHS in the future. The first draft on an accreditation scheme regarding structure and content will be discussed in April by the national GP association.

- What about evaluation culture in your country?

An evaluation culture in the DHS is slowly being introduced. In hospitals in the Copenhagen area as well as in the southern part of Jutland hospitals have undergone accreditation several times. A national accreditation scheme covering both primary and secondary care is underway. Clinical guidelines are developed by the “Danish Medical Association” as well as by different specialty colleges, and the national board of health. However, the use of guidelines in GP practices and the level of implementation are not known.

- If in place how do chronic, primary and specialist care health policies impact on meso- and microlevels of care?

In recent years the Danish College of General Practitioners has set up a special taskforce for improving chronic care in general practice and for improving collaboration with other parts of the healthcare system in relation to chronic care. These efforts are supported by the three national research centers for primary care. There are increasing efforts to improve collaboration between CME research and quality development.

## 2.2 The delivery system design

- What is the current focus of the primary care delivery system in your country?

The focus is on optimizing the quality of care in chronic conditions. Diabetes has been chosen as the first condition and the plan is that other conditions follow both regarding financial incentives to support high performance levels by continuous data recording and reporting.

Also shortage of GPs is discussed which raised the call for more nurse involvement to take over various tasks that normally are carried out by the GP.

- In how far is prevention a key role of primary care providers?

All GPs take part in child and maternity prevention and individual reactive preventive counseling has been taught to GPs as part of their normal consultations for decades. That is for instance counseling on smoking cessation, when patients attend for smoking related conditions, but the real activity is not known in detail and differs between the physicians

Targeted planned preventive consultations for adults and old people in GP offices amounts to just fewer than 5% of the total number of consultations. The number is however growing fast.

- In your opinion how well is the primary care system in your country suited to provide comprehensive care i.e. are there, for example multidisciplinary teams or case managers for complex cases? If not what are the key obstacles?

Multidisciplinary teams are a seldom construct in the primary care sector except for (secondary) health centers in which GPs are not enrolled. The primary care system can only to some extent provide care in chronic conditions for several reasons. As mentioned above, the economic incentive structure does not support care on a continuous basis. The GP culture does not endorse proactive care, either; and preventive care only to some extent. GPs’ work is mainly organized as reactive work in relation to diagnosis, treatment and control of diseases, incl. chronic diseases. The amount of preventive counseling actually taking place during these consultations is not known. As mentioned above, a special proactive, planned preventive consultation has been introduced in the insurance scheme between the regional managers of health care and the GPs.

- Please describe the status quo of primary care delivery, i.e. do physicians work mostly in solo practices, group practices, or polyclinics?

About 40% of GPs work in solo practice and the rest works in group practices with 2-8 GPs, often assisted by nurses and/or secretaries. The nurses typically assist with the clinical care while a secretary takes care of the administrative tasks in the office. The number of solo practices is declining.

- How are providers trained to take on a coordinating role for their patients?

All Danish GPs have a mandatory theoretical and practical training to become a specialist in family medicine of roughly the same length as for other specialists. There is no mandatory CME. Part of this training relates to taking responsibility for chronic care, for coordination and for gate advice. There is no systematic training in the CME programs for GPs to support coordination of care in their patients.

- What is the role of health services research / populations care research?

Public health research receives only few percent of the total amount of money spent on health care research.

For more than 20 years there have been three national research centers for general practice and primary health care. These research centers all have programs for chronic care management, especially in relation to diabetes and cardiovascular diseases. The overall emphasis on health services research in Denmark is weak, especially with regard to coordination of care and with regard to health care planning and to improving clinical pathways.

### **3. Meso level**

- In how far do primary health care providers collaborate with non-physicians in the community?

GPs do sometimes collaborate with local initiatives but there is not much experience in the area. GPs normally have quite intensive but mainly reactive collaboration with municipality nurses.

### **4. Micro level**

#### **4.1 Self-management support**

- What kind of patient support strategies and resources exists that help the patient better manage their disease?

A large number of disease specific patient schools, mostly located in hospitals, has been introduced during the last 10 years in the DHS. The general patient education program has been developed and introduced by Kate Lorig from Stanford University. It was introduced and evaluated in the DHS three years ago. The national Board of Health has contracted with the program owner and about 50 of the 98 communities signed up for the program. Many municipalities (98 in Denmark) have different self-management programs but they are often new, unstructured and fragmented.

- How is the patient - doctor relationship?

97 % of the population is registered with a general practice and has free access to health care as the region pays the GPs, partly by capitation and partly by fee-for-service. Patients often have a long-standing relationship with their GP. Less than 5 % change their GP each year apart from change due to moving. This enables a long-lasting, preventive push, but there has been quite a weak tradition for intensive preventive efforts from GPs as they mostly work reactively in relation to disease. However, the number of well-planned, coordinated chronic care consultations is rapidly increasing.

- In how far are patients involved in the treatments process, in decision making on treatment plans, goals and problems?

There are only few and weak formal patient involvement procedures in the Danish health care system, but the relationship between general practice and patients enables a dialogue-centered approach to communication and preventive initiatives.

#### **4.2 Decision support**

- Do evidence –based treatment guidelines exist, if yes, who defines them, which masters are used, and do providers use them?

Evidence-based guidelines exist and are mastered by the GPs' society. The implementation level is mostly unknown. A study assessing the implementation level of guidelines in GP offices is underway.

- Are there decision support systems in place that help providers use guidelines and if yes which ones?

For diabetes care, guidelines supported by electronic reminders have been developed and are currently in use in about 10% of GP offices. A patient oriented diagnose based decision support system has been introduced in most electronic record systems for GPs, but the level of real use is not known.

There is a very intensive development with regard to computerized decision support systems within the general practice setting, and it is supported by the three research centers and by the national quality initiatives for general practice. The decision support systems are much weaker when it comes to cross-sector or agreed decision support systems between the different specialties. Some regions have started initiatives to coordinate chronic care efforts on a regional level between the three main stakeholders – the regional hospitals, general practice and municipalities.

- How is CME organized in your country?

All GPs have the right to one week off from general practice per year to pursue CME with support from the National Health Insurance. There are national organizations for CME run by the medical association and there are regional small group based CME initiatives. CME is not mandatory, but currently the medical association is negotiating an improved CME scheme that comes very close to mandatory CME. There are no formal recertification schemes.

#### **4.3 Clinical information systems**

- Are patient registries in place that help better organizing care for certain patient groups? If yes please describe how far providers make use of them.

More than 97% of the population is registered in a doctor's computer system based on a unique national personal identification number, which each citizen has life-long.

Diagnose specific patient registries are not common in GP offices but the principles are known by some GPs and some GPs also have their patients in registries with the aim to plan and coordinate care. There is a rapid growing tradition for diagnose-coding of all contacts to GP based on the ICPC code scheme which enable diagnose specific retrieval of all patient records with a given diagnosis and diagnose specific sorting of all contacts from a certain patient to a GP.

- What role do electronic patient records play in your country? To what extent is data on patients available to different care providers



All GPs have electronic patient records and Danish electronic patient records were rated among the three best in the world in a recent Canadian study. Unfortunately, the systems in use are not fully aligned even if there is national standard for information exchange, when a patient moves to another doctor, but the integration in this process is not complete. There is a world known national standard (Medcom) for communication to and from hospitals so that all referral and discharge letters can be exchanged electronically. All GPs communicate electronically with pharmacies, other specialists, the out of hour service and to the regional health insurance. Many GP settings are now fully computerized without any paper in their day-to-day work. The Danish college of GPs decided standards for good computer systems more than 25 years ago, and the college has been an important driver for the development of standards for the 13 commercial systems out of which 3-4 dominate and sets market standards now.

It has been crucial for the Danish development that national communicative standards between pharmacies, hospitals and general practice were established many years ago. These standards have been used by hospitals for more than 10 years even if Danish hospitals are far from full computerization. Electronic records are increasingly used by the municipalities, but the communication between municipalities and GPs is still very poor. Hospital record systems are still quite poorly developed, which inhibits good information exchange between hospital and general practice for persons with chronic diseases. It is anticipated that mandatory diagnosis coding will be introduced in GP records in the near future, which, in principle, will enable the creation of chronic care databases, but all these processes are still not well developed, and communication about databases is weak between hospitals and general practice and nearly non-existing between municipalities and general practice. Many initiatives are trying to improve this. One of the most promising initiatives is a national database on all prescriptions linked to the patient's unique personal identification number, which enables all healthcare providers to get insight into a patient's medication. Similar efforts are being made with respect to laboratory test results and there are ongoing trials to create Web based record systems with key information to patients and providers. Thus, a lot of good plans and ideas are under development, but they are hampered by a slow development of IT in hospitals and by a lack of strong national regulation. One of the interesting new developments are so called 'data-hotels' to which the GP send for instance a patient's prescription, and the patient can later attend any available pharmacy and ask the receptionist to pick up the electronic prescription from the 'data-hotel'.

## **5. Further aspects**

Under this heading you can refer to other important aspects or new developments in primary care you would like to address but that are not covered by the above questions.

One of the strengths of the Danish healthcare system is that both hospitals and general practice are run by one insurance scheme, namely the regional tax-paid insurance scheme to which all Danish citizens contribute paying an 8 % healthcare tax. This should in principle give the best possible opportunities for coordination of care, but there are still quite heavy cultural discrepancies between general practice and hospital care, and in many places leadership for transmurial chronic care is still quite weak. This is also the case with regard to the involvement of the municipalities in chronic care. Some municipalities, e.g. Copenhagen, have created very visionary chronic care centers that support coordination between municipal population-oriented chronic care and general practice which is more oriented toward individual patient care than the very specialized hospital care.

Sadly, all the efforts are hampered by an increasing new public management-dominated fee-for-service culture in both hospitals and general practice, which seems to be a major barrier to the willingness to create coordinated, transmural chronic care. An ongoing debate tries to support a quality incentive driven payment system. The association of the five Danish regions has put the strengthening of general practice as one of their main priorities in the coming years, as well as the improvement of care coordination. The above-mentioned reform in public administration with a division between regions, municipalities and general practice is quite recent and time will show whether good intentions and good plans will work out in reality.

## **6. Key findings from the country case study**

Three or more main barriers for improving care that derives from your analysis of your country:

1. Despite a basic good structure with regions as the main driver for chronic care and with the possibility for strong leadership, reality in the DHS is that care is still very fragmented regarding both organization including municipalities, general practice and regions and that also counts for the economical system, the IT systems, culture. The main barrier is big cultural differences between the 3 systems and a weak and non-focused leadership in the development of a comprehensive, coordinated, proactive health care system.
2. The GP has been pin pointed as the lead for the patient in the healthcare system but has a reluctant approach to the need for proactive, coordinated chronic care, and leadership of the GP sector is weak mainly because a lack of tradition of intervention in the autonomy of the independent GP contractors in the total health care system, which historically is geared for reactive, curative work..
3. The Danish payment system that is mainly based on fee-for-service and activity incentives instead of quality incentives is a main barrier to focusing on quality development and a barrier to focusing on good task distribution.

Three or more main success factors for improving care that derives from your analysis of your country's primary care system:

1. Same insurance system for primary and secondary care should enable good task distribution.
2. Standards for IT and communication should enable information exchange and mutual data.
3. Collaboration between municipalities, which are focused on primary prevention and group-oriented chronic care, e.g. patient schools, and the more individual-oriented care in general practice in collaboration with disease management programs can improve care.

## **Literature**

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