Projektbericht

Research Report

Towards better care co-ordination for people with chronic conditions:

An analysis of reform processes in Austria

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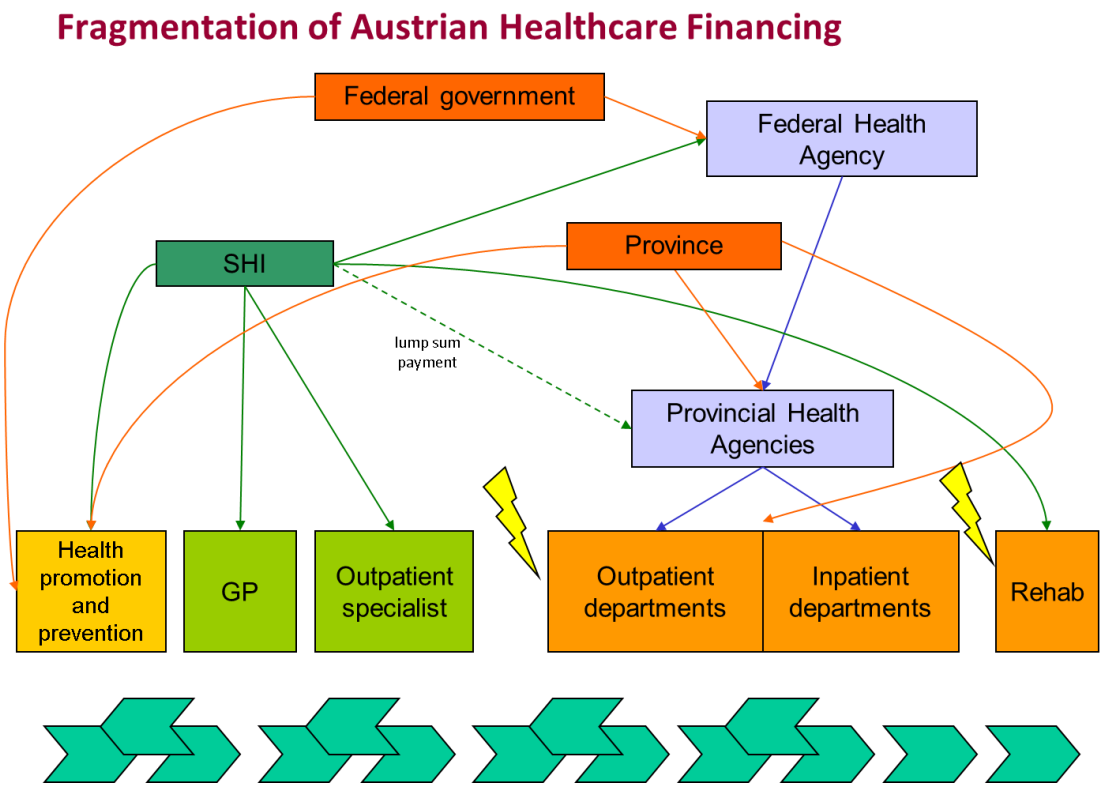
1. Introduction

The Austrian health care system shows a federalist and decentralised structure with a public-private mix in provision. In particular, the federal government, the nine federal provinces and self-governed social health insurance (SHI) are the key players in the health care sector. According to article 10 of the Austrian constitution, the federal government has responsibility over most areas of the Austrian health care system. The most important exception is the hospital sector, where according to article 12 of the Austrian constitution the basic framework is defined by federal law while more detailed legislation as well as its execution is the responsibility of the nine federal provinces excluding sanitary supervision, which is carried out by the district administration as agent of the federal government.

Problems of health care are rooted in the structures of sectoral segmentation. Additionally, these problems are intensified by the financing mechanisms which are partly determined by the Austrian federalist structure.
Health care in Austria has developed into a supply model based on decentralised contracts with service providers. These contracts are negotiated between health insurance funds and private service providers for the outpatient sector, whereas in the inpatient sector, federal and state cooperation is necessary, together with some non-profit hospital owners. This cooperation is governed by agreements based on “article 15a” of the Austrian constitution, which is renewed every three or five years. The outpatient and rehabilitation sectors are mainly the competence of the different social insurance institutions (all three areas: work-accident insurance, health insurance and pension insurance in the case of rehabilitation), whereas the inpatient sector is financed by the State Health Funds. This composition leads to an imbalance of cost objects because the Social Security Institutions contribute a lump-sum payment to the State Health Funds (about 43% of patient-relevant hospital costs) but do not have a voice in decision-making processes. Interface problems, therefore, lie especially in the fragmentation of the inpatient and outpatient sector, but also occur between preventive measures, general practitioners, medical specialists and rehabilitation, as there are no joint data infrastructures or electronic patient records yet. Interface problems between the inpatient and outpatient sector can be traced back to the mercantilist-cameralist movement in the 18th and 19th century that played a strong role in the provision of public infrastructure. It had a major influence on the development of hospital services leading to a strong link of organisation and financing of the Austrian health care sector and state institutions (Theurl, 1999). This affinity was strengthened by the general act on social insurance (“Allgemeines Sozialversicherungsgesetz”) coming into force.

The following Figure 1 gives an overview of the Austrian situation of sectoral fragmentation in health care financing. Interface problems are illustrated with flashes and moreover the lack of coordination among sectors is represented by the separation of the boxes.

Figure 1: Fragmentation of Austrian health care financing



Source: Czypionka and Röhrling, 2009

In addition, the segmented organisation of the inpatient sector among the nine federal provinces can lead to an inefficient provision of specialisations and services between hospitals (i.e. a hospital in Upper Austria offers the same specialised services as a neighbouring hospital ten kilometres away in Salzburg). The Austrian Structural Plan for Health, developed on the federal level and broken down into regional structure plans, has not yet succeeded in providing more co-ordination across borders.

Hitherto, no overall electronic system of health records that has the advantage of providing full information of a patient's medical history and prescriptions has been implemented. The aim of an electronic health record is to avoid parallel services and the prescription of inappropriate drugs as well as to provide co-ordinated care over time. Major drawbacks concern data privacy and the abuse and illegal access to collected data. On top of that, there is apparently opposition to more transparency. The first step in this direction has been taken with the Austrian Health Care Reform in 2005 in which supplements of data privacy requirements were specified.

The challenges that have to be overcome in order to provide co-ordinated care for people with chronic conditions lie primarily in the structural and financial segmentation of the Austrian health care system. Furthermore, the country's federalist structure hinders efficient nationwide planning.

Subsequently, a case study analysing policies to improve care co-ordination is presented. The second chapter gives a historical overview of attempts that were taken in order to improve care co-ordination. In the third chapter, the status quo of Austrian health policies is assessed. Barriers and facilitators of implementing better care co-ordination in Austria are identified and analysed in chapter four, before the conclusion follows in chapter five.

2. Attempts to improve care co-ordination

The demographic development will weigh heavy on the Austrian healthcare system especially in the second and third decade of the century. Additionally, the epidemiological change towards chronic illness affects Austria as much as many other highly developed countries.

Figure 2 gives an overview of the comparison of past and current life expectancies, disease spectrum, possible treatments and the share of elderly people. The projected life expectancy at birth in 2030 is about 13 years higher than in 1971, with an increase of almost 60% of people at the age of 65 and above. These developments and further medical progress led to a change in the disease spectrum from acute to chronic and turning possible treatments form “eminence-based” to “evidence-based”.

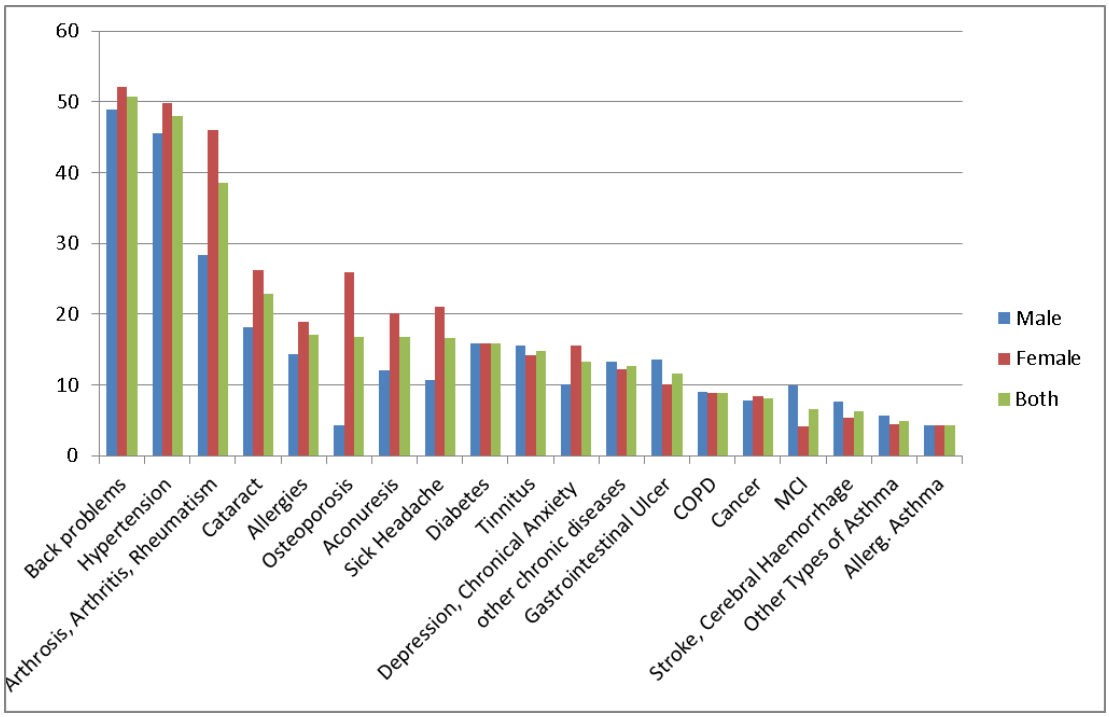
Figure 2: Stylised facts

	Past	Today/Future
Life Expectancy at birth	1971: 73.67 years	2009: 82.86 years 2030: 86.7 years
Disease-spectrum	acute>>>>	>>> chronic
Possible Treatment	restricted "eminence-based"	varied "evidence-based"
Share 65+	1981:15.1 %	2009: 17.6 % 2030: 23.8 %

Source: Statistik Austria (key indicators, forecasts), display: IHS HealthEcon, 2012

The shift from acute to chronic diseases has major implications for the provision of medical services. Chronic diseases require trans-sectoral, evidence based care, which has to overcome interface problems between the inpatient and outpatient sector. The Austrian Health Interview Survey (HIS) determines which chronic diseases are the most common. Figure 3 shows the results of the HIS of 2006/2007 for people at the age of 60 and older. In addition, as people grow older and increasingly suffer from chronic diseases, multi-morbidity is more likely.

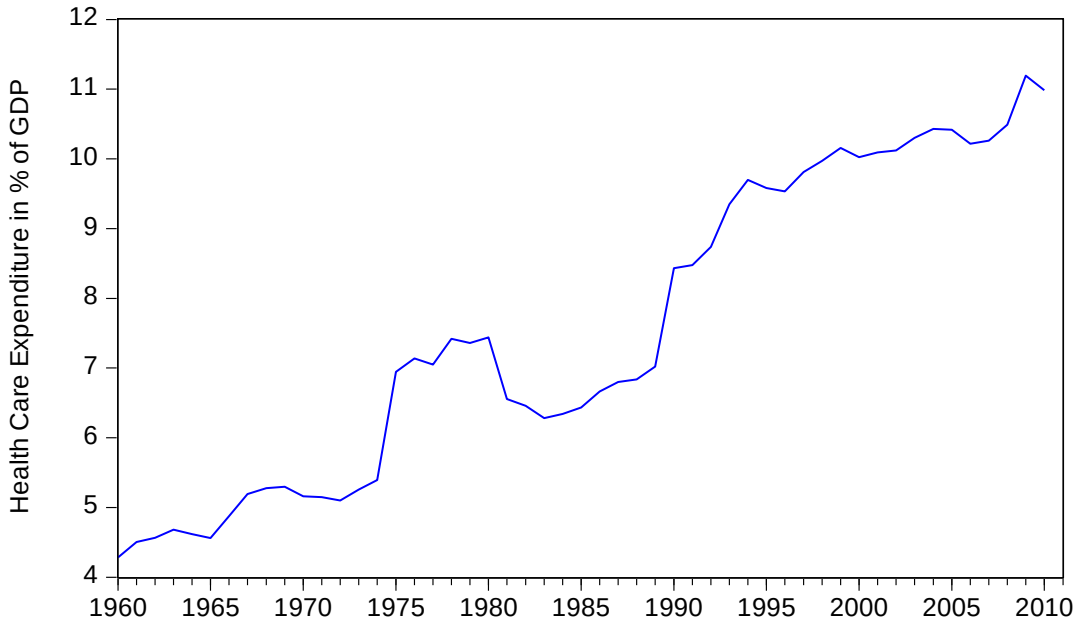
Figure 3: Chronic diseases at the age of 60+ in Austria



Source: Statistik Austria Health Interview Survey 2006/2007, Illustration: IHS HealthEcon, 2012

Austria's expenses on health care are among the highest in the European Union and the proportion of GDP spent on health care increases. Figure 4illustrates the development of health care expenditures in Austria as a share of GDP from 1960 to 2010. Since 1990 total expenditures on health care rose from about 7% to 11% in 2009. The increase is mainly due to the aging population, increased coverage and improvements in medical technology. In 2008 expenditures in per cent of GDP rose sharply because of a decline of GDP due to the financial crisis, even though they remained on a similar level. For this reason, the "affordability" of health care under the principles of maintaining or even augmenting the current quality level has been the main objective of the reforms undertaken.

Figure 4: Austrian health care expenditure in % of GDP between 1960 and 2010



Data Source: OECD, 2012; Illustration: IHS HealthEcon, 2012

2.1. Rising demand for Co-ordinated Care

Co-ordination was first demanded in the field of psychiatric care and care for elderly people. In 1987, for example, Badelt (1987) pointed out the necessity for co-ordinated care for elderly people in Vorarlberg.

The first legal step towards co-ordinated care can be found in the development plans for the "article 15a" agreement of 1993. The agreement states that services in all settings of care have to be provided in a co-ordinated way. Even though provinces are responsible for the provision of long-term care, all provinces are required to follow the same principles and broad goals of care (Kraus & Riedel, 2010).

Although the fragmentation of the inpatient and outpatient sector has been in place since the 19th century, there were only few demandsfor reform until the late 1990s. Theurl (1999, p.333) mentions this problem explicitly:

"The huge differences in the historical development of different provinces relates to the differing ownership structure of public hospitals. The split of the service guarantee is one important reason for the lack of integrated forms of health care services".

One principal reason to address these intersection problems in the late 1990s was that the Federal Government and the social security institutions tried to contain cost.

In 2000, the Austrian Court of Audit addressed this point in its perception report about the Austrian health care reform and hospital financing. The Austrian Court of Audit criticised that the structural commission failed to force structural changes in the health care sector and to further care integration. It also indicated that it is difficult to overcome the complexity of co-ordination caused by the jurisdictional tangle of inpatient, outpatient, care and rehabilitation sectors. From 2000 onwards, the Austrian Court of Audit repeatedly pointed out the lacking efforts to overcome the sectoral fragmentation in the health care system, i.e. the report examining the health care reform of 2005 gives a sobering impression of the impacts of measures taken (Österreichischer Rechnungshof, 2010/2).

2.2. Key National Policies and Reforms in the Health Care Sector

In 1978, the first “15a agreement” with a “revenue-oriented expenditure policy” was enacted in order to contain costs. Later, in the 1990’s, the Austrian National Assembly agreed on a number of reforms with the key aim to ensure the financial sustainability of the health care system.

The reforms of 1997 included the introduction of the Austrian DRG system “leistungsorientierte Krankenanstaltenfinanzierung” (LKF), covering only the inpatient departments. In terms of attempts to improve care co-ordination, a consultation mechanism between the social insurance institutions and the federal provinces was established. In case that the federal provinces infringe jointly agreed plans, a sanctioning mechanism was defined but never used so far. Additionally, the Austrian Hospital and Major Equipment Plan (ÖKAP/GGP) was established, which also included schemes for hospital outpatient departments, a location plan for fund-contracted physicians, a long-term care sector plan and a rehabilitation plan.

The ÖKAP/GGP not only specified the locations of hospitals but also stipulated services offered and the number of beds per hospital. Due to the changing age structure and the variation of encountered diseases in acute medical care, the plan was revised and extended in 1999. For the first time, sectors of acute geriatrics/remobilisation and concepts for coverage with palliative care were included in the plan as well as the integration of a psychiatry plan and the inclusion of minimum standards for intensive care units. The success, however, was minimal, as the provinces objected to this strong federal influence in their agenda. Nevertheless, most likely due to the delicate relations between the federal and provincial governments, the sanction mechanism was never used.

Between 2000 and 2004, another set of reforms was introduced with the main objective of cost containment and budget consolidation. These reforms resulted in a harmonisation of contribution rates of different groups (i.e. wage and salary earners) and an increase in the rates to additionally cover the risks of leisure time accidents. Furthermore, contributions of pensioners rise annually by 0.25 percentage points until they reach 4.75 % of the respective

pension. Another important aspect of these reforms is the agreement between the federal government and the federal *provinces* on quality work with defined quality goals. Projects were implemented focusing on topics such as patient orientation, interface management and quality reporting.
In addition, the ÖKAP/GGP was updated according to demographic and medical developments in 2001 and 2003. Part of the reform was the integration of the first psychiatric services plan (Hofmarcher & Rack, 2006).

In 2005, the implementation of various measures with the main objectives of budget consolidation, cost containment and quality assurance followed based on the Health Care Reform of the same year. The Health Care Reform's emphasis is laid on integrated care and interface management. The 73rd agreement pursuant to "article 15a", edited on July 12, 2005, formulates the intention to erase the existing fragmentation of current sectors of service provisions in article 3 (integrated Structural Plan for Health) and explicitly names inpatient and ambulatory care, rehabilitation and other care sectors. In addition, an area-wide and intra-sectoral hospice and palliative care system should be planned and introduced. Furthermore, the compulsory basis for integrated planning is implicitly defined in the Austrian Structural Plan for Health, in Article 5, clause 3 (Republik Österreich, 2005).

The Health Care Reform 2005 aimed to (Herber, 2007):

- overcome the sectoral boundaries in the health care system and to improve the co-ordination of planning, controlling and financing;
- assure long-term financial management with measures of cost containment and raising efficiency;
- support preventive measures and nationwide indemnification and improvement of quality;
- enforce transparency;
- promote interface management and
- match the requirements for the use of information technology.

As part of the framework of the Health Care Reform 2005 an "area of cooperation" within the State Health Funds was defined, encompassing the tasks lying in between the inpatient and outpatient sector. Projects at this interface can be financed by the so-called Reformpool. Furthermore, harmonisation of documentation, of clear demarcation of contents and the assignment of scores to case-based payments in other areas of care should lead to better adjustment of the Austrian DRG model to the possibilities of service-provision in the outpatient-sector and registered doctors-sector. Another instrument to develop integrated health care in Austria was the Austrian Structural Plan for Health, which is the basis for integrated planning of the Austrian health care structure pursuant the 2005-2008 15a agreement and represents the framework for the overall planning on the regional level

(Bundesministerium für Gesundheit, 2012a). This plan involves inpatient and outpatient care as well as acute and long-term care, including rehabilitation and interfaces between care sectors, as a successor to the ÖKAP/GGP. Table 1 gives an overview of the key reforms addressing the coordination of care.

Table 1: Timeline of key reforms impacting on care co-ordination

Year	Reform
1993	Introduction of insurance for long-term care for elderly and handicapped people.
1997	Establishment of a consultation mechanism between social insurance institutions and the nine federal provinces *(Bundesländer)*, introduction of the structural fund, the nine provincial funds and the Structural Commission, introduction of the Austrian Hospital and Major Equipment Plan (ÖKAP/GGP).
1998	Group practices become possible.
2001& 2003	Update of the Austrian Hospital and Major Equipment Plan (ÖKAP/GGP), integration of the psychiatric service plan.
2005	Integrated Planning with the Austrian Structural Plan for Health (ÖSG); Establishment of the Federal Health Agency and the Federal Health Commission as well as nine Federal Health Funds with the Health Platforms; Introduction of the Reformpool-project to finance projects at the intersection of the inpatient and outpatient sector, comparable documentation, health telematics and e-prescription
2006	Introduction of the Disease Management Programmeon Diabetes mellitus Type 2
2008	Explicit mentioning of integrated care in the Federal Constitution in “article 15a” on hospital financing; advancement and further development of measures introduced in 2005

Sources: Bundesministerium für Gesundheit, 2012b; Czypionka & Röhrling, 2009; Hofmarcher & Rack, 2006

2.3. Reformpool

In the framework of the Austrian health care reform in 2005, the cooperation area within the state health funds was defined. This area covers those tasks in between the in- and outpatient sector. As neither the provincial health funds nor social security institutions are fully responsible for these tasks, financial issues arise. The Reformpool is a fund for projects concerning specifically these interfaces. The principal aim of those projects is a service shift between the in-and outpatient sector benefiting both the provinces and social security institutions. For the years 2005 and 2006 up to 1% of total health care expenditure could be reserved for such Reformpool-projects. In 2007 and 2008 the amount could be raised up to 2% (Czypionka & Röhrling, 2009). These funds represent only a virtual cap and if projects were not commissioned, they remained and could be used for regular health care activities.

In 2005, the Federal Health Agency published guidelines for the Reformpool projects specifying goals, suitability, documentation, evaluation and the institutionalisation of a regular exchange of information. The expansion and actualisation of the “article 15a” agreement in 2008 explicitly states the aim of financing projects on integrated care (Czypionka & Röhrling, 2009) and that documentation of the status quo and of the change in performance outcomes is required. Regarding the issue of the merely virtual availability of Reformpool-funds, there was only a re-formulation in the actualisation of the “article 15a”- agreement in 2008, but the funds remain virtual.

In addition, further guidelines were passed containing province-specific special regulation for the course of projects. For example, in Upper Austria, these guidelines point out that anybody has the right to submit a project whereas the costs of formulating the project idea have to be paid for by the applicant. The Health Platforms can afterwards admit the project to the next phase in which it is submitted as a Reformpool-project. The costs of the second phase still have to be borne by the applicant. The second phase ends with the handover of a report to the state health fund. If the health platform decides in favour of the project, a realisation project starts.The project ends with a report containing the evaluation of forecast effects. In connection with the report, the applicant submits a Reformpool-plan suggesting a real operation of the project. If the health platform approves of it, the real operation starts with on-going evaluation during the process. It is necessary that the Reformpool-project is beneficial for both the provinces and SHI. This Reformpool process cycle seems complicated but comes with the advantage of permanent monitoring (Czypionka & Röhrling, 2009).

The ultimate goal after the test of the project and positive evaluation is the introduction of the project into real operation, financed by the provincial health funds or SHI.

2.4. Disease Management Programmes (DMPs)

Disease Management Programmes (DMPs) structure the process of care and thus try to overcome several shortcomings of current medical practices. They are primarily used to treat patients with chronic diseases. DMPs started in the USA with the launch of blood glucose monitoring for Diabetes patients in the 1980s followed by various DMPs in the 1990s (Chandaver, 2007). The Disease Management Association of America defines Disease Management as a "system of co-ordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant" (Care Continuum Alliance, 2011). Patients should be motivated via these programmes to better manage their disease. In addition, the aim is to monitor them actively following evidence-based guidelines and to co-ordinate care among all providers (Congressional Budget Office, 2004).

The motivation to introduce DMPs in Austria started with rising health care expenditures. Since the health care reform of 2005, there are several DMPs in Austria dealing among others with Diabetes mellitus type 2, strokes, breast cancer, palliative care and coronary heart diseases. In 2004 the Styrian sickness fund and the Institute for Biomedicine and Health Science of Johanneum Research started to develop a DMP on behalf of Austrian SHI's programme "Therapie Aktiv" (Österreichische Sozialversicherung, 2006). The programme was implemented in 2007 (Therapie Aktiv, 2012a). It consists of regular examinations, training, the agreement to individual targets with a practitioner and informative literature. Patients can participate free of charge and voluntarily in the DMP and terminate their participation at any time. During the regular examinations, the physician conducts (or refers the patient to) a haemodynamometry and a weight check, every six months an HbA1c-control and once a year an anamnesis, a foot inspection, a check on neuropathy, ophthalmologic control, cardiovascular risk stratification and an urine test (Czypionka et al. 2011). The national quality guidelines for DMPs (Bundesqualitätsleitlinien) should ensure a nationwide and trans-sectoral quality level, anchored in the national law for quality of health care services (GQG).

Physicians are paid for their service provided and, in addition, receive a capitation payment per treated DMP-patient per quarter. The physician completes a documentation form when the patient is registered with the DMP and subsequently every year. The physician is obliged to participate in a four-hour basic training and thereafter in a two-hour refreshing course every two years. The remuneration for physicians participating in "Therapie Aktiv" differs across regions depending on the specific health insurance fund. In Lower Austria, the physician is remunerated with 53 € for the first examination and afterwards is paid 25 € per quarter in addition to usual fees. For the training of insulin-dependent patients in small groups (three to five), a doctor receives 1,064 € (Czypionka et al. 2011). The remuneration in Upper Austria is comparable, as physicians receive 66 € for the first examination, 19 € and 43 € for the quarterly and annual check-up respectively as well as 690.39 € for the training of a diabetes-group (OÖGKK 2011).

Table 2: Characteristics of selected policies to improve care co-ordination in Austria

	Who is the target group?	Which gaps in co-ordination does the policy aim to address?			Pathway for implementation	Which incentives to participate exist?	Evaluation
		Type of integration	Breadth of integration	Degree of integration			
Reformpool	**Payers, Providers**	**Clinical, informational, financial**	**Mostly Indication-oriented**	**Linkage or co-ordination**	**Decentralised: provincial health funds make decisions** **Voluntary: funds for Reformpool projects reduce the budget for everyday services**	**Incentive problems for payers and providers: Virtual nature of financing increases risk for project initiators; funds reduce the available amount for everyday services in the in- and outpatient sector, decreasing incentives for payers; both province and social health insurance have to benefit**	**Mandatory evaluation of clinical outcomes and costs, e.g. via the controlling instrument "Reformpool manager"; however, often missing**
Disease Management Programmes	**Patients, Providers**	**Clinical, informational**	**Indication-oriented model**	**Linkage or co-ordination**	**Decentralised: there are different DMPs in some provinces** **Voluntary: Participation is voluntary both for physicians and patients**	**Physicians: Financial incentives** **Patients: Incentive to enjoy better care and support**	**Evaluation efforts currently on their way**

3. Assessment of the status quo

As previously mentioned the main aim of the health care reform was to overcome sectoral boundaries in the health care system and to achieve improvements in the co-ordination of planning, controlling and financing in order to finance the Austrian health care system in a more sustainable way. The previous "article 15a" agreements included plans for integrated care. The new "article 15a" agreement 2008-2013 and the new Reformpool-guidelines explicitly address integrated care for the first time, although projects already contained elements of integrated care before. Another key factor of the reform was information management. The introduction of an electronic medical record (ELGA) has the aim to provide seamless communication between hospitals, general practitioners and specialists and in this way contribute to overcome the fragmentation of the inpatient and outpatient sector. Up to now, ELGA has not yet been launched as several stakeholders are opposed.

Regarding co-ordinated care, the Reformpool-projects and disease management lie at the core of the reform and their status-quo will be analysed in the following chapters.

3.1. Reformpool

(1) Development of structures

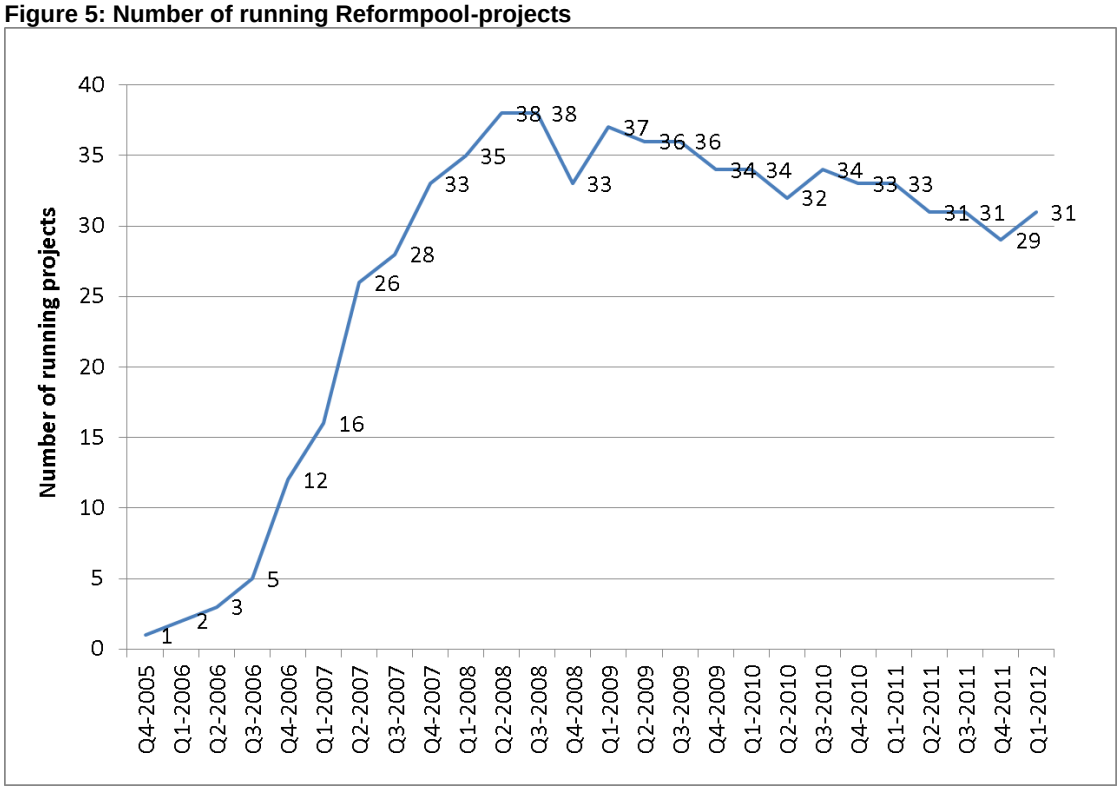
The aim of the Reformpool is to solve existing interface problems by installing a common pool of funds for projects within the provincial health funds. Reformpool projects were expected to extend the breadth of integration across interfaces. The new Reformpool-guidelines of 2008 make it explicitly possible to sponsor projects of integrated care, which had de facto already been the case before (Czypionka & Röhrling, 2009). In theory, anyone can develop a Reformpool project but, so far, mainly social security institutions and federal provinces have designed projects. It is difficult, though, to determine in what function federal provinces act as they are a political entity and additionally responsible for financing the inpatient sector. Up to 1% (in 2005 and 2006) and 2% (in 2007 and 2008) of total in- and outpatient expenditure could be made available for Reformpool-projects. The available funds, though, were not reserved for those projects, but reduced the total amount that could be spent in the inpatient and outpatient sectors. Notwithstanding, tariffs in the outpatient sector and hospital costs remained the same.

(2) Participation of SHI funds and providers

An analysis of Reformpool-activities by Czypionka and Röhrling (2009) shows a hesitant start in the first two years with an upswing in 2007, which was followed by a downturn in the following years. **Error! Reference source not found.** reflects a similar pattern, illustrating the number of running projects reaching from the fourth quarter of 2005 to the fourth quarter of 2010. In the third quarter of 2008, Reformpool-activity reached its peak at 38 simultaneously running projects. During the last quarter of 2011 the number of current

projects decreased to 29. The average duration of a project is about 43 months (Czypionka & Röhrling, 2009).

Figure 5: Number of running Reformpool-projects



Source: IHS HealthEcon questionnaire 2009, “Health System Watch”-Update 2012

The progress of Reformpool-projects can be divided into three phases. Initially, the concept and design of the project is presented in phase one. In phase two, the project is authorised and implemented, before the evaluation follows in phase three. After the final evaluation, the Reformpool-project is either adopted into routine care or brought to an end (Bundesministerium für Gesundheit, 2012c). Table 3 gives an overview over the state of affairs of Reformpool-projects across provinces. In the third quarter of 2012, 30 Reformpool-projects are running. Moreover, five projects are scheduled and four projects are under final evaluation. Out of the 22 projects that have been completed successfully, ten have been adopted into routine care. Besides, four projects were discontinued during the process.

Table 3: Reformpool-activities by provinces

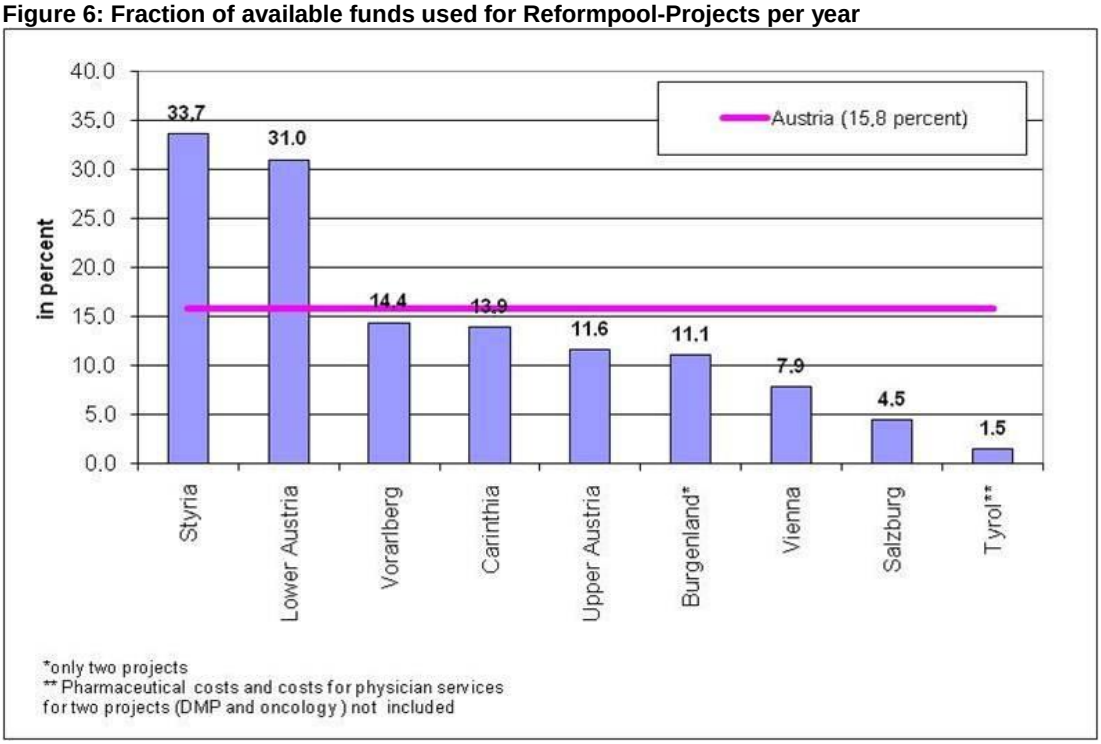
State	Phase 1	Phase 2	Phase 3	Completed	Adopted	Cancelled
Burgenland		4				
Carinthia	1	3			3	
Lower Austria		5		3	1	
Upper Austria	4	2			2	
Salzburg		1	1	1		
Styria		2	2	3	4	1
Tyrol		4		3		1
Vorarlberg		5	1			
Vienna		4		2		2
Austria	5	30	4	12	10	4

Source: Bundesministerium für Gesundheit 2012c (latest update June 11, 2012), Display: IHS HealthEcon 2012

The majority of the projects (79%) deals with integrated care like the DMPs for Diabetes Mellitus type 2 and stroke units (Upper Austria, Styria, Tyrol and Vienna), care of coronary heart diseases (Lower Austria, Styria), care of nephrological diseases (Styria) and Discharge-/Interface-/Case- and Care Management (Burgenland, Lower Austria, Salzburg, Styria, Vorarlberg and Vienna) (Czypionka & Röhrling, 2009).

The virtual nature of the Reformpool-funds caused the actual sum of investment to be much lower than 1% (2% respectively) of total in- and outpatient expenditure. On an aggregate level, only 15.8% of possible funds were used for Reformpool-investments per year in Austria. However, the activities among the nine provinces are quite different and reach from 33% in Styria to only 1.5% in Tyrol. Figure 6 illustrates the fraction of money actually used for Reformpool-projects as share of the money available.

Figure 6: Fraction of available funds used for Reformpool-Projects per year



Source: IHS questionnaire 2009

(3) Participation of patients

The number of participating patients varies among projects. Czypionka and Röhrling (2009) analysed first Reformpool-evaluations and found that for example in Vorarlberg, it was assumed that 45 to 60 patients would take part in the project "mobile healthcare", in total 53 patients participated from October 2007 to August 2008. Another project regarding palliative care intended to reach 100 patients, but the actual number was only about one third. In the training project for Diabetes mellitus type 2 in Carinthia, more than 2,000 patients participated in the initial training, but the participation rate for follow-up trainings declined to 40%. Furthermore, care-level varies highly among Carinthian districts, in the region of St.Veit/Glan only about 20 per cent of potential patients were trained.

(4) Availability of evaluations

Several Reformpool-projects can be considered as a success, both in medical and in economic terms. Several laws were enacted to ensure quality control (Health Quality Act), including several guidelines. Czypionka et al. (2006) analysed the evaluation procedure of quality control in medical practices that has been made compulsory for every office-based physician. However, they found that the methodology of the evaluation procedure itself has to be called into question.

The following Table 4 illustrates the number of Reformpool-project per federal province, their mean of budgeted funds as well as the coefficient of variation for 2011. The highest average

amount of funds was planned in Upper Austria, followed by Lower Austria and Styria. The lowest average budget for Reformpool-projects was planned in Tyrol and Salzburg. The lowest-budgeted project is only about € 60,000, whereas, on the contrary, the project with the highest financial volume, the "hospice and palliative care institution" of Styria, has a total budget of € 9,500,000. It has to be mentioned though, that the size and therefore the costs of the projects are quite divergent, reducing the informative value of the average budgeted funds.

Table 4: Statistics of Reformpool-projects

	Number of projects	Mean budgeted funds	Coefficient of Variation
Burgenland	4	1.246.888	1,17
Carinthia	6	602.667	0,75
Lower Austria	6	2.182.332	1,22
Upper Austria	8	2.975.000	0,43
Salzburg	4	374.191	0,65
Styria	9	1.911.809	1,70
Tyrol	8	547.071	0,85
Vorarlberg	7	1.145.613	0,38
Vienna	7	1.207.846	1,19

Source: Czypionka and RöhrlingUpdate 2012

Although there is financial potential for such projects, there is no guarantee that a project will be adopted as a regular service or spread to other regions even if it is successful.

The project "interdisciplinary admission department Horn" in Lower Austria is an example of a successful realisation of the Reformpool. Through this project, a significant reduction in hospital admission and days spent in the hospital as well as a cost reduction of € 2.4 million could be achieved. Additionally, a survey showed that both participating patients and physicians are satisfied with the project. The evaluation of another Lower-Austrian project ("integrated hospice- and palliative care in Lower Austria") showed that cumulated synergies exceeded costs and satisfied persons concerned. The project "mobile palliative-team" in Vorarlberg is seen as a success too because life- and care-quality of palliative patients could be improved and inpatient palliative stations could be disburdened. Due to the lack of evaluation in many cases, not all benefits from the projects could be assessed.

Comprehensive evaluations of the health and economic implications of Reformpool-projects remain scarce. The reluctance to evaluate is strengthened by the fact that it is still unclear whether the evaluation of Reformpool-projects is mandatory. The phrasing in the national guidelines is such that projects have to be evaluated, and that the guidelines are passed by the Federal Health Commission. But the legal status of such decisions by the FHC is not well-defined, which leads to confusion whether resolutions are legally mandatory.

Independent from this question, there are no sanctioning mechanisms in place for not evaluating a project.

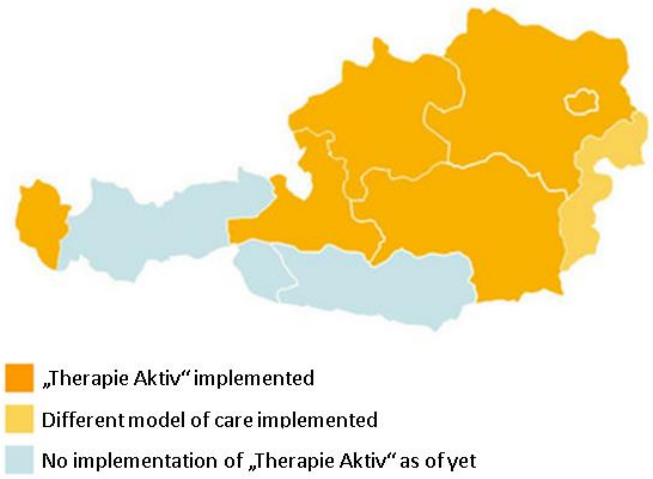
For projects that are actually evaluated, results indicate the potential of cost reduction.The project “Interdisciplinary receiving station Horn” in Lower Austria, for example, could reduce costs by about € 2.4 million, which was even above the expected amount of € 2 million. The Upper-Austrian project “Diabetes Care Upper Austria” resulted in a total amount of € 49 per patient which compares favourably to a random sample of the basic population of diabetes patients.

3.2. Disease Management Programmes

(1) Participation of SHI funds

The DMP “Therapie Aktiv” is used as representative of DMPs in Austria. As DMP for Diabetes Mellitus type 2, “Therapie Aktiv”, is the most widespread programme in Austria and is either a Reformpool-project or already adopted to daily routine in the provinces of Lower Austria, Salzburg, Styria, Vorarlberg, Vienna and Upper Austria (Czypionka et al., 2011). In Burgenland, a proprietary Disease Management Program called “Modell Burgenland” was introduced. Tyrol tested “Therapie Aktiv” as a Reformpool-project but did not adopt it to daily routine and it ended on December 31, 2010. For Carinthia, plans exist to implement “Therapie Aktiv”. Figure 7 shows a map of Austria, denoting the regions where “Therapie Aktiv” is in use. The orange colour shows federal provinces that implemented the programme; yellow denotes provinces with other DMPs and provinces pictured in grey do not currently have DMPs for Diabetes mellitus type 2 but offer trainings for patients suffering from diabetes.

Figure 7: Map of implementation of DMP Therapie Aktiv in Austria



Source: Therapie Aktiv, 2012; Translation: IHS 2012

(2) Participation of physicians and patients

Table 5 shows participating physicians and patients of the DMP "Therapie Aktiv". Compared to the total number of eligible outpatient physicians, the number of physicians participating in a DMP is quite low compared to other countries (i.e. Germany). General practitioners and specialists for internal medicine (both contracted and without a contract) are eligible to participate.In total, about 15.3% of eligible physicians participate in the DMP-programme "Therapie Aktiv". Vorarlberg and Upper Austria show a participation rate of physicians above average, whereas in Lower Austria and Vienna the number of registered physicians is still quite low. In addition, estimates assume about 420,000 diabetics (Wawrosky, 2010) in Austria, of which only about 7.7% currently participate in the DMP "Therapie Aktiv". In Germany, the participation rates of Diabetes mellitus type 2 DMPs are estimated to be around 50% (Czypionka et al., 2011). The goal is to raise participation up to two-thirds of all pharmaceutically treated diabetes patients.

Table 5: Therapie Aktiv-participants

Federal State	Currently participating physicians	Eligible physicians[1]	Share of participating physicians	Currently participating patients
Lower Austria	152	1556	9.77%	5,081
Upper Austria	300	1196	25.08%	8,152
Salzburg	101	514	19.65%	1,777
Styria	222	1145	19.39%	6,952
Vorarlberg	69	290	23.79%	1,058
Vienna	167	1904	8.77%	8,829
Sum	**1011**	**6605**	**15.31%**	**32,569**

Source: Therapie Aktiv (2012) (status September 2012), Ärztekammer (2012) and Ärzteverlagshaus(2012), display IHS HealthEcon 2012
Note: Only federal provinces with current Therapie Aktiv-projects are listed

A survey of participating practitioners and diabetics of "Therapie Aktiv" in Styria showed improved health outcomes for patients. Furthermore, 98% of total participants declared that they found it important to be involved in the DMP. Both diabetics and physicians look favourably upon the "Therapie Aktiv"-programme (Steiermärkische Gebietskrankenkasse 2009 in: Czypionka et al. 2011), as the process-quality of diabetes-treatment could be improved significantly.

Table 6 offers a concluding overview of the progress and stagnation of DMPs and integrated care contracts in Austria.

[1]Only general practitioners and internists (contracted or without contract) can participate in the "Therapie Aktiv"-programme

Table 6: Progress and stagnation in the implementation of care co-ordination policies

Parameter of (intermediate) policy effect ('success' or 'failure')	Disease management programmes	Reformpool
Up-take by payers	• Up-take is differing by provinces; some successful projects such as "Integrierte Versorgung Schlaganfall" in Upper Austria are not spread to other provinces	• High up-take in 2007 and 2008 • BUT: Since 2009, evidence suggests largely stagnation in the number of running projects and because of the virtual character of funds, the incentive to start projects is very low
Up-take by providers	• Physicians' acceptance and participation is still a weakness, they oppose the extensive administration/documentation required	• High up-take in 2007 and 2008 • BUT: stagnation since 2009
Up-take by patients	• Patient enrolment is low compared to other countries e.g. Germany	• Low number of participants
Development of structures	• Documentation has been reduced • Intention to integrate required documentation in physician's software • In some provinces (e.g. Styria) provision of help to re-structure the organisation of medical practices	• Virtual availability of fund is the main problem, the new "article 15"-agreement did not improve this issue • Still no legal obligation to introduce successful projects to regular operation
Availability of evaluations	• Thorough evaluation hardly exists or is not published • Concerns exist over insufficient quality assurance of medical documentation of DMP participants • Implications for refinement or abolition of the underlying initiatives thus remain unclear	• Evaluation exists, but is very difficult to access, the obtained results are ambiguous • Most programmes are not introduced to regular operation or to other provinces

4. Analysis of Barriers and Facilitators

Several stakeholders of the Austrian health care system were interviewed in order to determine likely barriers and facilitators for the implementation of integrated care policies. The interview partners ranged from representatives of payers, i.e. social security institutions and the federal government, providers like representatives of the Austrian Chamber of physicians, health platforms and ÖGAM (Association of General Medicine) to patients' representatives and experts in the field of health care. In the following, several findings from literature and the interviews with respect to care-coordination are presented.

Overall, most interviewees share similar opinions on the improvements that can be achieved through better care co-ordination. Patients mainly highlight the advantages of better personal care, easy access to services and information, clearly defined contact persons, the continuum of care and the strong emphasis on the patient's needs. Providers of health care defined the need to focus on their main tasks which may first result in a reassessment of their structure and finances leading to a clear allocation of tasks, a better flow of information as well as a more efficient and effective use of their own resources. Payers' identified the reduction of redundancy, more efficient and effective organisational forms as well as the avoidance of over- and under-supply as measures to reduce costs.

One of the interviewed experts summarises possible benefits of better care co-ordination as follows:

The essential advantage would be the separation of care processes for chronically and acutely ill patients and thus reduce the claiming of benefits and with it costs of health care provision. The continuum of care would ensure better outcome, probably reduced costs and less stress for chronically ill patients. In general, the patient's situation would improve because of less redundancy andless unnecessary appointments. This would cause the patient to feel to be taken care of. I think both patients and the health care system as a whole benefit if unnecessary treatments and costs can be avoided. Providers have to focus and decide what exactly they want to offer. The fragmentation of financing and decision-making is one of the major problems, though.

4.1. Key influencing factors

(1) Challenges in the health care system

Problems of the health care sector are often traced back to the federalist structure alongside the dual financing and sectoral separation. Indeed, the interviews confirm that this point is definitely important and a continuous obstacle for every arrangement that tries to span the

sectoral gap in the Austrian healthcare system. Interviewees point out the problem that various stakeholders with conflicting interests have to agree on guidelines. On several occasions, interviewees mention the existence of wrong frame conditions, e.g. the focus on a maximal instead of an optimal outcome. A representative of the Austrian Ministry of Health defines the most significant challenges for better care co-ordination in the following sentence:

There exist immobile structures, mechanisms and behavioural patterns that have to be newly defined or dissolved, particularly the dual financing and the federalist structure.

This illustrates a point that is relevant to actual change towards a better care coordination: Habits seem to play an important role in defining the relationship between stakeholders, particularly as ingrained habits are strengthened by the lack of competition. With respect to change, it will definitely be hard to overcome such a long-standing behaviour.

Another stakeholder from the payers' group thinks that the conflicting interests of stakeholders constitute a major obstacle:

I see the challenges clearly lying with the providers and cost bearers. The cost bearers fail to bring providers together in order to negotiate and set their aims. Providers are very resistant and unfortunately I see deficits in their qualification.

An expert comments on challenges in the health care system as follows:

One major challenge is the disposition of payers to shift benefits; a co-ordinated action between the sectors, confidence in each other's competencies, to ensure the necessary quality (to act evidence-based); to overcome federalism and the disposition to abide by quality guidelines and report the results.

A patient's representative sees the problems more in the conflicting interests of the stakeholders involved:

… In reality it's the payers' loss of power … the difficulty to take all the stakeholders on board - the ones that are afraid, the ones that are in favour and the ones fearing a loss of power; and to build up acceptance and transparency.

This problem is reflected in one of Leutz' (1999) laws of integration: "The one that integrates calls the tunes".

A representative from the group of payers offers a similar perspective:

The main challenge is to balance the different system-based interests in order to reach a common perspective.

(2) Culture of Evaluation

Several interviewees from the different stakeholders have the opinion that several parts of a culture of evaluation, such as quality monitoring (particularly in the outpatient sector) hardly exist in Austria. Especially, the lack of defined outcome parameters is criticised by stakeholders. Interview partners were asked for their opinion on three different aspects of the culture of evaluation: quality monitoring and assessment, information systems and evidence-based medicine/medical guidelines.

(a) Quality monitoring and assessment

When one of the experts was asked for his opinion on quality monitoring and assessment in Austria, his response was:

In many cases quality monitoring is not existent or only rudimentary. I don't know about quality monitoring; I only know that assessment on a wide basis and evaluation is carried out.

A sickness fund representative especially sees quality as a problem monitoring and assessment in the outpatient sector:

I think in recent years there was indeed some activity in the field of quality monitoring in the inpatient sector; it's a subject they are working on, quality monitoring for office-based physicians is still a disaster though.

Another representative from a sickness-fund criticises most notably the lack of outcome parameters:

There is neither process management nor measurement of outcome, mainly because there simply don't exist any defined outcome parameters.

For the improvement of care-coordination, this definitely poses a problem, as the integration of care naturally encompasses efforts of evaluation.

(b) Information systems

In general, problems regarding information systems occur mainly at the interfaces, since hospitals and groups of physicians or single practices have some form of information system in place already. Another drawback of current information systems is the lack of performance evaluation.

The systems of ELGA and e-prescription, which have not yet been introduced, would considerably facilitate intra-sectoral communication, according to a patient's ombudsman.

One of the interviewed experts thinks that mainly physicians are opposed to intra-sectoral information systems because it would make the detection of errors in treatments easier. Some providers may be afraid of a ranking too. In addition, issues of data privacy are addressed repeatedly as data on an individual's health condition is very sensitive and many people are afraid of a loss of privacy rights and misuse of medical data that may happen as physicians will be able to access their medical history easily. However, another expert stated that the concerns over "transparent doctors" seem to outweigh these concerns of "transparent patients" by far.

In another interview it was suggested that the widespread scepticism among physicians towards the establishment of intra-sectoral information systems is mainly rooted in a general lack of know-how of methods used for quality control.

Obviously, information systems spanning the sectoral gap are a prerequisite of integrated care, but they are largely absent in Austria.

(c) Evidence-based medicine/ medical guidelines

Evidence-based guidelines are the backbone of a DMP, as all providers in the process-chain have to contribute to the treatment in a predictable way. However, guidelines and evidence-based medicine are met with scepticism by representatives of the Austrian physicians (see e.g. Czypionka/Riedel/Röhrling 2006).

In our interviews, it was mentioned several times, especially regarding DMP-guidelines, that physicians do not see the need to change their procedures as they are successful and they are obviously satisfied with their results. Other physicians argue that they already follow medical guidelines. However, an interviewee points out that, although the physicians claim the opposite, they effectively fail to adhere to the medical guidelines in question. A sickness-fund representative thinks that most physicians fear to lose the freedom of treatment if guidelines were introduced.One of the experts comments on medical guidelines:

Guidelines are ill-reputed as cookbook-medicine.

(3) Governance

The Austrian governmental structure is determined by federalism, which is mainly characterised by the separation of legislation and execution among the federal level and

individual federal provinces. Every Austrian federal province has its own legislature, the "Landtag", a provincial government and a (politically very influential) governor. However, the legislative power of the provinces is limited and judiciary is exclusively a federal matter.

Furthermore, the federal structure poses a challenge to the Austrian health care system. Health care is provided by the federal health fund, which is mainly financed by the federal government, the provincial health funds, which are financed by all levels of government and SHI, and moreover by the social security institutions (see Figure 1).

Interviewed experts and stakeholders of the Austrian health care system were asked for their opinion on a form of self-government. All of them perceive the federal structure as a disadvantage for the operation of the health care system.

One of the providers summarises the problem as follows:

Federalism is historically seen as great achievement but actually it is a great barrier for the development of the health care system. It definitely has to do with the people working there [in decision-making institutions; author's note] *who I don't know… but all the procedural things until they make a decision… There are too many different interests. That is obstructive for the co-ordination of care.*

A patients' representative is more confident about the collaboration of federal provinces and social security institutions:

The stakeholders are talking more and more frankly with each other. There are resolutions of the federal health commission that emphasise that the provinces and social security institutions have to collaborate. But it's not really welcomed as it is connected with a certain loss of power.

An expert of the Austrian health care system expresses his opinion as follows:

The biggest challenge is the uncoordinated way of planning and financing in the health care system, which leads to the over- and under supply of care or to inadequate care. This is a big obstacle for integrated, patient-oriented care.

A sickness-fund representative highlights problems of governance and coordination:

There are serious governing problems, particularly in the inpatient sector and a lack of collaboration between federal provinces and social security institutions as well as co-ordination problems within the social security. The decentralised structure is good, but its co-ordination has to be improved, maybe by benchmarking or using models of best-practice…

(4) Sectoral fragmentation in provision, planning and financing

The problem of sectoral fragmentation is widely discussed among health care experts in Austria, as the split of competencies and financing seems to be the major barrier for more care co-ordination. Every change towards optimal allocation of services across this sectoral gap would cause a (financial) winner and a loser. Moreover, the financial benefits of potential new models of care settings are in dispute: Provinces often argue that shifting services from hospitals to physicians does not reduce their fixed costs, so they are reluctant to shift funds that amount to the average costs of provision. On the other hand, SHI has no knowledge about the actual costs in private practices, and therefore uses the tariff system to calculate the funds to be shifted. However, these include some form of contribution margin for the physicians. In our interviews, this theoretical problem was indeed identified as the core question in all negotiations.

Without doubt, a more efficient allocation of service provision could reduce costs and reduce efforts to shift costs.

(5) Organisation of service provision

The Austrian healthcare system allows a wide freedom of choice. Within the outpatient sector, patients can decide for themselves whether general practitioners or specialists are visited. The only restriction is that patients are usually only allowed to visit one practice per specialisation in a quarter. Experts repeatedly demand the introduction of a general practitioner-centred model with a gate-keeper function for the general practitioner (GP). It is often argued that this would constrain the patient's freedom of choice. However, when considering such a model, it is important to take into account that Austrian GPs only receive three years of vocational training. Therefore, some stakeholders see the problem more in the lacking abilities of the physician.

An interviewee from the payers' group mentions this issue:

The general practitioner wants to have the core competencies without having the know-how and without caring for the outcomes of the process.
The specialist is more a lone fighter being opposed to the outpatient department. I think transparency and good co-ordination is better than the restricted access of a gatekeeper-system.

A patients' representative is in favour of the gatekeeper-function, but stresses the importance of the freedom to choose the doctor:

I could definitely be won over for the model of gate-keeping; specialists should only be accessible via a physician's referral. However, what is close to our heart is the freedom to

choose one's physician in the case of a loss of trust, for example. I'm definitely against obligatory referrals.

A stakeholder from the group of providers sees the organisation of service provision as follows:

The "Hausarzt" (family doctor) is not well defined, as well as other levels of care, resulting in orientation problems and unused opportunities. Specialists are blocked by the unrestricted access, excess demand, too low demand or inaccurate demand. This results in an actual access-restriction and congestion. Additionally, there are unequal opportunities for different social groups as the rich ones can switch to private insurances.

One interviewee mentions conflicting interests:

I once made a study on general practitioners including a comparison among different countries. The result was that there are some very effective models of primary care, effective and efficient too. This study though has never been published; it was simply affecting too many interests. In the current model there are no "Hausärzte"; some maybe act like oneif you are friends with them.

(6) Involvement of interviewed stakeholders in the reform-process

In order to assess the stakeholders' involvement in the reform-process of the healthcare reform 2005, we use a model with four phases: information, reform design, legislation and implementation. However, due to a constant personnel change in positions and split roles, hardly anyone has an overview of the whole process, so it was difficult to obtain a clear picture for every stakeholder.

(a) Payers

A representative of a sickness fund mentions the involvement of the social security insurance (SV), although it is legally not a partner in the 15a-agreement-negotiations. Another sickness fund representative notes his involvement in all four phases as far as it concerned the outpatient sector.

(b) Providers

Representatives from this stakeholder group remark their involvement mainly in the fourth phase of the reform-process, based on the fact that they are the service providers. However, theory recommends the early involvement of providers in order to avoid resistance in later phases.

(c) Patients

One Patients' representative mentions his involvement in the phase of implementation, giving advice for training in a DMP. Another interviewee was involved in phase two, three and four, in the latter not as much as in the previous phases. He describes his experience as follows:

In the beginning - and I'm looking back until the year 2000 - everything was quite informal, actually I think it was by accident that patients were represented and we weren't really involved. But that improved and later we were involved in phase two, three and four, although less in phase four. Now it's even legally binding that we're involved, although missing resources partly prevent us from involvement.

(7) Integrated Planning

The healthcare reform 2005 led to the renewal of the Austrian hospital plan with its fixed targets. The Austrian Structural Plan for Health (ÖSG) is supposed to develop a framework for all sectors with ample room for regional adaptions in the so called Regional Structural Plans for Health (RSG), enacted by the provincial health funds. Due to the split in competencies, SHI and the provinces are expected to make the necessary adjustments in their respective spheres of action according to this RSG. However, the central planning instrument ÖSG managed only in 2010 to make first plans for the outpatient sector and still leaves some areas untouched. What is more, the ÖSG is subject to the wishes of all stakeholders by the means of the Federal Health Commission or direct calls to the Austrian Planning Institute for Health. The nature of the ÖSG is also disputed, as it is not a law or ordinance, but only indirectly legitimised, e.g. by the 15a-agreement or the hospital payment system LKF, which demands certain criteria to be met in order to be eligible for the reimbursementof costs for some services. The RSGs vary in terms of quality and degree of consensus.

Most of the interviewees are of the opinion that the introduction of the Austrian Structural Plan for Health was a first step in the right direction. Nevertheless, a stakeholder criticises the missing linkage to responsibilities and consequences as the available sanctioning mechanisms have never been applied. A sickness fund representative points out that these plans fail to be demand-oriented.

It was an impulse in the right direction, but I don't know whether the patient noticed anything.

A government representative comments on integrated planning the following way:

Integrated Planning is important; the question though is to what extent the outpatient sector is integrated. The plans should be used to better incorporate the social security (SV). If that's working, there could really be an improvement.

(8) Missing Incentives

A lack of motivation due to missing incentives for health funds might be one reason for possible poor conceptual design and for the lack of drastic reforms. A physicians' representative also addresses the need for a more profound political change:

The alternative clearly is an administrative reform with an adjustment of competencies and a clearance, simplification and reduction of financial flows too. That would be a clear solution. I'm afraid we don't have to talk about the chances to realise that. That's the government's problem and not only in the area of health care, but as well in the sectors of education or national defence.

This lack of incentivesis accompanied by the lack of politicians' capacity, as reflected in some of the interviewees' answers:

It's all about incrementing the power of politics. No question. The principal aim is to extend the room to manoeuvre because so far, politics are quite powerless in the outpatient sector.

However, incentive problems regarding politicians and bureaucrats are omnipresent and difficult to be solved. Some interviewed stakeholders point out that an increase in transparency could result in more efficiency:

I think payers and decision-makers should be forced to more transparency. The taxpayer and the insuree should understand the system better …who offers what at what costs…and which alternatives are there. In that way, patients could increase their saying in the decision-making process.

4.2. Reformpool

As already mentioned in chapter three, there was a hesitant start of Reformpool-activity followed by a rise in 2007 and 2008 and a subsequent slowdown during the following years. This subsection aims to identify possible barriers and facilitators of implementing Reformpool-projects.

(1) Payers

Interviewees identify two major problems of the Reformpool-design. The first one is the missing mechanism to secure that well-performing projects are introduced into regular care, which, according to the interviewee, should have been an absolute condition. One stakeholder from the group of providers summarises the problem the following way:

"What is definitely a weakness of the Reformpool-projects is that they never evolved from the status of being a pilot project into regular care. There has hardly been a roll-out or an area-wide implementation and integration in existing structures."

A patients' ombudsman makes a similar point:

*"I was involved in the development of "Integrierte Versorgung Schlaganfall" (*Integrated Care Stroke) *in Upper Austria and it was possible to prove a reduced mortality caused by strokes – only due to organisational improvements. Unfortunately these results didn't lead to an introduction of the same concepts in other provinces. In Styria the project went really well, but got lost between the federal province and social security and has not been taken up into regular operation. The reason not to implement it in Vienna was that the retirement pension insurance benefits from it, but doesn't participate, apart from animosities between Vienna and Upper Austria in SHI."*

Reasons for not implementing successful Reformpool-projects into regular care are numerous. Firstly, thorough evaluation is often missing, thus the information needed to objectively consider introduction as a regular service is not available. An attempt to introduce a standardised controlling-tool for nationwide usage was the so called "Reformpool manager". Nevertheless, an expert stated that this particular tool focuses strongly on financial aspects and hence might not be fit to deliver an adequate basis for evaluation. He also suggested that not all answers required in this tool could be delivered at the time of evaluation, which inhibits a widespread use. For evaluated projects, the actual amount of shifts in financing of a service made regular is contested. Additionally, existing animosities and power games of payers and decision-makers act as a barrier and were also mentioned by several interviewees:

It is very exhausting to be repeatedly confronted with dishonesty and animosity… for example false arguments that were already put aside and attacking people who represent a certain position personally instead of arguing against that position.

An interviewee also stresses the importance of knowing the informal distribution of power in the process of decision-making. These informal aspects are often neglected in analysis, but can determine whether a project may be introduced or not.

The second shortcoming identified was that the 2%of total health care spending available for the Reformpool projects were not dedicated exclusively to projects.

Unfortunately, the project was designed with several flaws. The money should have been put aside.

An interviewee also mentions the lack of incentives as the available pot of money is only virtual. However, as there was no real incentive to realize a project, it was more convenient to simply leave the money untouched. An explanation for this incentive problem is also given by the economic theory of bureaucracy described in section 4.1. As the available pot is only virtual and its use has to be decided unanimously with the consent of another stakeholder, it might be more interesting on this level not to use the Reformpool-mechanism. Indeed, in the interviews we often heard of successful projects that were commissioned outside of the Reformpool. Those projects are named differently and the project-design can deviate form Reformpool-specific criteria. The federal provinces and sickness funds agree upon their share of financial contribution, or projects are conducted under the aegis of only one player. An interviewee addresses this point as follows:

In every province they have to make their own inventions; something developed elsewhere cannot be right. Furthermore, Reformpool-projects mean that there will be a change of habits, it may lead to cost containment or at least cost reduction for one group, but additional costs for the other one and the outcomes cannot be measured easily. The qualitative benefit for the patient is evident, but doesn't influence the decisions. A change would mean a loss of power.

Numerous experts are convinced that a solution to the problemsof the Reformpool would be to put aside the fund of the Reformpool and block its use for other purposes than Reformpool projects.

(2) Providers

Czypionka and Röhrling (2009) found in their analysis of Reformpool-activity that, in Lower Austria, services of general practitioners in the outpatient sector could be reduced, although consultations at outpatient specialist's practices increased. Physicians were content with quality and coverage of the projects and declared not to have experienced any negative economic consequences. In addition, there was a reduction in days spent in the hospital as well as in hospital admissions. In Upper Austria, the stroke-unit project is widely accepted among physicians.However, better information on measures, implementation, and progress among attending physicians is required. The project "Mobile Kinderkrankenpflege" (mobile paediatric nursing care) in Vorarlberg is positively assessed by physicians who would support an introduction of the project to regular care.Furthermore, there is no adjustment of regular care-funds and fee for service rates do not decrease.

(3) Patients

In Lower Austria, the evaluation showed that 95% of questioned patients would recommend the project. The Reformpool-project "Integrated Care Stroke" in Upper Austria is widely accepted among patients as well. In Vorarlberg, the project "Mobile Palliative-team" was

quite successful too, as the main goals of improving the quality of life and care among palliative patients and reduce the number of patients in palliative stations in the inpatient sector could be achieved. The intended frequency of care of about one hundred patients could not be achieved during the observation period (only thirty patients participated) (Czypionka and Röhrling 2009).

(4) Conclusions

The hypotheses of our previous publication concerning the Reformpool-activity (Czypionka/Röhrling 2009) were confirmed by the interviews conducted in the current project, and some aspects can be added. The main weaknesses of the Reformpool can be summed up as follows:

1) Virtual character of the funds
   Since the funds are not dedicated to the projects, they have to be deducted from the current operational funding. In contrast to the German system, regular tariffs are not reduced by using money in Reformpool projects. Therefore, every project is an additional financial burden in an already strained financial situation. What is more, funds willrather be used outside the Reformpool, as in this case, there is no requirement to involve the other stakeholders in the process or meet the criteria set by the Ministry of Health. These misleading incentives inhibit the development of Reformpool-projects, although capacities would be available on both the payers' and providers' side.
2) Conflicts of interest
   SHI and the province have to agree on a project. However, there rarely is a project that benefits both partners equally. To determine whether a project is beneficial for either the SHI or the province, it is not legally required to conduct a cost-benefit analysis, although it may be done on some occasions. This decision is mostly based on the perception of either party to decide if the project is profitable. The majority of good projects would allocate services to the optimal setting and thus reduce costs. The lack of cost-shifting keeps SHI and the federal state from agreeing on projects as in many cases of integrated care, costs in the inpatient sector decrease while they rise in the outpatient sector. Payer's representatives of the outpatient sector (social security intuitions) are therefore not willing to bear the additional costs. Up to now, no proper system of cost-shifting between the inpatient and outpatient sector exists, and quantifying costs saved in the inpatient sector is quite difficult. Hospitals often argue that they save only marginal costs, not average costs, as they would be left with empty beds. As the current dual financing system has been in place more than five decades, rivalry, in some cases even animosity and a lacking will to reach a consensus on Reformpool-projects seem to be deeply rooted and often determined by specific actors.
   Nevertheless, the costs the payer has to bear rise even if total costs can be reduced.

3) Uncertainty
   As providers have to bear the initial costs of project development, this framework constitutes an increased financial risk to conduct the project – after all, the commission of projects is not mandatory. This definitely reduces the willingness to set up a project in the first place.
4) Providers' interests
   For current providers of healthcare and especially their representatives, there is little incentive to engage in projects that tend to reduce costs. In fact, in our previous evaluation, we found many projects that rather expand services than reduce them, thus filling gaps in provision rather than rearranging it. What is more, there is no explicit legislation allowing deviations from collective agreements within a project. This fact can act as an additional barrier to integrated care programs as contracts between sickness funds and the chamber of physicians apply to all physicians and it is not possible to close a contract with individual providers
5) Scale
   Given the nature of far-reaching projects that are intended to change the way services are provided, they have to be seen as an uncertain investment. However, many federal provinces in Austria have fewer than 500,000 inhabitants, and the overall funds in healthcare, let alone the 1% or 2% of funds available for Reformpool-projects, are not sufficient for such an investment as projects are designed decentrally and the human capital required is very high compared to the number of inhabitants of small federal provinces. Innovation economics tells us that various attempts are needed to identify meaningful and successful new ways of healthcare provision. In addition to this, a template for projects developed at the central level and a mechanism to share findings are missing
6) Institutional factors and habits
   Important aspects concerning the Reformpool projects are institutional or habitual factors. Our interviews confirmed that in some cases ideas were rejected also because they were developed by some other institution, perceived as a rival. This is the case between some provinces and social security institutions, but also among provinces as well as within SHI. What is more, strong tensions could be detected between SHI and physicians and physician representatives. Those tensions are mainly caused by distrust (physicians may charge more services than they actually perform while feeling controlled by SHI) and missing or wrong information.

4.3. Disease Management Programmes

Several interviewees mention that the initiative to start DMPs in Austria is already a big step forward and they are convinced that the existence of guidelines will reduce variation in treatment procedures. A representative also sees an advantage in its potential to improve quality. Interviewed providers remark the following strengths of DMPs: Quality management,

the reduction of variance and the continuity of care.The existence of DMPs in Austria can be regarded as a stepping stone, despite the numerous weaknesses and barriers to integrated care programmes, resulting in low participation rates of both providers and patients. One stakeholder summarises these barriers the following way:

The problem is still the co-ordination between payers and providers, for example between the social security institutions and physicians because commitment is quite differing. From a patient's point of view the programme does not work well, it's being rejected. Physicians are at the interface and they failed to transport the DMPs to the patients. That's why it's rejected.

He emphasises the importance of transporting the information of DMPs correctly and positively to the patient. If the office-based physician opposes the DMP for whatever reason, the physician will then, of course, not encourage the patients to participate. Moreover, for a patient, physicians act as opinion leaders and most patients will stay loyal to their physicians. In this subsection, the roles of different actors will be analysed by means of interviews and literature in order to identify possible barriers and problems.

(1) Payers

As DMPs are supposed to have cost containing effects, payers should be more than interested in making them work. Even so, there are so far no incentive mechanisms for sickness funds to offer DMPs, because there is no competition or financial advantage. Many sickness funds are indebted and cannot afford to invest in new projects, although they might contribute to a reduction in costs in the longrun. In subsection 4.1, the economic theory of politics and bureaucracy and the principal agent problem are mentioned as possible explanations for existing incentive problems between payers and decision-makers. Different goals of the stakeholders involved prevent the health care system from undertaking profound reforms and introduce integrated care policies. Furthermore, informal difficulties such as animosity and competition between institutions and provinces make improvements even less likely. In the case of "Therapie Aktiv", an interview partner pointed out those animosities between sickness funds existed concerning the programme, as the Styrian and Viennese sickness funds play the major role in it.

Some failures of the DMP-design were repeatedly addressed in discussions, but until now decision-makers failed to improve the framework of integrated care programmes

What is more, an interviewee confirmed that sickness funds tend to be slow in adopting new ideas. Many of his recommendations to change the structure of the way the DMP was delivered were rejected.

(2) Providers

Providers are often accused of representing the main barrier for a proper implementation of DMPs, although they were included in the development process, as is pointed out repeatedly by the group of payers. They criticise the physician's lack of acceptance, which is in their opinion mainly based on their fear of administrative costs and of structural changes in their office.

The problem can to a certain extent be traced back to misinformation of physicians. There is, for example, a widespread prejudice among physicians that the participation in DMPs is accompanied by an enormous administrative workload. In turn many physicians refrain from informing themselves about the DMPs let alone participating in them. However, once a patient is enrolled and the initial documentation is made, the physician only has to fill in a one-page form per patient per year. Another problem is the physician's difficulty identifying his or her diabetes patients due to software problems and inconsistency. According to a payer's representative, administrative requirements were already reduced to almost half, made available electronically and now work via the physicians' software. However, the software has to be periodically maintained, resulting in increased costs.

A representative of a sickness funds sees deficiencies mainly in the physician's office management:

What is being communicated to us is that they are dealing with difficult patients and a lack of temporal resources. I think physician could at least outsource some of the work, but they have deficienciesin their office- and patient-management.

Another sickness fund representative who has visited a lot of office-backed physicians raises another issue:

Physicians, especially in rural areas, are used to having a full waiting room. They are not accustomed to make appointments once a quarter with a diabetes patient. That would be a change of habits, and a change of habit is always very difficult.

Patients' representatives as well as physicians specialised on diabetes see the core of the acceptance-problem partly in the lack of ability to treat diabetes patients correctly. Some physicians might not have the necessary training in and knowledge of the use of modern methods in measuring the blood glucose level or the accurate handling of insulin Due to documentation requirements in DMPs their shortcomings in treatment would then be laid bare. Additionally, the training offered to physicians in the course of the DMP seems to be insufficient given the complexity of the disease, but physicians might be reluctant to admit that they would require further training. A patient's ombudsman mentions that the Chamber

of Physicians itself acts as a barrier to the implementation of DMPs as well as it is convinced that its physicians can treat diabetes perfectly and hence see no need for change.

There are some cases in which patients require very complex treatment, exceeding the capacities of a general practitioner. A possible way to deal with such patients would be a transfer to second care level with diabetes specialists. For general practitioners this step could however result in a loss of patients, if the diabetes specialist offers other medical services as well (for example if the diabetes specialist is also a specialist for internal medicine). Physicians might therefore be reluctant to transfer their patients to such a second care level.

Another major obstacle is a general lack of trust between SHI and their contract physicians. An interviewee stated that the SHI are very keen on maintaining a high degree of control regarding the work of the contracted physicians. This phenomenon is especially apparent in the overly pedantic contracts for DMPs. Naturally, physicians show considerable scepticism towards concepts brought forth to them by the SHI as they are always concerned that this might just be another attempt to impose more control onto them. Interestingly enough, the same expert suggested that SHI should communicate the advantages of participating in a DMP directly to the physicians, as the Chamber of Physicians might forward only biased information to the physicians.

In order to motivate physicians to participate in DMPs, financial incentives were set, but they were not as high as in other countries (e.g. England). As stated by one interviewee, DMPs can be profitable for the physician after a certain threshold and the amortisation of investments, if the physician's practice was restructured successfully and opportunity costs were minimised:

If a physician has reached a critical mass of about 200 to 250 patients participating in the DMP, it is worth changing the organisational processes. Once they changed the process, they can cope with any number of patients and it's profitable for them.

An expert considered the financial incentive system as exhausted as these incentives did not lead to the expected participation rate of physicians.

By means of interviews with Austrian stakeholders in the field of health care, several main barriers regarding lacking incentives and possibilities to motivate physicians could be identified**.**

(a) Attitude towards guidelines

Evidence-based guidelines should ensure the implementation of medical innovations in routine daily practice and overcome the gap between evidence and practice in health care (Grol & Grimshaw, 2003).

Office-based physicians are used to working independently, following the instruction of treatment and making decisions based on the physician's professional experience and judgement. As DMPs are accompanied by guidelines and strict documentation requirements, some physicians see that as a threat to their professional independence. This might lead them to reject the participation in a DMP and to refer to guidelines as "cookbook medicine", as has already been discussed in section 4.1

Guidelines seem to be unjustifiablyill-reputed among outpatient physicians, something that becomes clear examining the DMP-guidelines closely. In individual cases it is of course possible to deviate from those guidelines. An office-based physician though, may feel undervalued as he or she is dealing with those patients at a daily base and has experience. Some might be suspicious that those people designing the evidence-based guidelines might not have the experience of dealing with diabetes patients on a one to one basis.

Czypionka and Röhrling (2009) point out that, in the Netherlands, physicians have been following specific guidelines for decades with satisfactory results and general acceptance by physicians. Furthermore, some of the guidelines are not compulsory, but merely intend to "guide" the physician. Several experts emphasise the importance for both doctors and patients to choose an apt treatment procedure satisfying both (Ärztezeitung, 2006) .

A first crucial step towards higher participation of physicians in DMPs should be to thoroughly address the physicians' dismissive attitude about medical guidelines. This could be done by designing guidelines in such a way that physicians do not feel the threat of losing their therapeutic independence and freedom. Furthermore, guidelines should always take into account the newest findings in medical research. The physicians' attitude towards guidelines may also be affected positively by a supporting stance of the Chamber of Austrian Physicians and other opinion leaders.

(b) Documentation

The documentation requirements of a DMP are repeatedly mentioned as a barrier to the programmes' success. For physicians the requirements regarding documentation in DMP seem to be highly repellent as in many cases the perceived bureaucratic burden outweighs the relatively high financial compensation. However, physicians are often incorrectly informed and think documentation would be more time-consuming than it is in practice. An interviewee raised the point that the documentation process should be fully integratedin the physician's software as up to now documentation within DMPs has been made on paper exclusively. The documentation is mainly a challenge for medical information systems. The aim should be to create a software tool that facilitates those requirements and supports

the physician in several issues such as setting target agreements for weight et cetera. Well-designed software could contribute to a paradigm shift from paper work to electronic documentation and, in turn, towards more efficient use of the available data (Beck et al. 2009).

The bureaucratic effort can be reduced by electronic data transmission. However, the software needs to be purchased, maintained and updated regularly creating additional costs. It is difficult to determine a number of physicians that are already working with electronic documentation. At the moment it is often the case that two software tools are used simultaneously, on one hand the regular physician's software and the DMP-software on the other. Integrated software would facilitate the usage and could furthermore reduce time spent on documentation. However, this is not easily achieved, since physicians use different systems for their own needs (documentation, patient organisation, archiving of diagnostic information). If the DMP-documentation is to be integrated, several software providers need to be involved and kept up-to-date. If separate software is used, some connection is needed as the bulk of information on the patient is in the physician's initial software.

Another aspect is that physicians feel controlled by these tight documentation requirements because errors in diagnosis or treatment can be identified easily. A further point raised in this context was that the physicians' incompetence to treat diabetes would be revealed.

(c) Financial rewards

Physicians receive additional remuneration for treating patients enrolled in a DMP. Among the interviewees, contradictory opinions on the effect of financial rewards on DMPs are present. The opportunity costs of providing DMPs (when the physician has to cut back on other services offered) could exceed the remuneration, effectively resulting in negative incentives. A payer's representative however spoke out in favour of financial rewards:

The incentive problem can only be solved with financial rewards; those are most effective and the dissolving of the permanent status of the contract type agreement between the social security and physicians.

On the other hand, a sickness fund representative thought that purely financial incentives were already at their limit and concluded that alternative approaches have to be conceived.

In my opinion, financial rewards are exhausted. What amount would we have to pay a physician to offer a DMP? We need another incentive, but I don't know which one.

We were thinking about facilitating the daily routine with another software tool and there are trainings to better organise the office management too.

Office-based physicians in Austria are self-employed and their services have to pay off financially. Regarding DMPs, physicians have to keep in mind not only the financial rewards for the examinations of a DMP patient, but also the opportunity costs. Instead of a DMP-session, the physician could offer a number of profitable services to other patients. What is more, the physician faces sunk costs. Re-organising thepractice and adopting the rules of the DMP will pay off only if a certain threshold of patients is reached. This is also true for the group trainings. One solution for the group trainings therefore is to organise them centrally, i.e. by mobile teams delivering them instead of the contract physicians. It would be a failure though to reroute them to other physicians, as they might take over the patients completely.

(d) Organisation of Workflows

Participation in a DMP confronts an office-based physician with organisational challenges. If the implementation of the DMP is poorly integrated in the daily routine, additional costs can incur and make the DMP to a burden for the physician. Therefore, practice workflows have to be re-organised and processes need to be standardised. For some practices it might be the best to employ a part-time assistant who takes care of patient enrolment, documentation and patient logistics.

Concerning the re-organisation of workflows, the collaboration with the receptionist and/or the medical assistant is of great importance. The assistant may prepare the DMP-patients before they meet the physician; as an example he or she could take care of removing the patient's shoes and socks, so that the physician can take a look at the patient's feet, do the weight check or measure the blood pressure in an extra room, while the next patient is waiting. Depending on the number of DMP-patients in a practice, a re-organisation can make a programme-participation profitable. This issue is raises by an interviewee too:

In the beginning, there has to be an organisational change as well as a restructuring of the physician's way of thinking. If the organisation is adjusted then it will work just fine. Some office-based physicians really re-organised their practice structure and enrolled eighty to hundred patients. Once they have routine, it is financially profitable too.

At the beginning of the participation in a DMP, a trained DMP-advisor may visit the physician's practice to help restructuring the workflows.

Regarding DMPs it could be favourable for physicians to organise in group practices and thus benefit from a reduction in cost due to economies of scale and economies

of scope. For example, they could employ an assistant for DMP patients and make joint investments that pay off faster.

Unfortunately, in Austria, contract physicians mainly work in single practice, and diabetes nurses like in the Netherlands neither exist nor is it feasible to employ them. Both factors make it more difficult to establish the DMP.

(e) Provision of patient training

The patient's first step to participate in a DMP is to take part in a group training in which he or she is trained to better understand and cope with the disease and to learn self-management competencies. It is of utter importance for the patient to understand the necessity to change his/her lifestyle regarding nutrition and exercise.

In the DMP for diabetes patients, a special training for patients needing insulin exists. The office-based physician has to organise the training units and receives financial remuneration offering them. However, at least six patients (or three needing insulin) have to take part in such a group training. In order to be able to offer those training sessions, physicians themselves have to complete a ten-hour-training. If there are only a few diabetes patients in a practice, the physician's incentive to provide training will be lower. It is possible to outsource the patient training but then the physician wouldnot receive his/her financial remuneration, and possibly lose the patient to the colleague providing the training. Latest developments allow physicians to license as a "Therapie Aktiv"-physician via e-learning. After passing the final exam, physicians can register immediately for "Therapie Aktiv". This e-learning method has the potential to facilitate the participation of physicians in DMPs.

(f) Opinion leaders and communication

The physician's decision whether or not to participate in a DMP is often influenced by clinical opinion leaders whocan be other physicians or physicians' representatives such as the Austrian Chamber of Physicians. Local opinion leaders such as experts or physicians valued by practitioners can make an important contribution to a more positive picture of DMPs. Their opinions can be spread via media channels, conferences, publications and informal meetings.

The majority of diabetes patients are under medical treatment of a general practitioner. Therefore it is essential to convince their general practitioner to participate in a DMP.

Furthermore, there is need to improve the communication between sickness funds and office-based physicians. Their relationship is often characterised by distrust, as the sickness funds check whether they really offered the services they are charging. Therefore, sickness funds have to do more than to promote DMPs; they additionally have to form the consciousness among physicians that by participating in a DMP, they offer the patient a much better treatment and contribute to a lifestyle improvement and life extension.

(3) Patients

DMPs can increase a patient's quality of life as well as his or her life expectancy significantly. Nevertheless, a participation in a DMP incurs several changes to a patient's daily routine, as goals of weight reduction etc. may have been set together with the physician.

One interviewee emphasises the hardship of a lifestyle change for the patient following the participation in a DMP:

Senior patients have diabetes mellitus type 2, and that's not without a reason; they hardly exercise and don't have healthy eating habits. But that's their lifestyle and it's very difficult to change that. If he or she is participating in a DMP, the physicians try to force the patient to take up a healthier lifestyle.

A physicians' representative thinks that people are primarily responsible for themselves. It should be neither the payers' nor the providers' duty to convince them to participate in a DMP. He emphasises the people's own accountability:

What the Austrian population does not have is health-awareness. In general, it is, therefore, necessary to increase the population's individual responsibilities.

However, an interviewee pointed out that health awareness could be raised through better information of the patients which, in turn, could induce patients to actively seek participation in DMPs.

I think the main weakness lies in the lack of information for the patients. A DMP could be presented to them in a manner that they really want to participate because it means an improvement of their quality of life. They have to demand it from their physician. But in some regions there are influencing physicians that may be in favour or opposed to a DMP. If they are opposed, they don't really inform their patients and influence other doctors, resulting in a lower participation rate. What I have heard so far all stakeholders are quite content with the DMP-outcomes.

Another stakeholder addresses the topic of the influencing physician as well:

Patients trust their general practitioner and if he or she's in favour of the DMP, they will enrol. The patient is mostly loyal to his or her general practitioner. And, why won't the physician participate? Because he or she's afraid, his or her lack of knowledge could be exposed!

In order to motivate patients to participate in a DMP, the first step is to provide broad information for them. By default, patients are in the standard treatment procedure and have

to demand explicitly to participate in a DMP. Various forms of spreading information to the patients are available, reaching from a conversation with one's general practitioner or specialist at the moment ofdiagnosis or later, telephone calls or postal information (magazines, flyers, personal letters) sent by sickness funds.

(a) Informing the patient

The most important point in delivering the information of a DMP is to transmitit adequately. The patient is more likely to participate if he or she is personally addressed and if he or she has the opportunity to ask questions. Furthermore, it is essential to clearly explain the range of benefits that result for the patient by participating in an integrated care programme.

If the patient feels like he or she is manipulated to take part in the programme, he or she might refuse to participate and even act as an opinion leader to other potential participants. That is why the mode of information and benefit-presentation has to be chosen carefully. As participation in a DMP does not involve extra fees for the patient, he or she might not value the programme as much as if it wassubject to additional costs.

An interviewed representative of the physicians in Austria is convinced that the patient is individually responsible for his or her chosen lifestyle:

I wouldn't say patients should have to be motivated, the government though should offer the opportunity of the freedom to choose and make all opportunitiesand consequences transparent.

A sickness fund representative believes that the organisation of patients in groups could be motivating:

The patient has to take a look in the mirror, how he or she will look in several years' time. Unfortunately they don't feel any immediate improvements by participating, but the effects are in the long run. The most successful concept to motivate is in group training, I think.

Regarding the provision of information to the patient, the principal-agent problem[2] can play a role again. Within the framework of DMPs, this problem is present when it comes to the point that the physician could inform the patient about participating in a DMP. If the physician believes to benefit from offering DMPs, he will recommend them to his patients but, if he generally is opposed to DMPs, he might not mention them or present them in a negative way. The physician therefore has an advantage due to his superior expertise

[2] see section 4.1(3) for more information on Principal-Agent Theory.

and the patient's confidence in him. The provision of broad information via different channels can reduce this phenomenon of asymmetric information. SHI could take action in this field by engaging patients directly, e.g. by launching a magazine to inform and educate insurees about new health programmes and the potential advantages of participation.

(b) Financial incentives

Currently there are no financial incentives for patients to participate in a DMP, although the idea of financial incentives was discussed briefly. Those incentives could consist for example of a bonus or reduced insurance contribution. However, patients might perceive such financial rewards as unjustified advantage. In general, consumers associate higher quality with higher prices, which could cause adverse effects if financial incentives are used to convince patients to take part in a DMP. Additionally, the administrative and technical efforts can be challenging and expensive.

In order to motivate patients, it is necessary to fully inform them about the existence of DMPs and the benefits generated for them. If the patients are well informed aboutthe advantages of DMPs, they may even exert pressure on their general practitioner to participate in a DMP. Otherwise the general practitioner might lose his or her patient to another physician.

(4) Conclusions

There are a number of problems for the implementation of DMPs. Concerning the institutional framework, the scepticism about guidelines and electronic information systems, both prerequisites for DMPs, make it harder to get rooted in the Austrian healthcare system in the first place. Distrust between SHI and physicians makes it harder to establish a DMP, because it might be perceived as an attempt to usurp the freedom of treatment. What is more, due to the lack of group practices or trained diabetes personnel employed by contract physicians the physician has to cope with the additional workload all by him- or herself. Financial incentives might be high in gross terms, but the physician faces opportunity costs, which are higher without the support by trained personnel. Another problem seems to be the fixed costs that imply a threshold of participating patients. The complexity of diabetes treatment is also a challenge in so far as inexperienced physicians may fear that tight documentation might reveal their inadequateness in dealing with diabetes patients and thus permanently ruin their reputation.

Payers also have little incentive to promote a DMP, as the DMP does not constitute a selling pointdue to the lack of competition between sickness funds.

5. Conclusions based on the case study

This case study reveals that most stakeholders are indeed willing and determined to improve care co-ordination for chronically ill patients. Since the health care reform in 2005 the legal base to introduce co-ordinated care programmes at the intersection of the inpatient and outpatient sector is given, but serious barriers for a proper implementation of integrated care projects still exist.

Structural problems, which are deeply rooted in the Austrian political system, pose the first major barrier for a widespread implementation of DMPs. The federalist structure is seen to be a drawback to an efficient operation of the health care system by almost all interviewees. Furthermore, the sectoral fragmentation regarding the inpatient and outpatient sector and the current financing system make it very difficult to introduce co-ordinated care projects. These issues contribute to a certain animosity and competition between the inpatient and outpatient sector, provinces and SHI. Informal issues of people in decision-making positions were repeatedly addressed to be a considerable barrier.

Another problem can be found in the design of the Reformpool. Here, several issues were identified. First, funds have to be exclusively made available to projects. Moreover, it is of utmost importance that the overall benefit to the system becomes the main criterion for adopting a project; in the current systemprojects must be beneficial for both partners, and thus promising projects are often hindered. Projects should probably be commissioned by the Federal Health Commission rather than by the provincial health funds, which might be too small in some cases. What is more, there will seldom be a project that benefits both sides. Developing a mechanism to effectively adopt successful projects into regular funding is also critical and should therefore be addressed with high priority.

Regarding DMPs, several steps are necessary in order to ensure higher acceptance among physicians and patients. Concerning the institutional framework, improvements have to be made to kick-start group practices, which form a better basis for DMPs. Specialised nurses could relieve physicians of some of their work, thus also addressing the problem of opportunity costs. Otherwise, the DMP would only crowd out other services. In the long run, it is recommendable to take measures to improve trust and cooperation between SHI and physicians as well as the relations between sickness funds.

On the payer level, some form of incentive has to be found to make DMPs more attractive for the sickness funds. New means of communication should be used to inform patients and thus increase their interest and the incentive for the providers to offer the programme.

On the provider level, physicians mainly need support that does not affect their professional pride. The issue of too few patients for training groups could be addressed by establishing

mobile teams that provide them. Professional deficits could be addressed by some form of peer system, e.g. a colleague experienced in diabetes care who can be contacted informally with questions. This might also apply to organisational issues, as physicians are not normally trained in management skills. To cope with information deficits, more efforts to inform objectively about the programme should be made. Also, it isadvisable to identify and engage local opinion leaders astheir approval will have a positive impact on the willingness of their colleagues to participate in DMPs.

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