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*Gesundes Kinzigtal (Germany)
Case Study Report*

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Abstract

The Gesundes Kinzigtal case started about ten years ago as an initiative of OptiMedis AG, a management company with a health sciences background providing integrated care, and the local physicians network (Ärztetenz - MQNK). These two organisations had the capability to convince and fully commit two health Insurance companies, AOK Baden-Württemberg and LKK, to the initiative, within one and a half year of negotiation. OptiMedis and the GP network established together Gesundes Kinzigtal GmbH, with the aim of improving the health status and the inter-sectoral quality level of the services provided, and the inter-sectoral health care experience. It also aimed to reduce the total costs of care (and earn a share of the cost savings from the health insurances involved). Since 2006, Gesundes Kinzigtal has been operating in the Kinzigtal Region in the Southwest of Germany, providing health services to about 33,000 policy holders.

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Preface

The Strategic Intelligence Monitor on Personal Health Systems (SIMPHS) research started in 2009 with the analysis of the market for Remote Patient Monitoring and Treatment (RMT) within Personal Health Systems (PHS). This approach was complemented in a second phase (SIMPHS2) with the analysis of the demand side, focusing on needs, demands and experiences made with PHS by healthcare producing units (e.g. hospitals, primary care centres), healthcare professionals, healthcare authorities and patients amongst others.

Building on the lessons learnt from SIMPHS2 as well as on the European Innovation Partnership on Active and Healthy Ageing initiative, SIMPHS3 aims to explore the factors that lead to successful deployment of integrated care and independent living, and define best operational practices and guidelines for further deployment in Europe. This case study report is one of a series of case studies developed to achieve these objectives.

The outcomes of SIMPHS2 are presented in a series of public reports discussing the role of governance, innovation and impact assessment in enabling integrated care deployment. In addition, through the qualitative analysis of 27 Telehealth, Telecare and Integrated Care projects implemented across 20 regions in eight European countries investigated in SIMPHS2, eight facilitators have been identified, based on Suter's ten key principles for successful health systems integration.

The eight main facilitators identified among these as necessary for successful deployment and adoption of telehealth, telecare and integrated care in European regions are:

- Reorganisation of services
- Patient focus
- Governance mechanisms
- Interoperable information systems
- Policy commitment,
- Engaged professionals
- National investments and funding programmes, and
- Incentives and financing.

These eight facilitators have guided the analysis of the cases studied in SIMPHS3 and a graphical representation with arrows whose length represents the relative importance of each facilitator is presented in each case study.

In addition to the above facilitators analysed in each case report, a specific section is dedicated to the analysis of care integration. It should be noted that the definition of vertical and horizontal integration used in this research is taken from the scientific literature in the field of integrated care¹ and differs from the one mentioned in the European Innovation Partnership on Active and Healthy Ageing Strategic Implementation Plan². We define horizontal integration as the situation where similar organisations/units at the same level join together (e.g. two hospitals) and vertical integration as the combination of different organizations/units at different level (e.g. hospital, primary care and social care).

¹ Kodner, D. (2009). All together now A conceptual Exploration of Integrated Care.

² http://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/steering-group/operational_plan.pdf (page 27)

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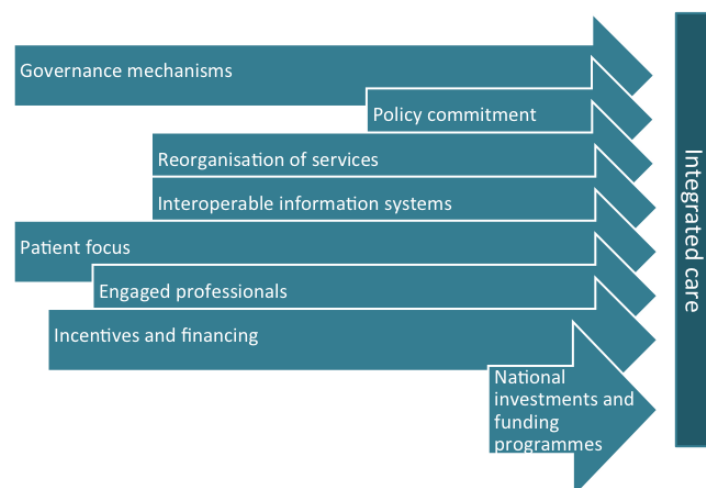
Case outlook

Gesundes Kinzigtal GmbH was established about ten years ago by OptiMedis AG and the local physicians' network (Ärztendorf - MQNK). OptiMedis AG is a management company with a health sciences background providing integrated care. These two organisations were able to convince and fully commit the two Health Insurance AOK Baden-Wuerttemberg and LKK to the initiative, after one and a half years of negotiation. Gesundes Kinzigtal GmbH aims to improve the health status and the inter-sectoral quality of the services provided, improving the inter-sectoral health care experience and reducing total costs of care (and earning a share of the cost savings from the health insurances involved). Since 2006, Gesundes Kinzigtal has been operating in the Kinzigtal Region in the state of Baden-Württemberg in Southwest Germany. It provides health services to about 33,000 policy holders in the region, which has an area of about 276 km² and a population of 71,000 habitants (the population density is about 250 inhabitants per km²).

The Gesundes Kinzigtal case is one of the few population-oriented integrated care approaches in Germany. It addresses the citizens of the whole Kinzigtal region who are insured by AOK (29.300 policy holders) and LKK (1.700 policy holders) and who can freely decide to enrol in Gesundes Kinzigtal. It focuses on preventive care management and in particular, on life style changes and disease prevention. It enables all the health care professionals that are associated to Gesundes Kinzigtal to fully integrate their efforts. Other health and social care operators can also be involved under service contracts with the company.

Gesundes Kinzigtal offers a complete network of health actors that work together in close collaboration to improve the health outcomes for the people enrolled in the initiative. Through the provision of structured health and prevention programmes it can significantly improve the health status of the citizens in the Kinzigtal region, while counteracting inefficiencies arising from uncoordinated treatment and care pathways.

The distinguishing feature of Gesundes Kinzigtal case is that despite the fact that it brought significant improvements in terms of service quality, it also reduced costs at the same time. The case has been helped by a number of factors. Strong governance mechanisms among OptiMedis and the health actors involved, strong engagement of health and policy actors, an in-depth reorganisation of services and a well-established incentive and financing scheme has helped Gesundes Kinzigtal to become a success story for integrated care.



1 Background

1.1 German social and health care services

Germany has a statutory health system, with 154 competing Statutory Health Insurers (SHI - “sickness funds”) providing services which they administer themselves. The SHI can be regarded as funds (“Krankenkasse”), more than insurance companies, to which members contribute in accordance with their resources. The system is characterised by universal coverage and covers about 90% of the German population. People who earn higher incomes can opt for private coverage through alternative private health insurance (PHI). These currently represent about 10% of the population. Health care is provided by these competing, non-profit and non-governmental SHIs or PHIs. The federal states own most university hospitals, whereas municipalities, local foundations, the churches and private companies share each about one third of the remaining acute care hospitals. Public health activities fall mainly under the responsibility of cities and counties. The various levels of government in the German federal state are not directly engaged in the provision of health care which is delegated to a large extent to self-governing bodies of the sickness funds and the provider associations. The Federal Joint Committee created in 2004 is the most important entity in this regard.

The social health system is characterised by five structural principles: 1) Solidarity, 2) Benefits in kind (beneficiaries receive direct treatment and do not have to pay upfront), 3) Financing from employers and employees, 4) Self-administration to enhance flexibility, 5) Plurality: patients can choose amongst hospitals and private providers.

The services provided through the SHI cover some preventive services and comprehensive inpatient and outpatient hospital care, physician services, mental health care, dental care, drug prescription, medical aid, rehabilitation, hospice and palliative care, as well as sick leave compensation. The benefits packages of these services are broadly defined by law, whereas the Federal Joint Committee deals with the definition of the specifics.

The public system financing is based on employer/employee earmarked payroll tax and general tax revenue. As the sickness funds are autonomous, non-profit and non-governmental bodies, they are funded by risk-adjusted capitations stemming from compulsory contributions, which are levied as a percentage of gross wages. Up until the most recent reform in 2011, the contributions to the SHI were almost equally split between employers and employees. However, given the rising cost of health care and the subsequent rise in non-wage labour costs, the employers’ share of SHI contributions started to stagnate. Nowadays, the amount paid by employers is about 7.3% and that of the employee about 8.2% of income before tax, while potential future costs are to be borne by the policy holder. The contributions to the sickness funds are pooled centrally and subsequently re-allocated to each sickness fund on the basis of a risk-adjusted capitation formula, which takes into account factors such as age, sex and morbidity.

General practitioners (GPs) and specialists (ambulatory care) are reimbursed on the basis of a fee-for-service, with fees negotiated between the sickness funds and physicians. Payments are, however, limited to pre-defined maximum numbers of patients per practice and reimbursement points per patient.

The key entities involved in the governance of the health system include the Federal Joint Committee, which has extensive regulatory power to determine the services covered by the sickness funds. In addition, the Institute for Quality and Efficiency (IQWiG) sets the quality

measures for providers and the Institute for Applied Quality Improvement in Research and Health Care (AQUA institute) supports the Committee in its function of ensuring quality of care.

GPs and specialists in ambulatory care officers are legally obliged to be members of regional associations at the Federal State level. These associations engage in negotiations with the sickness funds, act as financial intermediaries and retain the responsibility for organising care. Individuals can choose freely among GPs, specialists and hospitals. A prior registration with a primary care physician is not compulsory as the GPs do not function as gatekeepers. Hospital capacity is determined by the 16 state governments, whereby ambulatory care capacity is subject to delegated decision-making in accordance with the rules set by the Federal Joint Committee.

1.2 Kinzigtal region

The Kinzigtal region in Baden Württemberg has a territory of about 276 km² and a population of 71,000 inhabitants, with a density of about 250 habitants per km². Baden Württemberg has about 10.5 million inhabitants and an annual GDP of more than €376 billion, and an annual GDP per capita of €35,800. The average age of the Kinzigtal population³ is about 47.4 years for females and 42.5 years for males, with around 17.8% of the female population and around 11.5% of the male population aged 75 and older. It is estimated that the average age of the population in Baden-Württemberg will have increased from 44 to 50 years by 2030. The key characteristics of the Kinzigtal region and its health care system are summarised in

Table 1.

Table 1 Kinzigtal region health care system characteristics

Country	Germany
Territory	Kinzigtal region
Geographical coverage km²	276
Inhabitants per km²	250
Number of inhabitants (2012)	71,000
Life expectancy at birth years⁴	79.2 males – 84.6 females
Regional GDP (2012), billion €	2.5
Regional GDP per inhabitant (2012) €/inhabitants	35,800
General Practitioners /1.000 inhabitants (2010)	0.65
Specialists /1.000 inhabitants (2010)	7
Regional Budget for Health services management (2013), billion €	0.23
Health care professionals / 100.000 inhabitants	789
Regional health care budget, € per inhabitants (2013)	3,428
Hospital beds (2012)	372
Hospital beds/1.000 inhabitants (2012)	5.4

³ Source: www.alter-nativ.net/wDeutsch/pdf/130918_stunder.pdf

⁴ <http://www.statistik-bw.de/pressemit/2013035.asp?201302> (data for Baden-Wuerttemberg 2012)

1.3 Gesundes Kinzigtal case

The Gesundes Kinzigtal integrated care experience (henceforth “GK” case) started in Germany in 2006 after the decision by two insurance companies (AOK Baden-Württemberg and LKK), the local physician network (Ärztetzet MQNK) and a management company with a background in health sciences OptiMedis AG (Hildebrandt, 2014a) to enter a cost-saving agreement to manage the health services for their 30,000 policy holders. To achieve this, the local physician network MQNK and OptiMedis established Gesundes Kinzigtal GmbH, a regional care company that is now operating in the Kinzigtal Region in the Southwest of Germany.

The objective of GK is to foster patient self-management and enhance shared-decision making about individual treatment plans and goal-setting agreements between physicians and citizens/patients. Currently 58% of the GPs and specialists (about 500 health care professionals, including their employees) in the region are partners of Gesundes Kinzigtal GmbH and nearly 10,000 patients⁵ (30% of the policy holders of AOK and LKK) have already opted for the free membership offered by the care company. The members remain free to choose their health care providers, as it is customary in the standard health system but they receive additional health care services, coaching, and (free) prevention programmes.

The German health system is characterised by very limited information exchange among GPs and specialists. In this context, the GK case study is an interesting example of how a fully committed network of physicians, together with a health management company, have established a win-win agreement with health insurance organisations to provide cost-effective and better quality services to people in Kinzigtal.

Deployed in Southwest Germany, GK is one of the few population-oriented integrated care approaches in Germany, organising care across all health services sectors. This integrated care approach is run by a regional health management company (Gesundes Kinzigtal GmbH) owned by the physicians’ network in the region (MQNK). Gesundes Kinzigtal GmbH provides care services under a shared-care contract with two statutory health insurers (LKK and AOK). The health care services are provided to all the policy holders of the two statutory insurance companies residing in the Kinzigtal region and who are enrolled, on a voluntary basis, in Gesundes Kinzigtal GmbH. The services are based upon the following principles:

- Individual treatment plans and goal-setting agreements between physicians and patients.
- Enhancing patient self-management and shared decision-making.
- Chronic care model (based on Wagner et al. 2001), patient coaching and follow-up care.
- Providing the right care at the right time.
- System-wide electronic patient records.

The care services have developed since 2006 – when Gesundes Kinzigtal was established – until 2014 as outlined in Table 2. In the initial period (2006), the health company concentrated its efforts on chronic disease management (e.g. heart failure, diabetes) and non-communicable disease (e.g. breast cancer). At the same time the company has spent

⁵ The number of enrolled policy holders has increased from 4,402 in 2008 to 6,335 in 2009 and 9,473 in May 2014 (Hildebrandt, 2014)

time and efforts in training doctors in shared decision-making and patient empowerment, a fundamental precondition to improve patient activation and health literacy. In the first phase, initiatives were launched in an attempt to improve the cooperation among groups of practices and across tiers of health care (targeting hospitals and physiotherapists). From 2007 onwards, the health company went on to implement preventive care actions (e.g. promotion of lifestyle intervention for patients with metabolic syndrome, smoking cessation programmes, active health promotion for ageing population, osteoporosis prevention). In 2010, the company started implementing a centralised Electronic Health Record to support cooperation across GPs' practices and it extended its preventive health care actions to depression. More recently (in 2011 and 2012), the health company started to focus on health promotion in small and medium-sized enterprises and the unemployed, on reduction of pharmacological treatments and on increasing drug adherence. Some specific prevention actions aim to prevent the risk of hypertension and early detection and treatment of rheumatic disorders.

Table 2: Services provided at Gesundes Kinzigtal

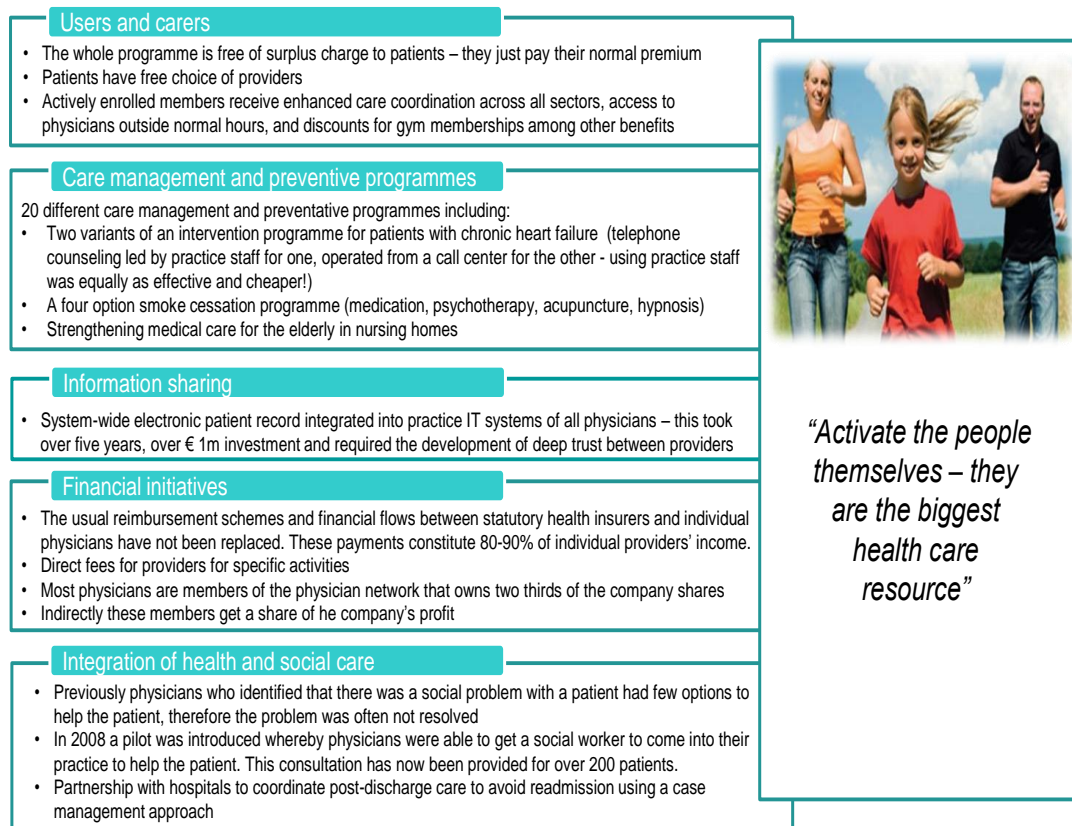
Years	Activities of Gesundes Kinzigtal
2006	<ul style="list-style-type: none"> • Chronic heart failure management • Diabetes mellitus type II management • Breast cancer management • Shared decision training
2007	<ul style="list-style-type: none"> • Lifestyle intervention for patients with metabolic syndrome • Quit smoking programme • Active health promotion for elderly • Intervention by psychotherapists/psychiatrists in case of acute personal crises • Coronary heart disease management • Start of electronic integration of the Patient Health Records
2008	<ul style="list-style-type: none"> • Prevention of osteoporosis/osteoporotic fractures • Social case management • Asthma management • COPD management
2009	<ul style="list-style-type: none"> • Medical care for the elderly in nursing homes • Gesundes Kinzigtal gets moving initiative • Patient university classes initiative
2010	<ul style="list-style-type: none"> • Start of planning a health and fitness training centres • Better management of major depression • Start of central electronic patient records
2011	<ul style="list-style-type: none"> • Health promotion for small and medium-sized business and their employees • Physical exercises and treatment for patient with back pain • Early detection of treatment of rheumatic disorders • Hypertension and prevention of renal diseases • Improving medication adherence of elderly patients by distributing unit dose blisters
2012	<ul style="list-style-type: none"> • Coaching high cost patients • Health promotion programmes for the unemployed • Reduction of antibiotic medication for various indications • Music therapy for patients with chronic pain problems

Source: Hildebrandt, 2012

The GK initiative has provided a new and more integrated approach to health care which is in continuous evolution. It has led to greater efficiency at organisational level and to a decrease in overall costs compared to German averages.

The approach consists of an innovative model of health care integration which combines the reorganisation of services, IT-integration and public health and prevention measures (Reime et al., 2014). The initiative currently includes about twenty preventive and health promotion programmes for specific conditions, among which are chronic health failure, smoking cessation and medical care for older people in nursing homes. The cost of the programme is fully covered by the yearly insurance premium paid by the AOK and LKK policy holders. The programme foresees a certain level of integration with social care services (through case management) and with some hospitals. These hospitals have signed an agreement with Gesundes Kinzigtal GmbH for post-discharge care to avoid readmission using a case management approach.

Figure 1: Gesundes Kinzigtal overview



Source: Hildebrandt, 2010

2 Integrated care analysis

2.1 Dimensions of integration

As explained in the description of the GK service, the initiative started in 2006 and is currently offered to all the policy holders of AOK (29,300 policy holders) and of LKK (1,700 policy holders), who can freely decide to enrol in Gesundes Kinzigtal. About one quarter of all AOK and LKK policy holders are enrolled in the programme. All together they represent about 15% of the entire population of the Kinzigtal region (69,000 inhabitants). In terms of social status, the policy holders of these insurance companies are mostly from the lower socio-economic classes. As to targeted conditions, the GK intervention addresses all kinds of pathologies, the main focus being on preventive care management and, more specifically, life style changes and disease prevention.⁶ The figure below shows the current services provided to the citizens of Kinzigtal region enrolled in the programme, in which the services are grouped in three pillars.

Figure 2: Actual services provided by Gesundes Kinzigtal



Source: Pimperl et al., 2013

The first pillar is about services for primary prevention and public health, which consists of the development of tailored activities in cooperation with sports clubs for the whole Kinzigtal population, and more specifically for older people and people at risk of suffering from health problems. Around 37 sports and social clubs, as well as 6 fitness clubs currently participate in the GK initiative. They offer subscription discounts and carry out other promotional actions, provide lectures on health topics (more than 3,500 participants

⁶ These foci are coherent with the Gesundes Kinzigtal incentives scheme for its associated health professionals. As explained in Chapter 4, the associated GPs working for Gesundes Kinzigtal GmbH are partially paid on the basis of the margins generated by the "sickness funds management" and therefore, if less care is required by the enrolled policy holders, more savings can be achieved. This is also highlighted in the impact section, which discusses the impact of the life style management and disease prevention programmes of the GK initiative which have been evaluated in terms of quality of life outcomes for the citizens of the Kinzigtal region.

over the last few years) and offer educational and training courses, and exercises. The second pillar deals with services targeting secondary prevention, whose aim is to reduce the progression of diseases and support self-management techniques. Finally, the third pillar covers other services like corporate health promotion activities targeting the employees of small and medium-sized local enterprises, planning their own medical exercises and training facilities, and cooperation with municipalities for the promotion of health and fitness activities. Finally, it also includes benchmarking of health care providers using indicators of the quality and health outcomes of the care they deliver to their patients. To support the associated GPs in the provision of the services, Gesundes Kinzigtal GmbH has established a strong “functional integration” of all the back-office services and support functions enabling the GPs practices. However, “service integration” is the most important and well developed type of integration that has been identified in the GK case study.

Gesundes Kinzigtal has implemented its services during recent years by drawing up a number of service contracts with different local actors of the health and social care ecosystem (see Figure 3). So far, service integration has been achieved among:

- 50% of the family doctors and specialists who work in the Kinzigtal region.
- 6 local hospitals.
- 7 physiotherapists.
- 11 nursing homes.
- 4 ambulatory nursing agencies/psychosocial agencies.

Further cooperation has been established with pharmacies, local enterprises, fitness centres and voluntary associations. The partnership contracts established with the organisations listed in Figure 3 help promote professionals' integration, and at the same time common objectives and working values (normative integration). This is particularly true of the GPs, physiotherapists and nurses associated with the Gesundes Kinzigtal GmbH. In contrast, organisational integration among the associated GPs, local hospitals and social care organisations is still not completely developed despite the growing ecosystem value network around the GK initiative through service contracts and close cooperation with regional and local pharmacies, hospitals units, local enterprises, and voluntary associations.

Figure 3: Ecosystem value network for GK services⁷

		No
Providers with partnership contracts	Family doctors, specialists, psychotherapists ... around 50% of those working in the area	60
	Staff in the provider offices	190
	Hospitals ...around 85% of all cases	6
	Physiotherapists	7
	Nursing homes	11
	Ambulatory nursing agencies / psychosocial agencies	4
Further partners in cooperation	Pharmacies... around 70% of all p.	16
	Self help, local enterprises, local government/administration	16
	Fitness-Centers ... ca. 80%	6
	Voluntary associations, sports clubs, social clubs, local industry and small enterprises	42

Source: Hildebrandt, 2010

⁷ In 2010 Gesundes Kinzigtal concluded providers contracts with 52 physicians' practices, 6 hospitals, 3 pharmaceutical companies, 9 nursing homes, 4 ambulatory home health agencies, 5 physiotherapists, 14 pharmacies, 22 health and sports clubs and 6 gyms (Hildebrandt et al., 2010).

In terms of breadth of integration, full integration of all health care professionals associated with *Gesundes Kinzigtal* and with the health and social care operators under service contracts with the company is being promoted. To achieve this goal, the company is working on enlarging the network of physicians, therapists, hospitals, nursing homes, and health-related businesses such as pharmacies, gyms and local associations which operate in close collaboration to enhance clinical treatment paths and improve patients' health status.

This high degree of integration is implemented by *Gesundes Kinzigtal* through consolidation of responsibilities, resources and financing activities for the associated GPs, and by ensuring a continuous level of care for the enrolled patients through service contracts with the local hospitals and the other actors of the health and social care management process of the *Kinzigtal* region.

The integrated care model deployed by *Gesundes Kinzigtal* thus comprises the following elements:⁸

- A regional management company which cooperates with the local physician network to deploy integrated care services on a local level.
- Cross-sectoral care – including an IT network with electronic patient data (CGM Net powered by OptiMedis), case conferences, and jointly developed treatment pathways.
- Health and care management in addition to Disease Management Programmes (DMPs), coaching for patients with complex problems, prevention programmes for children and families.
- Activation of patients through shared decision-making, agreed therapeutic targets, patient advisory committees.
- Targeted care governance structures through efficient, standardized processes, alignment and analysis of data, physicians' information systems and basic patient data.
- Participation of regional actors (e.g. associations, schools, businesses and communities) in the health network.
- Corporate health-management to promote prevention and health in companies.
- Scientific evaluation based on a counterfactual approach, carried out by a research institute of the University of Freiburg.
- Safeguarding of community-based care through the “practical future” funding programme for GPs, and training programmes for other professional groups.
- Collaboration with the statutory pension insurance.
- Innovative financing model with incentives.

2.2 Impact

To measure the impact of the activities of *Gesundes Kinzigtal*, LKK and AOK, together with *Gesundes Kinzigtal*, have invested significant resources since 2006 in developing a set of qualitative and quantitative evaluation modules, complemented by OptiMedis and *Gesundes Kinzigtal* with quasi-experimental, population-based controlled cohort trials (Hildebrandt et al., 2010; Waldeyer et al., 2010; Siegel et al., 2013; Pimperl et al. 2013, Köster et al, 2014).

⁸ OptiMedis AG (2014) . http://www.OptiMedis.de/index2.php?option=com_content&do_pdf=1&id=75

One of the most important studies started at the beginning of the service provisioning (2006) was the OUM study (Over-Under-Mis-use of services), which was conducted by the PMV research group (head: Dr. Ingrid Schubert) at Cologne University. This study aimed to compare the service quality of Gesundes Kinzigtal with the normal practice.⁹ The evaluation is focused on generic indicators such as prevalence of multi-morbidity, multi-medication, proportion of generic drugs, and prevalence of problematic drug prescriptions (such as long-term prescription of benzodiazepines). The study is still in progress and is updated annually. The latest data available from 2011 was published in 2014. Köster et al (2014) conclude that:

- a) There was no selection bias towards healthier policy holders: on the contrary, the least healthy people were the first to enroll in the Gesundes Kinzigtal integrated care programme.
- b) Gesundes Kinzigtal has led to savings compared with normal care in particular in terms of pharmaceutical costs, hospital costs and rehab/home care costs; a small increase was registered in physiotherapy.
- c) No reduction of quality of care has been observed in Gesundes Kinzigtal, contrary to what is sometimes written about managed care in international scientific publications. In fact, the opposite is true: over-, under- and mis-use of services have been reduced and GK was associated with an increase in quality of care.

The detailed evaluation showed, for example, that in every year during the observation period, the prevalence of fractures among patients diagnosed with osteoporosis (ICD-10: M80, M81) was at least 10% lower in the Gesundes Kinzigtal group compared with the age-adjusted control group receiving normal care. Between 2004 and 2011, prevalence remained more or less constant in the Gesundes Kinzigtal group while it increased by ca. 10% in the control group (Köster et al, 2014).

Furthermore, other studies have demonstrated that the improvement in health quality indicators (e.g. morbidity reduction; incidence and prevalence of chronic disease reduction) for the enrolled individuals, compared to other individuals in the region and in the whole of Baden Württemberg, are due to the effective trans-sector organisation of health care services and increased investment in well-designed preventive programmes undertaken by Gesundes Kinzigtal (Hildebrandt, 2011). Key impacts can be summarised as follows:

- In relation to hospitalisation reduction, Hildebrandt (2012) reports evidence that the number of hospitalisations among LKK policy holders in the Kinzigtal region increased by 10.2% between 2005 and 2010, while the increase in the comparative group representing the whole Baden Württemberg region reached 33.1%, i.e. three times more than for the LKK policy holders enrolled in Gesundes Kinzigtal.
- As regards morbidity reduction costs, Hildebrandt et al. (2012) showed a substantial morbidity-adjusted efficiency gain of more than 16% of the total costs compared with the Kinzigtal population not enrolled in Gesundes Kinzigtal, for the years 2007-2010.

A randomized control trial (Schmitt et al., 2011; Hildebrandt, 2012) on the mortality rate of patients with heart failure, repeated in 2014, shows that mortality among

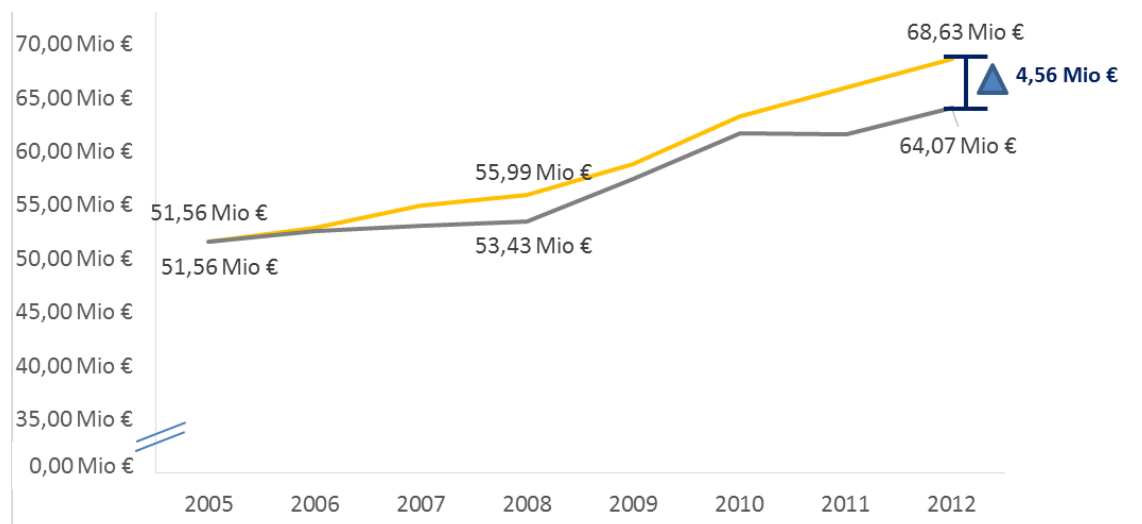
⁹ Although it was not performed through a randomized control approach, according to Siegel et al. (2013): “...it demonstrates slight tendencies of a comparatively higher and comparatively rising health care quality in the intervention region in respect to normal practices”.

patients from Gesundes Kinzigtal is 10% lower than in the propensity score matched control group. The evaluation of mortality is based on the comparison between policy holders enrolled in Gesundes Kinzigtal (years 2006-2010) and non-participants from the same region. Using a quasi-experimental study design (propensity score matching), which is based on routine data of the two participating health insurers AOK and LKK Baden-Württemberg, eliminated the bias of the non-randomized group assignment. The comparison of standardised differences before and after the propensity score matching reveals that mortality rates are significantly lower 16 quartiles after enrolment. Furthermore, those who died in the intervention group were on average 1.4 years older than those who died in the control group.

- In terms of health care expenditure, Hildebrandt (2012) provides evidence that in 2010 the per-capita expenditures of an LKK policy holder in Gesundes Kinzigtal vs. those in the control group have decreased by about 16.9% compared with 2005

After about 8 years of activity, the evidence produced by AOK and Gesundes Kinzigtal on the basis of the 2006-2014 data shows that the integrated care management process introduced in the region by the Gesundes Kinzigtal initiative has led to a net annual saving for the health insurance companies (AOK and LKK) of close to 3%, considering all policy holders in Kinzigtal, whether enrolled or not. The following graph shows the positive difference in the development of overall costs of care in Kinzigtal compared with the standard morbidity-adjusted costs of care of a similar population based on average costs in Germany (OptiMedis 2014). The figures have been indexed to 2005.

Figure 4: Evolution of overall cost of care



Source: OptiMedis 2014

The effectiveness of the GK initiative can be measured through specific indicators for health outcomes (measured through e.g. mortality rate), economic outcomes (e.g. development of contribution margin) and patient experience (e.g. number of people changing health insurance). The GK initiative has led to a significant reduction of the mortality rate of the enrolled policy holders in comparison with the rest of the citizens living in Baden Württemberg. A recent measurement shows a substantial reduction of the mortality rate of the enrolled policy holders and an overall increase of the average age at death of 1.5 years. Simultaneously, the services have led to an increase of the contribution

margin of *Gesundes Kinzigtal* of about €151 per enrolled person over two years, with a 55% reduction in the number of policy holders who left the sickness funds in the same period. Further, there was a significant reduction in the number of people leaving the insurance company for those enrolled in the GK initiative compared to people not participating, which reflects increased member loyalty.

The University of Freiburg carried out a qualitative analysis in 2013 as part of the “GEKIM-Study” (Siegel A., et al, 2014), a study with a representative number of patients per practice. Through a survey, 338 patients were asked whether they lived less healthily than before, just the same as before or more healthily than before. Interestingly the answers correlated with the degree of participation in *Gesundes Kinzigtal* and the interventions implemented by *Gesundes Kinzigtal*:

- All respondents: 26,1 % answered “altogether, I now live more healthily”
- Chronically-ill people: 31,7 % answered “altogether, I now live more healthily”
- Participants in GK programmes: 37,6 % answered “altogether, I now live more healthily”
- Participants who had agreed jointly with GPs on health objectives: 45,4% answered “altogether, I now live more healthily”

The highest impact was found among the patients who also reported having made a joint agreement on health objectives together with their general practitioner. These joint agreements on health objectives are offered, funded and promoted by *Gesundes Kinzigtal* for those patients who are at least at moderate risk of developing chronic diseases, already have some chronic disease(s) or patients whose lifestyles are associated with a risk of developing chronic diseases.

2.3 Drivers and barriers

One of the key drivers of the GK case was the health care legislation that was implemented in Germany at the beginning of 2000. For the first time, individual physicians and physician networks were able to become direct contractors of the health insurance companies through selective contracts. The problem of lack of funding for initiating integrated care activities was answered by the Statutory Health Insurance Modernisation Act (GKV-Modernisierungsgesetz) adopted in 2004, which allowed Germany’s health insurance companies to spend up to 1% of their physician and hospital expenditures on integrated care programmes (getting the same amount back from the other providers). This legislation allowed the setting up of about 6,000 contracts during the period 2004-2008. The budget dedicated to these purposes was about €680 million per year. Unfortunately, when the financing period expired at the end of 2008, the number of initiatives of this type decreased. Around 20% of the contracts which had been established were immediately dissolved or not renewed (Amelung et al., 2012). However a new study from 2014 using official data came to the conclusion that total investments in integrated care amounted to €1.45 billion in 2012 and the number of selected care contracts is growing (Straub et al., 2014).

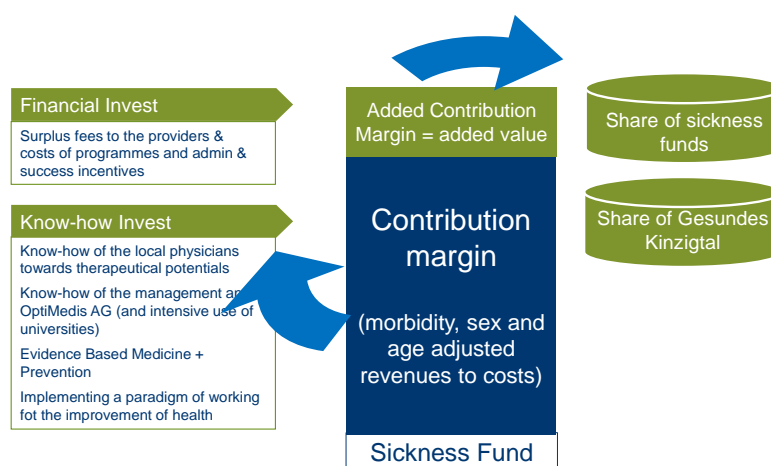
Table 3: Special forms of provision of health care in Germany

	Group contracts	Pilot projects	General practitioner-centred models	Particular outpatient care	Integrated care	Disease management programmes
Legal basis	§ 73a SGB V	§§ 63–65 SGB V	§ 73b SGB V	§73 c SGB V	§ 140a-d SGB V	§ 137 f-g SGB V
Voluntary basis of the offer	X	X		X	X	X
Interdisciplinary	X	X		X	X	X
Cross-sector		X			X	X
Selective transactions possible		X	X	X	X	
Obligatory evaluation						X

Source: Amelung et al, 2012

Another key driver of the GK Integrated Care case was the establishment of an organisation whose pivotal role was the redesign of primary care, population health management and financial management to facilitate system integration. Gesundes Kinzigtal cooperates with the sickness funds of AOK and LKK, two health insurance companies operating in Baden-Württemberg and which to a large extent insure the lower class population. However, thanks to the integrated care approach implemented, Gesundes Kinzigtal GmbH takes over the risk associated with service provisioning on behalf of the care providers, with the overall objective of producing better health outcomes at lower costs (in a context of rising costs for the normal care provided according to standard practice in Germany).

In addition the monitoring and evaluation system and the reimbursement scheme implemented in Gesundes Kinzigtal have been identified as two other drivers of integrated care deployment. On the one hand, since the beginning, Gesundes Kinzigtal has put the emphasis on gathering and monitoring data from all the health providers involved in order to be able to assess costs, claims, patient demands, diagnosis and treatments. The resulting analyses are shared and discussed with all the GPs involved so that they can improve their medical practice (e.g. they look at how many of their chronic heart failure patients have received adequate medication in line with the defined care pathway). Gesundes Kinzigtal has also developed a shared-revenue model that promotes additional incentives for health professionals. The sickness funds are managed by Gesundes Kinzigtal GmbH to provide services, and part of the generated margins is reinvested in training of local physicians, OptiMedis personnel and for innovative programmes.

Figure 5: Revenues share model in Gesundes Kinzigtal

Source: Hildebrandt, 2012

Gesundes Kinzigtal generates its revenue through the share it gets from the relative cost-saving for the insurance companies. The associated health care professionals receive their normal fee plus targeted additional fees through Gesundes Kinzigtal, equivalent to about 5-10% of the revenues generated normally in the physician's office. Nevertheless, health providers of Gesundes Kinzigtal seem to be only partly interested in economic gains or in maximizing their own profit. They value other elements as well, such as good reputation and social approval. It is important to note that in order to provide its services and sustain service provision in the long-term, Gesundes Kinzigtal invests a significant amount of money to attract young doctors to the region by offering training positions, for the type of training required for their medical qualifications.

Lastly, trust between providers is another important driver. According to the stakeholders consulted, a lot of time and effort was needed to establish good collaboration among health providers and to overcome the communication barriers that seem to affect medical practice in Germany. These barriers consequently increased costs for patients and for the healthcare system in general (e.g. duplication of effort, unnecessary exams such as X-ray exams and unnecessary medications which are sometimes dangerous for the patients themselves).

The Gesundes Kinzigtal integrated care deployment has also been hampered, as is the case in the rest of Germany, by the following barriers.

- **Data protection and privacy.** This is an important issue since without patients' written consent to each health care professional with whom he/she interacts, the patient information cannot be shared and used.
- **Failure of traditional hierarchical concepts of management.** Political, institutional and organisational resistance to the development of new types of shared decision-making and guidance for patients and physicians.
- **A reimbursement scheme based mainly on fee-for-service** that still constitutes the main source of providers' income. The competition for contracts for the provision of care is still very limited in the German healthcare, as the system is dominated by mutual and uniform contracts between the traditional associations of statutory sickness funds and service providers.
- **Lack of cooperation across disciplines.** The activities of German physicians (in comparison with other countries) are characterised by their wide spectrum, i.e. they include tasks that could be carried out in a more affordable and possibly even more suitable way by other care professionals.
- **Lack of management skills and transparency of economic and quality outcomes.** These barriers relate to the lack of measurement data and impact evaluation processes. Currently, the policy holders can hardly judge the different services offered by health insurance companies because of a lack of information. If new standardised forms of outcome evaluation were adopted, there would be more transparency about the value in terms of care of the various services which would allow comparison and thus evaluation of the way in which the sickness funds are managed by the different insurance companies, and which care models are the most effective for each patient.
- **Lack of coordination across primary and secondary health care actors.** According to Schoen et al. (2011), 23% of the patients surveyed in Germany stated that the flow of information between the service providers is insufficient. 35% complained that specialists are not sufficiently familiar with the disease history of

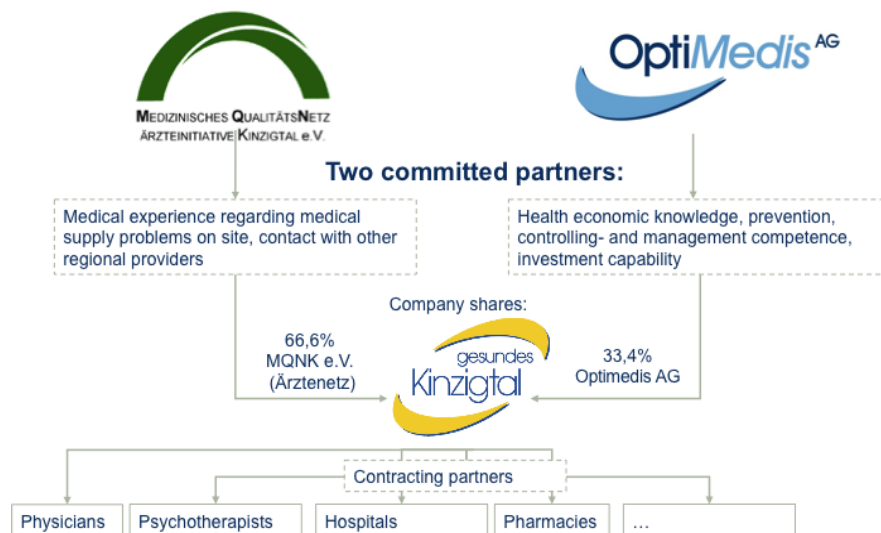
the patient or that the primary care providers are not informed about the treatments prescribed by specialists. This situation also leads to an increase in health costs e.g. because of unnecessary duplication of examinations.

- **Integration of health, social, and care communities.** It is difficult at political, institutional and organisational level to understand that health is not only the outcome of a purely medical intervention. In order to achieve health, additional public health and health promotion initiatives oriented towards all the aspects of life need to be set up.

2.4 Organisation, health professional and patients

As mentioned in the description of the case, this integrated care approach is run by a regional health management company (Gesundes Kinzigtal GmbH) owned by the physicians' network in the region (MQNK) and by OptiMedis AG, a company with a background in health sciences and specialised in health care management.

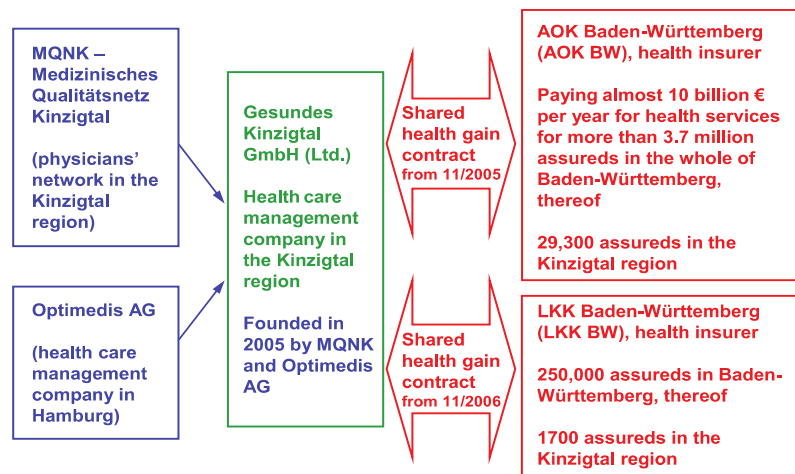
Figure 6: Organisations involved



Source: Pimperl et al., 2013

Gesundes Kinzigtal GmbH provides care services under a shared-care contract with two statutory health insurers (LKK and AOK). The health care services are provided to all the policy holders of the two statutory insurance companies residing in the Kinzigtal region and who are enrolled, on a voluntary basis, in Gesundes Kinzigtal.

Figure 7: Kinzigtal stakeholders



Source: Hildebrandt et al., 2010

According to the experts consulted, the improvement of the self-care capability of the policy holders also has short-term benefits such as more economical pharmacotherapy for the patients and economic savings in drug purchasing, that is if the latter is managed by one organisation which is entirely responsible for all the health care providers in the region. Therefore, health professionals have clear incentives to collaborate, avoiding the traditional silos in the fragmented German health system. This collaboration is perceived as positive not just in terms of the economic benefits but in terms of reputation and patients' quality of care and satisfaction.

2.5 Information and Communication Technologies

According to the experts consulted, the idea of implementing mutually compatible IT systems has remained a utopia for the German health care, with 68% of primary care physicians working as sole practitioners and an additional 31% in small group practices.

Until 2010, OptiMedis SA developed a DataWareHouse (in conformity with privacy legislation) for Gesundes Kinzigtal, which contains the contracting health insurers' data such as basic claims data (age, sex, residence, duration of insurance contract), data on diagnoses and services in ambulatory care, data on prescriptions made by office-based physicians, hospital data (admission/discharge diagnoses, further diagnoses, length of stay, treatments, surgeries, DRG, etc.), sick leave data, data on therapeutic appliance and long-term care. The data analysis (predictive modelling, disease cost analysis, variance analysis on the services provided, benchmark reports) is used for planning intervention programmes and for monitoring and improving the quality of the services and health outcomes.

Simultaneously, Gesundes Kinzigtal GmbH has been working since 2007 on the development of a shared electronic patient record system that would allow each physician to access information about what other practitioners ordered, diagnosed or prescribed for their patients. According to Reime et al. (2014), next to the DataWareHouse, currently all partnering physicians of Gesundes Kinzigtal have access to the information stored in the EHR not only by themselves, but also by other providers. As a precondition, the patient has to give written consent to each physician to allow access to his or her information before the physician is entitled to access it.

The system was developed between 2006 and 2007 on the basis of an ad-hoc solution provided by a local provider in the Kinzigtal region. The main aim was to overcome the

existing fragmentation in the health care practices associated with *Gesundes Kinzigtal* (Reime et al., 2014). Despite being technically functional, the solution was not sufficiently satisfactory and was therefore only partially adopted by the practitioners. In 2012, the management of *Gesundes Kinzigtal* decided to replace this initial solution with a more sustainable solution that could be integrated better with the different software systems used by the physicians. Implemented in the second half of 2013, the new system is now working in about 85% of the ambulatory physician offices. Nevertheless, usage is still lagging behind and needs to be strengthened and improved, as only about 3,000 of the enrolled patients are activated in the system at the moment. Several incentive programmes are underway to encourage physicians and patients to make more use of the system-wide electronic patient record.

Among the issues related to the ICT solution adopted by *Gesundes Kinzigtal*, which need to be solved in the near future, we find interoperability with hospitals information systems, compatibility with mobile health solutions from smart phones, interoperability with the information systems of the social care organisation and the degree of openness of the systems to relatives, friends and the community where the patient lives.

2.6 Governance

The Governance of the GK case is composed of *Ärztendorf MGNK*, the local physician network which owns 66.3% of *Gesundes Kinzigtal GmbH* and *OptiMedis AG*, a health management company which owns the remaining 33.4% of *Gesundes Kinzigtal GmbH*. Up to now, the *Gesundes Kinzigtal* initiative cooperates with two statutory health insurance companies:

- **AOK Baden-Württemberg**. The biggest health insurance company in the Southwest of Germany. It is a not-for-profit insurer which belongs to the German statutory health care system. As of 2014 it served around 31,500 policy holders in *Kinzigtal*.
- **LKK Baden-Württemberg** (whose name has changed into *SVLFG Baden-Württemberg*). This health insurance company only serves people who have some connection to the agricultural and forestal sector. As of 2014 it had about 1,500 policy holders in *Kinzigtal*. It has a special role in the German statutory health care system.

Until 2013, *Gesundes Kinzigtal GmbH* agreed to an exclusive contract with these two insurers, but it is currently negotiating similar contractual agreements with other insurance companies as well.

In June 2014, AOK and *Gesundes Kinzigtal GmbH* publicly announced that they were both interested in extending the current contract which runs until the end of 2015. AOK Baden-Württemberg and the *Gesundes Kinzigtal GmbH* intend to continue the contract from 1st January 2016 for an unlimited period of time and have signed a letter of intent in this respect. The terms of the contract will be developed further and will incorporate the experience of recent years. This includes the direct connection of integrated care in the *Kinzigtal* with the successful nationwide AOK contracts for GP-centred care and the specialist programmes.

The governance and management structure in *Gesundes Kinzigtal* consists of a combination of two advisory councils to the Director (named by *OptiMedis*), a patient board (patient

representatives are elected in membership meetings of enrolled patients) and a physician board (physician representatives are elected by MQNK). For quality assurance purposes and in order to represent all the cooperating health care providers, a provider board is elected by the different professions which are partners in Gesundes Kinzigtal. It currently includes one hospital, one nurse, one physiotherapist and two physicians.

Next to physicians and specialised health care staff, Gesundes Kinzigtal GmbH works in close cooperation with regional and local pharmacies, local enterprises, as well as voluntary associations. In 2010 Gesundes Kinzigtal concluded providers contracts with 52 physicians' practices, 6 hospitals, 3 pharmaceutical companies, 9 nursing homes, 4 ambulatory home health agencies, 5 physiotherapists, 14 pharmacies, 22 health and sports clubs and 6 gyms.

The distinguishing feature of the Gesundes Kinzigtal initiative is that it breaks with the longstanding tradition of distinguishing between inpatient and outpatient care. Furthermore, in the context fragmentation and lack of communication among different tiers of care which characterises the German Health System, Gesundes Kinzigtal has managed to establish a healthcare network that leverages the combined strength of physicians, therapists, hospitals, pharmacies, gyms, associations and local schools to not only provide treatment, but also implement prevention measures. This network is shaped by the right structure of incentives so that all the actors are willing to collaborate in a win-win context. This has led to more efficient treatments and has improved health outcomes for patients, while effectively overcoming the inefficiencies that arose from multiple diagnoses and treatments. The structured health and prevention programmes set up by the management company together with health actors, in accordance with the population's needs could succeed in both improving health outcomes for the population and reducing the cost of services. It is only by reducing the costs of treatments without compromising the quality of care that the management company of Gesundes Kinzigtal can generate revenue – and it does so successfully.

2.7 Organisational processes

The shared services contract among the actors of the GK case is based on health care savings that are mainly derived from improving self-care management among the population. The main investment of Gesundes Kinzigtal is therefore directed to preventive care and health promotion programmes. The following table summarises the main programmes developed to date:

Table 4: Self-care management programmes

Programme	Year of Implementation	Number of patients
Smoking cessation programme	2007	222
Chronic heart failure	2007	94
Metabolic syndrome	2007	197
Prevention of osteoporosis	2008	853
Intervention by Psychotherapists in case of acute personal crisis	2007	431
Depression	2010	32
Special assessments and organisation of care for elderly in nursing homes	2009	119
Special training and empowerment for patients with back pain	2011	66

Programme	Year of Implementation	Number of patients
Special training and self-management for hypertension	2011	36
Early diagnosis and treatment of rheumatic disorders	2011	10
Health coaching – Case Management	2013	30
Additional preventive measures for children	2008	1007
Additional social support and coordination by social worker	2008	265
Nutritional trainings and courses	2007	94
Fall prevention through exercises	2007	159
Aqua Fitness – exercises in water	2009	1222
Educational trainings and lectures	2006	3528

Source: Hildebrandt et al., 2010

The key elements of GK's preventive care management programme comprise:

- **Individual treatment plans and goal-setting agreements between doctors and patients.** For this, doctors and patients have to develop an individual treatment plan and agree upon mutual treatment goals. Gesundes Kinzigtal supports physicians with case management know-how, offers incentives to them and provides additional services for patients such as patient education programmes.
- **Patient Education/ Activation and Health Literacy.** There are numerous patient self-care programmes covering chronic illnesses and shared decision-making between patients and physicians.
- **Right care at the right time (continuous improvement of care services).** This is based on the “triple aim” principle which is about empowerment of the enrolled patients, vertical and horizontal integration of the health care services, the improvement of the health services through training of health care professionals and the evaluation of impacts.
- **System-wide electronic patient record.** This infrastructure is open to each health provider operating in the region. They can access data through a key card provided by the patient who thereby implicitly gives consent for the use of his or her personal health data. According to Hildebrandt et al. (2010) this is an important shift in the sharing of patient health care information among the health care providers within the region. It is also an important precondition for improving the quality of care and reducing costs related to unnecessary medication and redundant services.

To implement the health care service described above and to support continuous improvement, Gesundes Kinzigtal has structured an organisational process based upon the following elements:

- A network of associated GPs and GPs' practices which, as of 2014, covered almost 50% of the primary care professionals operating in the region. The GPs who belong to the network have direct contact with the company in charge of service delivery.

They operate under the responsibility of the company which takes over the risk associated with service provisioning on their behalf.

- A common ICT infrastructure managed by Gesundes Kinzigtal which allows associated GPs to work in close collaboration with each other and to share patients' information and services. As described earlier, the infrastructure is open to all regional health and social care operators which have established a contractual agreement of cooperation with the company.
- A network of health and social care actors contacted by Gesundes Kinzigtal to guarantee a continuum of care for its policy holders. This network is currently composed of some local hospitals, nurses for the provision of some care services, health care professionals, non-profit associations, social care operators and pharmacies. In order to guarantee preventive care, the network has been enlarged to include gym pools, fitness centres, sports club and small companies in recent years.

For both the network of associated GPs and for the health and social care network of the organisations which have signed a contract with Gesundes Kinzigtal, the company provides support services such as contract administration, maintenance of the ICT shared database, training support, and communication campaigns. Moreover, the company guarantees the monitoring and the evaluation of services, as well as the relationship with the insurance companies LKK and AOK.

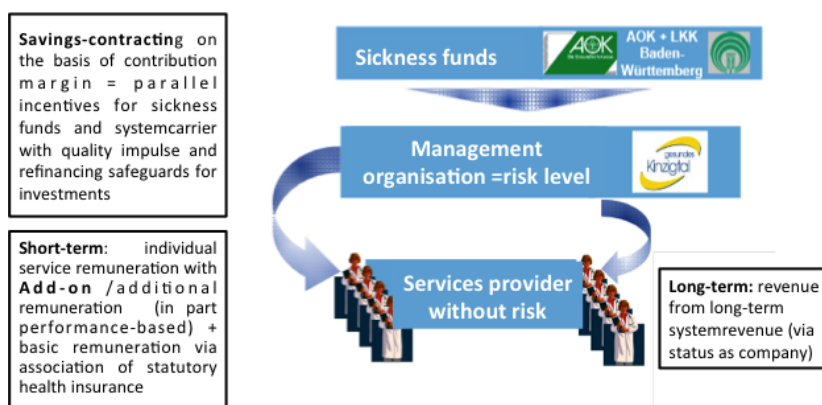
Lastly, there are very few examples of health care and social care integration as a result of Gesundes Kinzigtal. The most significant example is a pilot which was launched by the company in 2006 where physicians dealing with social problems could ask a social worker to come into the practice to help the patient. So far 265 patients have benefitted from a joint consultation of this kind and the level of satisfaction among them was very high. A second approach, more closely related to psychosocial problems in social care has been developed based on health coaching in 2013. 30 patients so far have asked for this kind of support which is provided by a health professional trained in case-management and specifically oriented towards strengthening the resources of the patients and their environment.

2.8 Reimbursement model and economic flow

The Gesundes Kinzigtal model does not replace the normal reimbursement scheme and financial flow between statutory health insurances and individual physicians, which continues to be the bulk of individual providers' income. Gesundes Kinzigtal only reimburses some specific services in addition to these payments which are not covered by normal reimbursement schemes, but are deemed necessary to achieve a higher quality of care.

Currently, providers receive these additional payments for comprehensive check-ups of patients' health (routinely performed after patients have enrolled), calculation of patients' prognoses and development of individualised treatment plans, including goal-setting agreements with patients, participation in project group meetings, development and implementation of preventive programmes, and case management of patients with chronic diseases. Furthermore, Gesundes Kinzigtal GmbH bears additional providers' IT costs which result from fulfilling providers' prerequisites and setting up equipment for data exchange and for providing access (to view and insert data) to patients' electronic health records. The overall incentives for GPs make up about 5-10% of their personal yearly income

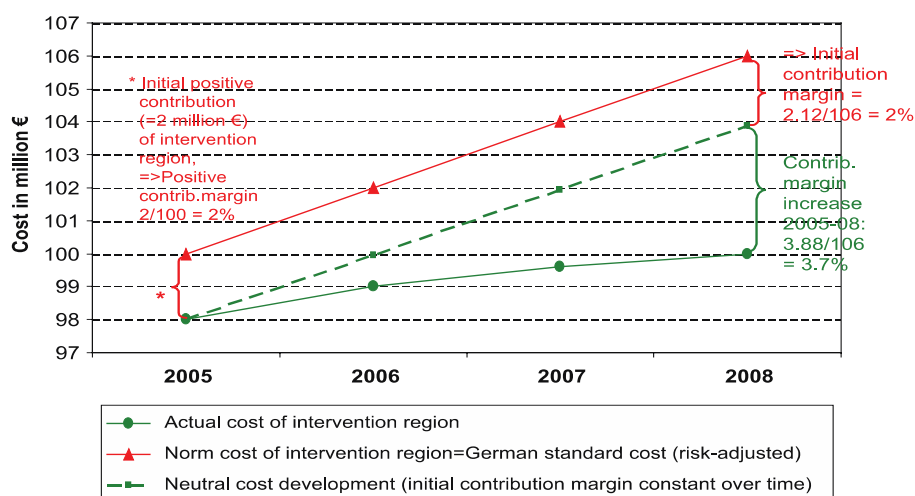
Figure 8: Matrix of reimbursement models: aggregation and risk sharing



Source: Hildebrandt et al., 2014

An example of the calculation of the incentives for the actors involved in the Gesundes Kinzigtal initiative is provided in Figure 9. It shows that the financial results achieved by Gesundes Kinzigtal equal the changes in the Kinzigtal region's contribution margin, the change being measured in relation to the region's contribution margin before the intervention started.

Figure 9: Examples of the calculation of the health insurers' contribution margin



Source: Hildebrandt et al., 2010

Policy holders pay the normal premium for their health insurance, which is around €2,250 a year per person without dental care costs. This fee covers health services according to standard care in Germany, plus the extra services provided by Gesundes Kinzigtal. However, there are no immediate financial incentives for policy holders to enrol in Gesundes Kinzigtal and receive their services. Thus, individuals' choice for or against enrolment depends on their expectations about health outcomes and service quality rather than on financial criteria. The perceived material benefits of the enrolled policy holders are:

- Improved care coordination across all care sectors.
- A “doctor of trust” ready to conduct additional care management services.
- Care providers who have been trained in shared decision-making.

- A more intensive patient-physician relationship through a mutually agreed-upon treatment plan.
- Additional health check-ups compared with normal care.
- Additional preventive care programmes compared with normal care (mostly for free).
- Access to consultation with physicians outside normal opening hours.
- Discount for fitness classes and sports club membership fees.
- Immediate accessibility for providers to GK's own electronic patient files containing all diagnoses treatment and prescription records.

3 Transferability

The German health system is characterised by a significant fragmentation between the different tiers of care. In this context, the GK experience could be considered as a good practice towards integrated care. In Germany, cooperation contracts or regional health management companies have been established in Leinetal (Gesundes Leinetal), Bochum (Medizinisches Qualitätsnetz Bochum), Homburg-Saarpfalz (Gesundheitsgenossenschaft Homburg-Saarpfalz) and Zwei-Täler (Zwei-Täler Ärzte und Psychotherapeuten Gemeinschaft e.V.). Several cooperation contracts are currently under development in Hamburg Billstedt-Horn, Bielefeld, Berlin/Brandenburg, Mannheim and Greifswald. In the Netherlands, currently three cooperation contracts are under development, another one in Switzerland and there is interest in Austria.

The Gesundes Kinzigtal case could be considered an answer to the institutional fragmentation of the German health system. In Germany, public health services, primary and secondary ambulatory care (outpatient care), and hospital (inpatient) care are largely organised and financed independently from each other. The strict historical division of health services is linked to a reimbursement system which does not foresee any incentives for outcome-oriented health care or prevention so that quality- and value-based incentives have been virtually non-existent. Gesundes Kinzigtal would be highly transferable to any other part of Germany and also to countries with similar insurance-based health care systems such as the Netherlands, Austria and Switzerland, where the company has established preliminary contacts to expand its services.

Nevertheless, this case would not be as easily transferred in the case of Beveridge health systems, where there is no place for Gesundes Kinzigtal within the public sector. However, the increasing presence of private health insurance companies in public systems could facilitate the implementation of the Gesundes Kinzigtal model in the private sector.

4 Conclusions

Gesundes Kinzigtal in Baden-Württemberg (Germany) is a patient-centric integrated care service targeting the 33,000 policy holders of two insurance companies (LKK and AOK), which operate in the region. The people covered by the initiative represent about 45% of the inhabitants of the Kinzigtal region, mainly those from lower social groups.

The case has been developed over the last 10 years in the Kinzigtal region and it is based on a shared-savings agreement between two insurance companies, the local physician network (Ärztendorf MKN) and the management company OptiMedis AG. The starting point

of the GK was the innovation in health care legislation, which started in Germany at the beginning of 2000, with the adoption of the Statutory Health insurance Modernization Act (GKV-Modernisierungsgesetz) in 2004. This Act allowed Germany's health insurance companies to spend 1% of their total expenditure on integrated care management programmes. Within this framework, Gesundes Kinzigtal was established by MQNK (66.66%) and OptiMedis AG (33.34%) in 2005. It aimed to introduce cost savings in health care services to the policy holders enrolled in the company and to maintain or even increase the quality of the service provided. The main foci of the GK case are service integration, improving the health of the population by focused preventive care management and in particular life style changes and disease management.

The full scale-up of the project has allowed it to develop several integrated care initiatives in recent years such as services targeting primary prevention and public health, services oriented towards secondary prevention, and services like corporate health promotional activities. The gateway to the service is provided by the 500 health care professionals (physicians/psychologists/nurses/physiotherapists) who are in charge of the primary care of the 33,000 policy holders of LKK and AOK living in the Kinzigtal region. The promoter of the GK case, OptiMedis AG, had the vision to start the initiative in early 2000. It was able to convince AOK and LKK (the two insurance companies), and the GPs' consortium of Kinzigtal region (MQNK) and gain their full commitment to the initiative.

Since the establishment of Gesundes Kinzigtal in 2005, the stakeholders involved have considered it extremely important to provide evidence of the impacts produced by the GK initiative on the regional health system. Key results of an evaluation undertaken in the last 5-6 years can be summarised as follows:

- **Hospitalisation reduction** of about 20% compared with other regions of Baden-Württemberg.
- **Morbidity reduction costs** of about 16% compared with Kinzigtal's population not enrolled in Gesundes Kinzigtal.
- **Mortality rate** 10% lower than for population of other regions of Baden-Württemberg.
- **Health care expenditure** per-capita reduction of about 16.9% for all the LKK-policy holders in the region (morbidity levels among LKK's policy holders are high) against the general cost increase derived from a control group adjusted to the population in 2005 (before the establishment of the company).
- **Health care expenditure** difference between the standard cost of the performed services and actual costs of about 6.64% for all the AOK policy holders in the Kinzigtal region (morbidity levels in AOK are more normal) in 2012, resulting in €4.6 million difference (out of €68.7 million health care costs)
- **Net positive annual economic benefits** for the health insurance companies (AOK and LKK) close to 3% (corresponding to about €2.3 million per year out of the €74 million per year paid by the 33,000 policy holders).

However, health actors agreed that to realise the full potential of GK initiative, the following barriers have to be removed:

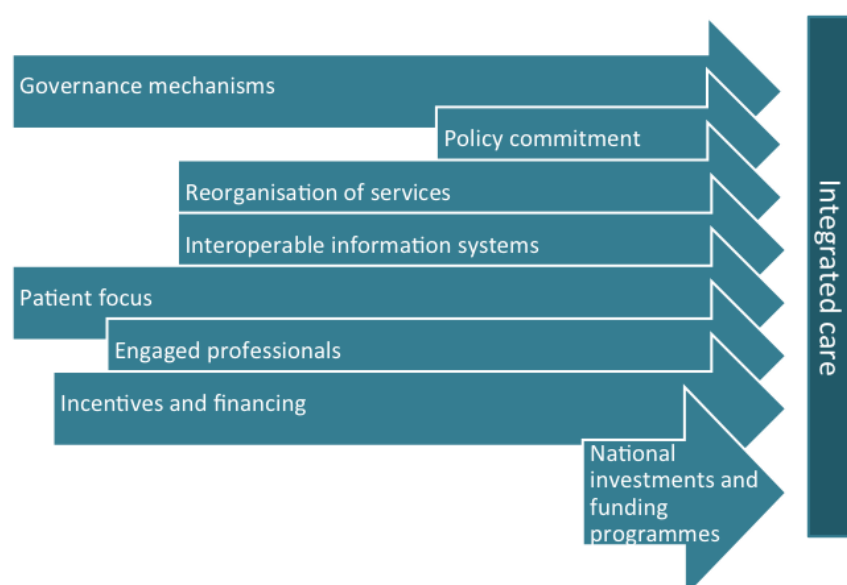
- **Data protection and privacy.** This is an important issue since patient information cannot be shared and used without the written consent of the patient to each health care professional with whom he or she interacts.

- **Failure of traditional hierarchical concepts of management.** Political, institutional and organisational resistance to the development of new types of shared decision making and guidance for patients and physicians.
- **A reimbursement scheme based on fee-for-service** that continues to be the main source of providers' income
- **Lack of coordination across the health and social care actors.** This situation also leads to an increase in health costs due to e.g. unnecessary duplication of examinations, which occurs in 28% of the cases in which patients are transferred from outpatient to inpatient care.
- **Integration of health, social and care communities.** It is difficult at a political, institutional and organisational level to understand that health is not only an outcome of a purely medical intervention, but public health and health promotion initiatives oriented towards all the aspects of life are also needed.

As regards the transferability of the case into other contexts, all the health actors consulted agreed on the high potential for transferability of the Integrated Care experience to similar Bismarck health care systems (e.g. Germany, Austria, Switzerland and Netherland). However, the transferability in EU Member States with national health care systems might be less feasible, as it is less common for privately-owned companies to enter the health care organisation business in health care systems of this kind. On the other hand, the recent economic crisis is pushing for structural changes in health services and for a more consistent implementation of supply and chain management in service provisioning. In the US, the public health care funds say that they have had good experiences with the development of Accountable Care Organisations (ACO), which are private organisations established to promote similar incentives and reach the same type of impact as *Gesundes Kinzigtal*, which could be seen as a specific advanced type of ACO. National health care systems in Europe might therefore also be interested in testing ACOs and interventions like *Gesundes Kinzigtal*.

Figure 10 provides an outline of the main facilitators of the GK case.

Figure 10: GK Integrated care facilitators



Source: Authors' elaboration

Put differently, the facilitators comprise:

- A strong governance mechanism established between OptiMedis SA, the health care management company and the association of GPs of Kinzigtal region. Together they have established the *Gesundes Kinzigtal*, a health company that has signed a shared-care contract with two health insurance companies AOK and LKK for providing health care services to their policy holders.
- A strong engagement of the primary care providers, particularly the associated GPs.
- A strong patient focus driven by preventive care services delivered by the *Gesundes Kinzigtal GmbH* to the enrolled members.
- An in-depth reorganisation of services delivered by *Gesundes Kinzigtal* under the shared care contract. This reorganisation implies high horizontal integration among the associated GPs to share patients' information and services. It also means a significant re-organisation of the collaboration between the associated GPs and the other health care and social care operators through service contracts established with *Gesundes Kinzigtal*.
- A well-established incentive and financing scheme defined by *Gesundes Kinzigtal* with their associated GPs, though this does not substantially modify the national contract for primary care service providers. A 10-15% of outcome-oriented incentives based on an agreed care management plan is foreseen.
- A well-established information system that allows the associated GPs to manage the health information of the enrolled patients and to share it with the other GPs' practices. The system is also open to all the contracted local actors. However, it currently does not guarantee full interoperability with the local hospital information systems and the existing information systems of the other health and social care actors.
- Significant policy commitment which led to the adoption of innovative legislation in support of integrated care services, allowing German health insurance companies to spend 1% of their total expenditures on integrated care programmes.

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