Healthy Kinzigtal Programme in Germany

Case study

Luca Elisa Lindner
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### Abbreviations

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<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>ACE</td>
<td>angiotensin-converting enzyme</td>
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<td>ARB</td>
<td>angiotensin II receptor blocker</td>
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<td>AOK BW</td>
<td>Allgemeine Ortskrankenkasse Baden-Württemberg (German health insurance fund)</td>
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<td>EPR</td>
<td>electronic patient record</td>
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<td>GKV</td>
<td>Gesetzliche Krankenversicherung (statutory health insurance)</td>
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<td>GP</td>
<td>general practitioner</td>
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<td>HK</td>
<td>Healthy Kinzigtal (Gesundes Kinzigtal)</td>
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<td>HK Ltd.</td>
<td>Healthy Kinzigtal Ltd. (Gesundes Kinzigtal GmbH)</td>
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<td>IT</td>
<td>information technology</td>
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<tr>
<td>LKK BW</td>
<td>Landwirtschaftliche Krankenkasse Baden-Württemberg (German health insurance fund; now part of the Sozialversicherung für Landwirtschaft, Forsten und Gartenbau (SVLFG, German social security provider))</td>
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<td>Morbi-RSA</td>
<td>Morbiditätsorientierter Risikostrukturausgleich (a national morbidity-based risk-adjustment scheme)</td>
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<td>MQNK</td>
<td>Medizinisches Qualitätsnetz Kinzigtal (a local network of health care providers in the region)</td>
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<tr>
<td>NSAID</td>
<td>nonsteroidal anti-inflammatory drug</td>
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<tr>
<td>QuATRo</td>
<td>Qualitäts-Check für Arztetze (a framework for benchmarking providers’ performance)</td>
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Executive summary

Healthy Kinzigtal (HK; in German, Gesundes Kinzigtal) is an integrated care network in southwest Germany introduced in 2005. The objective of the HK programme is to promote integrated care and lower health care costs through a payment arrangement whereby participating providers receive incentives to promote prevention and improve care coordination through a shared-savings arrangement contracted between two health insurance funds and the programme management company. Providers continue to be primarily reimbursed on a fee-for-service basis for usual care and receive add-on payments and performance-based reimbursements for additional services considered important to attain quality improvements. Profits come from realized savings relative to the average cost norms of care, which are shared between the programme management company and the insurance funds. Providers share in the company’s profits based on their individual performance. One estimate suggests that these payments comprise up to 15% of a provider’s income, with values around 5% being common.

Patients are recruited by explaining the additional benefits received from enrolment. Of 71,000 inhabitants in the region, around 8,150 patients were registered members in 2020. Patient self-management is a key element of the model, and members receive services that are coordinated across all sectors, access to physicians outside normal hours, and other benefits beyond the health system, such as gym memberships. In 2020, providers and affiliated facilities taking part in the programme included 24 general practitioners as well as other partners, such as hospitals, nursing homes, community centres and pharmacies.

Recent external evaluations found that there was no significant change in the quality of care provided to individuals participating in this programme. Challenges include balancing risk selection associated with voluntary enrolment and the underprovision of care as a result of the shared-savings model. The lack of publicly available information limits evaluation and learning across settings.

This case study provided information to the WHO and OECD joint publication Purchasing for quality chronic care: summary report.
1

Introduction
The German health care system is characterized by considerable fragmentation of primary, secondary and tertiary care, which limits its ability to be patient-centred and makes it challenging to ensure continuity of care. Since the early 2000s, several reforms of the health system have been implemented in Germany that aim at improving the integration of care, including policies that incentivize health insurance funds\(^1\) to develop and test new approaches to delivering and paying for care.

The integrated care network known as Healthy Kinzigtal (HK; in German, Gesundes Kinzigtal) in southwest Germany was introduced in 2005 as part of a push towards developing payment models for integrated care. It is based on a shared-savings contract between two health insurance funds and the programme management company (the regional “integrator”), Healthy Kinzigtal Ltd. (HK Ltd.). The integrator facilitates care coordination, designs and implements health-promotion programmes, develops infrastructure for information technology (IT) and data analysis, and performs managerial tasks. The integrator incentivizes participating providers to reduce health care spending and improve the quality of care through a range of financial and nonfinancial incentives. The programme aims to redesign delivery systems by improving the prevention and patients’ self-management of chronic conditions through better care coordination, patient empowerment and personalized health and treatment plans. These, in turn, should rein in health care spending and promote value. Providers participating in the project are encouraged to offer additional health-promotion services to their patients, work cooperatively with other providers in the region and deliver more cost-effective care. Savings that are generated through this approach are shared between the health insurance funds, the integrator and, in a second step, health care providers that are part of a network of participating providers. The savings realized cover the costs of the project, including management, IT and the implementation of health-promotion interventions.

The description of the HK programme and its impact are based on an extensive review of the publicly available literature published before March 2023. Additional information about the payment mechanisms and project structure was provided by Oliver Groene from OptiMedis via personal communication in 2022 and 2023. OptiMedis is a German health care management company that is part owner of the company that manages the HK programme. As certain data are not publicly available, conducting a comprehensive evaluation of the programme and its impact remains challenging.

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1 Health insurance funds, also referred to as sickness funds, are competing, not-for-profit health insurers in the German statutory health insurance system.
The German health care system
Germany has a multipayer health care system with nearly universal health coverage. Jurisdiction over health care is shared across the federal and state governments. Health insurance in Germany is compulsory, and patients can choose between multiple health insurance funds, or insurers. About 90% of German residents are covered by statutory health insurance and 10% are covered by private health insurance, which is open only to people above a certain income level, people who are self-employed and civil servants. In 2023, statutory health insurance was composed of 96 self-governed health insurance funds, all of which compete for members on the German health insurance market while being strongly regulated by the government. Health insurance funds are mandated to ensure equal access to health care and to provide high-quality services. They are not allowed to contract providers selectively or to reject applications for membership.

The budget for statutory health insurance is based on a wage-related contribution from members, a contribution fee charged by health insurance funds and state budget transfers. A complex morbidity-based risk-adjustment scheme (Morbiditätsorientierter Risikostrukturausgleich, known as Morbi-RSA) is in place to reallocate funding across the health insurance funds according to the risk profile of their populations. This risk-based distribution mechanism prevents health insurance funds with members who earn less or have higher health care costs from being disadvantaged. Morbi-RSA relies on information such as age, sex, diseases and a regional component to calculate the risk profiles of the populations covered by the health insurance funds to distribute money accordingly.

Patients can choose any provider for ambulatory care, including specialist care, without a referral from their general practitioner (GP), and they have some choice of provider for hospital care upon referral. While GPs do not act as gatekeepers in the German health care system, voluntary gatekeeping through GP-centred care plans has been in place since 2004.

2.1 Health care reforms aimed at payment models and integrated care

The fragmentation of care has been an issue for years. As Busse and Riesberg note, there has been a long-standing “broad consensus that there are, at least potentially, negative consequences [of care fragmentation] for patients” and that “the weak role of primary care and the absence of gatekeepers (e.g. general practitioners) to steer the patient through the system” are also products of the separation of ambulatory care from inpatient care in Germany. It has been argued that the lack of coordination, especially between ambulatory
care and hospital care, has “led to discontinuities in the provision of health services, reduced effectiveness of interventions and increased costs” (2). Since the 2000s, Germany has implemented several health system reforms to address the challenges of health care fragmentation, which are increasingly important as the growing prevalence of chronic conditions requires coordinated care along the entire patient pathway.

The 2000 Health Care Reform Act (referred to as GKV-Gesundheitsreformgesetz 2000, where GKV is for Gesetzliche Krankenversicherung, or statutory health insurance) introduced the concepts of integrated care programmes, networks of providers and contracts. This reform gave health insurance funds more leeway in implementing alternative payment models and delivery systems to reduce costs and improve care. It established the legal foundation for health insurance funds to contract providers or networks of providers to form integrated care programmes with alternative payment schemes (7). Thus, in the German health system, health insurance funds are encouraged to play an important role in advancing innovation in models of care and purchasing arrangements, including through shared-savings contracts (8).

While the 2000 reform provided the legislative foundation for introducing different models of care and payment in Germany, the implementation of integrated care projects with alternative payment models gained ground only after the 2004 Health Care Modernization Act (GKV-Modernisierungsgesetz) (7,9). The 2004 Act reduced regulatory hurdles and enabled health insurance funds to invest up to 1% of their total expenditure as start-up financing for integrated care or GP-centred programmes. From 2004 to 2006, this amounted to €680 million per year originating from inpatient and outpatient budgets (7). The start-up financing expired in 2008. Around 6400 integrated care projects were founded between 2004 and 2008, covering about 4 million patients (10).

While legislative changes and generous start-up financing led to the founding of many integrated care initiatives in Germany, this development was only partially sustainable. Around 20% of the newly founded programmes were terminated in 2008 at the end of the 4-year start-up period (8). Despite the limited long-term success of many integrated care contracts, the health care reforms implemented in 2000 and 2004 were able to foster “more competition for care concepts between health insurances, more options for the insured and more leeway for players in the various sectors of health care” (8). Thus, they have been central to advancing the implementation of alternative payment models in Germany, including the shared-savings contract of the HK programme.

2 The first policies addressing the fragmentation of care in Germany date back to the 1980s. The reforms introduced since the 2000s are the most relevant ones for advancing the implementation of alternative payment models and are thus the focus of this article.
Healthy Kinzigtal
The HK programme was implemented in 2005 after the 2004 Health Care Modernization Act. HK is an integrated care network funded through a population-based shared-savings contract. It follows the Triple Aim of health care: striving to reduce per capita health care expenditure while improving population health, the quality of care and patients’ experiences (11). The Kinzigtal region is located in southwest Germany in the federal state of Baden-Württemberg; it has a population of about 71,000. HK aims to reduce health care spending in the region by investing in prevention, health promotion and patient empowerment efforts, as well as in better coordination of care. Providers are further incentivized to provide more cost-effective care.

HK is a cooperation agreement between the two regional health insurance funds, Allgemeine Ortskrankenkasse Baden-Württemberg (AOK BW, referred to in the text as AOK) and Landwirtschaftliche Krankenkasse Baden-Württemberg (LKK BW, referred to as LKK and which is now part of SVLFG), and HK Ltd., a newly founded regional company that manages the programme as an integrator. The programme rests on a shared-savings contract under which savings for the covered population in Kinzigtal are shared between the health insurance funds and the management company. In the HK model, savings in health care spending are calculated by comparing actual spending to a cost norm. The cost norm for the covered population is determined using the national morbidity-based risk-adjustment scheme known as Morbi-RSA, which estimates health care costs for a population based on several risk factors. The strategy of the HK programme is to redesign the delivery system to keep health care expenditure below the risk-adjusted cost norm to generate savings that can then be invested in the project.

The shared-savings contract initially lasted until the end of 2014, but it has been extended.³ The HK programme benefited from €4 million in start-up funding provided by AOK, including €1 million dedicated to an external evaluation of the programme (12). Since 2007, the HK programme has been able to sustain itself financially, exclusively through the funds it received from the shared-savings arrangement (13).

### 3.1 Governance structure

Several stakeholders are involved in the HK integrated care network, resulting in a complex governance structure. The main parties of the shared-savings arrangement are AOK and LKK (the health insurance funds) and the regional health management company, the integrator.

³ The health insurance funds and HK Ltd. are currently renegotiating the contract. Since these discussions are ongoing, they are not covered in this article. For further information, see reference (33).
While the health insurance funds play only a minor role, by agreeing to share a portion of their budgets, the management company manages the project, facilitates the integration of care across providers, implements care plans and prevention programmes, and provides the IT infrastructure and data analytics capacity for the project (14). The company was founded at the start of the project in 2005, and it is a joint venture between the local health providers’ network, Medizinisches Qualitätsnetz Kinzigtal (MQNK), and the German health care management company OptiMedis. Two thirds of the company is owned by MQNK and one third is owned by OptiMedis. HK Ltd. is a for-profit company, so it can reinvest its profits into the project or share a part of them with its shareholders, MQNK and OptiMedis. Most of the physicians participating in the HK programme are part of MQNK and thus can benefit from any savings that are realized.4

MQNK and OptiMedis play important roles in the project and have significantly contributed to its design and implementation. MQNK is an established local actor with strong ties to providers and patients, and it supports the project with its expertise and experience in the local health care system. OptiMedis provides the know-how in management, health intelligence and data analytics needed to run and monitor the integrated care network (13). This combination of capacities enables the management company to coordinate acute, chronic and preventive care by tailoring its approach to the health infrastructure and needs of the Kinzigtal population. Patients are represented in the project through patient advisory boards that are elected biannually (14).

3.2 Provider and patient participation

All beneficiaries of the two participating health insurance funds can participate in the HK programme. As of 2020, out of the 71,000 inhabitants in the Kinzigtal valley, around 33,000 were members of the two participating health insurance funds (14). This insured population traditionally consists largely of blue-collar workers and farmers (13). Participation in the HK programme is voluntary. In 2020, around 8,150 patients were registered members of the HK programme, about one fourth of all eligible patients (14, 15). The main incentive for patients to join is that they can receive additional health services and participate in preventive and health-promotion programmes.

4 General practitioners, outpatient specialists and psychotherapists can join the MQNK physicians’ network.
While the HK programme encourages all eligible patients to participate, it specifically targets patients with or at risk of chronic conditions that can be managed or prevented with effective interventions. The rationale behind this focus is that these groups of patients are likely to benefit most from better care coordination, preventive programmes and patient empowerment. Considering the high cost of caring for patients with chronic conditions, investing in better case management, prevention programmes and programmes to promote lifestyle changes is expected to reduce health care costs through overall improvements in patients’ health. While only members of the HK programme can benefit from the additional services and programmes, the project is financially accountable for the entire population covered by the two participating health insurance funds, including those who are not enrolled in the programme or do not seek care from participating providers (10). Thus, the calculation of savings is based on the health care expenditure for all beneficiaries of the two health insurance funds, even if they do not benefit from the health-promotion programmes and additional services. This approach rests on the assumption that the overall improvement in care coordination in the region fostered through the HK programme will benefit all patients, regardless of their enrolment status.

Participation is also voluntary for health care providers and other stakeholders, such as fitness centres and pharmacies. In 2020, several health care providers and affiliated facilities in the region were taking part in the programme, including 24 GPs, 41 specialists, 3 psychotherapists, 7 hospitals, 11 physiotherapists, 10 nursing homes, 5 home care services, 16 pharmacies, 38 sports clubs and associations, and 8 gyms (14).

Several financial and nonfinancial incentives are designed to encourage health care providers and other stakeholders to participate. As part of the HK programme, physicians are paid for additional services provided to patients, receive performance-based bonuses and benefit from support to coordinate care and from an advanced electronic health data infrastructure. Since most participating physicians are members of MQNK, they are also shareholders of the programme management company and can benefit from any savings generated (14). Other health care providers and stakeholders, such as physiotherapists and nursing homes, benefit from additional payments, depending on their participation in health-promotion programmes, as well as nonfinancial incentives, such as training or support to coordinate care (O. Groene, OptiMedis, personal communication, 2022).
3.3 The Healthy Kinzigtal payment model

3.3.1 Population-based shared-savings contract

The HK integrated care network is based on a shared-savings contract under which any savings are distributed to the two participating health insurance funds and the programme management company. The share received by the programme management company constitutes the budget for the project. The shared-savings contract does not replace the existing payment model, and providers continue to be paid through the conventional, mainly fee-for-service scheme, even if they are part of the integrated care network.

Savings are calculated based on the difference between the actual cost of health care for the population in the region and the cost norm calculated for that population (Box 1). The cost norm is calculated using Morbi-RSA, which reflects the risk-adjusted standard cost of care in Germany (13). This value is calculated by the Federal Office for Social Security (Bundesamt für Soziale Sicherung, formerly Bundesversicherungsamt), using several risk factors and patients’ characteristics to determine the expected health care expenditure for a given population. Since the cost norm determined by Morbi-RSA constitutes the budget for the health insurance funds, spending less on health care than is budgeted will result in savings. The management company thus generates savings if the two health insurance funds spend less on their beneficiaries in the Kinzigtal region than the average German expenditure for a population with the same risk profile. Ideally, the difference between the cost norm and actual spending would increase or remain stable at a rate that is sufficient to cover the cost of the project.

In the HK contract, realized savings are shared between the health insurance funds and the programme management company. The proportion that each party receives is not publicly available, for reasons of confidentiality.

If health care expenditures increase compared with the cost norm, the health insurance funds are liable. Thus, the HK shared-savings arrangement is one-sided: the programme management company receives a share of realized savings but is not financially accountable for any losses incurred. In the case of loss, the health insurance funds can exit the shared-savings contract prematurely (12). This has not happened so far.

The programme management company can pay out dividends to its shareholders and the latter may then share these funds with health care providers that are part of their network. Enabling providers to
Healthy Kinzigtal Programme in Germany

Benefit from reductions in health care expenditure constitutes one financial incentive for the HK programme to deliver more cost-effective care. The portion of savings received by physicians and other providers through their involvement in MQNK is not publicly available and can vary depending on the year. While only providers who are members of MQNK can receive a share of savings as shareholders, other providers and stakeholders benefit from add-on payments for their involvement in health-promotion programmes or for providing additional health care services, such as in-depth health check-ups, setting health goals with a patient and ensuring better care coordination for enrolled patients. A more detailed description of the shared-savings contract and its payment mechanism can be found in Hildebrandt et al. (13).

The HK strategy is to reduce health care expenditure for the insured population by providing better care coordination and health-promotion programmes and then to reinvest the savings into the programme. Since 2007, the HK programme has been financed exclusively through the proportion of savings obtained via the shared-savings contract, which covers the costs of managing and administering the programme, as well as the additional payments made to providers and partners in the health-promotion interventions (13).
Box 1. Calculating savings in the Healthy Kinzigtal shared-savings arrangement

**Actual cost:** The amount of money a health insurance fund spends for the insured population in a given region and year, regardless of whether they are participating in the Healthy Kinzigtal (HK) programme.

**Cost norm:** The average health care cost in Germany for a population, calculated using the national morbidity-based risk-adjustment scheme (known as Morbi-RSA). The cost norm is based on several risk characteristics, such as sex, age, income and disease, and it reflects the risk-adjusted standardized German cost for a given population.

**Realized savings:** The difference between the total actual cost and the total cost norm if the actual cost is lower than the total cost norm. Realized savings reflect how much lower a health insurance fund’s total actual spending was for its insured population compared with the risk-adjusted German total for the relevant population.

**Example:** The actual cost grows more slowly than the cost norm, resulting in savings that are shared between the health insurance funds and the programme management company (regional integrator).

![Diagram showing health care cost over time with actual cost and cost norm, and realized savings.

**Note:** This calculation method applies to the larger of the two health insurance funds. A slightly different method is used to calculate savings for the smaller health insurance fund. Since the latter represents only about 4% of the population eligible for participation, their calculation approach is not outlined in detail. More information about their calculation of savings can be found in Hildebrandt et al. (16).

**Source:** Based on information from Hildebrandt et al. (13) and Groene and Hildebrandt (14). The graph is adapted from (13). This work is licensed under a Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.
Although information about the general payment mechanism of the shared-savings arrangement is publicly available, the financial flows in some areas of the contract remain black boxes, meaning that they are not publicly available. This includes the proportions shared between the health insurance funds and the programme management company, the amount of money received by the two shareholders of the company, as well as the amount of money received by individual members of the provider network. Thus, it remains unclear, for instance, how strong the financial incentives are for physicians to reduce spending because these are linked to the proportion of savings they may receive indirectly from the provider network.

### 3.3.2 Add-on payments and performance-based bonuses

The HK shared-savings arrangement includes two other forms of financial incentives to encourage physicians to improve the quality of care they provide, namely add-on payments for additional services and performance-based bonuses. Since the HK payment model does not replace the fee-for-service reimbursement model through which physicians are primarily paid in Germany, the additional payments received through the HK programme are incremental to providers’ regular income.

Providers participating in the HK programme receive add-on payments for services that are not conventionally covered by the two participating health insurance funds, including completing comprehensive health check-ups, designing individualized treatment plans and preparing case management plans for people with chronic conditions (12). These services go beyond the preventive health services covered by regular insurance plans and are part of the patient-centred and preventive care rationale of the project. They are provided only to patients registered with the HK programme.

Providers are further rewarded for meeting quality and performance goals that are jointly defined by the shareholders of the programme management company and the two health insurance funds (12, 13). The quality metrics are based on the relative performance of providers and are calculated by OptiMedis. Providers that perform better on these benchmarks receive higher bonuses. Detailed information about the quality indicators is not publicly available. The benchmarking process is currently under revision, and in the next few years, the Qualitäts-Check für Arztnetze (QuATRo) framework for benchmarking providers’ performance will be introduced.\(^5\) QuATRo benchmarks are regional comparisons and are calculated by the health insurance fund AOK (O. Groene, OptiMedis, personal communication, 2022).

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\(^5\) More information about the QuATRo framework can be found on the AOK website at https://www.aok.de/gp/aerzte-psychotherapeuten/versorgungsqualitaet-aerzte/quatro.
The HK payment model thus enables providers to offer additional services to their patients, rewards them for meeting quality and performance targets and incentivizes more cost-effective behaviour by granting them a share of any realized savings. Apart from financial incentives, the programme management company also covers providers’ costs for establishing the IT infrastructure needed to foster better coordination across providers and to evaluate providers’ performance and the quality of care.

Payments received by health care providers and other stakeholders via the HK programme vary depending on their involvement in the programme and its health-promotion initiatives. Regular fee-for-service payments continue to make up the vast majority of their pay (13; O. Groene, OptiMedis, personal communication, 2022).

#### 3.4 The Healthy Kinzigtal programme for quality care and health promotion

The HK payment model is complemented by a comprehensive programme to improve care coordination across providers and improve the prevention and management of chronic conditions. Better coordination of care is expected to lead to more cost-effective treatment and referral decisions, for instance by reducing the number of avoidable hospitalizations and duplication of actions, such as medical tests. The HK programme facilitates care coordination, for instance, by improving patients’ access to timely care and by supporting physicians to better align treatment plans (e.g., when caring for patients after discharge from hospital) and share patient data via an electronic patient record (EPR) system (see Section 3.5.1). A range of programmes has been implemented to improve patients’ health, for instance by strengthening patients’ self-management capabilities.

#### 3.4.1 Care coordination and integration

Ensuring better coordination of care across providers is a central component of the HK programme’s approach to improving the quality and cost-effectiveness of care. Since primary, secondary and tertiary care in Germany are managed and financed separately, there is little coordination and no incentives to reduce overall health care expenditure (17). Primary care providers, for instance, are not financially incentivized to help reduce hospital admissions and may not be able to provide adequate follow-up care for patients due to a lack of care coordination. The fragmentation of the German health care system results in suboptimal care for patients and increased health care spending (2). The HK programme seeks to address care fragmentation not only through its payment model, which rewards
physicians for reducing overall expenditures, but also through several programmes that aim to improve care integration, some of which are outlined below. The specific programmes that are offered by HK change over time, based on emerging evidence and new opportunities for cooperation (O. Groene, OptiMedis, personal communication, 2022).

Patient-centred care and coordination: trusted doctors. Every patient enrolled in the HK programme can choose what is known as a "trusted doctor" from all of the participating GPs and psychotherapists. The trusted doctor acts as a health care coach for patients and supports them in defining and pursuing their own health goals (13). The trusted doctor conducts additional health check-ups and ensures that a patient receives optimal and seamless care across providers through improved communication and care coordination. While the trusted doctor constitutes a central node and coordinator in a patient’s care pathway, patients are free to choose any health care provider or service they want and are not bound to their trusted doctor. The HK trusted doctors are not gatekeeping – that is, deciding which care a patient receives – but they provide advice and support so that patients can make informed decisions about their health.

When patients join the HK programme, they first have an appointment with their trusted doctor to jointly assess their health status, identify potential risk factors and discuss areas for improvement. At the end of the visit, the patient and the physician agree on an individual treatment or health plan, which specifies the patient’s health goals and how to achieve them; for instance, the plan could include the aim to improve the patient’s blood sugar levels, lose weight, exercise more or stop smoking (12). While such services are part of physicians’ regular efforts to provide optimal care, traditional payment schemes often do not allow them to spend as much time with patients as they would like. In the HK programme, physicians are paid for providing longer and more in-depth consultations, as well as other additional services in their role as a trusted doctor, via add-on payments made by the programme management company, which allow them to take more time for individual patients if needed (O. Groene, OptiMedis, personal communication, 2023).

Thus, the trusted doctor not only provides assistance and advice to patients during regular visits but also supports them in being participants in developing their health care plan. Partnership and shared decision-making between physicians and patients are central to HK’s goal to improve patient-centred care and continuity of care.

Coordinating care to decrease wait times. Long wait times for appointments with psychotherapists are an issue in many German regions, and patients often have to wait several weeks before they...
see a specialist (13). The HK programme’s initiative known as Acute Psychotherapy (Psychotherapie Akut) addresses this problem through better coordination and distribution of providers. It assists patients in receiving the care they need in a timely manner by facilitating immediate, short-term interventions by psychotherapists and psychiatrists. These emergency services are specifically intended to help patients who are in urgent need of support in areas where there are structural bottlenecks in services. Providers receive an additional payment for being available and offering these emergency services (13, 18).

**Integrating hospital and primary care.** One important dimension of HK’s programme is its facilitation of cooperation between hospitals and other providers to allow for more seamless and coordinated follow-up care, for instance through jointly developed care pathways and better communication about patients. While it is often impossible for outpatient physicians and hospitals to share patient data via the EPR system, better coordination among providers is facilitated via other means, for instance by hospitals or other providers offering more detailed discharge or referral letters (O. Groene, OptiMedis, personal communication, 2023). The trusted doctors also play an important role in managing patients’ care pathways and ensuring that they receive appropriate care after being discharged. Providing optimal follow-up care results in better health outcomes and thereby decreases avoidable hospital readmissions, which constitute a significant financial burden for hospitals and the health care system (13).

**Integrating health care with long-term care.** The HK programme aims at improving the health of patients with or at risk of chronic conditions, groups that include elderly people and, specifically, residents of nursing homes. The lack of integration between health and long-term care often leads to avoidable hospitalizations if a patient’s GP is not available and to suboptimal care if hospital personnel are not familiar with a patient’s medical history. The HK programme initiated its DoctorsPlusCare programme (ÄrztePlusPflege) to improve coordination between these two areas. The programme supports nurses and physicians to develop shared guidelines; ensures the availability of GPs, even in the evenings and on weekends; and advises nursing home personnel about how to prevent common injuries and infections (13). The programme aims to improve the quality of care received by residents of nursing homes by developing guidelines and providing training, by encouraging better communication among stakeholders and by ensuring improved coordination and availability of care. Participating stakeholders, such as nursing home personnel and physicians, receive add-on payments for their involvement in the programme.
Integrating health care and social care. While the issues addressed by health and social care often overlap, especially for patients with social needs or substance use disorders, these systems operate independently from each other. The HK programme seeks to improve integration by facilitating close cooperation between social care case-management workers (Sozialer Dienst) and trusted doctors to ensure that medical care plans are aligned with the social support that patients receive (13).

3.4.2 Prevention and health promotion

In addition to investing in better coordination, the HK programme also offers several courses to support participants to improve their overall health, prevent illness and manage chronic conditions. These programmes are specifically targeted to individuals with or at risk of developing “common chronic diseases with high impact on patients’ health status and against which effective interventions are available” (13). Trusted doctors or other providers suggest these courses to eligible patients during their check-ups. In these courses, patients learn the skills and information needed to achieve the health goals they set for themselves and how to better self-manage their illnesses. Apart from preventive and health-promotion programmes, HK also offers other benefits to participants, such as gym memberships at reduced prices. Table 1 gives an overview of some of the disease prevention and health-promotion activities implemented by the HK programme. More detailed descriptions of the preventive and health-promotion interventions can be found in Hildebrandt et al. (13) and Groene and Hildebrandt (14).
<table>
<thead>
<tr>
<th>Programme</th>
<th>Targeted condition or risk factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong heart</td>
<td>Heart failure</td>
</tr>
<tr>
<td>Healthy weight</td>
<td>Metabolic syndromes, including diabetes</td>
</tr>
<tr>
<td>In balance</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>Strong muscles, solid bones</td>
<td>Osteoporosis</td>
</tr>
<tr>
<td>Staying mobile</td>
<td>Early-stage rheumatic diseases</td>
</tr>
<tr>
<td>Strong support, healthy back</td>
<td>Chronic back pain</td>
</tr>
<tr>
<td>Better mood</td>
<td>Depression</td>
</tr>
<tr>
<td>Acute Psychotherapy</td>
<td>Acute psychological issues</td>
</tr>
<tr>
<td>Smoke-free Kinzigtal</td>
<td>Smoking, including presurgery smoking cessation</td>
</tr>
<tr>
<td>Self-management training based on the Stanford Chronic Disease Self-Management Programme (19)</td>
<td>Several physical and psychological conditions, such as diabetes, stroke, hypertonia and depression (20)</td>
</tr>
</tbody>
</table>

*Source: Adapted with permission from Groene and Hildebrandt (14).*

### 3.5 Healthy Kinzigtal data infrastructure

The HK integrated care network relies on advanced IT infrastructure that facilitates the collection, exchange and analysis of health and administrative data. This infrastructure supports the coordination of care by enabling better communication and data-sharing between physicians and allows for the monitoring and evaluation of health care quality and expenditures (14).

#### 3.5.1 Electronic patient records system

To facilitate the coordination of services across providers, the HK programme implemented an EPR system in 2007, and this is continually updated and available to all participating outpatient physicians (12). The EPR stores encrypted data about diagnoses, treatments and prescriptions. Use of the EPR infrastructure is voluntary for HK physicians, and it is mainly used by GPs and outpatient specialists. Connecting hospitals to the EPR system requires additional interfaces that have not been implemented, in
most cases. The EPR enables the seamless and reliable sharing of patients’ health data. The EPR system enables the alignment of services and treatments, which can reduce the likelihood of medication interactions and prevent duplication of interventions and tests (13). Providers can use the EPR system to manage data for all their patients, not only those participating in the HK programme or insured by the two participating health insurance funds. Many of the care coordination programmes initiated by HK rely on this infrastructure.

3.5.2 Administrative data for coordination and management

The HK programme relies on data analytics to improve its preventive and health-promotion programmes and to provide health care in the region. For instance, the management company monitors health care utilization and costs in the region, the impact of different programmes and providers’ performance to develop or adapt interventions accordingly. The data used to better coordinate care in the region are based on the health insurance funds’ cost and utilization data. One of the shareholders of the management company set up a comprehensive data warehouse with the health and health-related data of patients insured by the two health insurance funds. As Hildebrandt et al. (13) note, the warehouse adheres to privacy regulations and includes data from multiple sources and care settings, such as:

- claims (e.g. age, sex, residence, periods of insurance);
- diagnoses and services provided in ambulatory care;
- prescriptions written by office-based physicians;
- hospitals (e.g. admission and discharge diagnoses, further diagnoses, length of stay, medical procedures, diagnosis-related groups);
- sick leave;
- therapeutic appliances;
- nursing care or long-term care.

Based on this comprehensive data set, the programme management company develops interventions targeted to patients’ needs and adapts them based on a continual evaluation of care quality and health outcomes. Different techniques are used to improve interventions, including data analytics to identify groups at risk of developing certain conditions who can be invited to join prevention or health-promotion programmes. This allows the company to target high-risk populations and support them in preventing chronic conditions to improve their health and quality of life. The company
further analyses regional variations in the prevalence of conditions and the utilization of care and discusses findings with providers to explore ways to improve performance and health outcomes.

3.5.3 Integrated data about providers’ performance

To support providers in improving their performance, the programme management company provides quarterly feedback to participating physicians (14). These reports are presented as dashboards and are based on data from multiple sources, including claims data, EPRs and surveys of patients. These different types of data are analysed to produce automated benchmark reports about each provider’s performance. Feedback reports are based on a balanced scorecard approach and include interactive structure, process and outcomes indicators. For some health outcomes indicators, improvement activities have been designed for providers. For instance, the indicator that identifies problematic prescription behaviour is supported by two monthly consultation meetings about prescribing for older patients for which physicians prepare a patient case report and during which potential problems are discussed jointly with a pharmacologist to optimize medication regimens (14). In these meetings, providers discuss with a pharmacologist how to better align their medication regimens with current guidelines (14). The dashboard also enables providers to identify high-risk patients and estimate the potential effectiveness of an intervention (21). Such analyses are performed, for instance, by comparing the characteristics of patients with a specific condition to the standard HK population to identify groups who would be most likely to benefit from an intervention (22).
Evaluation and impact
Evaluating the HK integrated care network is important to understanding the effect of the shared-savings arrangement and the complementary interventions directed at improving health care quality and population health in the Kinzigtal region. A continual assessment of care quality is particularly crucial for payment models that reward short-term savings and thus may lead to an under-provision of care, such as shared-savings contracts.

### 4.1 Health care quality and population health

A central goal of the HK programme is to improve care quality and population health by providing integrated, patient-centred and prevention-focused care. Since the beginning of the project in 2005, there have been two main independent external evaluations of utilization and care quality in the Kinzigtal population (23, 24). These evaluations were carried out by researchers from the University of Cologne, University of Freiburg, University of Tübingen and Philipps-Universität Marburg (25).

The first comprehensive evaluation of the HK programme was a longitudinal study with a nonrandomized control group conducted by Schubert et al. (24). The study assessed the impact of the project on health care quality from 2005 to 2011 using claims data from the larger participating health insurance fund (24). The intervention group (n = 24,454) consisted of beneficiaries residing in the Kinzigtal region, and the control group (n = 512,086) comprised beneficiaries in other regions of Baden-Württemberg. Since the intervention group included all beneficiaries in the Kinzigtal region, regardless of their enrolment status in the HK programme, the study assessed the impact of the programme on the entire population insured by this fund and not only on HK members.

The study used 18 indicators – 5 of which covered the overuse of care, 10 the underuse of care and 3 that assessed health outcomes – to evaluate the difference between the trend in the intervention region and the trend in the control region. The study found no significant difference for 12 indicators of health care quality for the Kinzigtal population compared with the control group, and significant improvements for the remaining 6 indicators.

A more recent external evaluation based on a nonrandomized observational study (23) did not find significant differences in the improvement of care quality between the insured persons living in the Kinzigtal region, regardless of their HK enrolment status, and a control group that consisted of persons insured by the same fund in 13 control regions. A set of 101 indicators was developed by the authors based on a literature review and confirmed through a Delphi
consensus process: the indicator set evaluated in this study was more comprehensive than that of the evaluation discussed above. Based on the health insurance fund’s claims data from 2006 to 2015, an evaluation of the difference between the trends in the intervention region and the mean trend in the control regions was carried out. A detailed description of the study’s methodology is provided by Stelzer et al. (26).

For 88 indicators, the study did not find any significant differences between trends in the Kinzigtal region and trends in the control regions. Six indicators showed a positive trend in the Kinzigtal region (Table 2). For instance, the proportion of patients with heart failure who were prescribed anti-inflammatory medicines decreased significantly more in the Kinzigtal than in the control regions. Seven indicators, however, were unfavourable in the Kinzigtal region (Table 2). For instance, the initial favourable prevalence in the Kinzigtal of treatments with angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blockers (ARBs) in patients after myocardial infarction and left ventricular systolic dysfunction were not maintained compared with the control group.

Table 2. Indicators showing favourable and unfavourable health care trends in the Kinzigtal region compared with control regions, Germany, 2006–2015

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2006 baseline prevalence (%)</th>
<th>Trend difference (95% CI)</th>
<th>z score (95% CI)</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of heart failure patients prescribed nonselective NSAID (e.g. diclofenac, ibuprofen, naproxen) or selective COX-2 inhibitors during the previous 12 months</td>
<td>35.60</td>
<td>−3.79 (−5.52, −2.07)</td>
<td>−3.25 (−9.41, 1.62)</td>
<td>Moderately positive</td>
</tr>
<tr>
<td>Proportion of patients with type-1 or type-2 diabetes mellitus participating in the Diabetes Mellitus Type 1 and Type 2 disease management programme</td>
<td>43.00</td>
<td>7.67 (2.80, 12.53)</td>
<td>1.14 (0.40, 2.32)</td>
<td>Weakly positive</td>
</tr>
<tr>
<td>Proportion of patients with depression who received follow-up care (i.e. quarterly visits with a psychiatrist or psychotherapist) during the previous 12 months</td>
<td>57.70</td>
<td>7.15 (2.60, 11.70)</td>
<td>1.25 (0.43, 2.54)</td>
<td>Weakly positive</td>
</tr>
<tr>
<td>Proportion of patients diagnosed with moderate depression who required inpatient admission during the previous 12 months</td>
<td>5.65</td>
<td>−2.06 (−3.46, −0.67)</td>
<td>−1.78 (−5.31, 1.04)</td>
<td>Weakly positive</td>
</tr>
<tr>
<td>Indicator</td>
<td>2006 baseline prevalence (%)</td>
<td>Trend difference (95% CI)</td>
<td>z score (95% CI)</td>
<td>Evaluation</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>----------------------------</td>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Proportion of patients with lower back pain during the previous 12 months who were unable to work for more than 14 days</td>
<td>7.79</td>
<td>-0.83 (-1.36, -0.31)</td>
<td>-1.88 (-5.55, 1.06)</td>
<td>Weakly positive</td>
</tr>
<tr>
<td>Proportion of prescriptions for antidiabetic medicines that were compliant with the RSCA relative to all prescribed antidiabetic medicines</td>
<td>91.40</td>
<td>2.88 (1.78, 3.99)</td>
<td>1.76 (0.98, 3.21)</td>
<td>Weakly positive</td>
</tr>
<tr>
<td>Proportion of patients with chronic obstructive pulmonary disease that required inpatient admission for exacerbations during the previous 12 months</td>
<td>3.71</td>
<td>0.94 (-0.02, 1.91)</td>
<td>1.39 (-0.03, 3.38)</td>
<td>Weakly negative</td>
</tr>
<tr>
<td>Proportion of patients with chronic pain that were screened for depression</td>
<td>26.70</td>
<td>-10.32 (-15.01, -5.62)</td>
<td>-2.71 (-7.84, 1.35)</td>
<td>Moderately negative</td>
</tr>
<tr>
<td>Proportion of children aged &lt; 6 weeks who were screened for developmental dysplasia of the hip</td>
<td>70.80</td>
<td>-8.55 (-13.09, -4.00)</td>
<td>-1.58 (-4.60, 0.83)</td>
<td>Weakly negative</td>
</tr>
<tr>
<td>Proportion of patients aged ≥ 65 years who required inpatient admission due to adverse medicine reactions during the previous 12 months</td>
<td>0.17</td>
<td>0.33 (0.13, 0.52)</td>
<td>1.82 (0.69, 3.67)</td>
<td>Weakly negative</td>
</tr>
<tr>
<td>Proportion of patients diagnosed with multiple sclerosis who received physiotherapy</td>
<td>50.70</td>
<td>-6.09 (-16.25, 4.06)</td>
<td>-1.42 (-5.23, 1.77)</td>
<td>Weakly negative</td>
</tr>
<tr>
<td>Proportion of post–myocardial infarction patients that received a prescription for an ACE inhibitor or ARB for left ventricular systolic dysfunction</td>
<td>82.90</td>
<td>-5.45 (-9.77, -1.12)</td>
<td>-2.39 (-7.45, 1.54)</td>
<td>Moderately negative</td>
</tr>
<tr>
<td>Proportion of patients with stroke and depression who received a selective serotonin reuptake inhibitor</td>
<td>30.50</td>
<td>-10.32 (-20.17, -0.47)</td>
<td>-2.35 (-7.47, 1.73)</td>
<td>Moderately negative</td>
</tr>
</tbody>
</table>

ACE: angiotensin converting enzyme; ARB: angiotensin II receptor blocker; CI: confidence interval; COX-2: cyclooxygenase-2; NSAID: nonsteroidal anti-inflammatory drug; RSCA: German Risk Structure Compensation Act.

Source: Adapted with permission from Schubert et al. (23).
Schubert et al. (23) concluded that the quality of care provided to the Kinzigtal population covered by this health insurance fund had neither significantly improved nor deteriorated between 2006 and 2015. The authors also did not find any difference in mortality between the intervention group and the control group.

Schubert et al. (23) commented that because there is no standard definition of integrated care, comparisons across different integrated care programmes are difficult. They emphasized that neglecting to consider this lack of a standardized definition “could lead to incorrect conclusions and generalizations about the effectiveness of integrated care” (23). A further limitation of both studies is that the intervention groups included patients who were not registered with the HK programme. It is possible that evaluations focusing only on HK members would yield different results.

4.2 Patient satisfaction

Patient satisfaction is an important dimension of care quality and a central component of HK’s patient-centred approach. To measure the impact of HK on patients’ satisfaction, participants are surveyed every 2 years by the GeKiM study (Gesundes Kinzigtal Mitgliederbefragung, or Healthy Kinzigtal member survey) (27). The survey assesses how satisfied HK participants are with the treatment and support they received from their trusted doctor, whether their health-related behaviour and health literacy have changed since joining the programme, and their general satisfaction with the integrated care programme.

For each survey, between 3000 and 3500 members of HK are randomly chosen from the membership database to receive a standardized questionnaire via post. Around a month after the survey is sent out, a reminder is issued. Members send their completed survey free of charge to the external institute conducting the evaluation. A returned survey is considered valid and included in the analysis if at least half of the questions have been answered (27). The participant satisfaction survey was conducted in 2013, 2015, 2017 and 2021. While the first two surveys were conducted by a team of researchers from the University of Freiburg and the University of Tübingen, the fourth was conducted by a private survey institute (27, 28). No comprehensive analyses of the results of the third and fourth patient satisfaction surveys are available, which limits the significance of these findings for understanding the impact of HK on patients’ satisfaction.

There are some limitations to the patient satisfaction surveys. First, the survey is designed as a trend study without a control group, which allows changes in satisfaction to be followed for the
intervention group but does not allow for conclusions about whether the observed findings and potential changes are due to participation in the HK programme or other external factors. Siegel and Niebling (27) argue, for instance, that the finding that respondents reported “living healthier” may also be due to a more general trend towards a healthier lifestyle rather than participation in HK. Since no comparative data about patient satisfaction are available for non-HK members, it remains unclear to what extent the experiences of HK members differ from those of other patients. Another limitation is that among those HK members who received the survey via post, the more motivated or more satisfied patients may have been more likely to respond, resulting in selection bias. Other biases that may confound the results are confirmation bias, as respondents may be inclined to present the HK programme, in which they had already decided to participate, in an overly positive light, and social desirability bias, which is the tendency to give socially desired responses (27).

While the results of the second GeKiM survey point to an overall positive impact of HK on patients’ satisfaction with care and their health-related behaviour (27), limitations remain regarding the methodology and the public availability of results.

4.3 Health care expenditure

Since the HK programme is financed through savings, reducing health care expenditure is not only an end in itself but also a prerequisite for the sustainable and self-sufficient functioning of the project. The population for whom health care spending is calculated in the HK programme is all individuals insured with the two participating health insurance funds in the Kinzigtal region. Internal evaluations by the programme management company show that health care expenditure for the covered population has consistently remained below the expected cost norm, as calculated through Morbi-RSA. Box 1 has a detailed description of the calculations for savings.

In 2012, the annual savings made by the HK programme amounted to €4.56 million, as actual health care spending was 6.6% below the cost norm (16). In that year, the most significant savings were realized in hospitals, with €179 saved per insured patient and €93 saved per insured in other services, including medical aids and appliances, travel costs and rehabilitation benefits (16, 29). In spending on medicines, €37 was saved per insured person. In 2013 and 2014, the annual savings by the HK programme amounted to €5.5 million (10, 27). In 2018, savings of €5.6 million were realized, which was 6.1% below the cost norm (30). In 2019 and 2020, the
Evaluation and impact

Annual savings represented 7% of the cost norms (31; O. Groene, OptiMedis, personal communication, 2022). These annual savings are significantly larger than those from before implementation of HK. In the reference period 2003–2005 before implementation of the HK programme, annual savings represented only around 1.6% of the cost norm (13).

While these savings are significant, it is noteworthy that AOK realized similar savings in other regions in the state of Baden-Württemberg (32). Further studies are needed to understand how much of the positive financial performance of the HK programme can be attributed to the integrated care network.

4.4 Challenges and limitations to evaluating Healthy Kinzigtal

While the HK programme has been described as “the flagship model of an integrated health care system and the only fully population-based system in Germany that has been subject to rigorous external evaluation” (10), some challenges remain to fully assess the payment mechanism and its impact on the quality of care, patient satisfaction and spending. The limited publicly available information about the payment mechanism makes it difficult to evaluate the impact of financial and nonfinancial incentives on providers’ behaviour. For instance, it is unknown how much money physicians receive as shareholders via their membership in MQNK, via the quality bonus and through payments for participating in health-promotion interventions.

The limited access to the results of the GeKiM surveys on patient satisfaction represents another challenge to evaluating the impact of the programme. While survey results indicate that participants in the programme are satisfied with it overall, a longitudinal analysis is needed to yield more robust insights (27). Furthermore, it remains unclear to what extent the experience of HK participants differs from that of people who are not enrolled, as there has been no publicly available study that compares findings from those enrolled in HK with those from a control group.

Information about the financial performance of the programme is provided by OptiMedis; however, this is not publicly available in a systematic form, which constitutes a challenge to understanding the financial impact of the programme. As commentators have also pointed out, AOK has yielded similar savings in other regions (33). An in-depth external evaluation that compares the financial performance of the HK programme in the Kinzigtal region against similar regions would give insight into how much of the savings effect can be attributed to the intervention by HK. To understand the
impact of the HK programme after 2016, it would be useful to have a comprehensive evaluation of insurance data as a follow-up to the assessments of the quality of care made by Schubert et al. (23, 24).

While it is understandable that HK Ltd. as a private company cannot publicly disclose certain information, the limited availability of data represents a challenge to conducting a rigorous evaluation of the impact of the programme.
Enabling factors and preconditions for the payment model in the Healthy Kinzigtal programme
The HK programme is one of the most ambitious and largest integrated care programmes in Germany. It aims to facilitate the coordination of care and the development of programmes for preventing and managing chronic conditions, and it is financed through a shared-savings arrangement. However, as only certain data are publicly available, conducting a rigorous, comprehensive and independent evaluation of this programme is challenging.

Nevertheless, several factors have been identified as enabling the implementation and long-term sustainability of the HK population-based shared-savings contracts. The following reflections on enabling factors are based on Groene and Hildebrandt (14) and Groene et al. (10).

5.1 Contract and project design

5.1.1 Payment model

One enabling factor for implementation of the population-based shared-savings contract in the Kinzigtal region is its clear and well-communicated payment model, in line with the expectations and resources of its stakeholders.

5.1.2 Population size

In 2020, the Kinzigtal region had 71,000 inhabitants, of whom around 33,000 were covered by the participating health insurance funds, and thus were eligible to join the programme; around 8,150 participants were actively enrolled in 2020 (14, 15). This population size has proven suitable for implementing an integrated shared-savings arrangement as it has allowed the integrator (the programme management company) to stay in close contact with local stakeholders and to tailor approaches to the conditions and needs of the region. Limiting the size of the integrated care network has also positively affected its ability to coordinate providers, and to establish local interactions and a shared feeling of working towards a common goal. Since the design of payment models strongly depends on the context of implementation, the suitable population size may vary for other regions with different health care structures.

5.1.3 Contract duration

Choosing an adequate duration for the contract has enabled and incentivized long-term structural changes in care coordination, providers’ behaviour and patient engagement. The first contract between the management company and the health insurance funds ran from 2005 to 2014, with an automatic extension if the contract
was not cancelled in 2014. This gave all stakeholders the necessary
time and planning certainty to implement and monitor long-term
changes, enrol participants, build IT infrastructure and develop
relationships (e.g. between providers and associated institutions).
Since 2014, the shared-savings contract has been extended, giving
providers, insurers and other stakeholders stability to make future
investments and for planning.

5.1.4 Start-up investment
In the case of HK, a start-up investment in integrated care networks
was made possible through legislative changes (8). When the start-
up financing for the HK programme ran out in 2007 after about two
years, the project was mature enough to financially sustain itself.
Thus, the amount of start-up funding should provide the support
needed to ensure the financial stability of a programme, especially
in the first years of implementation.

5.2 Project management and coordination

5.2.1 Governance structure
In the HK integrated care network, the management company acts as
an integrator to facilitate the coordination of care, the design and
implementation of health-promotion programmes, development of
the IT infrastructure and data analysis, as well as managerial tasks.
Two thirds of the company are owned by the local network of
providers. The strong involvement of local actors, especially
providers, is crucial because they are established in the region and
have a good understanding of the health context. Engaging with
providers further ensures that they do not feel as if changes are
being forced onto them but that they can actively contribute to the
design and direction of the project. In the case of the HK
programme, this provider network is the main shareholder of the
management company, so physicians are also involved in decision-
making processes. The remaining one third of the company is owned
by a German health management company (14).

5.2.2 Data infrastructure
Advanced IT and data infrastructure are crucial to coordinating and
evaluating population-based shared-savings models. An EPR system
enables different physicians who treat the same patient to exchange
health data, which saves time and resources and can improve

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The health insurance funds and HK Ltd. are currently renegotiating the contract. Since these
discussions are ongoing, they are not covered in this article. For further information, see reference (33).
patients’ experiences. This type of data infrastructure also allows for more timely and in-depth monitoring of care quality and is essential for payment models that link providers’ payments to quality indicators. Since developing an IT system and skills requires considerable investment, it makes sense for providers if this infrastructure is used for as many patients as possible. If an IT system is used for only a few patients in a practice or hospital, such changes might be considered wasteful or an additional burden. Thus, the population covered by a project should be large enough for investments in IT to pay off. In the HK programme, physicians can use the EPR system for all of their patients, regardless of whether they are enrolled in it, which increases the likelihood of providers establishing and using the IT infrastructure.

5.2.3 Evaluation and monitoring

HK has allocated a significant budget for the evaluation of the programme, which has been central to understanding its impact on the quality of care and to monitor the satisfaction of enrolled patients.

5.3 Local preconditions: culture and vision

Implementing structural changes in the delivery of and payment for care, as in shared-savings arrangements, requires support from all stakeholders, especially from providers who will experience and implement changes in their daily routines. The success of such a programme depends on a common culture and vision and the willingness of stakeholders to work cooperatively, even if the project might come with significant changes in responsibilities and financial flows. Such a culture is particularly important for population-based programmes that require cooperation across social care, health care and long-term care services. A shared vision among local actors will support the successful implementation of structural changes, including the breaking up of established institutional boundaries. The fact that the HK programme was co-initiated by the local provider network, which was motivated to change health care delivery in the region, positively contributed to the success of the project.
Lessons learned for other settings
The shared-savings model in the HK programme is based on the idea that better coordination of care, as well as financial and nonfinancial incentives for providers and patients, reduce health care spending compared with the expected cost norm for the covered population. If expenditure is below the cost norm, which represents the budget for the health insurance funds as determined through Morbi-RSA, savings are generated, and these are then used to fund the project through the share received by the integrator that manages the programme. The share received by the health insurance funds constitutes actual savings or an actual reduction in costs because they are not directly reinvested in the project itself but kept by the insurers. Thus, bringing down overall expenditures as compared with cost norms is an inherent goal and prerequisite of shared-savings arrangements, and it is also achieved through delivering better quality and coordination of care.

While the sound design and management of the HK programme are central enabling factors, maintaining the support of stakeholders and trust and motivation among providers may be equally important to ensure the acceptance of the project in the region. The HK model represents a collaborative, multistakeholder approach with strong physician involvement through which compromises can be made and the alignment of different interests can be achieved, all of which have likely contributed to the sustainability of the project. A reasonably sized covered population and a reasonable number of providers – in this case 33,000 eligible and 8,150 enrolled patients and about 65 participating doctors – are other important factors in the success of the project. While the lessons learned from the HK programme constitute a good starting point for designing and implementing a payment model, they also show that a programme’s size and structure always need to be tailored to the context of implementation.
References


