



# Integrated Care – The OptiMedis Model to achieve the “Triple Aim”

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# Structure

- Background - what's the problem we are trying to fix?
- The model - what's the legal basis, how does it work?
- Evaluating results - what does the data show about the model in real-life?
- Outlook - what needs to be done to do the same elsewhere?

# Background

Our fragmented healthcare systems are engineered for “repair” but not for “maintenance” and not at all for “prevention” and “innovation”.

Maria Roth is a 84 years old woman suffering from heart failure. Since 2010 she was admitted to hospitals eight times because of inadequate monitoring and poor care coordination.

From 2010 to 2014 the total costs of care for Maria were 72,261 €, resulting in a **loss** for the insurance of **-23,204 €** or about **-5,800 €** per year.

I am afraid we have to move to a nursing home because of my wife's bad health status.



Can't we do better?

Innovating the health system to be  
more efficient and to produce health.

Hanna Held is also a 84 years old woman suffering from heart failure. Since the diagnosis six years ago she has been participating in the health care program „Strong Heart“ and she has a case manager at her GP practice. She gets supported in her self-management, her medication gets precisely adapted to her situation and she knows exactly to identify and act on signs of deterioration.



I can still go out to buy food and things. My quality of life is good and I feel safe.



In the last 4 years Hanna only went once to hospital because of an ophthalmic complication. Her total costs of care summed up to 14,281.8 €, resulting in a **profit** for the insurance of **+2,613.6 €** or about **+650 €** per year.

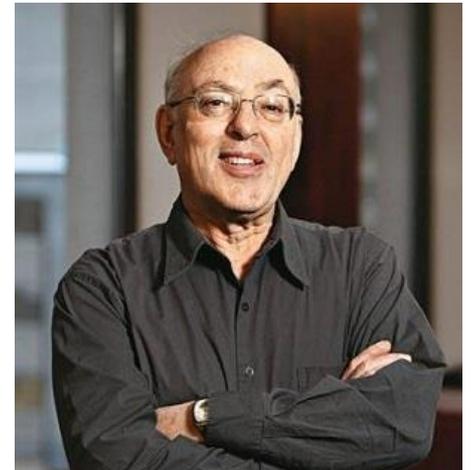
# The challenge

“Every organized human activity — from the making of pots to placing man on the moon — gives rise to two fundamental and opposing requirements:

- the division of labour into various tasks to be performed,
- and the coordination of these tasks to accomplish the activity.

The structure of an organization can be defined simply as the sum total of the ways in which it divides labour into distinct tasks and then achieves coordination among them.”

(Henry Mintzberg)



# The governance model

# What are we trying to achieve?



Berwick DM, Nolan TW & Whittington JW. The Triple Aim: Care, Health, And Cost. *Health Affairs* 2008; 27(3), 759–769.

# How can we achieve the Triple Aim?



**Key components** necessary to attain the Triple Aim:

- a clear (regionally defined) reference population
- total budget limit or assumption of financial responsibility for the population,
- the presence of a regional integrator to take responsibility for the three aims.

The role of a ***regional integrator***:

- assessing and managing population health
- redesigning health and care services
- achieving system integration at the macro level, and addressing local issues and
- establishing partnerships with individuals and families
- implementing tailored solutions with the involvement of all stakeholders.



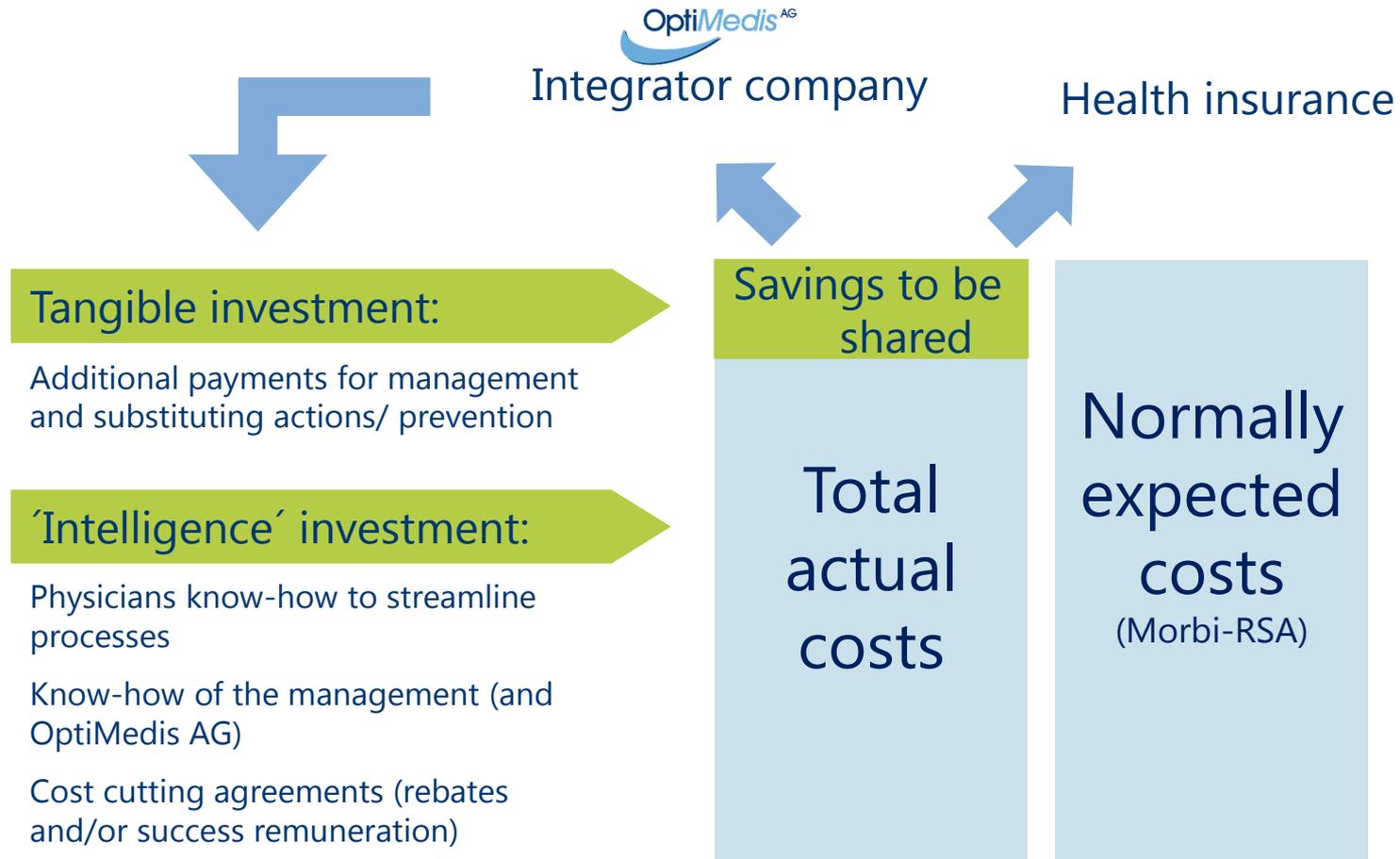
# A new business model: Shared Health Savings Contracts

In “Shared Health Savings Contracts” we generate an economical benefit for purchasers for a defined population through wise investments, prevention and optimized care.

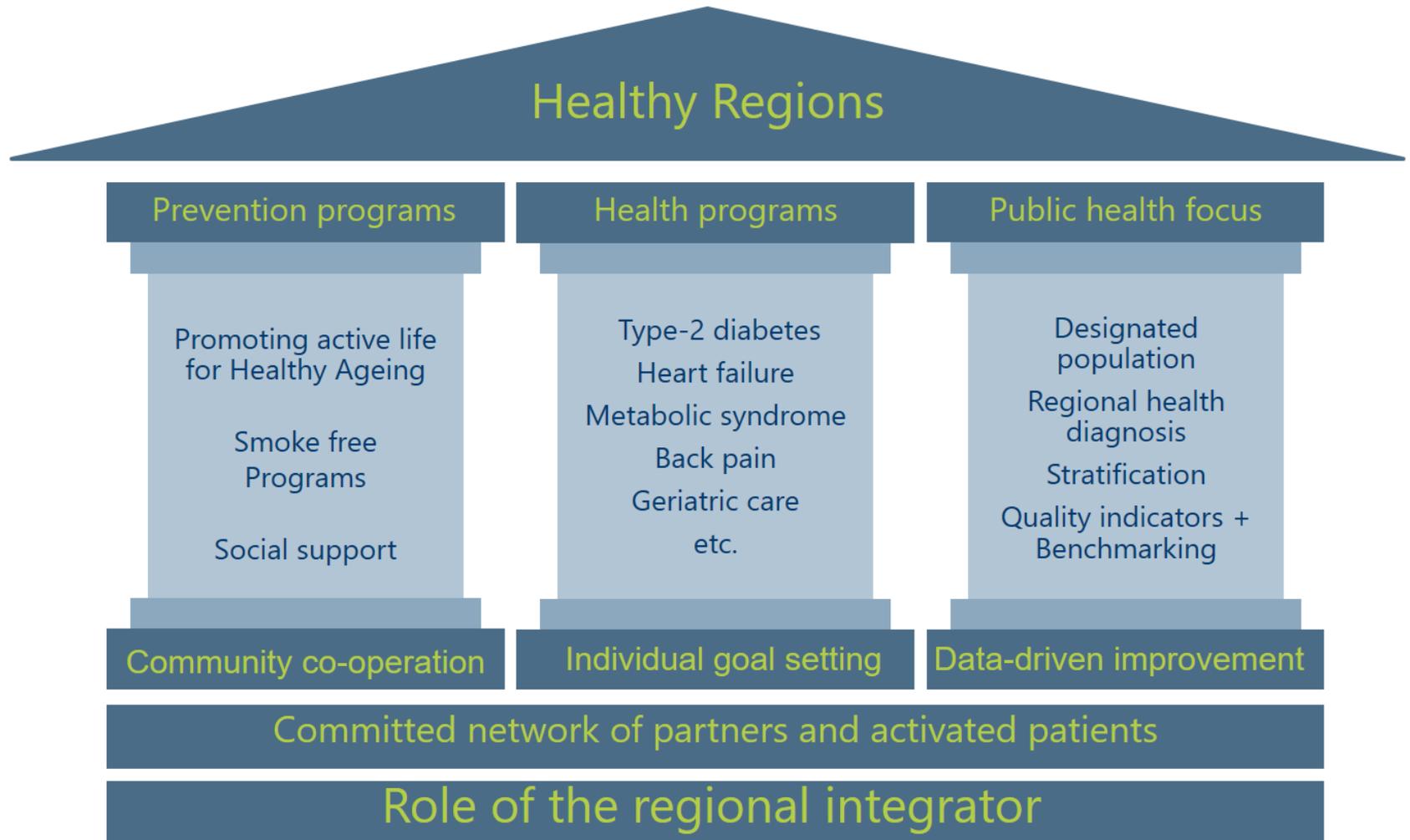


# Health gain sharing: the risk adjusted contribution margins of the partnering health insurances

The integrator company (re) invests and benefits from its success



# Our programme logic for population-based, regionally integrated health care



# The case: „Gesundes Kinzigtal“

# Gesundes Kinzigtal: successful in the 10th year and still investing for further population health improvement

- › Start: 2006 for a population of 33,000 insureds of AOK and LKK
- › 58 % of all the GPs and specialists of the region have chosen partnership
- › Surplus health care services, coaching and free preventive offers



- › **Investing in health:** Central electronical data platform, around 20 prevention and care improvement programs, integrating sport and exercises
- › 2015: Building a medical training & education center (3.5 million € investment)
- › 2016: Unlimited contract with AOK

# Organizational structure



MEDIZINISCHES QUALITÄTSNETZ  
ÄRZTEINITIATIVE KINZIGTAL e.V.



## Partnership:

Physician network with experience on local health problems and other issues, contacts to regional stakeholders

Competencies in health sciences and health economics, know-how in the fields of prevention, controlling, management, investment capability

Shareholder:

66,6%  
MQNK e.V.  
(Ärztenez)



33,4%  
Optimedis AG

Contracts with providers

Physicians

Psychotherapy

Hospital

Pharmacy

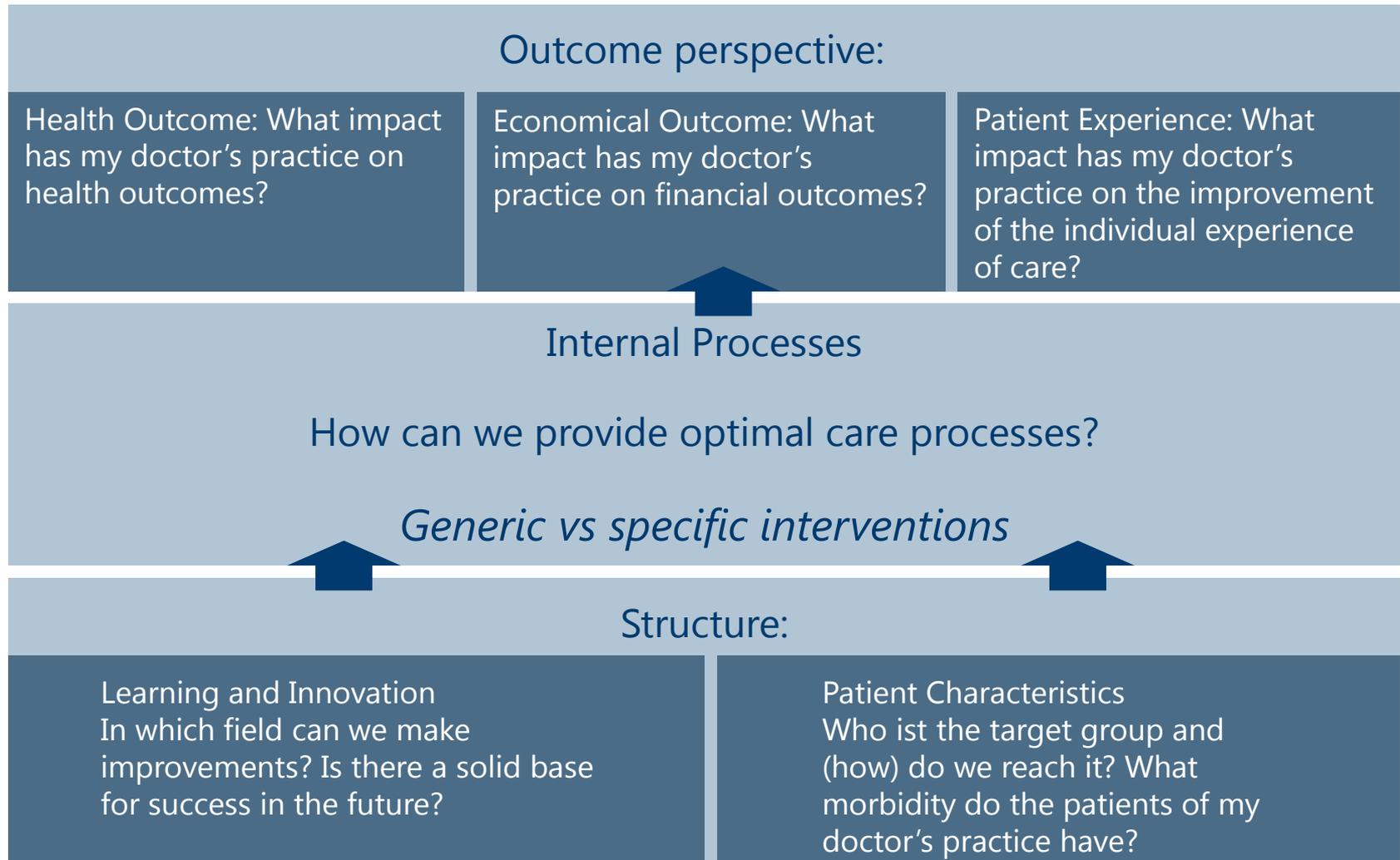
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# OptiMedis: Our function as regional integrator

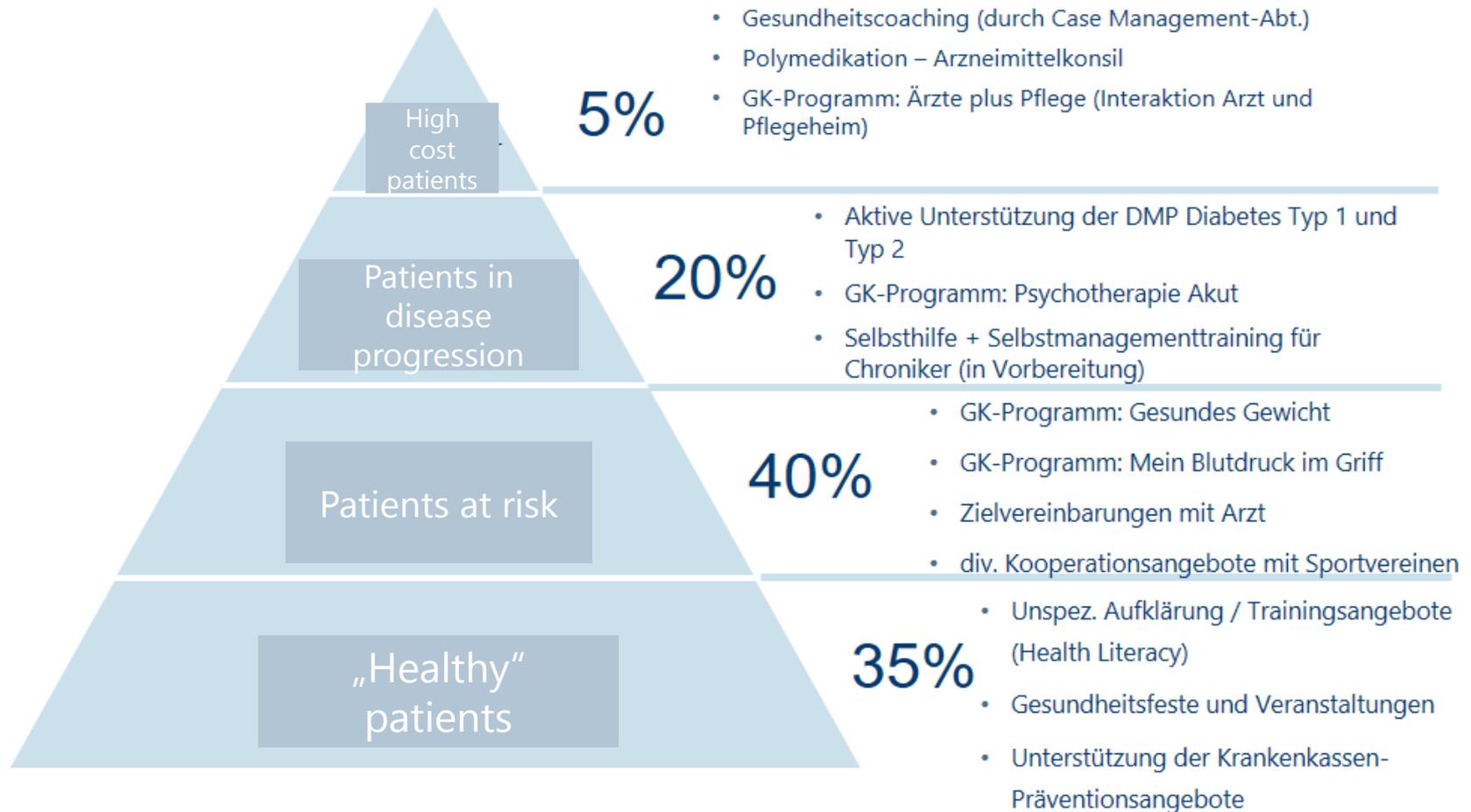
- We develop and manage regional multi-professional healthcare-networks  
in which physicians, hospitals, physiotherapists, pharmacies, sport clubs, schools and enterprises are engaged together.
- We improve the level of health and create significant health benefits  
for whole regions applying scientifically proven interventions and activating patients towards prevention.
- We analyze health care data  
and perform independent, data-based real-life health care research and make the results available for the integrated provision of health care services.



# Intervention logic focused on the Triple Aim



# Generic and specific interventions related to the management of diabetes mellitus II



## List of *specific* interventions (prevention and health promotion programmes) that have been developed so far

- **Strong heart (programme targeting heart failure)**
- **Healthy weight (for metabolic syndrome, including diabetes)**
- **Good prospects (care services for children)**
- **In balance (blood pressure)**
- **Strong muscles – solid bones (osteoporosis)**
- **Staying mobile (treating early stage rheumatism)**
- **Strong support - healthy back (chronic back pain)**
- **Better mood (depression)**
- **Good counselling (help, advice and support in critical times)**
- **Psycho Acute (acute psychological issues)**
- **Disease management programmes**
- **Smoke-free Kinzigtal (including pre-surgery smoking cessation)**
- **Social support (to reduce stress where patients are in critical situations)**
- **Liberating sounds (in tune with music) and,**
- **New: a self-management training programme (based on the Stanford Chronic Disease Self-Management Programme).**

Importance of *generic* interventions to facilitate programme implementation, monitoring and quality improvement

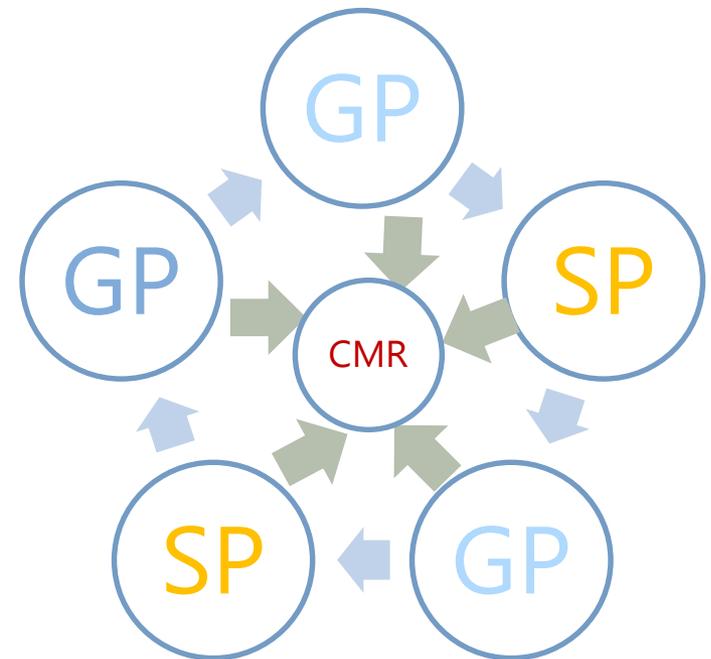
# A prerequisite : Central medical record + ICT-integration

Now: Every physician sees in his own Computer-system what the other physicians did with the patient ... the medications, the goals + lab results.

Investment of time and money,  
but a key requirement for continuity  
of care and timely data analytics.

Starting point: Trust between  
providers and joint experiences in  
working groups etc.

Keep it simple and smart ...  
No second system but deep integration  
into the work flow



Monitoring system for the physicians health services cockpit focused on the Triple Aim

**Quality indicators and key figures**

**Your Practice**      **Ø-LP-GP's (n=17)**      **Ø-NLP-GP's (n=22)**      **Min/Max GP (n=39)**

**3. Outcomes: Which impacts have interventions on medical and financial outcomes and patient satisfaction?**

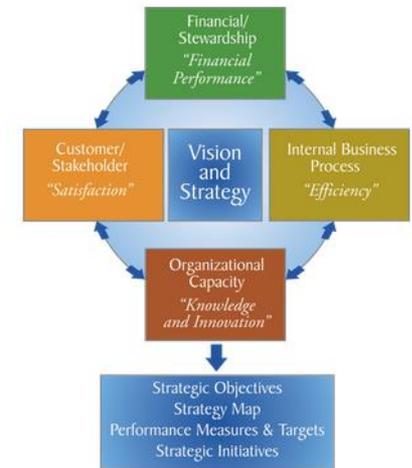
3.1 Economical outcomes	Allocation (Morbi-RSA) per patient		845,45 →	765,33	687,81	937,79
	- Total costs per patient		841,81	764,78	677,81	251,72
	= Contribution margin per patient		3,64	0,55	10,00	326,69
3.2 Health outcomes	Hospital cases per 1.000 patients (risk-adj.)		82,91	87,42	98,55	42,35
	Decedents % (risk-adj. mortality)		0,51%	0,57%	0,60%	0,00%
	Patients with osteoporosis & fracture %		3,64%	8,49%	12,98%	0,00%
3.3 Patient satisfaction	Impression of practice very good - exc. %		66,7%	61,0%	79,9%*	83,3%
	Weisse Liste / GeKIM 2012/13 Med. treatment very good - exc. %		52,8%	53,0%	75,1%*	79,2%
	*Ø-NLP here = Ø-Germany Recommendation likely - certain %		85,2%	84,6%	88,1%*	95,6%

**2. Process - Where do we have to be excellent?**

2.1 Diagnostic quality	Unspecified diagnoses %		20,4%	20,1%	24,1%	12,5%
	Suspected diagnoses %		1,6%	1,3%	1,6%	0,6%
2.2 Utilization	Patients >= 35 with health-check-up %		7,5%	7,8%	7,1%	17,1%
	Patients incapable of working %		39,0%	41,7%	43,8%	33,8%
	Length of incapacity for work		5,52	5,93	6,37	3,87
2.3 Improvement of Medication	Generic quota		93,0% →	88,6%	87,2%	93,0%
	Pat. with heart-fail. & guideline prescr. %		79,9%	75,4%	72,9%	100,0%
	Patients >= 65 with pot. inad. med. (PRISCUS)		14,3%	13,2%	12,5%	4,2%
	Patients >=65 with inad. prescr. (FORTA D) %		4,0%	4,8%	4,3%	0,6%

**1. Structure - What ist the target population? Where can we improve structure elements to generate better outcomes?**

1.1 Patient sturcture	1.1.1 Age, gender, etc.	Ø-Number of patients		509,0	485,3	338,9	931,0
		Ø-Age		57,1	54,6	52,5	53,5
		Female %		56,8%	56,5%	55,8%	65,2%
		Patients capable of work %		55,2%	58,5%	60,5%	72,7%
		Patients dependent on care %		6,7%	7,7%	7,0%	13,0%
		1.1.2 Morbidity	Ø-Charlson-comorbidity-score		1,85 →	1,26	1,14
Regional GP-risk-score (Morbi-RSA)			1,16 →	1,05	0,94	1,29	
1.1.3 Enrollment	IC-participants %		88,8%	61,1%	10,2%	88,8%	
	DMP-participants %		67,4%	53,9%	32,0%	81,9%	
1.2 Learning & innovation	Participation in quality circles (Ø = 1,0)		1,3	1,0	-	2,1	



Robert S. Kaplan and David P. Norton, "Using the Balanced Scorecard as a Strategic Management System," Harvard Business Review (January-February 1996): 76.

Pimperl A., Schulte T., Daxer C., Roth M. & Hildebrandt H. (2013). „Balanced Scorecard-Ansatz: Case Study Gesundes Kinzigtal". Monitor Versorgungsforschung 6, Nr. 1 (2013), 26-30

Importance of *generic* interventions to impact on the population as a whole



*"We are at a turning point in health policy: the nature of 21st century health - the health society - calls for a radical change of mindset and a reorganization of how we govern health in the 21st century."  
(Ilona Kickbusch)*



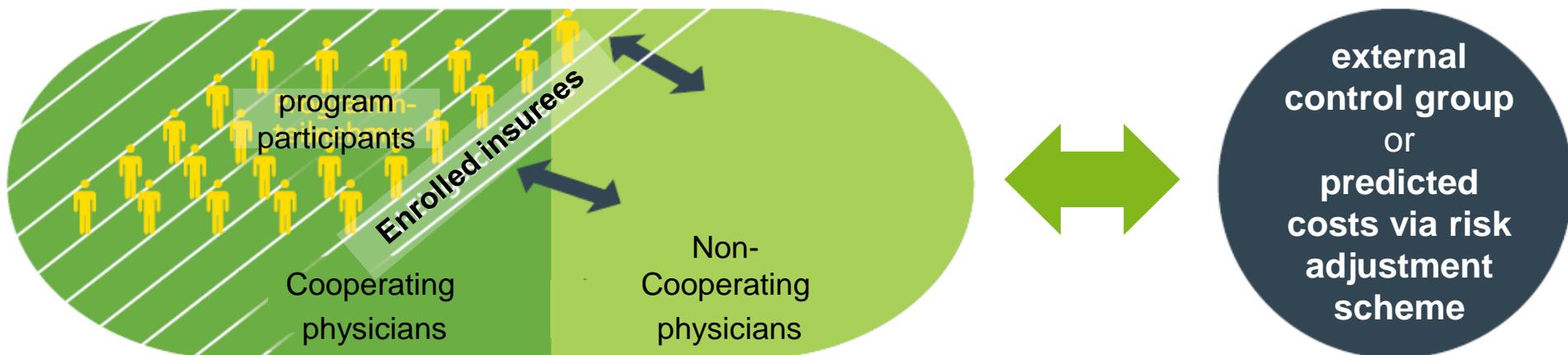
# Results

## Two central (external) scientific evaluation studies

- First, a survey amongst the insured regarding their perceived health, satisfaction, changes in health behaviour, health-related quality-of-life and levels of activation.
  - Biannual trend study based on a representative random sample of the insured (University of Freiburg).
- Second, an analysis of the over- and underutilisation of health services, based on routinely available data from the Social Health Insurance.
  - Controlled quasi-experimental study comparing the intervention population to a random sample of ca 500,000 members of AOK-BW and LKK-BW that are not from the Kinzigtal region (University of Cologne).

# Different methods of evaluation of results are used

All insurees with residence in the Kinzigtal region



Program participants vs. risk adjusted non-program participants

Enrolled insurants vs. risk adjusted non-enrolled insurants

Patients of cooperating physicians vs. patients of non cooperating physicians  
(attribution via number of contacts > 50%)

Real development versus predictions

# Triple Aim Results: Patient Reported Outcomes

“I live healthier now” – Answering in a positive way is correlated with the intensity of involvement, cooperation and shared-decision making



Siegel A, Stößel U (2014) Patientenorientierung und Partizipative Entscheidungsfindung in der Integrierten Versorgung Gesundes Kinzigtal. In: Pundt J (Hrsg.) Patientenorientierung: Wunsch oder Wirklichkeit?. 195-230. Apollon Bremen

# Triple Aim Results: Routine data analysis



Contents lists available at ScienceDirect

Z. Evid. Fortbild. Qual. Gesundh. wesen (ZEFQ)

journal homepage: <http://www.elsevier.com/locate/zefq>



Versorgungsforschung / Health Services Research

Evaluation der populationsbezogenen, Integrierten Versorgung  
Gesundes Kinzigtal<sup>1</sup> (IVGK). Ergebnisse zur Versorgungsqualität auf  
der Basis von Routinedaten<sup>☆</sup>

*Evaluation of the population-based 'Integrated Health Care System  
Gesundes Kinzigtal' (IHGK). Findings on health care quality based on administrative data*

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<sup>1</sup> PMV forschungsgruppe an der Klinik und Poliklinik für Psychiatrie und Psychotherapie des Kindes- und Jugendalters der Universität zu Köln, Köln, Deutschland

<sup>2</sup> Universitätsklinikum Freiburg, Lehrbereich Allgemeinmedizin, Freiburg, Deutschland

Indicator set (n=18): 15 on over- und underuse, avoidable hospital stays, fractures and mortality.

Indicators improve in overuse (2/5), underuse (2/10), occurrence of fractures, survival.

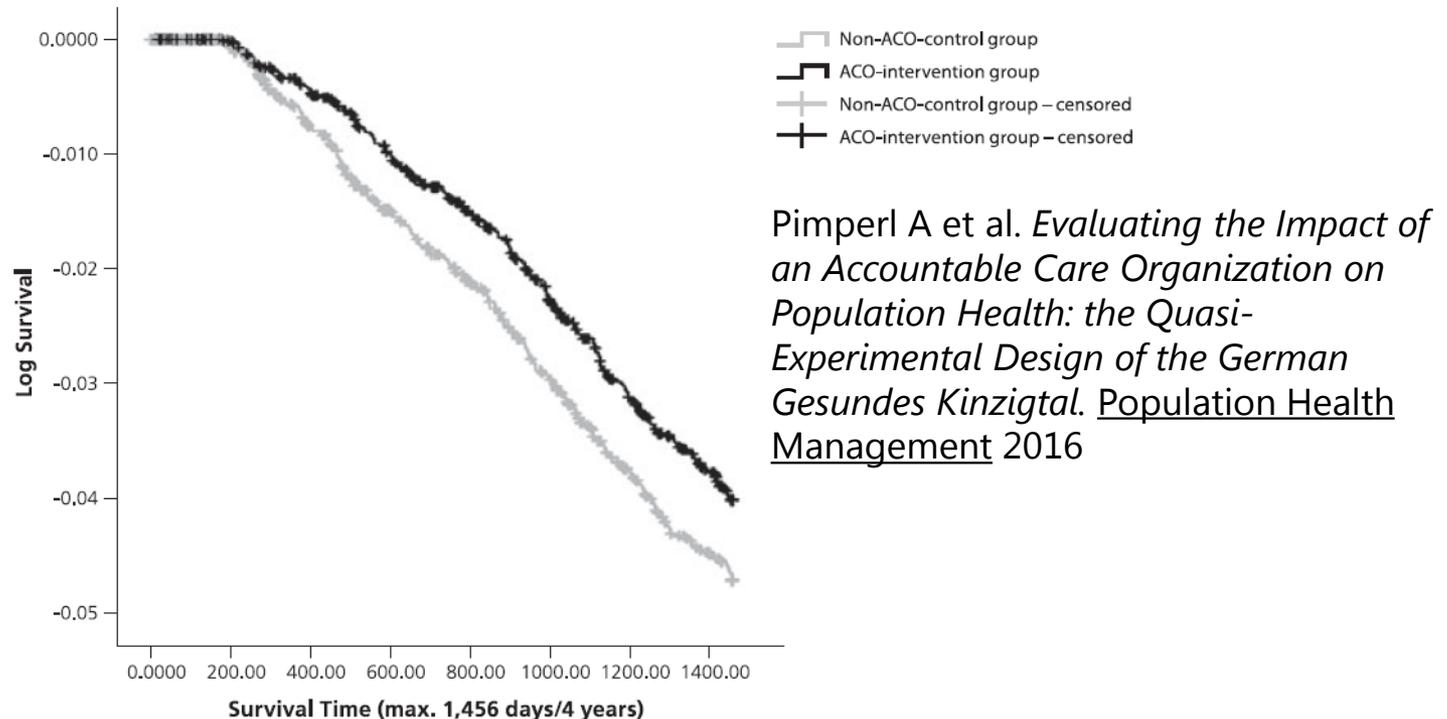
No negative trends found.

**Methods:** Longitudinal study with non-randomised control group based on health insurers' claims data from the years 2004–2011. Intervention group: residents of the Kinzigtal region insured by AOK. Control group: persons insured with the AOK in other regions of Baden-Württemberg. Healthcare quality indicators were derived from other studies and guidelines. Fifteen out of the 18 indicators related to overuse or underuse; three related to an outcome, namely avoidable hospital stays, the appearance of fractures in patients with osteoporosis, and mortality. Trend and outcome analyses rely on Poisson and Cox regressions adjusted for age, sex, the Charlson Index, and multimorbidity.

**Results:** Two out of 5 indicators for overuse and 2 out of 10 for underuse showed significant improvement for the intervention population relative to the control group. The risk of a fracture in patients with osteoporosis (HR: 0.809; 95 % CI: 0.740 to 0.885;  $p < 0.0001$ ) and mortality (HR: 0.944; 95% CI; 0.899-0.991;  $p = 0.0194$ ) were significantly lower in the Kinzigtal population. No negative trends were found.

# Triple Aim Results: Medical and population health outcomes

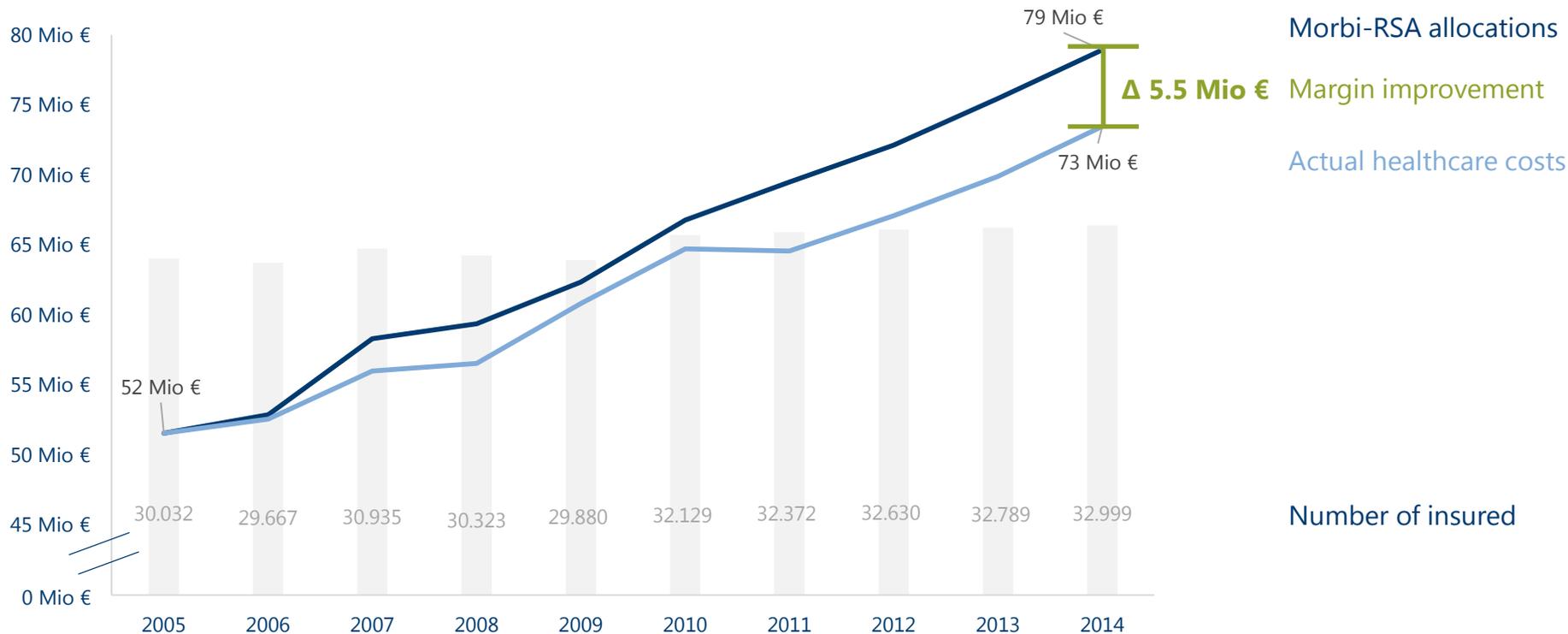
635.6 fewer years of potential life lost (2005.8 vs. 2641.4; t-test: sig.  $P < 0.05^*$ ) in the ACO intervention group (n = 5411) attributable to the ACO, also after controlling for a potential (indirect) immortal time bias by excluding the first half year after enrollment.



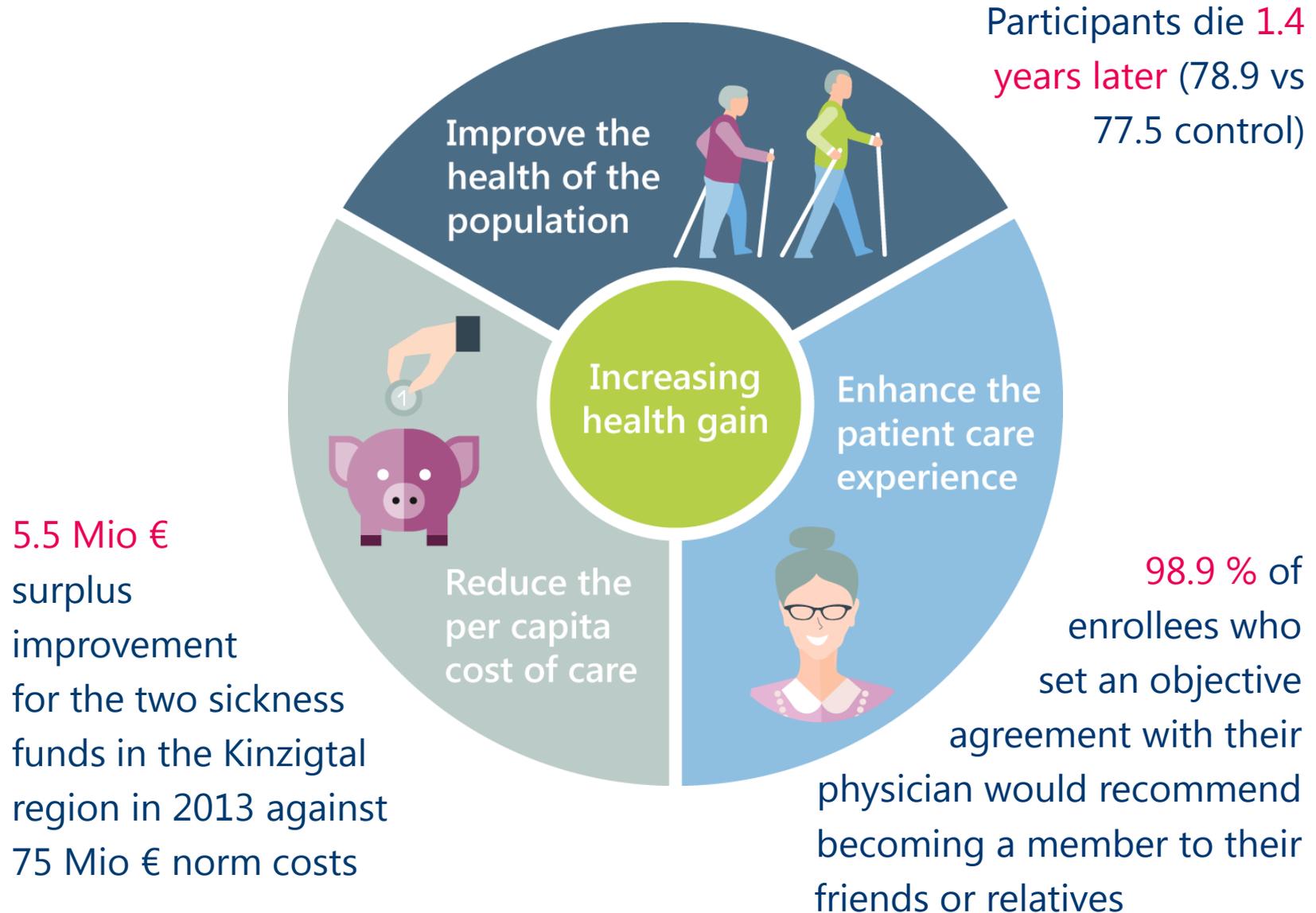
**FIG. 2.** Log survival function ACO intervention group versus Non-ACO control group (log scaled, survival time in days, max. 1456 days, censoring the deceased within the first 182 days, as well as insurees who switched to another statutory – health insurer. ACO, accountable care organization.

# Triple Aim Results: Margin improvement for the two sickness funds in the Kinzigtal region 2014 – 5.5 Mio €

Development of Morbi-RSA allocations, actual healthcare costs, margin improvement and number of insured of AOK und LKK in the Kinzigtal region

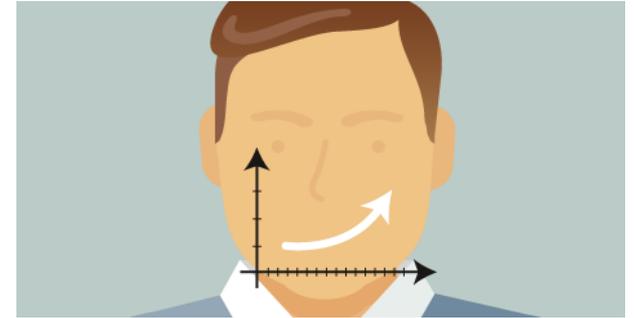


# Gesundes Kinzigtal produces value in three Dimensions:



# It even produces value in three further dimensions:

**Quality of life and professional satisfaction of providers:** 15 % increase in income for partnering physicians per case + higher satisfaction through better cooperation (with other providers and patients + viceversa).



**Community building and securing health care for the region:** Local municipalities are calling on Gesundes Kinzigtal to secure the supply of health care and the staff for physician and nursing practices.



**Healthy workforce:** Companies are calling on Gesundes Kinzigtal to get support for health promotion management and activities around health at the workplace.



Is Kinzigtal so special  
that we cannot do the  
same in other regions?

No!

# Different contexts, different problems, but similar solutions

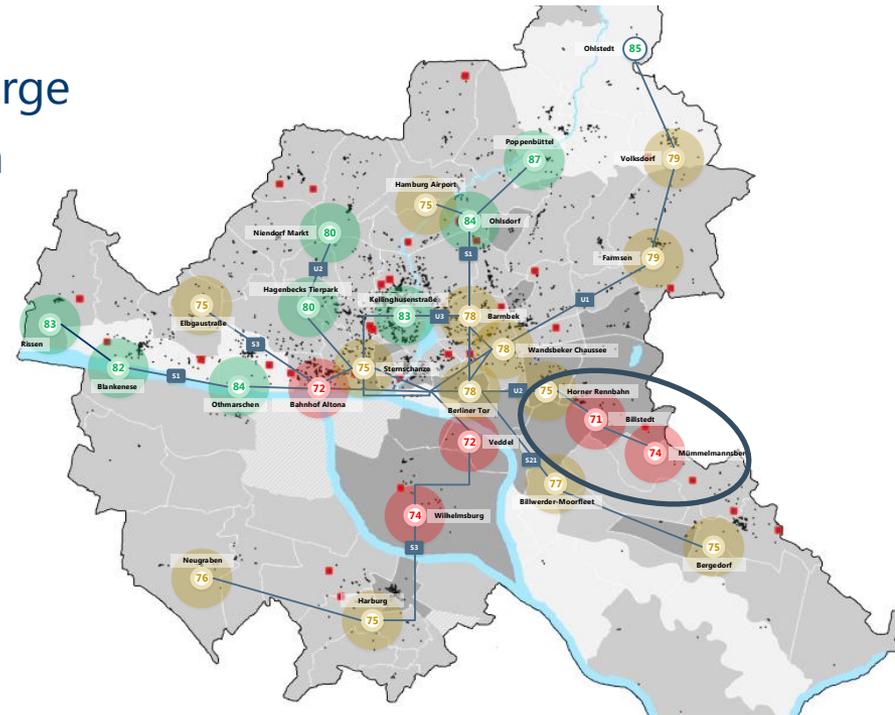
- From rural to urban  
Solutions such as patient engagement, strengthening the role of GPs, implementing shared information systems are equally (or even more) relevant in an urban context with a disadvantaged population.
- Role of the regional integrator  
Additional stakeholders (e.g. more social service involvement and representation of target groups such as migrants), but the same approach to intervention planning, performance feedback, and shared savings.
- Key: data availability, manageable population size, shared savings contract to align incentives towards a shared common goal (Triple Aim)

# INVEST Hamburg Billstedt/Horn – start January 2017

Aim: Building an integrated healthcare system in two socially disadvantaged districts, characterized by high unemployment, a large number of migrants and a lower physician density.

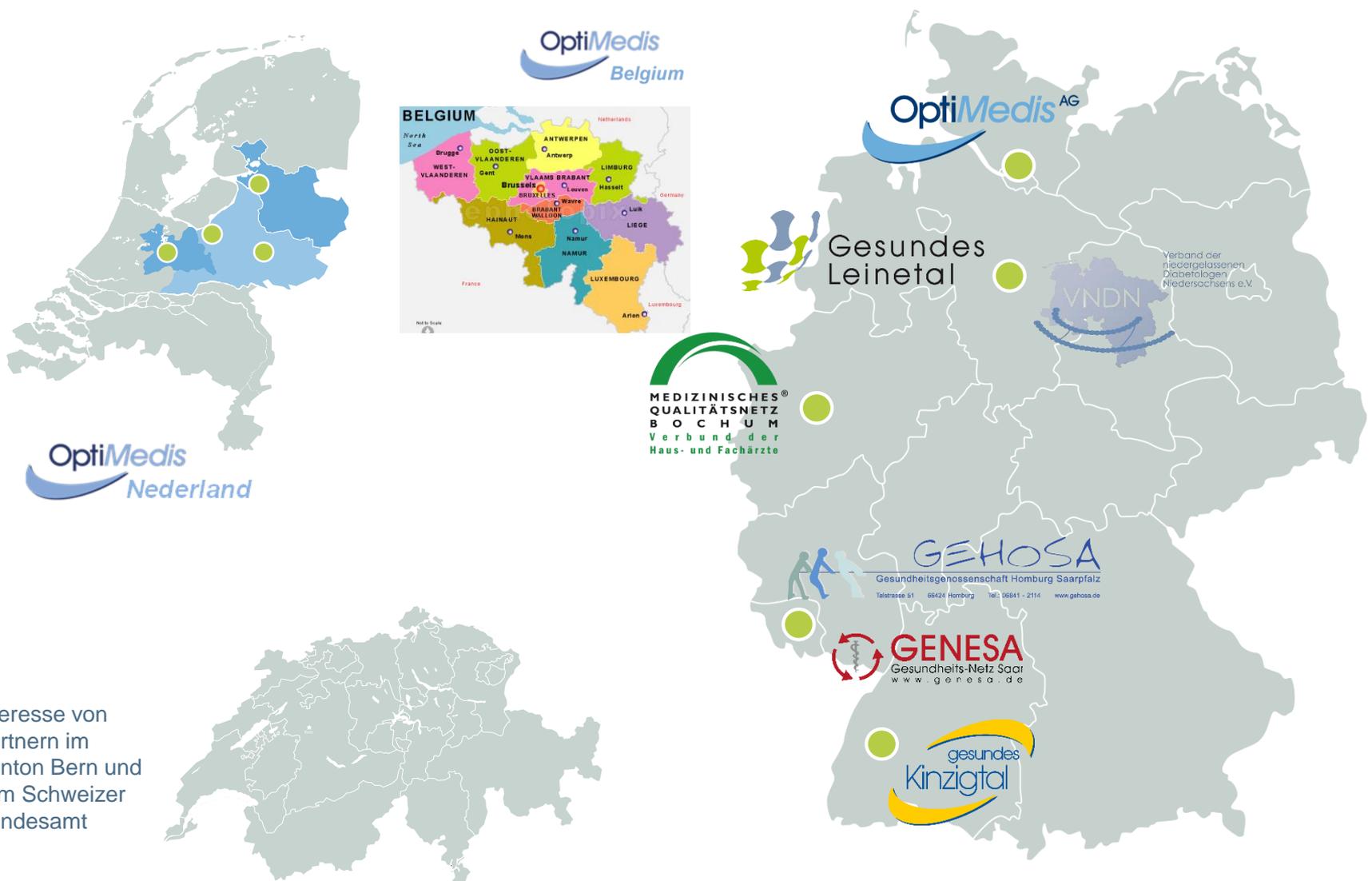
Key motivation:

- 13 years lower average life expectancy than in other parts of the city (AOK).
- Substantially higher health care costs because of high disease burden and overutilisation of hospital services.



There is no reason to assume that the key principles of the OptiMedis Model implemented in Gesundes Kinzigtal are less relevant and effective in this urban context.

# Other partners/regions in Germany and Europe



# What would be needed to create a similar project abroad?

- Investment funding for at least the first three years
- National health services or social health insurance organisations – willing to share the savings long-term
- Relative cost savings can be calculated in a robust and reproducible manner
- Professionally managed organization to act as regional integrator, with comprehensive know-how in health data analytics, public health, ICT implementation ...
- And ... interested local providers to embrace the opportunity



# Our „take-home-message“

- A clever long lasting contract, oriented towards „Integrated Chronic Care“ and „Triple Aim“ with the possibility to (re)invest and to analyze the claims data, guarantees success.
- „But: there is no free lunch“: Regional integrated care for a whole population and the re-integration of Public Health, health promotion and traditional health care management needs investment and courage...
- ... but out of the health sciences there is so much input to be taken and the work delivers such an amount of pride, excitement and generates real value for the whole society ... so it is really worthwhile.

# Let's get in contact



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