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In this issue:

Editorial

In the preceding issue of our newsletter, we presented some results of the first survey of the GeKiM study. 'GeKiM' stands for ‚Gesundes Kinzigtal – Mitgliederbefragung' which means ‚survey of Gesundes Kinzigtal members'. The data collection of GeKiM's first survey was completed in February 2013, the data collection of the second survey in May 2015. More surveys are to follow every two years. The surveys rely on a standardized questionnaire focusing on two main topics: The respondents assess – first – their respective ‚doctor of confidence', and – second – the integrated care system as a whole. But there are some further aspects which are regularly surveyed such as the reasons why patients have enrolled into *Gesundes Kinzigtal* Integrated Healthcare (GKIH). Precisely this aspect is the subject of the first contribution to this newsletter: We compare respondents' answers to this question in both surveys (first and second survey), we check how much women's answers differ from those of the men and how much the answers of long-time members differ from the answers of short-time members. You will find this paper on pages 3 to 7.

On pages 8 to 12 we present for the first time results from the OUM study's final report. „OUM" stands for 'over-, under-, and mis-use' of health services. Some intermediate results have been presented in earlier issues of the EKIV Newsletter, with the last one having appeared in issue 1/2012.[1] In the OUM study, health service quality in the Kinzigtal region has been compared over a longer time period (2004-11) with health service quality in the rest of Baden-Württemberg. The final report has been submitted a few months ago. In this issue we discuss three health service parameters: the proportion of insurants with long-term prescriptions of benzodiazepines (or benzodiazepine derivatives), the proportion of insurants with utilization of care according to SGB XI ('Versicherte mit Pflegestufe I-III'), and the proportion of insurants with sick leave in 2004-11. When discussing these parameters, we show some difficulties and challenges which everybody is confronted with when using health insurer's claims data as indicators of health care quality and as study endpoints. Further results of the OUM study will be presented in future issues of our newsletter.

Psychotherapie akut is a specific GKIH program, offering an early psychotherapist intervention in case of an acute mental crisis of patients. The program has been brought into being in 2006. The impact of the program has been evaluated internally, i.e. by researchers of Gesundes Kinzigtal Ltd. and OptiMedis AG, and the results have been published recently in *Welt der Krankenversicherung* (issue 9/2015). There is more information on this paper on page 13 of this newsletter.

Current data on several aspects of Gesundes Kinzigtal Integrated Healthcare are documented on pages 14 and 15.

Your feedback on our newsletter's topics is always welcome. We look forward to answering your email (to achim.siegel@uniklinik-freiburg.de).

With best regards,
Achim Siegel & Wilhelm Niebling

[1] Siehe http://www.ekiv.org/pdf/EKIV-Newsletter_2012-1_English.pdf.

External Evaluation of *Gesundes Kinzigtal* Integrated Healthcare (GKIH):

Selected results of the GeKiM study – first and second survey, part I: insurants' reasons to enroll into GKIH

In this article we present selected results of the first and second survey of the GeKiM study. 'GeKiM' denotes ‚Gesundes Kinzigtal – Mitgliederbefragung' which means ‚survey of Gesundes Kinzigtal members'. In this paper we focus on the insurants' reasons to enroll into Gesundes Kinzigtal Integrated Healthcare (GKIH). The data collection of the first survey has been completed in February 2013 and of the second survey in May 2015. As we have presented the study's aims and methods already in the preceding EKIV Newsletter,[1] we confine ourselves here to a brief summary.

Aim and methods of the GeKiM study

The GeKiM study is to render evidence on the satisfaction of patients who have enrolled into Gesundes Kinzigtal Integrated Healthcare (GKIH). The focus is on two aspects: patient satisfaction with the respective ‚doctor of confidence' and with the integrated healthcare system as a whole. The GeKiM study conforms to the design of a trend study, i.e. surveys are repeated regularly – in the case of GeKiM every two years – so that trends may be assessed. In the first survey, completed in February 2013, 3034 GKIH members were asked to participate, in the second survey 3516 GKIH members. The data collection of the second survey was completed in May 2015.

Besides the two main topics – satisfaction with the doctor of confidence and with the integrated healthcare system as a whole – some other things are surveyed such as, e.g. the reasons why patients have enrolled into GKIC. In the following we analyze which reasons were given by the respondents in the first and second survey. Thereby we check whether different subgroups (women vs. men and long-time vs. short-time members) differ as to the frequency of certain answers.

Results: patients' reasons to enroll into GKIH

Within the context of the first GeKiM survey, altogether 711 questionnaires could be analyzed (evaluable response: 23.4%); within the context of the second survey, 869 questionnaires were analyzed (evaluable response: 24.9%).

In the first survey clearly more than half of the respondents were female (56.5%). The mean age of the respondents was 59.2 years, 62% of them indicated a lower secondary education as their highest graduation, and 51% of the respondents mentioned that they were chronically ill. In the second survey similar sociodemographic characters were found: There, 56.2% of the respondents were female, the mean age was 57.8 years, 59.5% indicated a lower secondary education as their highest graduation, and 53.5% were chronically ill.

Reasons to enroll into GKIH in the first survey 2013

In both surveys, enrolled patients had been asked to answer the following question: „Which were the main reasons why you enrolled into Gesundes Kinzigtal as a member?" Survey participants could then tick one or more out of nine preset answers, starting with "the surgery has informed me about Gesundes Kinzigtal and convinced me to become a member" and ending with "I learnt about Gesundes Kinzigtal from the newspaper or other mass media (such as television etc.)". The distribution of respondents' answers in the two GeKiM surveys is shown in table 1 below.

[1] Cf. http://www.ekiv.org/pdf/EKIV-Newsletter_2015-1_English_corr.pdf.

Table 1: Distribution of answers on the question „Which were the main reasons for which you enrolled into Gesundes Kinzigtal (=GK) as a member? (Multiple answers are possible.)"; first survey 2013 and second survey 2015; count of subjects: n=711 (2013) and n=869 (2015).

Answer	**Proportion in % of survey participants 2013 (95% CI*)**	**Proportion in % of survey participants 2015 (95% CI*)**	**P value of the difference in proportion 2015 – 2013**
The surgery informed me about GK and convinced me to become a member	75.2 (72.0-78.4)	78.6 (75.9-81.2)	.129
My health insurer informed me about GK	11.5 (9.1-13.9)	13.1 (10.9-15.4)	.334
Family members have called my attention to GK	6.6 (4.8-8.5)	6.9 (5.2-8.6)	.817
Friends have called my attention to GK	3.8 (2.6-5.2)	4.4 (3.1-5.6)	.567
GK's preventive programs have convinced me	19.3 (16.4-22.4)	22.2 (19.4-25.3)	.153
The argument of better coordinated healthcare (integrated care) has convinced me	18.8 (15.9-21.8)	22.8 (20.1-25.6)	.056
Good reputation of Gesundes Kinzigtal	21.8 (18.9-24.9)	22.1 (19.3-24.8)	.888
I am personally aquainted with someone who works with Gesundes Kinzigtal	3.1 (1.9-4.4)	4.4 (3.0-5.9)	.186
I have learnt about Gesundes Kinzigtal from the newspaper or other media (such as, e.g., television or television in surgeries)	5.3 (3.7-7.1)	8.4 (6.8-10.3)	.018
Other	3.9 (2.5-5.4)	4.6 (3.2-6.0)	.517

* Explications: CI = confidence interval. The 95% confidence interval was computed with the aid of a bootstrapping method (based on 1000 samples each time).

Table 1 shows that in both surveys about three quarters of all respondents (75.2% and 78.6%) indicated that the convincing information of their doctor of confidence (or of the surgery team) about Gesundes Kinzigtal was a main reason for enrolling. This answer was ticked by far the most frequently in the first survey. This answer was significantly more frequent than any other answer (as the respective confidence intervals – 72.0-78.4 and 75.9-81.2 – do not overlap with the confidence intervals of any other category). The following three ranks – as to frequency – are taken by "good reputation of Gesundes Kinzigtal" (ticked by about 22% of respondents in both surveys), "GK's preventive programs have convinced me" (19% and 22% respectively), and "the argument of better coordinated healthcare (integrated care) has convinced me" (19% and 23% respectively). These three answers were significantly more frequently given than any of the remaining answers. Roughly 12% (and 13% respectively) of the respondents indicated that the information of their health insurer was a main reason to enroll. All other potential reasons were ticked by less than 10% of all respondents.

When we compare the relative frequencies of given answers in the first and the second survey, there is only one category which shows a considerable and significant difference: The answer "I have learnt about Gesundes Kinzigtal from the newspaper or other media (…)" was given significantly more frequently in the second survey (8.4%) than in the first survey (5.3%).

Reasons to enroll into GKIH in women and men in the second survey 2015

We used the data of the second survey to check whether the distribution of reasons to enroll differed between women and men. The results are presented in table 2.

Table 2: Distribution of answers in women and men in the second survey 2015 on the question „Which were the main reasons for which you enrolled into Gesundes Kinzigtal (=GK) as a member? (Multiple answers are possible.)"; count of subjects n=488 (women) and n=376 (men).

Answer	**Proportion in % of female participants 2015 (95% CI*)**	**Proportion in % of male participants 2015 (95% CI*)**	**P value of the difference in proportion between women and men**
The surgery informed me about GK and convinced me to become a member	79.1 (75.3-82.6)	77.9 (73.6-82.1)	.677
My health insurer informed me about GK	13.1 (10.1-16.3)	12.8 (9.4-16.3)	.880
Family members have called my attention to GK	7.0 (4.9-9.4)	6.9 (4.4-9.7)	.976
Friends have called my attention to GK	4.9 (3.2-6.9)	3.7 (1.9-5.8)	.396
GK's preventive programs have convinced me	26.0 (22.1-30.1)	17.6 (13.8-21.5)	.003
The argument of better coordinated healthcare (integrated care) has convinced me	24.0 (20.2-28.2)	21.0 (16.8-25.4)	.303
Good reputation of Gesundes Kinzigtal	25.0 (21.1-29.2)	18.6 (14.7-22.7)	.025
I am personally aquainted with someone who works with Gesundes Kinzigtal	4.7 (3.1-6.8)	4.0 (2.2-6.1)	.607
I have learnt about Gesundes Kinzigtal from the newspaper or other media (such as, e.g., television or television in surgeries)	8.4 (5.9-11.2)	8.5 (5.9-11.7)	.955
Other	4.5 (2.7-6.4)	4.5 (2.5-6.8)	.993

* Explications: CI = confidence interval. The 95% confidence interval was computed with the aid of a bootstrapping method (based on 1000 samples each time).

Clear differences in the relative frequency of certain answers exist with respect to the following statements: "GK's preventive programs have convinced me" (26.0% vs. 17.6%) and "good reputation of Gesundes Kinzigtal" (25.0% vs. 18.6%). These two reasons were indicated more frequently by women than by men. Both of these two differences are statistically significant ($p<.05$) as can be seen from the corresponding p values (last column in table 2). The differences in relative frequency of the remaining answers are not significant.

Reasons to enroll into GKIH in long-time vs. short-time members

We furthermore checked, by relying on the data from the second survey, how the reasons to enroll were distributed when respondents were grouped according to the duration of their GKIH membership. For that sake we grouped GKIH members into long-time members (enrollment in 2006-08) and short-time members (enrollment in 2009-14). The results are presented in table 3.

Table 3: Distribution of answers of respondents 2015 according to long-time vs. short-time GKIH membership on the question „Which were the main reasons for which you enrolled into Gesundes Kinzigtal (=GK) as a member? (Multiple answers are possible.)"; count of subjects n=406 (enrollment 2006-08) and n=458 (enrollment 2009-14)

Answer	**Proportion in % of participants enrolled in 2006-08 (95% CI*)**	**Proportion in % of participants enrolled in 2009-14 (95% CI*)**	**P value of the difference in proportion 2006-08 vs 2009-14**
The surgery informed me about GK and convinced me to become a member	83.5 (79.9-87.0)	74.2 (70.1-78.4)	.001
My health insurer informed me about GK	12.3 (9.2-15.5)	13.5 (10.4-16.7)	.512
Family members have called my attention to GK	6.2 (4.0-8.7)	7.6 (5.2-10.4)	.417
Friends have called my attention to GK	3.4 (1.9-5.4)	5,2 (3.2-7.5)	.212
GK's preventive programs have convinced me	23.6 (19.4-27.8)	21.2 (17.6-25.2)	.341
The argument of better coordinated healthcare (integrated care) has convinced me	22.4 (18.2-26.6)	22.9 (19.2-26.8)	.807
Good reputation of Gesundes Kinzigtal	24.6 (20.6-28.8)	20.1 (16.6-23.6)	.092
I am personally aquainted with someone who works with Gesundes Kinzigtal	3.9 (2.2-5.9)	4.8 (2.9-6.7)	.560
I have learnt about Gesundes Kinzigtal from the newspaper or other media (such as, e.g., television or television in surgeries)	7.9 (5.5-10.4)	9.0 (6.3-11.6)	.606
Other	3.7 (2.0-5.7)	5.2 (3.2-7.6)	.232

* Explications: CI = confidence interval. The 95% confidence interval was computed with the aid of a bootstrapping method (based on 1000 samples each time).

Clear differences between the subgroups exist with respect to two answers: "The surgery informed me about GK and convinced me to become a member" (83.5% vs. 74.2%) and "good reputation of Gesundes Kinzigtal" (24.6% vs. 20.1%). Both answers were ticked more frequently by long-time members who had enrolled in 2006-08. The first of these two differences is statistically significant ($p<.05$) as can be seen from the corresponding p value ($p=.001$).

Summary

In this article we have analyzed the answers of the GeKiM survey responders on the following question: „Which were the main reasons why you enrolled into Gesundes Kinzigtal as a member?" Both in the first and the second survey more than three quarters of all respondents ticked the answer „the surgery informed me about Gesundes Kinzigtal and convinced me to become a member". This answer was significantly more frequently given than any other answer. About one fifth of all respondents indicated that the following statement were main reasons to enroll: „the argument of better coordinated health care (integrated care) has convinced me", "Gesundes Kinzigtal's preventive programs have convinced me", and "good reputation of Gesundes Kinzigtal". These three answers were given significantly more often than all the remaining answers. About 12% (2013) or 13% respectively (2015) of the respondents indicated that their health insurer informed them about Gesundes Kinzigtal. All other potential reasons were ticked by less than 10% of all study participants. Obviously, there is a clear hierarchy of reasons to enroll into GKIH: Most important is, then, the

information of the patients' doctor of confidence or of the surgery team as a whole. Second are substantial arguments which underline the significance of prevention and integrated care in the GKIH system or the "good reputation" of GKIH. Third is the health insurer's information on Gesundes Kinzigtal, and thereafter all other reasons mentioned above.

The answers of women and men are all in all relatively similar – with two exceptions: The statements „GK's preventive programs have convinced me" and "good reputation of Gesundes Kinzigtal" are ticked clearly more frequently by women, and both of these differences are statistically significant. These results seem to correspond with the evidence that women are, as a rule, more health-conscious and more amenable to prevention than men.

A remarkable difference exists also between long-time GKIH members (who enrolled in 2006-08) and GKIH members who enrolled in 2009 or later: The statement "the surgery has informed me on GK and convinced me to become a member" was called significantly more frequently a "main reason to enroll" by long-time members (83.5% vs. 74.2%). Otherwise, the frequency of answers is quite similar in these two groups.

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External evaluation of *Gesundes Kinzigtal* Integrated Healthcare (GKIH):

Evaluation of health services by analyzing health insurer's administrative data: proportion of insurants with long-term benzodiazepine prescriptions, with utilization of care according to SGB XI, and with sick leave days 2004-11

The PMV research group (Cologne University) has evaluated the quality of healthcare in the GKIH system by relying on health insurers' administrative data (claims data), as we have reported in several newsletter issues.[1] The study is conducted by Dr. Ingrid Schubert and her research team. The final report of this study, analyzing administrative data of the years 2004-11, has been finished a few months ago. In this paper we present some results from that final report. Further results will be presented in journal articles and forthcoming issues of the EKIV Newsletter.

Aims and study design of the evaluation study ‚Identification of over-, under- and mis-use of health services – evaluation of health services by analyzing statutory health insurers' administrative data' (OUM study)

Aims and study design of the OUM study have been described in earlier newsletter issues.[2] Therefore we confine ourselves here to a summary.

The OUM study is to survey the administrative prevalence of selected diseases as well as the quality of health services in the Kinzigtal region and a control group, using several indicators of health service utilization and health service quality. The data which are to be analyzed come from two statutory health insurers: AOK Baden-Württemberg (AOK BW) and LKK Baden-Württemberg (LKK BW, now called SVLFG, which means Sozialversicherung für Landwirtschaft, Forsten und Gartenbau). The OUM study conforms to the design of a controlled longitudinal study (trend study with control group); some research questions will be analyzed according to the design of a quasi-experimental study (controlled cohort study). Either way, prevalence of diseases and indicators of utilization and health service quality of the Kinzigtal group (intervention group) will be compared with a control group of adult insurants residing in the rest of the federal state Baden-Württemberg (control group).

When comparing disease prevalence, utilization or quality indicators, the results of the control group (abbreviated as 'sample BW') are standardized according to the age and sex distribution of the intervention group (Kinzigtal region), if not stated otherwise. The baseline year is 2004, in some cases 2005. The following years (2005-11 or 2006-11) are considered a time span with a gradually growing intensity of integrated healthcare.

The following analyses are based on the data of insurants who had a contract with their health insurer throughout the year or who deceased during the year. On the contrary, the data of insurants who changed their health insurer during the year were excluded (for the concerning year). As the number of cases of LKK insurants is rather small, the results presented below will refer only to AOK insurants.

In this paper we discuss the following utilization indicators: proportion of insurants with long-term benzodiazepine prescriptions, proportion of insurants with utilization of care services according to SGB XI, and proportion of insurants with sick leave.[3] Thereby we explain why these three indicators are not considered as healthcare quality indicators but only as 'utilization indicators'. Results with respect to quality indicators in a strict sense will be presented in later issues of our newsletter.

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[1] Cf. EKIV-Newsletter 1/2010 (http://www.ekiv.org/pdf/EKIV-Newsletter_2010-1.pdf), pp. 3ff (in German), EKIV-Newsletter 3/2009 (http://www.ekiv.org/pdf/EKIV-Newsletter_3-2009.pdf), pp. 3ff (in German), and EKIV Newsletter 1/2012 (http://www.ekiv.org/pdf/EKIV-Newsletter_2012-1_English.pdf), pp. 8ff (in English).

[2] Cf. ibid.

[3] These results are excerpted from: PMV forschungruppe (2015): Evaluationsbericht 2004-2011 für Gesundes Kinzigtal GmbH, hier: AOK-Daten. Evaluationsmodul der Integrierten Versorgung „Gesundes Kinzigtal": „Identifizierung und Abbau von Über-, Unter- und Fehlversorgung – Versorgungsevaluation auf Basis von GKV-Routinedaten", hier: Abschlussbericht mit Status-Quo-Daten für 2004 sowie Analysen der Jahre 2005-11.

Proportion of insurants with long-term benzodiazepine prescriptions (>20 DDD / year)

Background: High risk of drug addiction in case of long-term benzodiazpine consumption

The reason why this indicator was constructed and surveyed in the study is the high risk of patients to become physically addicted in case of a long-term intake of benzodiazepines and benzodiazepine derivatives (the latter are often called "z-drugs"). When speaking of 'benzodiazepines' in the following, we always include benzodiazepine derivatives.

The risk to become addictive to benzodiazepines in case of long-term consumption is known for decades. Therefore, the intake of benzodiazepines is limited – as a rule – to four weeks as a maximum.[4] Data of statutory health insurers show that roughly 4% to 5% of their insurants get at least one benzodiazepine prescription per year.[5]

According to the German 'Bundesgesundheitssurvey 1998', about 1.6 million people in Germany are addicted to tranquilizers and sleeping pills,[6] of which benzodiazepines make up the largest part. Although prescriptions at the expense of statutory health insurers have considerably decreased since the beginning of the 1990s, 'private prescriptions' – i.e. prescriptions at the expense of individual patients or of patients who have a contract with non-statutory health insurers – have considerably increased at the same time. Thus, the proportion of private prescriptions in the case of benzodiazepines (in the strict sense) amounted to 55.3% in 2011, and in case of z-drugs to 49.5%.[7] As in Germany 87% of the general population have a contract with a statutory health insurer, one may conclude that these insurants, too, get private prescriptions of benzodiazepines to a considerable degree.

AOK insurants with benzodiazepine prescriptions >20 DDD/year in the OUM study

This indicator has been chosen referring to similar indicators on prescriptions which may lead to physical drug dependency. When reflecting this indicator critically, it became obvious that it was not sufficiently qualified – for several reasons – for indicating health service quality. A detailed description and analysis of these reasons is published in *Public Health Forum*[8] (in German). In the following sections we analyze further indicators and point out why these do not qualify as valid indicators of health care quality.

Proportion of insurants with utilization of care ('Pflegestufe I-III') according to SGB XI

Table 1 shows the proportion of insurants with utilization of care according to the German Social Code ("SGB") XI. The table shows almost identical indicator values in both groups at baseline: The proportion of insurants with utilization of care (Pflegestufe I-III) amounts to 6.0% in the Kinzigtal region in 2004 and to 5.8% in the control group. The PMV research originally wanted to use this indicator as an outcome indicator, based on the following argument: The GKIH system strives to reduce (or postpone) care-dependency of the Kinzigtal insurants by more effective preventive programs and health promotion. If this maxim was applied effectively, the proportion of care-dependent insurants (with 'Pflegestufe I-III') would decrease in comparison with the sample BW as a reference group.

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[4] Janhsen K, Roser P, Hoffmann K (2015): Probleme der Dauertherapie mit Benzodiazepinen und verwandten Substanzen. Deutsches Ärzteblatt 112 (1-2): 1-9.

[5] Ibid., cf. also Holzbach R (2010): Benzodiazepin-Langzeitgebrauch und –abhängigkeit. Fortschr Neurol Psychiatr 78: 425-34.

[6] Cited after Janhsen et al. 2015: 2.

[7] Hoffmann F, Glaeske G, Scharffetter W (2006): Zunehmender Hypnotikaverbrauch auf Privatrezepten in Deutschland. Sucht 52: 360-6; Hoffmann F, Glaeske G (2014): Benzodiazepinhypnotika, Zolpidem und Zopiclon auf Privatrezept. Verbrauch zwischen 1993 und 2012. Nervenarzt 85: 1402-1409.

[8] Public Health Forum 2016; 24 (1): 17-21. This paper is availabe online: http://www.degruyter.com/dg/viewjournalissue.articlelist.resultlinks.fullcontentlink:pdfeventlink/$002fj$002fpubhef.2016.24.issue-1$002fpubhef-2016-0007$002fpubhef-2016-0007.pdf/pubhef-2016-0007.pdf?t:ac=j$002fpubhef.2016.24.issue-1$002fissue-files$002fpubhef.2016.24.issue-1.xml.

Table 1: Proportion of AOK insurants (≥ 20 years) with utilization of care (Pflegestufe I-III) according to SGB XI

Year	Insurants (≥20 years) with Pflegestufe I-III according to SGB XI					
	Proportion (in %)			Change (2004 = 100)		Odds Ratio**
	Kinzigtal (A)	Sample BW* (B)	Difference (A – B)	Kinzigt.	Sample BW*	(95% confidence interval)
2004	6.0	5.8	+0.2	100	100	1.06 (1.00-1.13)
2005	5.7	5.8	-0.1	95	100	1.02 (0.96-1.09)
2006	5.5	5.7	-0.2	92	98	1.00 (0.94-1.07)
2007	5.7	5.9	-0.2	95	102	1.00 (0.97-1.07)
2008	5.7	6.1	-0.4	95	105	0.94 (0.89-1.01)
2009	6.1	6.4	-0.3	102	110	0.99 (0.93-1.05)
2010	6.3	6.6	-0.3	105	114	0.97 (0.91-1.03)
2011	5.8	6.9	-1.1	97	119	0.84 (0.78-0.89)

*) Results of 'sample BW' have been standardized according to the age and sex distribution of the Kinzigtal population in a given year
**) Odds Ratio: Reference population: sample BW

As table 1 shows, the indicator slightly decreased in the intervention region (2004: 6.0% vs. 2011: 5.8%) whereas it increased considerably in the sample BW (2004: 5.8% vs. 2011: 6.9%). Referring to the above-mentioned hypothesis, this result could be interpreted at a first glance as indicating a more effective prevention of care-dependency in the Kinzigtal region. The PMV research group who had to assess the indicator's appropriateness and validity, however, regarded the indicator finally as too incalculable: The development of the indicator over time in different regions could have been influenced also by multiple other factors than just an effective program to prevent care-dependency. Thus, e.g., the proportion of care-dependent insurants might have been influenced to a relevant degree by the readiness of insurants (in particular by the relatives of potentially care-dependent aged persons) to make applications so that the potentially care-dependent persons be officially assessed as care-dependent – and it may be doubted that this readiness developed equally over time in different regions. This kind of imponderability finally led the PMV research group to classify the indicator as a utilization indicator but not as a service quality indicator.

Proportion of insurants with sick leave

Similar arguments as the ones presented in the preceding paragraph led the PMV research group to conceive a further indicator simply as a kind of 'utilization indicator' but not as a healthcare quality indicator. This concerns the proportion of insurants with sick leave days. At a first glance, one could perhaps attribute this proportion to an effective health promotion and prevention of illness. The development of this indicator over time is presented in table 2.

Table 2: Proportion of insurants with sick leave

	Insurants (≥20 years) with sick leave					
	Proportion (in %)			Change (2004 = 100)		Odds Ratio**
year	Kinzigtal (A)	Sample BW* (B)	Difference (A – B)	Kinzigt.	Sample BW*	(95% confidence interval)
2004	51.2	51.4	-0.2	100	100	0.99 (0.95-1.03)
2005	51.9	52.3	-0.4	101	102	0.99 (0.95-1.03)
2006	49.2	50.6	-1.4	96	98	0.95 (0.92-0.99)
2007	51.6	53.3	-1.7	101	104	0.94 (0.91-0.98)
2008	52.7	55.0	-2.3	103	107	0.92 (0.88-0.95)
2009	51.6	54.2	-2.6	101	105	0.91 (0.87-0.94)
2010	50.4	53.8	-3.4	98	105	0.88 (0.84-0.91)

Population: AOK insurants, limited to insurants subject to compulsory statutory health insurance or subject to § 155 Arbeitsförderungsgesetz, and to voluntary insurants.
*) Results of 'sample BW' have been standardized according to age and sex of population ‚Kinzigtal' in a given year
**) Odds Ratio: Reference population: Sample BW

Contrary to the above-presented indicator ‚proportion of insurants with utilization of care according to SGB XI' (table 2), here the difference in proportions increases steadily over time: Whereas in 2004 the difference amounts to only 0.2 percentage points, in 2011 it is 3.4 percentage points. This result could perhaps be interpreted – at a first glance – as indicating a more effective health promotion and prevention of illness in the intervention region. But again, this attribution seems too imponderable as too many other factors could have influenced these results – factors that can hardly be controlled in the OUM study. In sociological studies on sick leave, e.g., it is generally accepted that besides the health status of the working population there are other important factors which influence the level of sick leave in a given organizational entity. And of course it is doubtful whether these other factors develop in a roughly constant relation over time in different regions. Because of such imponderability the indicator is not conceived as a healthcare quality indicator.

Summary

Referring to two indicators - 'proportion of insurants with utilization of care according to SGB XI' and 'proportion of insurants with sick leave' – we have demonstrated that utilization figures very often do not qualify as indicators of health service quality. Therefore that they should neither be used as study endpoints in epidemiological studies such as, e.g., the OUM study.

It has been shown that regional comparisons of comparative effectiveness indicators face severe validity problems which sometimes may not be solved when one is restricted to statutory health insurers' claims data. In some cases the imponderability we faced might be cleared by introducing a kind of 'multiple control group approach': E.g., referring to the above-presented indicators 'proportion of insurants with utilization of care services according to SGB XI' and 'insurants with sick leave', one could check whether the computed intervention effect would persist if the control group was modified so that the controls would consist of insurants from regions which were similar to the intervention region as to economic geography or social structure background (thus considering only controls residing in rural areas and small towns so as to match the structural characteristics of the intervention region). Some other imponderability could perhaps be cleared sufficiently by supplementary studies or even expert workshops and focus groups. Thus, it may be sensible to plan a study based on claims data from the beginning as a mixed-method study.

In the forthcoming issues of the EKIV Newsletter we will present and discuss outcome indicators and healthcare quality indicators from the OUM study. These indicators focus on outcomes

(such as, e.g., mortality) as well as process quality, describing over-utilization of healthcare services (such as, e.g., the proportion of insurants with antibiotic prescriptions in case of respiratory tract infection) or under-utilization (such as, e.g., the proportion of patients with congestive heart failure who do not receive drugs recommended by evidence-based guidelines).

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Internal evaluation of *Gesundes Kinzigtal* Integrated Healthcare (GKIH):

The GKIH program *Psychotherapie akut*: development of healthcare utilization parameters and mental state of participants before and after participation

The GKIH program *Psychotherapie akut* was brought into being in 2006; it is one of the first programs implemented in the GKIH system. The program is tailored for patients who are in need of a quick psychotherapeutic intervention. In the usual health care system, these patients often have to wait for a psychotherapeutic intervention several months, sometimes even half a year. GKIH offers an effective alternative: As soon as a patient seeks help from e.g. his or her GP or when the GP recognizes an acute mental crisis in his or her patient, the concerned patient may enroll into *Psychotherapie akut*. Then, the patient selects a psychotherapist from those therapists who have a contract with GKIH and fix an appointment with her or him. The crucial point is that the psychotherapists working with GKIH always have an appointment available for an emergency so that they can offer a short-termed appointment – as a rule within a week – to the emergency patient. The *Psychotherapy akut* intervention contains a first appointment and six follow-up appointments as a maximum. If a therapist realizes that these seven sessions will not be sufficient, he or she helps the patient to get a regular therapy as soon as possible. GKIH reimburses the provision of such emergency appointments from extra-budgetary funds (‘off-budget’).

An internal evaluation of *Psychotherapie akut* has been published recently in *Welt der Kranken-versicherung* (issue 9/2015). The authors of the paper are Helmut Hildebrandt, Petra Zimmer, and Wolfgang Stunder; all of them work with Gesundes Kinzigtal Ltd. The paper informs on the development of hospitalizations of program participants, on the development of their contribution margin, and on mental state parameters before and after participating in the program. The paper shows, among other things, a considerable reduction in hospitalization and a continually increasing contribution margin of the concerned insurants.

Subscribers of Welt der Krankenversicherung may download and read the article without additional cost (issue 8/2015, pp. 213-16). All other readers may obtain the journal and the article from the following address: http://www.medhochzwei-verlag.de/index.php?id=438.

Current data on Gesundes Kinzigtal Integrated Care (GKIC) (as of October 2015)

Count of actively enrolled insurants *	**9.798***
- thereof AOK Baden-Württemberg insurants / full members*	8.858*
- thereof AOK Baden-Württemberg insurants / basic members**	499
- thereof LKK Baden-Württemberg insurants / full members	427
- thereof LKK Baden-Württemberg insurants / basic members**	15

* Enrolled members who deceased, changed residence to outside the Kinzigtal region or resigned because of other reasons are not considered in this list. The count of AOK insurants who have enrolled into GKIH is subject to current internal revisions (as of December 2015).
** Basic members differ from full members in that their family doctor („doctor of confidence“) does not have a cooperation contract with GKIC.

Count of patients with higher morbidity risk	**5.693**
- thereof insurants of AOK Baden-Württemberg	5.383
- thereof insurants of LKK Baden-Württemberg	310

GKIC preventive programmes and national disease management programmes (DMPs)	**count of participants**
Smoking cessation („Rauchfreies Kinzigtal“)	235
Prevention/treatment of congestive heart failure („Starkes Herz“)	95
Lifestyle intervention for patients with metabolic syndrome („Gesundes Gewicht“)	210
Prevention of osteoporosis and osteoporotic fractures („Starke Muskeln – feste Knochen”)	904
Early intervention by psychotherapists in cases of acute personal crises („Psychotherapie akut“)	501
Specific medical care for the elderly in nursing homes („Ärzte plus Pflege”)	150
Back pain prevention programme („Starker Rückhalt – Mein gesunder Rücken“)	72
Patient coaching	69
Specific intervention for patients with depression („Besser gestimmt“)	32
Ophtalmological check-up for children - U10 - U11 - amblyopia	 550 441 172
Individually blistered drug packages („Medifalter-Markttest“) – closed	104
Wound management („Gut verbunden“) – in abeyance	4
AGil (Active health promotion in the elderly) – in abeyance	511
Electronic health card – in abeyance	1300
DMP diabetes mellitus type II	979
DMP coronary heart disease	368
DMP breast cancer	15
DMP asthma	113
DMP COPD	178
Members of the network ‘healthy enterprises’ (count of enterprises)	7
People who have participated in a program or activity of GKIC	15.145

(continued on the following page)

Other programmes offered in cooperation with AOK specialists or third parties	**count of participants**
Social service (case management by social workers according to GP's recommendation)	330
Diet counselling by AOK BW specialists	106
Specific fall prophylaxis for the elderly	159
Aqua fitness	2.579
Sponsored membership in sports clubs	462
People participating in 'gesund & aktiv' classes	248
Lecture series on health issues (since 2009)	4.258

Physicians and other providers contracting with GKIC	**93**
- GPs/family physicians	28
- specialists	24
- pediatricians	1
- psychotherapists	6
- hospitals	6
- physiotherapists	11
- nursing homes	11
- outpatient nursing services	5
- social-therapeutic services	1
Other partners cooperating with GKIC	**63**
- pharmacies	16
- sports clubs	38
- fitness centres	6
- others	3