Dr Corinna Hentschker, Dr Robert Messerle, Julia Schlüter, MaHE Prof. Jochen Schmitt, MPH, Dr Jürgen Malzahn

Effects of the introduction of hybrid DRGs – an analysis based on AOK data

On 1 January 2024, the introduction of hybrid DRGs in accordance with Section 115f of the German Social Code, Book V (SGB V) established a cross-sector, uniform remuneration system for certain medical services. The aim is to shift services that can be provided safely, with appropriate quality and effectively in an outpatient setting, but which – unlike in other countries – have traditionally been provided on an inpatient basis in Germany, to the outpatient sector. In addition, the aim is to promote the more efficient use of medical professionals and to strengthen the economic efficiency of statutory health insurance (GKV) while maintaining the same quality of care [1, 2]. The hybrid DRG remuneration system applies to both contract doctors and inpatient care and covers the following five service areas: certain hernia operations, removal of ureter stones, oophorectomies (removal of the ovaries), arthrodesis of toe joints (joint stiffening) and removal of coccyx fistulas (pilonidal sinus). For 2024, the Institute for the Hospital Remuneration System (InEK) has assigned a total of twelve hybrid DRGs to these five service areas. Until 31 December 2023, these procedures could be billed either on an outpatient basis according to the Uniform Assessment Standard (EBM) or on an inpatient basis using DRGs.

The new hybrid DRGs represent sector-independent flat rates per case. They ensure that both hospitals and contracted doctors receive a uniform, flat-rate remuneration for the services in question [3]. Remuneration for hybrid DRG cases is based on a weighted mixed price, which is composed of the previous inpatient and outpatient remuneration rates. Since the outpatient rates were previously well below the inpatient level, this mixed calculation led to a reduction in inpatient remuneration and, at the same time, a significant increase in outpatient remuneration.

From the perspective of the contribution-paying solidarity community, the shift to outpatient care using hybrid DRGs must increase the efficiency of care, i.e. care must become more cost-effective overall and contributeto the urgently needed reduction in statutory health insurance expenditure . However, there has been a lack of analysis to date on the effect of the introduction of hybrid DRGs in Germany on the volume of services, the place of provision and the cost effects. To fill this evidence gap, we analysed nationwide statutory health insurance routine data from the AOK. The analysis was exploratory; reporting is in accordance with STROSA recommendations [4].

Summary

Background: With the introduction of hybrid DRGs in accordance with Section 115f of the German Social Code, Book V (SGB V), the legislature wanted to promote the shift from traditional inpatient to outpatient care, which has been slow in comparison to other countries.

In order to reduce the lag in the shift to outpatient care in Germany, five service areas were defined in 2024 for which hospitals and contracted physicians receive uniform, sector-independent flat rates per case (hybrid DRGs).

Methodology: The effect of the introduction of hybrid DRG remuneration is analysed using nationwide SHI routine data from the AOK for the years 2022 to 2024. The case numbers (total and stratified by outpatient and inpatient service provision) and the effect on expenditure in both sectors are presented for the five service areas. In order to draw conclusions about the entire statutory health insurance system, the data was standardised according to age, gender and health insurance region on the basis of KM6 statistics and extrapolated to the entire statutory health insurance system. The analyses were exploratory.

Results: In 2024, 360,000 cases were billed under the hybrid DRG regulation. Looking at the treatments provided in hospitals and by contract doctors together, there was a 7% increase in 2024 compared to the previous year. The proportion of outpatient cases across the five service areas considered rose from 42% in 2023 to 49% in 2024. Overall, the volume of expenditure remained virtually unchanged. However, this is due in particular to the fact that outpatient services were often still billed according to the more favourable EBM.

Discussion: From the perspective of the solidarity-based community, the shift from inpatient to outpatient services must lead to efficiency gains in care that relieve the burden on insured persons. However, the present analysis shows that contract doctors in particular have reacted quickly to the higher prices and that there has been a sharp increase in volumes. The financial effect on the statutory health insurance system is still neutral, but only because a large proportion of cases continued to be billed according to the EBM. Once hybrid DRG billing is established, cost increases of approximately 5% (€49 million) are to be expected for the statutory health insurance system as a result of the increases in volume.

Keywords

Outpatient care, hybrid DRG, statutory health insurance routine data, efficiency, health economics

Crossref/doi

http://doi.org/10.24945/MVF.01.26.1866-0533.2801

Method

Description of data selection

The following analyses are based on AOK billing data from 2022 to 2024. In order to draw conclusions about the entire statutory health insurance system, the data was standardised on the basis of the statutory health insurance statistics (KM6 statistics) according to age, gender and place of residence (health insurance region) and extrapolated to the entire statutory health insurance system using the corresponding insured persons' shares of the AOKs as a basis. This is an exploratory analysis of the

observed developments.

Services provided at hospitals

All cases billed according to hybrid DRG in 2024 were included in the analysis. For a comparison with previous years, the potential hybrid cases billed according to DRG and according to Section 115b of the German Social Code, Book V (outpatient surgery/AOP) from previous years had to be used. Those inpatient DRG cases from the previous period (2022 and 2023) were considered that would potentially result in hybrid DRGs in 2024 – based on the twelve "parent DRGs"(1). Only cases that included a procedure (OPS code) from the initial catalogue of the BMG's Hybrid DRG Regulation (2) were included. In 2022 and 2023, these cases were still billed entirely through the aG-DRG system. From 2024 onwards, parts of these cases were reimbursed via hybrid DRGs. These are usually cases that involve a hybrid procedure, a length of stay of one day and a PCCL of less than three [1, 5]. Cases that did not meet the hybrid DRG criteria – usually cases with a length of stay of more than one day and/or cases with a higher severity of illness (presence of contextual factors or a PCCL > 2) – continued to be billed via the DRG system in 2024. Figure 1 shows a schematic representation of the specification.

In order to make inpatient expenditure in 2022 and 2023 comparable with 2024 and to adjust for the price effect of the increase in the state base rate, the case mix of the cases in 2022 and 2023 was multiplied by the respective state base rate for 2024.

To determine the potential hybrid cases for 2022 and 2023 from the § 115b SGB V data (outpatient surgery), cases that had an OPS code from the initial catalogue of hybrid DRGs were counted as such. In these cases, an additional fee from EBM Chapter 31.2 (outpatient surgery) must have been billed. The cases determined in this way were already performed on an outpatient basis in the past; the only change here is the remuneration system, or rather, the mixed calculation results in a much higher revenue than before.

Accordingly, in 2024, these services could no longer be billed as outpatient surgery in accordance with Section 115b of the German Social Code, Book V (SGB V), but as hybrid DRGs in accordance with Section 115f SGB V. However, it was found that some cases with these OPS codes were still being billed as Section 115b SGB V services in 2024. For the comparison with previous years, these cases were also included in 2024 to ensure a fair comparison. The occurrence of these cases may also be a consequence of the late entry into force of the Hybrid DRG Regulation and the billing agreement. The data shows that the proportion of these cases decreases over the course of 2024.

In order to make the expenditure for outpatient surgery in 2022 and 2023 comparable with that of 2024, the expenditure for 2023 was increased by the 3.85% increase in the orientation value for all contract medical services for 2024, and the expenditure for 2022 was additionally increased by the 2.00% increase in the orientation value for 2023 [6].

Contractual medical services

All hybrid cases were included which, in 2024, were billed to the AOK in accordance with the transitional agreement on contract physician billing with special billing codes via the associations of statutory health insurance physicians (KV). Cases of direct billers, in which billing was carried out directly with the health insurance funds without the involvement of the KV, are only partially included in the data. For comparison with the previous years 2022 and 2023, in which billing was still carried out according to EBM, all cases were included in which both a hybrid procedure from the initial cataloguewas coded and afee schedule code (GOP) from chapter 31.2 (outpatient surgery) was billed (see also Fig. 1). Cases involving only additional services, such as anaesthesia, were not included in the case count in order to avoid double counting. Cases from selective contracts with different billing codes are also not included, as they cannot be assigned to the hybrid area.

Specification with inclusion and exclusion criteria

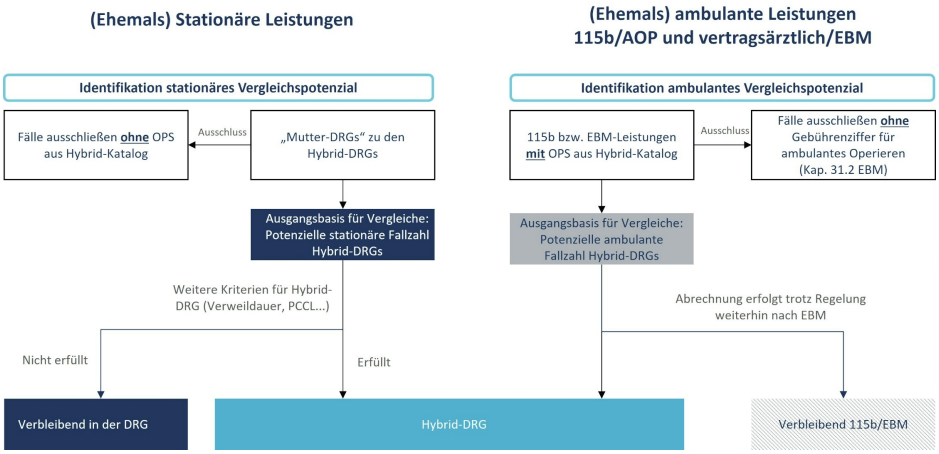


Fig. 1: **Specification with inclusion and exclusion criteria. Own representation.**

The expenditure for EBM services provided by contract physicians cannot be fully determined from the data because various cost types, such as material costs, cannot always be assigned to a single case. Therefore, the average expenditure for § 115b services from hospitals was used for each service area. In order to make the expenditure for outpatient surgery in 2022 and 2023 comparable with that of 2024, the same procedure was followed as for § 115b SGB V services. As in hospitals, cases involving hybrid procedures in the contract physician sector in 2024 continued to be reimbursed via the EBM, even though in principle there was an entitlement to higher reimbursement with the hybrid DRG. However, here too, a declining proportion of these cases can be observed in the course of 2024.

Results

The introduction of hybrid DRGs led to significant shifts, which are presented below, first individually for the service providers "hospitals" and "contract physicians" and then in an overall view.

Hospital service providers

Table 1 shows the number of cases, costs and days for the years 2022 to 2024 by billing type for Section 115b SGB V (AOP), DRG and hybrid DRG by service area for treatments provided at hospitals. The service areas "certain hernia operations", "removal of ureter stones" and "oophorectomies" accounted for over 80% of cases.

In 2023, around 331,700 cases were billed via the parent DRGs, which could potentially lead to a hybrid DRG in 2024. In 2024, their number fell to 142,200 cases (57%). In accordance with the new guidelines, only those cases that did not meet the hybrid DRG criteria, e.g. those with a length of stay greater than one day or a higher severity of illness, were billed via the aG-DRG. At the same time, in 2023 there were around 117,600 cases billed in accordance with Section 115b of the German Social Code, Book V (SGB V), which would have been hybrid-compatible in 2024. In 2024, their number fell to 37,500 cases (-68%). The fact that cases involving hybrid procedures continue to be found in the billing for outpatient surgery under Section 115b SGB V (AOP) must be monitored further. It is striking that a significant increase in volume was already observed before the introduction of hybrid DRG remuneration. In 2023, hospitals performed approximately 8% more cases in these service areas compared to the previous year. This increase was mainly driven by § 115b SGB V services.

Case numbers in hospitals by remuneration system, 2022 to 2024

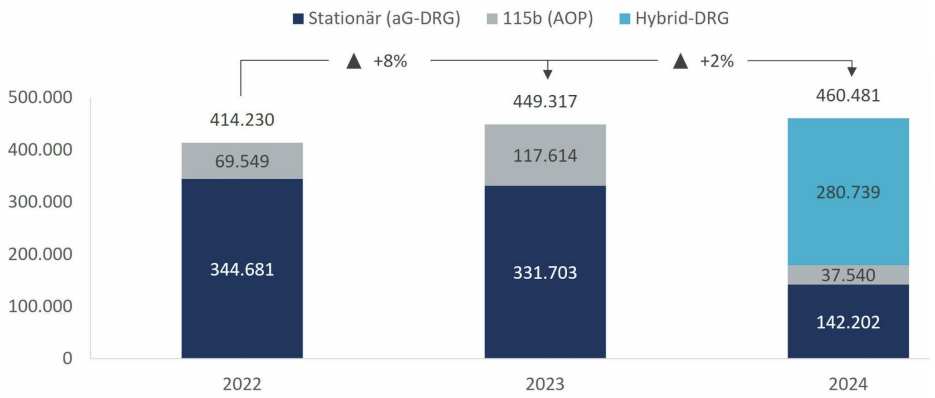


Fig. 2: **Case numbers in hospitals by remuneration system, 2022 to 2024. Source: AOK billing data (standardised and extrapolated to the entire statutory health insurance system). Own representation.**

In 2024, around 280,700 cases were billed via hybrid DRGs for the first time. In order to assess the development, the total number of cases (including hybrid DRG cases) must be considered. The overall development of case numbers in hospitals shows that these rose slightly in 2024 compared to 2023 (+2%) (Fig. 2).

On the expenditure side, it can be seen that these fell by 7% in 2024 compared to the previous year (71 million euro, Table 1). This effect is composed of a volume effect (+21 million euro) and a price effect of -92 million euro. The latter is in turn based on two effects for hybrid cases: The introduction of hybrid DRGs reduced the remuneration for cases that were previously billed according to DRG. On average, hospitals still receive two-thirds of the former inpatient remuneration for these cases. In contrast, remuneration for former AOP cases doubled (increase of approximately 100%).

It should be noted that in 2024, around 37,500 cases for which there was a legal entitlement to a hybrid DRG continued to be billed according to EBM. If these cases were billed accordingly via hybrid DRG, this would result in additional expenditure of €25 million for the statutory health insurance funds. The reduction in hospital expenditure would then only amount to €46 million.

There's another thing to keep in mind: because of the hybrid DRGs, the number of days people spent in hospital went down, as more cases were treated on an outpatient basis and people didn't have to stay overnight. In 2024, there were about 78,000 fewer days spent in hospital compared to 2023 (-11%). A conservative method of estimating the cost reduction resulting from this reduction is to estimate the amount at £160 per day of hospitalisation, as is done for day care treatment under Section 115e of the German Social Code, Book V (SGB V) for the overnight stays that are no longer required. This results in cost savings of around £12 million for hospitals.

Service providers Contract doctors

A dynamic development can be observed in (potential) hybrid DRG cases in the contract physician sector. In 2023, the number of cases rose by 8% compared to the previous year, from 108,700 to 117,800 cases (Table 2). In the year the hybrid DRGs were introduced, there was a further increase in cases of 23% to 144,400 cases.

Due to the mixed calculation of hybrid DRGs from former inpatient and outpatient remuneration, average expenditure per case rose by approximately 43%. However, as more than 40% of cases continued to be billed according to EBM in 2024, the increase in total expenditure has so far been lower than would have been expected based on the differences in remuneration. Overall, expenditure in 2024 rose by 75% compared to 2023, or approximately £64 million. This increase is composed of a volume effect, due to the increase in the number of cases, amounting to £32 million (32%), and a price effect due to rising average costs amounting to £37 million (43%).

In addition, it should be noted that the remaining cases billed under the EBM system will be billed via hybrid DRGs in 2024. This will result in additional expenditure of around €30 million for the statutory health insurance system in the future. SHI expenditure in the contract physician sector would thus double compared to 2023, from €86 million to €180 million.

Overall view

Looking at the treatments provided by hospitals and contract doctors together, there will be a 7% increase in the number of cases in 2024 compared to the previous year (Table 3). However, due to the lower average costs per case, this increase will be offset by a 1% reduction in expenditure.

However, it can be assumed that the hybrid DRG services currently still billed by hospitals and contract doctors via EBM will also be billed via hybrid

DRGs in the future, and retroactive invoice corrections may also be made. This scenario is shown in the last two columns of Table 3. In this scenario, it is assumed that expenditure for the remaining EBM billing cases would approximately double. Overall, the introduction of hybrid DRGs would result in an increase in expenditure of approximately 5% or £49 million for 2024 compared to 2023. This increase would be driven primarily by a volume effect resulting from the significant increase in the number of cases.

There would be considerable differences between the service areas. While there would only be relatively small changes in hernia surgery and the removal of ureteral stones, there would be more dynamic changes in other areas. These are the areas in which a relatively high level of outpatient treatment is already evident (see next section). In particular, the smallest service area in terms of numbers, "pilonidal sinus excision", would see an increase in expenditure of approximately 42% or £21 million if billed entirely via hybrid DRGs.

Selected key figures for hospital service providers in the area of (potential) hybrid DRGs

Leistungsbereich	115b-Abrechnung (AOP)					DRG-Abrechnung					Hybrid-DRG-Abrechnung		Gesamt				
	2022	2023	2024	VÄR 2023 zu 2022	VÄR 2024 zu 2023	2022	2023	2024	VÄR 2023 zu 2022	VÄR 2024 zu 2023	2024	2024 davon: 0 Tage	2022 (Stat. + AOP)	2023 (Stat. + AOP)	2024 (Stat. + Hybrid + AOP verbl.)	VÄR 2023 zu 2022	VÄR 2024 zu 2023
Fallzahlen																	
Bestimmte Hernieneingriffe	27.540	48.463	6.712	76 %	-86 %	127.437	121.657	33.150	-5 %	-73 %	133.111	55.309	154.977	170.120	172.973	10 %	2 %
Entfernung Harnleitersteine	3.639	7.151	1.579	97 %	-78 %	100.765	102.988	57.353	2 %	-44 %	56.069	13.983	104.404	110.139	115.001	5 %	4 %
Ovariektomien	21.645	30.148	10.844	39 %	-64 %	67.062	63.732	32.791	-5 %	-49 %	50.978	23.534	88.707	93.880	94.613	6 %	1 %
Arthrodese Zehengelenk	7.240	11.756	5.471	62 %	-53 %	31.767	28.006	15.008	-12 %	-46 %	17.901	8.912	39.007	39.762	38.380	2 %	-3 %
Exzision Sinus pilonidalis	9.485	20.096	12.934	112 %	-36 %	17.650	15.320	3.900	-13 %	-75 %	22.680	11.610	27.135	35.416	39.514	31 %	12 %
Summe	69.549	117.614	37.540	69 %	-68 %	344.681	331.703	142.202	-4 %	-57 %	280.739	113.348	414.230	449.317	460.481	8 %	2 %
Kosten																	
Bestimmte Hernieneingriffe	19.044.217	39.626.753	5.493.829	108 %	-86 %	351.781.896	327.955.257	108.668.195	-7 %	-67 %	226.911.424	93.307.860	370.826.113	367.582.010	341.073.448	-1 %	-7 %
Entfernung Harnleitersteine	2.705.500	5.614.270	1.079.533	108 %	-81 %	253.305.437	261.179.012	159.543.995	3 %	-39 %	88.172.022	21.430.533	256.010.937	266.793.282	248.795.550	4 %	-7 %
Ovariektomien	12.686.636	18.258.433	6.624.854	44 %	-64 %	200.902.918	182.103.537	108.451.971	-9 %	-40 %	77.140.741	35.352.667	213.589.554	200.361.970	192.217.566	-6 %	-4 %
Arthrodese Zehengelenk	4.551.720	8.165.948	3.917.305	79 %	-52 %	85.418.830	74.127.050	44.173.156	-13 %	-40 %	16.961.650	8.349.393	89.970.550	82.292.998	65.052.111	-9 %	-21 %
Exzision Sinus pilonidalis	6.781.576	14.136.993	7.292.865	108 %	-48 %	30.322.536	25.868.111	8.644.075	-15 %	-67 %	23.547.895	12.053.280	37.104.112	40.005.104	39.484.835	8 %	-1 %
Summe	45.769.649	85.802.397	24.408.386	87 %	-72 %	921.731.617	871.232.967	429.481.392	-5 %	-51 %	432.733.732	170.493.733	967.501.266	957.035.364	886.623.510	-1 %	-7 %
Tage																	
Bestimmte Hernieneingriffe	0	0	0			226.080	212.136	109.503	-6 %	-48 %	78.377	0	226.080	212.136	187.880	-6 %	-11 %
Entfernung Harnleitersteine	0	0	0			264.137	266.849	198.637	1 %	-26 %	42.439	0	264.137	266.849	241.076	1 %	-10 %
Ovariektomien	0	0	0			157.336	144.046	100.913	-8 %	-30 %	28.082	0	157.336	144.046	128.995	-8 %	-10 %
Arthrodese Zehengelenk	0	0	0			69.211	58.476	38.428	-16 %	-34 %	9.299	0	69.211	58.476	47.727	-16 %	-18 %
Exzision Sinus pilonidalis	0	0	0			28.210	24.992	11.753	-11 %	-53 %	11.160	0	28.210	24.992	22.913	-11 %	-8 %
Summe	0	0	0			744.974	706.499	459.234	-5 %	-35 %	169.357	0	744.974	706.499	628.591	-5 %	-11 %
Durchschnittliche Kosten																	
Bestimmte Hernieneingriffe	692	818	819	18 %	0 %	2.760	2.696	3.278	-2 %	22 %	1.705	1.687	2.393	2.161	1.972	-10 %	-9 %
Entfernung Harnleitersteine	743	785	684	6 %	-13 %	2.514	2.536	2.782	1 %	10 %	1.573	1.533	2.452	2.422	2.163	-1 %	-11 %
Ovariektomien	586	606	611	3 %	1 %	2.996	2.857	3.307	-5 %	16 %	1.513	1.502	2.408	2.134	2.032	-11 %	-5 %
Arthrodese Zehengelenk	629	695	716	10 %	3 %	2.689	2.647	2.943	-2 %	11 %	948	937	2.307	2.070	1.695	-10 %	-18 %
Exzision Sinus pilonidalis	715	703	564	-2 %	-20 %	1.718	1.689	2.216	-2 %	31 %	1.038	1.038	1.367	1.130	999	-17 %	-12 %
Summe	658	730	650	11 %	-11 %	2.674	2.627	3.020	-2 %	15 %	1.541	1.504	2.336	2.130	1.925	-9 %	-10 %

Table 1: **Selected key figures for hospital service providers in the area of (potential) hybrid DRGs, 2022 to 2024. Note: Adjusted for price effects due to increases in the state base rate and the reference value for contract medical services. Source: AOK billing data (standardised and extrapolated to the entire statutory health insurance system). Own representation.**

Cases by billing type in 2023 and 2024

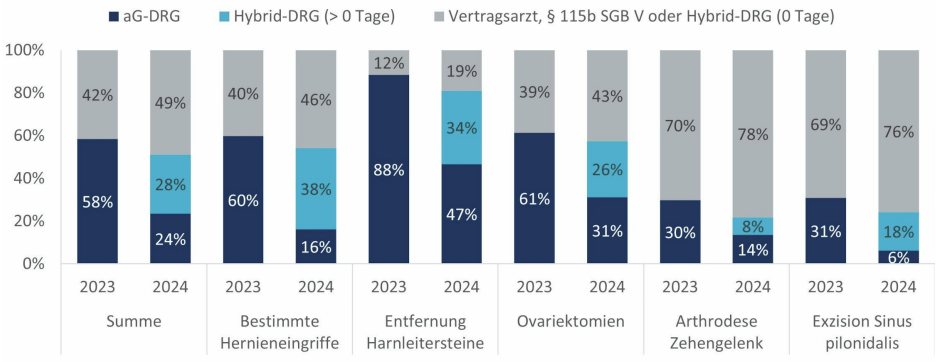


Fig. 3: **Cases by billing type in 2023 and 2024, share in %. Source: AOK billing data (standardised and extrapolated to entire statutory health insurance). Own representation.**

Degree of outpatient treatment and place of service provision

The aim of introducing hybrid DRG remuneration is to increase the outpatient treatment potential of cases that have previously been treated on an inpatient basis. To determine the degree of outpatient treatment, the number of cases at hospitals and contract doctors were considered together. All cases treated by contract doctors (billed according to EBM or hybrid DRG) are considered to be outpatient cases. In addition, there are cases of outpatient surgery at hospitals. Hybrid DRG cases at hospitals are only considered to be provided on an outpatient basis if the admission date corresponds to the discharge date, i.e. no overnight stay in the hospital has taken place. All other hybrid DRG cases at hospitals still require inpatient care structures, as do cases billed according to DRG. In 2023, the proportion of cases provided on an outpatient basis across the five service areas considered was 42% (Fig. 3). This proportion rose to 49% in 2024. A further 28% of cases were reimbursed via hybrid DRGs, but remained with an overnight stay in hospital.

Across all service areas, the highest outpatient treatment rates in 2024 were for "toe joint arthrodesis" and "pilonidal sinus excision" at 78% and 76% respectively. In contrast, the removal of ureteral stones was still predominantly performed on an inpatient basis. The outpatient treatment rate here is only 19% (Fig. 3).

Figure 4 shows the cases according to the place of service provision. There were hardly any changes between 2023 and 2024 – across all service areas, 79% of cases were performed at or in hospitals in 2023, compared to 76% in 2024. Only in the service area of "toe joint arthrodesis" did contract doctors treat significantly more cases than hospitals, with a share of 65%.

Cases by place of service provision

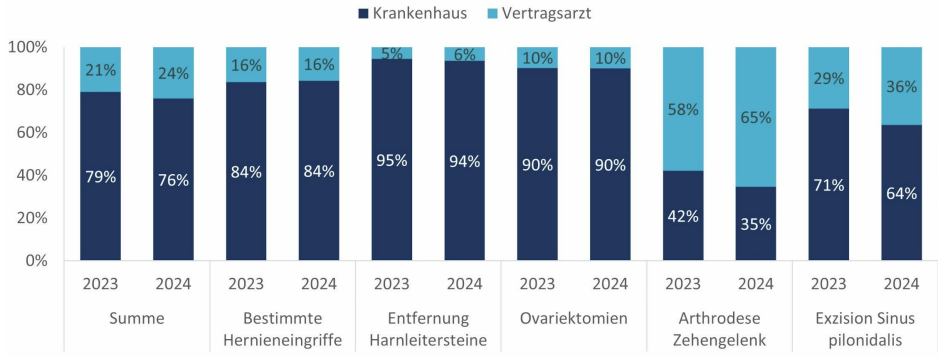


Fig. 4: **Cases by place of service provision, percentage share. Source: AOK billing data (standardised and extrapolated to the entire statutory health insurance system). Own representation.**

Discussion and conclusion

In 2024, the remuneration of cases in five service areas was converted to sector-specific remuneration. Due to the very late publication of the statutory order on hybrid DRGs on 19 December 2023, the data is subject to uncertainty. In 2024, hospitals did not bill all outpatient cases with hybrid OPS using hybrid DRGs, but continued to bill some cases according to EBM. Cases were also continued to be billed according to EBM in the contract physician sector.

The available data show that in the hospital sector, there was a slight reduction in expenditure of €70 million (-7%) for 2024 compared with the previous year. On the one hand, the increase in hybrid DRG cases and the corresponding decline in fully inpatient cases in 2024 led to savings in expenditure. On the other hand, however, many of the outpatient services previously reimbursed under Section 115b of the German Social Code, Book V (AOP) were now reimbursed using the more expensive hybrid DRG, which resulted in higher expenditure. It should also be noted that not only theexpenditure side (revenue side of hospitals) but also the cost side of hospitals has changed, for example due to savings in bed days. As the number of cases in hospitals rose from 2023 to 2024, it can also be assumed that the bed days saved were used to treat additional hospital cases. From a business perspective, a higher value for the use of these occupancy days is also justified.

Selected key figures for contract doctors in the area of (potential) hybrid DRGs

Leistungsbereich	EBM			Hybrid-DRG			
	2022	2023	2024	2024	2024 (EBM + Hybrid)	VÄR 2023 zu 2022	VÄR 2024 zu 2023
Fallzahlen							
Bestimmte Hernieneingriffe	30.480	33.187	8.721	23.200	31.921	9 %	-4 %
Entfernung Harnleitersteine	6.031	6.243	4.384	3.407	7.791	4 %	25 %
Ovariektomien	10.056	9.971	4.541	5.716	10.257	-1 %	3 %
Arthrodese Zehengelenk	51.193	54.228	37.298	34.623	71.921	6 %	33 %
Exzision Sinus pilonidalis	10.946	14.214	7.117	15.444	22.561	30 %	59 %
Summe	108.706	117.843	62.061	82.390	144.451	8 %	23 %
Kosten							
Bestimmte Hernieneingriffe	21.077.260	27.136.022	7.138.213	40.731.599	47.869.812	29 %	76 %
Entfernung Harnleitersteine	4.483.889	4.901.397	2.997.259	5.069.667	8.066.926	9 %	65 %
Ovariektomien	5.894.055	6.038.704	2.774.203	8.958.008	11.732.211	2 %	94 %
Arthrodese Zehengelenk	32.184.558	37.667.832	26.705.838	34.515.641	61.221.479	17 %	63 %
Exzision Sinus pilonidalis	7.826.160	9.999.165	4.012.936	17.239.032	21.251.968	28 %	113 %
Summe	71.465.922	85.743.119	43.628.450	106.513.947	150.142.397	20 %	75 %
Durchschnittliche Kosten							
Bestimmte Hernieneingriffe	692	818	819	1.756	1.500	18 %	83 %
Entfernung Harnleitersteine	743	785	684	1.488	1.035	6 %	32 %
Ovariektomien	586	606	611	1.567	1.144	3 %	89 %
Arthrodese Zehengelenk	629	695	716	997	851	10 %	23 %
Exzision Sinus pilonidalis	715	703	564	1.116	942	-2 %	34 %
Summe	657	728	703	1.293	1.039	11 %	43 %

Table 2: **Selected key figures for contract doctors in the area of (potential) hybrid DRGs, 2022 to 2024. Note: Estimated costs are based on the average costs according to § 115b SGB V hospital invoices, adjusted for price effects. Source: AOK billing data (standardised and extrapolated to the entire statutory health insurance system). Own representation.**

For technical reasons, the average costs from § 115b SGB V services in hospitals were assumed for the expenditure estimate for contract doctor care. On this basis, expenditure increases of €64 million (+75%) are expected in 2024. Overall (hospitals and contract doctors), this currently represents a decrease in expenditure of €6 million (-1%). The volume effect due to higher case numbers (+€65 million) was offset by the price effect (€71 million).

In both hospitals and contract doctors' practices, hybrid services were still billed via the EBM in 2024 instead of via the higher hybrid DRG remuneration. It stands to reason that these cases will also be billed with a hybrid DRG in future. On this basis, this would result in an increase in expenditure of £49 million (5%) for the statutory health insurance system, as the volume effect would no longer be offset by the price effect. In a

scenario without volume increases, no effect on expenditure should be observed. This is because the weighted mixed price structure should, from the legislator's point of view, keep the overall expenditure volume and thus also the average price stable if the volume remains constant.

In 2024, there was a 23% increase in the number of cases, particularly in contract medical care. Corresponding developments should be taken into account when setting prices in the future. In addition, increases in case numbers were already recorded in hospitals and in contract medical care in 2023. The extent to which these are attributable to catch-up effects from the Corona period, the anticipation of hybrid DRGs or the revision of the AOP catalogue cannot be assessed at this point. Coding effects cannot be ruled out either, given the lack of outpatient coding guidelines and the complex billing situation. This issue needs to be investigated further, particularly in light of the fact that further volume-sensitive indications for hybrid DRGs are planned from 2026 onwards. Accordingly, healthcare monitoring is strongly recommended. This would also be welcome with regard to the annual price adjustment.

With regard to promoting outpatient care, however, it can be noted that the degree of outpatient care has only increased slightly with the introduction of hybrid DRGs. From 42% in 2023 to 49% in 2024. A further 28% of cases billed with a hybrid DRG continued to require an overnight stay in hospital. Only the remuneration for these cases has changed, but this has not automatically led to an increase in outpatient care. The increased proportion of services billed on an outpatient basis is therefore only partially reflected in structural changes in care, which is certainly to be expected given the short time frame. These changes represent the potential for further "genuine" outpatient care.

Overall view (hospitals and contract doctors), 2022 to 2024

Leistungsbereich	Gesamt					Szenario	
	2022	2023	2024	VÄR 2023 zu 2022	VÄR 2024 zu 2023	Szenario 2024	VÄR 2024 zu 2023
Fallzahlen							
Bestimmte Hernieneingriffe	185.457	203.307	204.894	10%	1%	204.894	1%
Entfernung Harnleitersteine	110.435	116.382	122.792	5%	6%	122.792	6%
Ovariektomien	98.763	103.851	104.870	5%	1%	104.870	1%
Arthrodese Zehengelenk	90.200	93.990	110.301	4%	17%	110.301	17%
Exzision Sinus pilonidalis	38.081	49.630	62.075	30%	25%	62.075	25%
Summe	522.936	567.160	604.932	8%	7%	604.932	7%
Kosten							
Bestimmte Hernieneingriffe	391.903.373	394.718.032	388.943.260	1%	-1%	403.064.237	2%
Entfernung Harnleitersteine	260.494.826	271.694.679	256.862.476	4%	-5%	261.792.218	-4%
Ovariektomien	219.483.609	206.400.674	203.949.777	-6%	-1%	218.076.608	6%
Arthrodese Zehengelenk	122.155.108	119.960.830	126.273.590	-2%	5%	138.016.704	15%
Exzision Sinus pilonidalis	44.930.272	50.004.269	60.736.803	11%	21%	70.804.145	42%
Summe	1.038.967.188	1.042.778.483	1.036.765.907	0%	-1%	1.091.753.912	5%
Durchschnittliche Kosten							
Bestimmte Hernieneingriffe	2.113	1.941	1.898	-8%	-2%	1.967	1%
Entfernung Harnleitersteine	2.359	2.335	2.092	-1%	-10%	2.132	-9%
Ovariektomien	2.222	1.987	1.945	-11%	-2%	2.079	5%
Arthrodese Zehengelenk	1.354	1.276	1.145	-6%	-10%	1.251	-2%
Exzision Sinus pilonidalis	1.180	1.008	978	-15%	-3%	1.141	13%
Summe	1.987	1.839	1.714	-7%	-7%	1.805	-1,8%

Table 3: **Overall view (hospitals and contract doctors), 2022 to 2024. Note: Adjusted for price effects due to increases in the state base rate and the orientation value for contract doctor services. Source: AOK billing data (standardised and extrapolated to the entire statutory health insurance system). Own representation.**

Despite the significant increase in volume, the introduction of hybrid DRGs has not yet led to an increase in statutory health insurance expenditure. However, this is only because outpatient services that could actually be reimbursed via hybrid DRGs continue to be reimbursed according to EBM. Even if all outpatient hybrid cases were billed via hybrid DRGs, the introduction of hybrid DRGs would have been possible without increasing expenditure if there had been no volume effects. However, driven by mixed calculation, there has been an increase in volume, particularly in the area of contract physicians.

Nevertheless, the hybrid services introduced in 2024 continued to be provided mainly in hospitals, with a high proportion of cases involving an overnight stay in hospital. The adjustment of structures is therefore likely to take some time.

From the perspective of society as a whole, the shift from inpatient to outpatient services must result in efficiency gains in healthcare reaching contributors and relieving the burden on insured persons and thus our social systems. In addition, an increase in outpatient operations in the contract physician sector further exacerbates the tense appointment situation in contract physician outpatient care for conservative treatment. The significant volume increases of 23% in the contract physician sector can be interpreted accordingly. In 2026, particularly volume-sensitive service areas such as diagnostic cardiac catheters and event recorders will be included in the catalogue for hybrid DRGs. Since it is virtually impossible to check the appropriateness of indications in individual cases, the incentive to increase volumes must be eliminated.

Literature

[1] BMG – Federal Ministry of Health (2023). Draft bill: Regulation on special sector-equivalent remuneration (Hybrid DRG Regulation). https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/Gesetze_und_Verordnungen/GuV/H RG-V.pdf (accessed on: 22 October 2025)

[2] SVR – German Council of Experts for the Assessment of Developments in the Health Care and Nursing Sectors (2024). Skilled workers in the health care sector. Sustainable use of a scarce resource. https://www.svr-gesundheit.de/fileadmin/Gutachten/Gutachten_2024/2._durchgesehene_Auflage_Gutachten (accessed on: 22 October 2025)

[3] Dengler, R., Froschauer, S., Kron, F.: "Outpatient specialist care (ASV) in the context of current health policy reforms", in: "Monitor Versorgungsforschung" (05/23), pp. 63–70. http://doi.org/10.24945/MVF.05.23.1866-0533.2548

[4] Swart, E./Schmitt, J. (2014). Standardised reporting of secondary data analyses (STROSA) – Proposal for a reporting format for secondary data analyses. Journal for Evidence, Training and Quality in Healthcare, 108(8-9), 511-516

[5] InEK – Institute for the Hospital Remuneration System (2024). Definition Manual 2024. https://www.g-drg.de/ag-drg-system-2024/definitionshandbuch/definitionsha-ndbuch-2024. (accessed on: 22

October 2025)

[6] GKV-SV – GKV-Spitzenverband (2025). Focus: Remuneration of medical services. https://www.gkv-spitzenverband.de/gkv_spitzenverband/presse/fokus/verguetung_aerztlicher_leistungen/s_thema_aerzteverguetung.jsp#:~:text=September%202021%20gegen%20die%20Stimmen,500%20Millionen%20Euro (accessed on: 22 October 2025)

Author's declaration

Corinna Hentschker, Robert Messerle, Julia Schlüter and Jürgen Malzahn are employees of the AOK Federal Association. Jochen Schmitt is a university professor at TU Dresden and a member of the Expert Council for Health and Care. The data was prepared, analysed and interpreted and the manuscript was written solely by the authors without the involvement or financial support of third parties.

Citation

Hentschker et al.: "Effects of the introduction of hybrid DRGs – an analysis based on AOK data", in: "Monitor Versorgungsforschung" (01/26), pp. 73–81. http://doi.org/10.24945/MVF.01.26.1866-0533.2801

Effects of the introduction of hybrid DRGs – an analysis based on administrative claims data

Background: The introduction of hybrid DRGs (§ 115f SGB V) aimed to accelerate the shift towards outpatient treatment of services that were traditionally provided in an inpatient setting. In 2024, five service areas were defined for which hospitals and physicians receive equal payment under the hybrid DRG system.

Methods: We analysed the effects of the introduction of hybrid DRG using administrative claims data from a large German statutory health insurance provider (AOK) from 2022 to 2024. To draw conclusions about the entire statutory health insurance (SHI) system, we standardised the data according to age, gender and federal state and extrapolated it to the entire SHI system. We analysed the development of case numbers and expenditure, both overall and in the inpatient and outpatient sectors separately.

Results: In 2024, 360,000 cases fell under the hybrid DRG regulation. Overall, there has been a 7% increase in the number of cases compared to the previous year. The proportion of outpatient cases across the five service areas considered rose from 42% in 2023 to 49% in 2024. Overall, the volume of expenditure has remained unchanged. However, this is because outpatient services were still often billed according to the EBM system.

Conclusion: From the perspective of the SHI system, shifting from inpatient to outpatient services should lead to more efficient care. However, the present analysis shows that physicians have quickly responded to higher prices, resulting in a significant increase in volume. The financial impact on the SHI system remains neutral for now, but only because a significant proportion of cases continue to be billed under the

EBM system. Once hybrid DRG billing is in place, the SHI system can expect cost increases of around 5% (49 million euro) as a result of the increased volume.

Keywords

Outpatient care, hybrid DRG, administrative claims data, efficiency, health economics



Dr. rer. oec. Corinna Hentschker holds a doctorate in health economics and works as a research assistant at the Scientific Institute of the AOK (WIdO) in the hospital research department. She was previously employed at the RWI – Leibniz Institute for Economic Research. Contact: Corinna.Hentschker@wido.bv.aok.de

ORCID: 0000-0002-1409-8382



Dr Robert Messerle heads the Health Policy/System Analysis Research Department at the Scientific Institute of the AOK (WIdO). From 2020 to 2024, he completed his doctorate in health economics at the University of Hamburg. Previously, he worked at the GKV-Spitzenverband (National Association of Statutory Health Insurance Funds) analysing outpatient care and at the offices of the Expert Council for Health and Care and the Scientific Commission for a Modern Remuneration System. Contact: Robert.Messerle@wido.bv.aok.de

ORCID: 0000-0002-0354-8675



Julia Schlüter MaHE has been a consultant in the field of inpatient care at the AOK Federal Association since 2017. Prior to this, she worked in science management at Charité Universitätsmedizin Berlin for 14 years. She studied business administration and holds a Master of Health Economics (MaHE) degree. Contact: Julia.Schlueter@bv.aok.de



Prof. Dr. med. Jochen Schmitt MPH studied medicine and public health and then worked for around ten years as a senior physician at the Clinic and Polyclinic for Dermatology at Dresden University Hospital. In 2011, he was appointed Professor of Social Medicine and Health Services Research at TU Dresden and has been the founding director of the Centre for Evidence-Based Health Care (ZEGV) at Dresden University Hospital since 2012. He is a member of the SVRt Health and Care and deputy chairman of the DNVF. Contact: Jochen.Schmitt@ukdd.de

ORCID: 0000-0003-0264-0960



Dr Jürgen Malzahn studied medicine in Berlin and Frankfurt am Main. He has been working for the AOK Federal Association since 1997, initially in the Hospital Case Management Department until 2000. He then moved to the Hospitals Department. He has been head of the Inpatient Care/Rehabilitation Department since 2007. Contact: Juergen.Malzahn@bv.aok.de

ORCID: 0009-0006-2165-6684

1: Each hybrid DRG is assigned a "parent DRG", which continues to be billed according to the DRG system. From 2024 onwards, this will include cases that do not have an OPS code according to the hybrid DRG start catalogue or cases that continue to be treated on an inpatient basis due to the severity of the illness.

2: Regulation on special sector-equivalent remuneration (Hybrid DRG Regulation). Federal Law Gazette 2023 I No. 380 of 21 December 2023.

3: Section 115e of the German Social Code, Book V (SGB V) provides for a reduction of 0.04 valuation ratios per overnight stay, which corresponds to a reduction of 160 euros for a base case value of approximately 4,000 euros.