

Assessment of University Gynaecology Clinics Based on Quality Reports

Die Universitäts-Frauenkliniken im Spiegel der Qualitätsberichte

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Key words

- gynaecology
- obstetrics
- reproductive medicine

Schlüsselwörter

- Frauenheilkunde
- Geburtshilfe
- assistierte Reproduktion

Abstract



Introduction: Quality reporting was initially implemented to offer a better means of assessing hospitals and to provide patients with information to help them when choosing their hospital. Quality reports are published every 2 years and include parameters describing the hospital's structure and general infrastructure together with specific data on individual specialised departments or clinics.

Method: This study investigated the 2010 quality reports of German university hospitals published online, focussing on the following data: number of inpatients treated by the hospital, focus of care provided by the unit/department, range of medical services and care provided by the unit/department, non-medical services provided by the unit/department, number of cases treated in the unit/department, ICD diagnoses, OPS procedures, number of outpatient procedures, day surgeries as defined by Section 115b SGB V, presence of an accident insurance consultant and number of staff employed.

Results: University gynaecology clinics (UGCs) treat 10% (range: 6–17%) of all inpatients of their respective university hospital. There were no important differences in infrastructure between clinics. All UGCs offered full medical care and were specialist clinics for gynaecology (surgery, breast centres, genital cancer, urogynaecology, endoscopy), obstetrics (prenatal diagnostics, high-risk obstetrics); many were also specialist clinics for endocrinology and reproductive medicine. On average, each clinic employs 32 physicians (range: 16–78). Half of them (30–77%) are specialists. Around 171 (117–289) inpatients are treated on average per physician. The most common ICD coded treatments were deliveries and treatment of infants. Gynaecological diagnoses are underrepresented.

Zusammenfassung



Einleitung: Die Qualitätsberichte wurden konzipiert, um die Kompetenz der Kliniken besser darstellen zu können, sodass Patienten sich für die Auswahl der Klinik daran orientieren können. Sie werden alle 2 Jahre veröffentlicht und enthalten Parameter zu den Strukturen der Kliniken, der Infrastruktur insgesamt und spezifische Daten zu den einzelnen Fachabteilungen (Disziplinen).

Methode: In dieser Arbeit wurden die im Internet veröffentlichten Qualitätsberichte des Jahres 2010 der Universitätskliniken untersucht und die folgenden Daten ausgewertet: Anzahl der stationären Patientinnen im Gesamtklinikum, Versorgungsschwerpunkte der Organisationseinheit/Fachabteilung, medizinisch-pflegerische Leistungsangebote der Organisationseinheit/Fachabteilung, nicht medizinische Serviceangebote der Organisationseinheit/Fachabteilung, Fallzahlen der Organisationseinheit/Fachabteilung, Diagnosen nach ICD, Prozeduren nach OPS, ambulante Behandlungsmöglichkeiten, ambulante Operationen nach § 115b SGB V, Zulassung zum Durchgangs-Arztverfahren der Berufsgenossenschaft und personelle Ausstattung.

Ergebnisse: Die Universitäts-Frauenkliniken liefern 10% (von 6 bis 17%) der stationären Fälle der jeweiligen Universitätsklinik. Bei der Beschreibung der Infrastruktur gibt es keine relevanten Unterschiede. Alle UFKs decken das gesamte Spektrum des Faches ab und sind Schwerpunkte im Bereich der Gynäkologie (operativ, Brustzentrum, Genitalkarzinome, Urogynäkologie, Endoskopie), Geburtshilfe (Pränataldiagnostik, Risikogeburtshilfe) und die meisten auch im Bereich der Endokrinologie und Reproduktionsmedizin. Im Mittel werden ca. 32 Ärztinnen und Ärzte beschäftigt (16–78). Die Hälfte davon (30–77%) sind Fachärztinnen und Fachärzte. Pro Arztstelle werden durchschnittlich 171 (117–289) Patientinnen stationär behandelt. Die meisten

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Bibliography

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Summary: UGCs treat 10% of all inpatients treated in university hospitals, making them important ports of entry for their respective university hospital. Around half of the physicians are specialists. Quality reports offer little information on the differences in competencies or medical specialties. The statutory quality reports are not useful for patients and referring physicians when choosing a clinic.

ICD-Schlüssel sind Entbindungen und Kinder. Gynäkologische Diagnosen sind unterrepräsentiert.

Zusammenfassung: Die UFKs sind mit ca. 10% der stationären Fälle der Universitätskliniken eine wichtige Eintrittspforte für das jeweilige Uniklinikum. Beinahe die Hälfte der Ärztinnen und Ärzte sind Fachärztinnen und Fachärzte. Kompetenzunterschiede und Schwerpunkte sind aus den Qualitätsberichten nur schwer bis gar nicht abzuleiten. Die gesetzlichen Qualitätsberichte sind für Patientinnen bei der Klinikwahl und für einweisende Ärztinnen und Ärzte bei der Beratung kaum nützlich.

Introduction

Quality reports are statutory reports as defined by Section 137 Book V of the SGB (Germany Social Welfare Code) which every hospital must publish every two years. Hospitals provide data based on certain pre-defined, standardised criteria. The structure of the quality reports is shown in **Fig. 1**.

These publications are intended to offer patients standardised information on every hospital. Quality reports are structured according to specified requirements, making it easier to compare the structures of different hospitals/clinics. Part B of the quality report aims to provide information on individual specialist clinics/departments. Data include the number of inpatients treated, the infrastructure of the specialist clinic, the number of diagnoses and procedures performed listed in order of frequency (10 most common), and the levels of staffing.

Currently, quality reports are published every 2 years and their contents are updated. This platform aims to provide information about the respective hospital or clinic as well as more transparency. One important aspect of quality reports is that all hospitals are represented within the same framework, irrespective of whether they are primary or tertiary care facilities. Hospitals offering the same levels of care (primary, secondary, tertiary) can be compared to one another [1–3].

The disadvantage of the quality reports is that they focus on quantitative aspects. The reports do not reflect criteria on the quality of medical care.

Material and Method

This study investigated the 2010 quality reports for university hospitals published online.

The following data were assessed:

- ▶ Number of inpatients treated in the university hospital (Part A)
- ▶ Focus and level of care provided by the unit/department (Part B)
- ▶ Medical services and care provided by the specialist department (Part B)
- ▶ Non-medical services provided by the unit/department (Part B)
- ▶ Number of cases treated in the unit/department (Part B)
- ▶ ICD diagnoses (Part B)
- ▶ OPS procedures performed (Part B)
- ▶ Number of outpatient procedures (Part B)
- ▶ Day surgery as defined in Section 115b SGB V (Part B)
- ▶ Accident insurance consultant present (Part B)
- ▶ Staffing levels given as numbers of full-time employees (Part B)

A Data on structures and services

- ▶ General information
- ▶ Organisational structure of the hospital
- ▶ Regional obligation to provide psychiatric care
- ▶ Interdisciplinary medical specialties
- ▶ Interdisciplinary medical services and care
- ▶ General non-medical services offered
- ▶ Research and teaching
- ▶ Number of hospital beds as defined in Section 108/109 SGB V
- ▶ Number of patients
- ▶ Staff
- ▶ Equipment

B Data on structure and services of the unit/department

- ▶ General information
- ▶ Medical specialties
- ▶ Medical services and care
- ▶ Non-medical services
- ▶ Number of patients
- ▶ ICD diagnoses
- ▶ OPS procedures
- ▶ Outpatient procedures
- ▶ Day surgeries
- ▶ Accredited accident insurance consultant
- ▶ Staffing levels (physicians, nursing staff, therapists)

C Quality assurance

- ▶ Participation in external comparative quality assurance as defined by Section 137 para. 1 sentence 3 no. 1 SGB V (QA procedure)
- ▶ External quality assurance procedures mandated by federal state law in accordance with Section 112 SGB V
- ▶ Quality assurance for participation in Disease Management Programmes (DMP) as defined by Section 137f SGB V
- ▶ Participation in other procedures for external comparative quality assurance
- ▶ Implementation of the Agreement on Minimum Number of Cases as defined by Section 137 SGB V
- ▶ Implementation of resolutions taken by the Federal Joint Committee on Quality Assurance as defined by Section 137 para. 1 sentence 1 no. 2 SGB V
- ▶ Implementation of regulations on advanced training in hospitals as defined by Section 137 SGB V

D Quality management

- ▶ Quality policies
- ▶ Quality targets
- ▶ Establishment of quality management processes/procedures within the facility
- ▶ Quality management tools
- ▶ Quality management projects
- ▶ Assessment of quality management

Fig. 1 Structure of quality reports.

Table 1 University hospitals (UH) and university gynaecological clinics (UGC) according to the number of inpatients (UGC and UH), day care patients and outpatients (UH). Sorted according to the ratio of UGC patients to UH patients given in percent.

Clinic	No. of in-patients per UH	No. of day care patients per UH	No. of out-patients per UH	No. of in-patients per UGC	UGC/UH (%)
1	43 759	0	11 039	2 729	6.24
28	47 323	6 656	240 060	2 979	6.30
7	53 774	337	0	3 517	6.54
10	45 020	2 168	155 997	2 960	6.57
11	48 213	2 243	181 816	3 434	7.12
12	35 324	1 002	112 000	2 774	7.85
26	57 032	19 643	208 947	4 732	8.30
16	61 116	9 800	413 135	5 092	8.33
9	62 751	4 587	257 491	5 370	8.56
17	51 621	1 306	206 224	4 482	8.68
24	47 095	4 434	94 305	4 098	8.70
13	38 486	1 850	90 449	3 653	9.49
4	53 926	5 997	309 487	5 163	9.57
25	61 420	5 836	238 381	5 929	9.65
19	46 779	456	168 260	4 516	9.65
30	51 406	7 022	211 741	5 040	9.80
3	46 447	458	325 248	4 593	9.89
18	52 895	4 260	362 321	5 301	10.02
23	48 657	484	125 827	4 889	10.05
32	53 489	5 418	152 916	5 449	10.19
20	49 451	2 548	173 509	5 051	10.21
8	46 439	1 891	219 480	4 766	10.26
15	54 875	1 790	370 373	5 822	10.61
27	43 085	971	144 075	4 839	11.23
2	128 017	0	592 566	15 148	11.83
14	53 606	1 882	182 358	6 346	11.84
5	43 213	1 107	192 603	5 362	12.41
21	48 721	2 981	278 562	6 113	12.55
6	58 248	9 885	387 794	7 387	12.68
22	76 797	8 615	378 930	11 950	15.56
31	45 883	3 464	216 311	7 508	16.36
29	60 320	2 581	327 581	10 486	17.38

In some cases where hospitals consisted of 2 or 3 clinics (at several speciality locations) the case numbers were simply added up. University gynaecology clinics not affiliated to university hospitals were not included in this study. Such hospitals have a non-university infrastructure for patient care which makes it more difficult to compare them with university facilities.

The following questions were investigated:

- ▶ How many inpatients were treated in the respective university hospitals?
- ▶ Which quantitative differences exist between university gynaecology clinics with regard to inpatient care?
- ▶ How important is gynaecology for the inpatient care of university hospitals?
- ▶ What are the quantitative differences in staffing levels between university gynaecology clinics?
- ▶ What information can be deduced from quality reports?

Results



1. How many inpatients are treated in the respective university hospitals?

Part A of the quality report listed the numbers of inpatients treated in the respective hospital and clinic. The number of patients are shown in **Table 1**. The average number of patients was 52 827 (range: 35 324 to 128 017). Six university hospitals (UHs) treated more than 60 000 patients annually (2 of which were spread over 2 and 3 locations, respectively), 10 UHs treated 50 000 to 60 000 patients, 14 UHs treated between 40 000 and 50 000, and 2 treated fewer than 40 000 patients per year.

2. Which quantitative differences exist between university gynaecology clinics with regard to inpatient care?

Part B of the quality reports showed the number of inpatients in the respective gynaecology clinic. The average number of inpatients treated in university gynaecology clinics was 5 311 (range: 2 729 to 15 148). When the number of inpatients was divided according to the number of hospital sites, the average number of patients treated per UGC site was 5 073. Four university gynaecology clinics treated fewer than 3 000 women and 5 treated more than 7 000 inpatients per year. The other 23 UGCs treated between 3 000 and 7 000 women annually (3 UGCs treated between 3 000 and 4 000; 8 UGCs between 4 000 and 5 000; 10 UGCs between 5 000 and 6 000 and 2 between 6 000 and 7 000 women per year).

3. How important is gynaecology for the inpatient care of university hospitals?

The university gynaecology clinics treated an average of 10% of all inpatients of their respective university hospital (between 6 and 17%). Three UGCs treated more than 13% and 6 UGCs treated less than 8%.

4. What are the quantitative differences in staffing levels between university gynaecology clinics?

Table 2 shows the number of staff for the respective university gynaecology clinics. On average, UGCs employed around 32 physicians (between 16 and 78). The number of specialist physicians was around 16 per university gynaecology clinic (min. 8 to max. 36.5). This means that around 50% of physicians employed were specialists (30 to 77%). An average of 171 (117 to 289) inpatients were treated per physician.

5. What information can be deduced from quality reports?

No relevant differences between UGCs were found with regard to the focus of care of the unit/department, the medical services and care offered by the unit/department, or the non-medical services provided by the unit/department.

The most common diagnoses and procedures are listed in **Tables 3 and 4**.

The most common diagnosis was Z38 (30 clinics, range: 384–1559) with one clinic listing O68 as the most common (n = 399). In 3 clinics Z38 was not found among the 10 most common diagnoses. In these clinics C50 (2 clinics, 331 and 460, respectively) and O42 (1 clinic, n = 435) were the most frequently diagnosis.

The second most common diagnoses were: C50 (14 clinics, range: 267–840), D25 (6 clinics, range: 144–631), O70 (5 clinics, range: 330–445), O42 (2 clinics, range: 267–335), O68 in two clinics (n = 428), O60 (n = 175), O34 (n = 232), N39 (n = 109) and Z38 (n = 393).

Table 2 Physicians employed by UGCs.

Clinic	No. of in-patients per UGC	No. of physicians	No. of specialists	Specialists/physicians	No. of in-patients per physician
10	2960	16.0	8.0	50.00	185.00
1	2729	17.3	9.3	53.76	157.75
24	4098	18.7	9.7	51.87	219.14
17	4482	19.8	7.6	38.38	226.36
11	3434	20.5	9.7	47.32	167.51
12	2774	21.8	16.8	77.06	127.25
13	3653	22.9	7.7	33.62	159.52
4	5163	24.6	11.6	47.15	209.88
15	5822	25.0	13.0	52.00	232.88
28	2979	25.5	17.0	66.67	116.82
26	4732	25.9	10.8	41.70	182.70
31	7508	26.0	14.0	53.85	288.77
8	4766	26.5	14.0	52.83	179.85
21	6113	27.0	17.0	62.96	226.41
7	3517	27.0	18.0	66.67	130.26
9	5370	30.4	16.9	55.59	176.64
25	5929	30.5	18.5	60.66	194.39
32	5449	31.8	13.0	40.94	171.62
3	4593	31.8	9.7	30.50	144.43
20	5051	32.0	20.0	62.50	157.84
5	5362	32.6	14.9	45.71	164.48
18	5301	32.8	14.0	42.68	161.62
27	4839	34.3	13.3	38.78	141.08
23	4889	36.7	17.2	46.87	133.22
14	6346	36.7	17.9	48.77	172.92
19	4516	37.7	21.0	55.70	119.79
16	5092	37.8	15.3	40.48	134.71
6	7387	41.5	13.5	32.53	178.00
30	5040	41.8	21.7	51.91	120.57
29	10486	50.8	31.5	62.01	206.42
22	11950	73.5	36.9	50.20	162.59
2	15148	78.0	36.7	47.05	194.21

The third most common diagnoses were obstetrical (O68, O42, O24, O34, O70, O71, O99; 24 clinics, range: 125–344), N81 (3 clinics, range: 105–369), C50 (3 clinics, range: 257–311), D25 twice (n = 52 und n = 82), C56 twice (n = 97 und n = 132).

The fourth most common diagnoses were mostly obstetrical (n = 14, range 116–295), gynaecological (9 clinics, range: 70–275) and gynaecological oncology diagnoses (6 clinics, range: 43–347).

The fifth most common diagnoses were obstetrical (n = 23, range 85–302), gynaecological (6 clinics, range: 33–228) and gynaecological oncology diagnoses (2 clinics, range: 119–156).

Thereafter, the most common diagnoses were obstetrical diagnoses (the sixth most common in 19 clinics, the seventh most common in 22 clinics, the eighth most common in 18 clinics, the ninth most common in 20 clinics and the tenth most common in 20 clinics).

When assessing individual clinics according to the most common diagnoses (10 most common) of the 86968 diagnoses made, 77.7% (43.4–100%) were obstetrical diagnoses. With the exception of 4 clinics, the diagnosis Z38 is the most common. In one clinic it was the second most common, while in 3 clinics it did not make the top 10. 15% of cases were gynaecological-oncology diagnoses and 7.3% of diagnoses were purely gynaecological.

The average number of gynaecological diagnoses among the top 10 was 2.5 (0–5). The remaining 7.5 were obstetrical diagnoses.

The 2010 quality reports listed 31 UHs with a level 1 perinatal centre. Only one UH did not have a level 1 perinatal centre. 17 quality reports described their facility as a CCC (comprehensive cancer centre).

Discussion

Quality reports are published every 2 years. The collected data are standardised and are intended to help patients select the optimal clinic for their needs. The high level of standardisation has the advantage that it permits data from different clinics to be compared. But the quality reports are quite extensive and difficult for patients to interpret. The contents of quality reports offer few benefits. Quality reports focus in the first instance on data relating to the infrastructure of the entire hospital complex (Part A of the quality report) and of the specialist clinics (Part B of the quality report), together with quantitative information such as ICD codes (diagnoses), therapies and staffing levels. However the level of specialist expertise available in the respective clinic is difficult to represent in these reports. The quality of care cannot be easily objectified. There are numerous quality criteria for every disorder, which only describe certain aspects. These quality criteria are so extensive that they cannot be integrated into a quality report. But not all diseases have quality criteria, and even when quality criteria are defined, opinions often diverge as to the significance of various criteria [4].

Quality reports are not well known. Several retrospective studies have shown that fewer than half of all surveyed physicians knew of the existence of these legally mandated quality reports. Younger physicians were more likely to know about them but did not use the quality reports more frequently than their older colleagues. Overall, only about one in ten physicians stated that they actively made use of quality reports in their original format during consultations with patients. Some preferred to use the electronic versions of the quality report data, particularly in the format provided by some of the numerous internet portals which offer comparisons between hospitals. Overall, the legally mandated quality reports played only a minor role in the run-up to patients being admitted to hospital [6].

The situation is rather different for rehab clinics and psychosomatic clinics. The quality reports of rehab clinics are consulted by (potential) users who view them as an important source of information. The reports do not focus on the target group “Patients” and do not predominantly look at the most important areas of interest [7]. The introduction of quality reports for psychosomatic clinics provided an initial approach, allowing these clinics to be compared based on their infrastructure and the quality of their processes [8].

This study compared the quality reports of university gynaecology clinics. The question was, which data could a potential user deduce from a comparison of quality reports.

When comparing university hospitals, it was noticeable that the number of inpatients per year treated at different clinics varied widely (from 35 324 to 128 017). This figure is surely of little relevance for patients. A university hospital with lower number of patients can possess outstanding specialist knowledge in a particular field and a university hospital with high numbers of patients may not offer the required expert knowledge. The probability of specific specialist knowledge being available may be higher in a large university hospital compared to a small one, but the potential user has to read Part B of the quality report to

Table 3 The 10 most common diagnoses in each UGC.

Kl.	D1	N1	D2	N2	D3	N3	D4	N4	D5	N5	D6	N6	D7	N7	D8	N8	D9	N9	D10	N10
12	C50	331	D25	144	O99	125	O24	116	O70	115	O60	115	C56	79	C54	71	D27	69	O42	62
18	O42	435	O68	428	O24	344	O69	254	O36	252	O48	252	O64	199	O34	199	O26	183	O99	157
4	O68	399	Z38	393	O42	391	C50	347	O60	302	O34	214	Q66	198	O48	153	O64	146	P08	136
1	Z38	492	O60	175	O34	171	O36	117	O42	99	C50	94	D25	82	O48	68	O99	65	N83	47
2	Z38	742	O42	267	O34	145	O48	125	O99	85	O68	78	O70	72	O75	72	O28	66	O36	62
3	Z38	927	C50	245	O70	219	O36	188	O34	178	O42	171	O35	162	O60	147	C56	125	Q65	123
5	Z38	1319	O70	330	O34	255	C50	229	O68	170	O42	160	O63	160	O80	151	O64	131	D25	128
6	Z38	1177	C50	840	O70	279	D25	275	O68	270	O42	254	N80	241	C56	229	D24	179	O34	131
7	Z38	617	C50	305	O70	165	D25	140	C56	119	O68	108	O34	104	O60	101	O65	89	O26	86
8	Z38	922	C50	339	O68	248	O70	223	O60	217	O42	196	O71	141	O47	124	P08	109	O34	102
9	Z38	548	C50	314	O34	283	O68	207	O70	196	O24	191	O99	154	O60	137	D25	106	O42	87
10	Z38	667	O34	232	O42	166	D25	144	O36	95	O68	92	O75	84	O70	78	C50	71	O99	71
11	Z38	459	C50	400	O34	194	C53	143	O42	141	C56	128	O99	121	C54	77	O36	71	O71	70
13	Z38	622	C50	267	O42	250	O36	146	P08	126	D25	110	O26	104	O68	93	O48	92	O34	91
14	Z38	1263	O70	406	P08	318	C50	303	O68	284	O32	252	O42	233	O63	218	O34	198	O80	146
15	Z38	879	D25	326	C50	277	O42	270	O34	230	O69	189	O70	188	O36	134	O26	125	O99	107
16	Z38	689	C50	660	O70	310	O34	266	O60	191	O68	171	P07	127	N81	112	D25	111	C56	83
17	Z38	897	C50	269	O70	215	O80	179	D25	159	O60	122	O65	111	O36	106	N83	97	O42	81
19	Z38	671	C50	636	O70	291	O71	255	D25	223	O34	140	O42	100	D05	96	O62	94	N83	79
20	Z38	746	C50	557	O34	241	O60	234	O36	199	O70	171	P07	145	D25	134	O99	94	P22	90
21	Z38	1559	O70	392	O71	252	O60	242	O68	224	C53	161	O64	146	O34	144	C50	141	O42	122
22	Z38	491	O70	359	C50	257	O34	242	O71	155	D25	144	O42	136	C56	114	O32	110	P07	103
23	Z38	582	C50	373	O70	221	P08	194	O34	174	N80	160	D25	153	O60	141	O71	128	O68	124
24	Z38	622	C50	267	O42	250	O36	146	P08	126	D25	110	O26	104	O68	93	O48	92	O34	91
25	Z38	1057	O42	335	C50	311	O68	174	C53	156	D25	149	N39	145	O34	134	O60	134	N81	126
26	Z38	384	C50	286	O68	280	O60	173	O34	159	O99	151	P08	144	P21	139	O42	129	D25	124
27	Z38	857	C50	468	O70	232	O68	178	O34	174	O80	157	D25	145	O60	115	O63	108	C56	97
28	Z38	534	C50	252	O42	159	N80	110	O34	108	O70	93	O99	73	D05	66	O36	66	D25	64
29	Z38	1755	C50	677	D25	631	N81	369	O42	324	O70	263	N83	258	O34	230	O60	229	N39	228
30	Z38	970	O70	445	O71	310	C50	303	Z03	226	O34	141	O42	133	O68	115	O64	98	O99	95
31	Z38	1417	C50	449	O70	366	O68	339	O42	305	O34	253	P05	189	N81	171	O24	159	P07	148
32	Z38	1090	C50	464	O70	359	O71	278	O82	239	C56	229	O42	128	D25	118	O34	95	O02	92

C50 Malignant neoplasm of breast
 C53 Malignant neoplasm of cervix uteri
 C54 Malignant neoplasm of corpus uteri
 C56 Malignant neoplasm of ovary
 D05 Carcinoma in situ of breast
 D25 Leiomyoma of uterus
 D27 Benign neoplasm of ovary
 N39 Other diseases of urinary system
 N80 Endometriosis
 N81 Female genital prolapse
 N83 Non-inflammatory disorders of ovary, fallopian tube and broad ligament
 O24 Diabetes mellitus in pregnancy
 O26 Maternal care for other conditions predominantly related to pregnancy
 O32 Maternal care for known or suspected malpresentation of foetus
 O34 Maternal care for known or suspected abnormality of pelvic organs
 O42 Premature rupture of membranes
 O48 Prolonged pregnancy
 O60 Preterm delivery
 O63 Long labour
 O64 Obstructed labour due to malposition and malpresentation of foetus
 O68 Labour and delivery complicated by foetal distress
 O70 Perineal laceration during delivery
 O71 Other obstetric trauma
 O75 Other complications of labour and delivery, not elsewhere classified
 O80 Single spontaneous delivery
 O81 Single delivery by forceps and vacuum extractor
 O82 Single delivery by caesarean section
 O99 Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium
 P05 Slow foetal growth and foetal malnutrition
 P07 Disorders related to short gestation and low birth weight, not elsewhere classified
 P08 Disorders related to long gestation and high birth weight
 Q65 Congenital deformities of hip
 Q66 Congenital deformities of feet
 P21 Birth asphyxia
 P22 Respiratory distress of newborn
 P24 Neonatal aspiration syndromes
 Z03 Medical observation and evaluation for suspected diseases and conditions
 Z13 Special screening examination for other diseases and disorders
 Z38 Mature liveborn infant

Table 4 The 10 most common 10 OPS codes used in each UGC.

Clinic	OPS1	N1	OPS2	N2	OPS3	N3	OPS4	N4	OPS5	N5
3	1-208	825	5-749	803	5-758	505	9-261	208	5-870	158
14	8-542	3041	9-262	1892	5-758	1104	9-261	861	5-749	787
16	8-542	3901	8-547	2727	6-001	1456	6-002	1178	9-262	1064
12	9-260	327	5-758	272	5-749	253	5-870	191	5-738	180
4	9-260	1057	9-262	1056	1-208	997	5-758	766	5-749	563
32	9-261	454	8-542	384	5-740	424	5-758	323	5-401	285
18	9-261	1180	9-262	1173	8-542	970	5-758	859	8-547	437
26	9-261	1328	9-262	1107	8-543	965	1-208	896	5-758	721
13	9-262	884	1-208	854	5-749	434	1-671	423	5-704	414
27	9-262	1099	5-401	526	5-740	448	5-870	396	5-758	374
2	9-262	3301	9-261	2726	1-208	2425	9-260	1887	8-910	1761
1	9-262	876	5-749	239	9-260	183	5-740	162	9-261	156
5	9-262	1679	5-740	628	9-260	511	5-758	465	5-740	424
6	9-262	1688	1-208	1562	5-758	846	8-542	846	9-261	697
7	9-262	657	1-242	623	5-749	476	9-260	317	5-870	284
8	9-262	1473	5-758	976	5-749	631	9-261	527	5-870	235
9	9-262	1344	8-930	1237	1-208	943	5-741	711	3-05 d	596
10	9-262	1445	5-740	458	9-261	437	5-730	381	5-758	283
11	9-262	552	5-741	336	9-261	332	9-401	295	5-401	250
24	9-262	1157	9-260	515	5-738	357	9-261	308	5-730	276
15	9-262	1718	9-261	599	5-749	561	5-758	468	9-260	414
19	9-262	1303	5-758	662	9-260	634	1-208	572	5-740	458
20	9-262	1450	5-749	815	8-711	511	9-260	446	5-870	423
21	9-262	1565	5-758	908	9-261	822	5-730	705	9-260	615
22	9-262	3398	1-208	2950	9-261	2623	5-758	2406	8-910	2198
23	9-262	999	5-758	508	9-401	473	5-740	428	1-208	364
31	9-262	2541	1-208	1797	5-758	1593	9-261	1404	5-730	823
25	9-262	1375	9-261	830	8-910	769	5-740	534	5-738	414
17	9-262	1011	1-208	943	5-749	417	5-758	345	5-738	255
28	9-262	682	5-749	411	5-401	291	5-758	259	9-401	244
30	9-262	1296	5-758	981	8-910	866	8-930	777	5-749	631
29	9-262	2677	5-983	1295	9-260	1197	5-758	1118	5-740	1020
Clinic	OPS6	N6	OPS7	N7	OPS8	N8	OPS9	N9	OPS10	N10
13	9-261	403	5-758	299	5-932	254	5-401	240	5-870	229
32	5-870	230	5-756	220	5-683	205	5-690	177	5-653	162
3	5-754	146	1-672	142	9-262	130	9-260	98	5-543	97
29	8-910	792	5-704	786	5-657	772	1-853	771	5-681	709
14	5-892	745	8-547	442	9-260	438	8-547	442	5-870	296
16	8-543	877	5-749	845	8-930	678	5-758	495	8-800	417
18	5-401	285	5-704	268	5-749	268	5-549	267	6-001	226
12	5-683	177	9-261	160	8-522	150	3-990	141	9-401	140
27	5-683	248	9-401	231	5-657	229	9-261	196	9-260	176
4	5-738	470	8-910	382	9-261	381	8-542	340	5-730	238
2	5-749	1602	5-758	1000	5-730	634	1-472	614	5-738	536
26	5-749	506	6-001	490	8-910	209	8-547	208	5-740	195
1	5-758	124	5-738	117	5-683	97	5-690	88	5-651	67
5	9-261	402	5-738	241	5-690	158	5-728	139	5-870	135
6	5-749	695	8-910	658	5-730	641	5-401	572	5-657	568
7	5-758	267	5-730	256	5-657	255	8-910	220	9-261	217
8	5-720	201	5-401	181	5-756	136	1-672	128	5-690	107
9	5-758	494	5-881	448	9-261	391	9-260	328	5-870	327
10	1-208	256	5-983	236	5-738	210	9-280	198	5-683	184
11	5-870	238	5-758	194	5-738	186	8-543	185	5-886	162
24	5-758	271	5-749	243	8-910	219	5-683	184	8-542	173
15	5-738	381	5-681	327	5-469	221	5-683	202	5-651	187
19	5-870	384	3-760	318	5-401	295	5-657	272	5-681	230
20	5-886	410	5-758	324	5-401	317	9-261	230	5-681	158
21	5-749	587	8-020	502	8-910	428	5-738	389	3-990	308
22	5-749	1162	8-132	1033	8-930	672	9-260	439	5-690	398
23	5-738	260	5-401	241	9-260	231	3-760	217	5-683	215
31	5-749	625	5-740	582	5-401	378	8-930	376	8-980	370
25	5-704	386	9-260	286	5-683	237	1-471	221	5-749	200
17	5-740	253	5-651	241	5-469	236	5-870	214	5-401	186
28	9-260	238	9-261	234	5-870	176	5-702	170	1-900	144
30	8-810	283	5-401	270	5-870	246	5-657	202	5-886	172

Table 4 The 10 most common 10 OPS codes used in each UGC. (continued)

1-208	Recording of evoked potentials
1-242	Audiometry, paediatric audiometry
1-661	Diagnostic urethroscopy
1-671	Diagnostic colposcopy
1-672	Diagnostic hysteroscopy
1-853	Diagnostic (percutaneous) puncture and aspiration of the abdominal cavity
5-892	Other incisions of the skin and hypodermis
3-05 d	Endosonography of female genitalia
3-760	Probe measurement in SLNE (sentinel lymph node extirpation)
5-401	Excision of individual lymph nodes and lymphatic vessels
5-469	Other intestinal surgery
5-543	Excision and destruction of peritoneal tissue
5-549	Other abdominal surgery
5-569	Other ureteral surgery
5-657	Adhesiolysis of ovary and fallopian tube without microsurgery
5-683	Extirpation of the uterus (hysterectomy)
5-704	Vaginal colporrhaphy and pelvic floor plasty
5-730	Artificial rupture of membranes (amniotomy)
5-738	Episiotomy and suturing
5-740	Classic caesarean section
5-741	Caesarean section, supracervical and corporal
5-749	Other caesarean section
5-756	Removal of retained placenta (postpartum)
5-758	Reconstruction of female genitalia after rupture, postpartum (perineal tear)
5-870	Partial (breast-conserving) excision of the breast and destruction of breast tissue without axillary lymphadenectomy
5-983	Re-operation: this additional code must be used if the operated area is re-opened to treat a complication, to perform an operation for recurrence
5-932	Type of material used for tissue replacement and tissue reinforcement
6-001	Administration of drugs, list 1
6-002	Administration of drugs, list 2
8-132	Bladder manipulations
8-542	Uncomplicated chemotherapy: 1 day
8-543	Moderately complex and intensive chemotherapy administered over more than 1 day
8-547	Other immunotherapy
8-711	Mechanical ventilation and assisted ventilation of neonates and infants
8-910	Epidural injection and infusion for pain therapy
8-930	Monitoring of breathing and cardiovascular parameters without measurement of pulmonary artery pressure or central venous pressure
8-980	Intensive medical care for complex treatment (basic procedures)
9-260	Monitoring and delivery for a normal birth
9-261	Monitoring and delivery for a high-risk birth
9-262	Postpartum care of the neonate
9-401	Psychosocial interventions

find out. To usefully compare the number of inpatients per year, it is necessary to look at and compare numerous quality reports. Very few users are likely to make the effort [9].

The same applies to comparisons of university gynaecology clinics. The number of inpatients ranges from 2729 to 15 148 inpatients/year. One significant factor for this wide range could be the amalgamation of several different sites to form a single university hospital (e.g. Berlin, Munich). But once this point was factored in (recalculated into number of inpatients/site), there are still big differences in the number of patients treated per university gynaecology clinic (range: 2729 to 10 486 inpatients/year). Thus, there was a correlation between patient numbers of UGCs and those of the UHs. This correlation is unsurprising and can best be explained by the local conditions (site, radius, competitors). 60% of UGCs treated between 4000 and 6000 patients, and 77% treated between 3000 and 7000 inpatients per year. The local healthcare infrastructure for the area where the respective

university hospital was sited played a decisive role. For some university hospitals, local circumstances dictated that they were also needed to provide primary and secondary care, while in other regions the UHs existed alongside numerous competitors. In terms of percentages, the UGCs with their 10% of inpatients are an important part of their UH. 77% of UGCs treat between 7 and 12% of patients; 17% of UGCs even treat more than 12% of their university hospital's annual inpatients. UGCs therefore represent an important part of entry for other specialist clinics. These include, in the first instance, the neonatology departments, which receive most of their cases directly from the UGC. Oncology patients from a UGC are very important for every UH because of the interdisciplinary cooperation required to treat these patients. These patients receive treatment from other departments such as Radiodiagnostics, Nuclear Medicine, Radiotherapy, Internal Medicine, Abdominal Surgery, Urology, Neurology, Neurosurgery, Orthopaedics, etc. Thus, every UGC is a key department for its respective UH and represents an important economic factor. There were also important differences in staffing levels between UGCs. With numbers of resident physicians ranging from 16 to 78, the differences are significant. The numbers of patients treated per full-time physician also differed greatly. These differences were due to differences in teaching and research facilities, the calculation of inpatient numbers (all children or only some of them or none credited to the inpatient numbers of the UGC), outpatient care, accreditation with statutory health insurance companies, etc. But this data does not make it possible to describe one clinic as "more effective" than another.

In addition, research and teaching are part of the services provided by a UGC but they are not taken into consideration in the quality reports. Cross financing of staff using the budget for research and teaching is often necessary to guarantee patient care. In many cases, when staffing levels are calculated, the calculation does not include outpatient services (outpatient consultations, etc.). Outpatient services are only profitable if they can be used to recruit inpatients or patients for day surgery procedures. Controls or follow-up visits are not taken into account.

The number of medical specialists could be another possible indicator when assessing a UGC. However, here again comparisons are tricky as medical specialists may work in different capacities (e.g. senior physician). The quality report does not show the level of qualifications obtained, the experience, medical speciality, etc. of individual physicians.

This means that the quality reports offer no accurate chance of comparing clinics on the basis of staffing ratios. Patients are not provided with this background information and they may even draw the wrong conclusions.

The range of services provided by UGCs varies greatly. It is virtually impossible to deduce which areas a hospital has specialised in based on the data obtained from quality reports. The data are based on ICD codes (diagnosis). These codes do not reflect quality of treatment or medical expertise.

The most common diagnoses (ICD codes) are obstetrical and include deliveries, care of neonates and suturing after vaginal delivery. This provides an approximate figure which allows the number of deliveries to be estimated. The rate of transfers of neonates to the neonatology department is inconsistent. For 3 clinics, Z38 was not among the top 10 diagnoses. In these cases, all newborns were probably assigned to the paediatric clinic and not to the gynaecological clinic. The number of gynaecological diagnoses and surgical procedures was therefore often lower than for obstetrics. The level of gynaecological expertise is difficult to

deduce based on the services provided. From the point of view of an external observer, it is very difficult to infer the level of expertise present in a specific clinic based on the list of ICD and OPS codes. There are no figures on complications, morbidities or even survival rates.

All of the UGCs are virtually identical with regard to equipment, facilities and medical specialties. All UGCs have breast centres, gynaecological oncology centres, pelvic floor centres, perinatal centres, centres for minimally invasive surgery, prenatal diagnostics and urodynamics. It is not possible to obtain information useful for patients based on the list of the UGC's medical specialties given in the quality report. Moreover all UGCs have virtually the same facilities and equipment.

All UHs are now level I perinatal centres. At the time of publication, only one UH was not a level I perinatal centre but it became one shortly thereafter. 17 UHs described themselves as a CCC. However not all CCCs are supported by German Cancer Aid. The term CCC is not protected, making it impossible for readers to differentiate between centres.

UGCs have not been previously compared. In a study on obstetrics by Bauer et al. [5] published in 2011, home births were compared with delivery in hospital. The intact perineum rate was higher for home births, but there were no differences with regard to Apgar 10 scores. But pre-selection of cases in this study cannot be excluded. Hospital births will obviously include higher rates of high risk births. The choice of a home birth is generally done after considering the risk factors. We found no other comparisons using the quality reports.

Overall, it is very difficult for patients and for the physicians who arrange their admission to hospital to obtain crucial information from quality reports.

Quality reports contain too much information. Around one third of all published data are superfluous [10]. Disadvantages of quality reports include a lack of indicators providing information on patients' experiences and the clinic's reputation. A survey of potential user groups would provide better descriptions [10]. Patients prefer quality comparison graphs which provide a lot of information and rank hospitals [10]. The text sections in the reports aimed at patients are currently not easy to read and are not formulated so that they can be easily understood [12].

Legally mandated quality reports are currently not used by physicians as a useful source of information when advising patients. For this, quality reports would have to become more widely known and physicians would have to place more confidence in this form of reporting. Some of the objective data on structures and services required by physicians is already included in the quality reports. But it would be important to consider how "soft" factors could additionally be included in these reporting tools [11]. The readability and comprehensibility of texts for patients could still be improved. It has been suggested that patients and physicians working outside hospitals could offer concrete approaches and proposals on changes to be implemented when drawing up quality reports in future [7, 12].

In 2007 Streuf et al. [13] investigated the most important criteria behind patient selection of a particular hospital. It turned out that the advice most relied on and accorded the greatest importance was the information given to a patient by his or her family doctor. Newspapers, journals and the internet came second. However, in the ranking of importance, the internet ranked below the advice given by the family physician and information obtained from friends and relatives. The most important selection criteria were a hospital's good reputation, a good cooperation be-

tween the hospital and physicians working outside the hospital, and the number of cases treated. Of these criteria, only the number of cases treated can be obtained from quality reports. Five years ago, quality reports played almost no role in hospital selection by patients. It should be noted that quality reports have changed very little in recent years and it must be assumed that the criteria referred to above are still applicable today.

In summary, quality reports use a very broad brush to describe the infrastructure and services of the UHs. The specific characteristics of a UGC within a hospital offering comprehensive inpatient and outpatient care and special consultation services which are time-consuming, demanding and require high staffing levels are not reflected in the quality report. The quality of treatment is not shown. For external readers it is extremely difficult to find any differences between UGCs. UGCs are an important part of UHs.

Conflict of Interest

None.

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