

Quality Indicators

Quality indicators used at IQM

- **G-IQI (German Inpatient Quality Indicators)**
- **CH-IQI (Swiss Inpatient Quality Indicators)**
 - 400+ Indicators which cover 60% of inpatient population
 - IQM Working groups for frequent development of QI
- PSI (Patient Safety Indicators), AHRQ
- Data of mandatory quality assurance (§ 136 SGB V) – only Germany

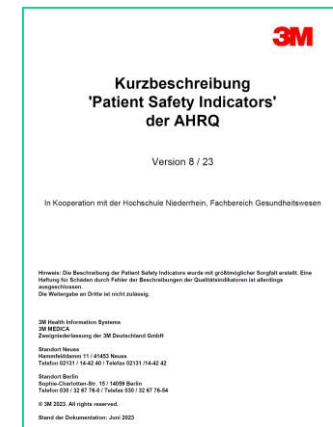
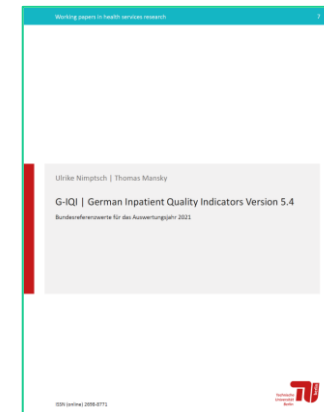


Indicator Types

Mortality indicators (partially risk adjusted)
Observational values
Process and complication metrics
Quantity information
Information values
Legal minimum quantities

Links:

- [Doku 3M GIQI V54 2023 Deckblatt \(initiative-qualitaetsmedizin.de\)](https://www.initiative-qualitaetsmedizin.de)
- [G-IQI – German Inpatient Quality Indicators Version 5.4 \(tu-berlin.de\)](https://www.tu-berlin.de)
- [Qualitätsindikatoren der Schweizer Akutspitäler \(admin.ch\)](https://www.admin.ch)



Who is IQM?

- non-profit association
- Founded in 2008 by 15 leading hospital group, voluntary initiative
- Cross-agency and cross-country
- Active error management (more than QA)
- IQM Tools for Continuous Quality Improvement
- Transparent and standardized presentation of results
- Exchange and learning in a large network
-
- Three principles:
 - ① Quality measurement based on routine data
 - ② Transparency of results through their publication
 - ③ Quality improvement through peer reviews

[IQM \(initiative-qualitaetsmedizin.de\)](https://www.initiative-qualitaetsmedizin.de)

Membership Development

2008

84 hospitals



2016

361 hospitals



2023

506 hospitals



Members

Inpatient cases

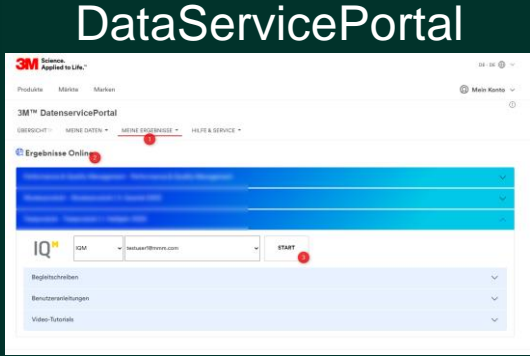
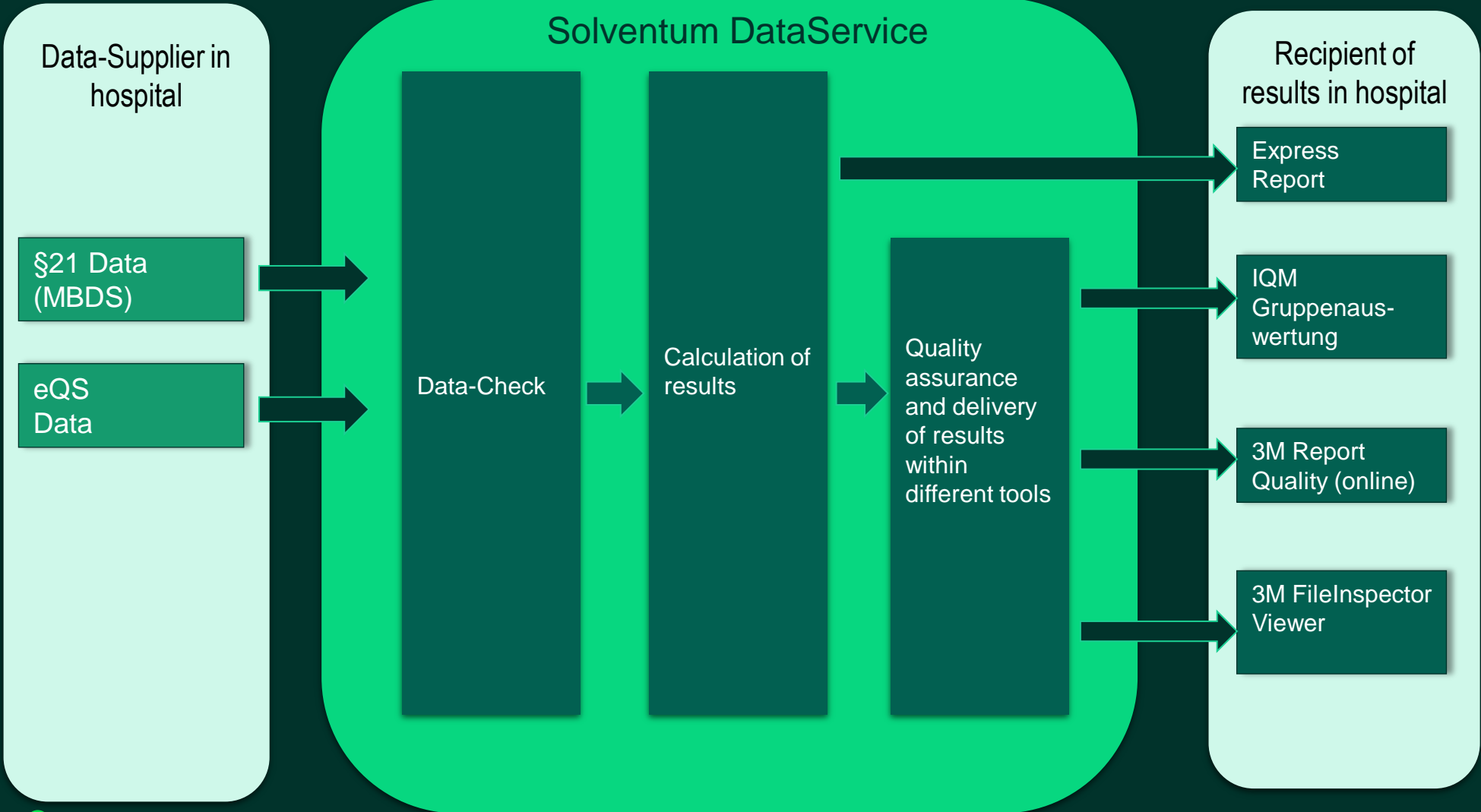
Germany total 16,8 Mio. (2021)

1,4 Mio. cases

5,5 Mio. cases

6,5 Mio. cases

Workflow – Data Processing Operations



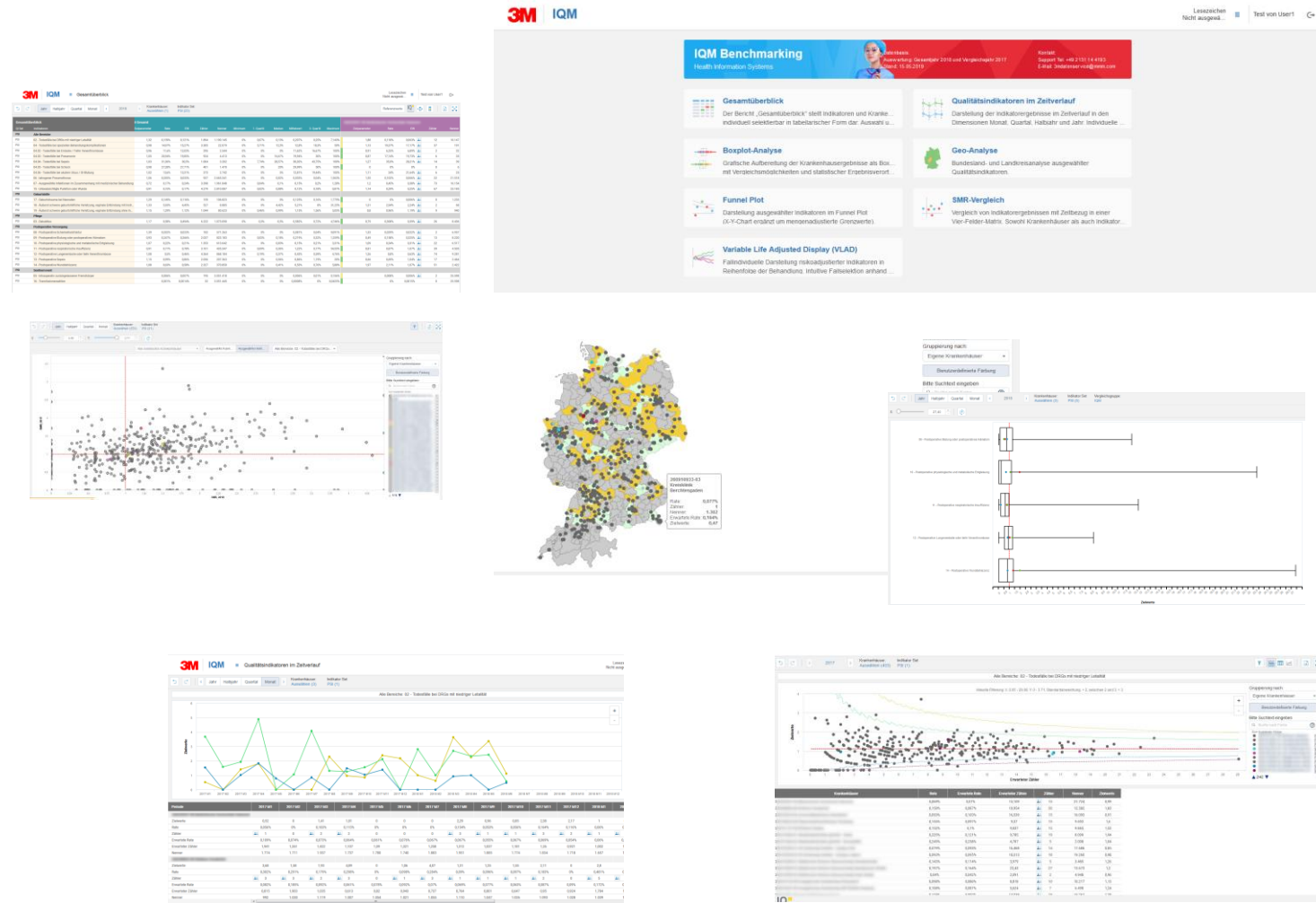
IQM online Reporting / Report Quality 7

- **Technology**

- Online Reporting with 3M™ DatenservicePortal mit
- role and authorization system

- **Concept**

- Reports include results from Germany and Switzerland
- Reports include indicators from all indicator sets (exception: QSR)



Report Gesamtüberblick

- IQM group evaluation
- Manual selection of indicators (1 to all possible, all QI sets)
- Integrated display (display sorted by disease area) available
- Manual selection of clinics (clinics, hospitals, hospital groups, ...)
- Manual selection of the evaluation period (half-year, year)

3M | IQM | Gesamtüberblick

Jahr | Halbjahr | Quartal | Monat | 2017 | Krankenhäuser: Auswählen (12) | Indikator Set: GIQI51 (389)

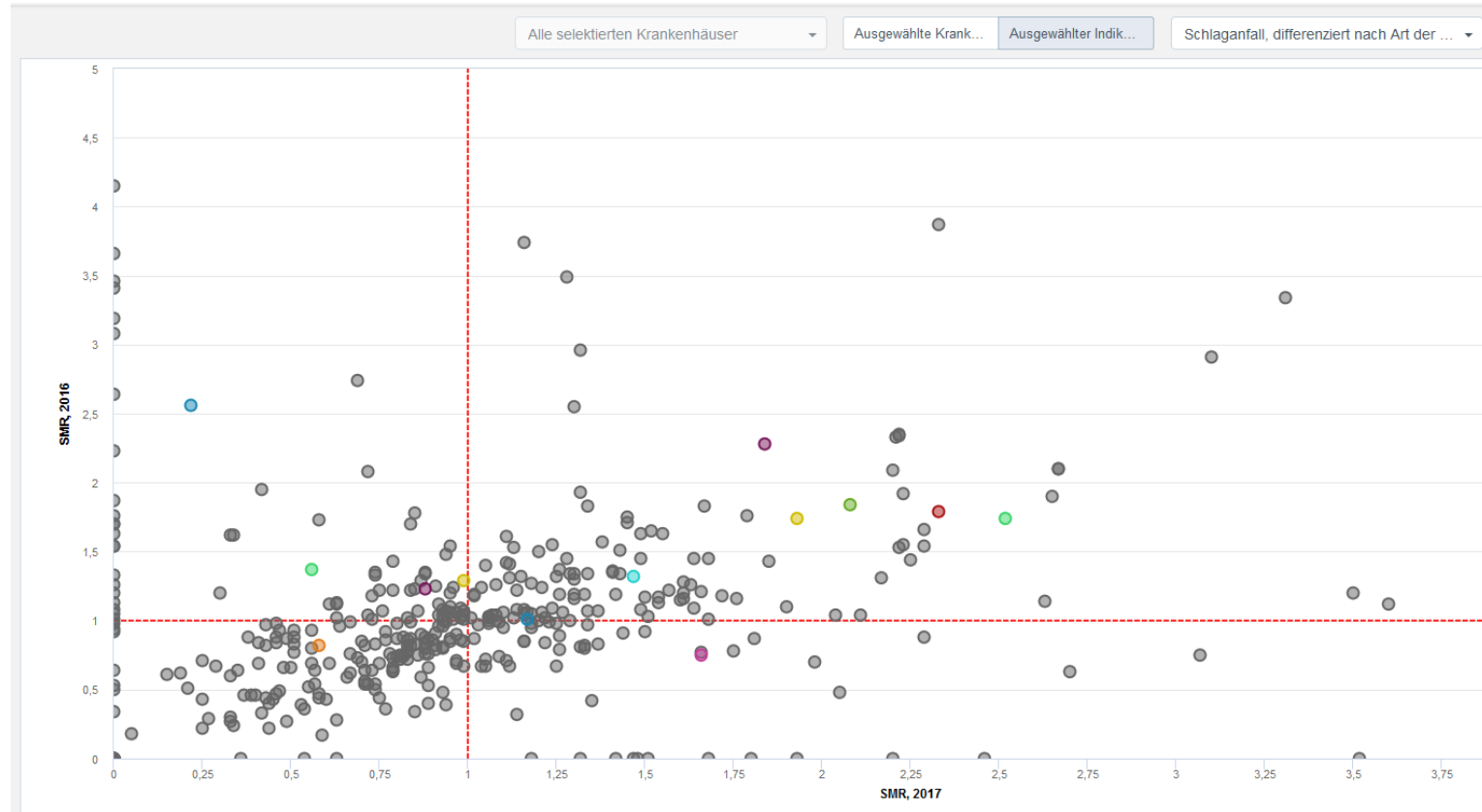
Gesamtüberblick		Referenzwerte			Kliniken (12)				
QI Set	Indikatoren	Zielwert / Indikatortyp...	Referenzwert	Quelle	Zielparameter	Rate	EW	Zähler	Nenner
GIQI51	A - Erkrankungen des Herzens								
GIQI51	01 - Herzinfarkt								
GIQI51	01.1 - Hauptdiagnose Herzinfarkt (Alter >19), Anteil Todesfälle, aufgetreten	unter Erwartungswert	8,5%	(a)	0,91	7,61%	8,4%	36	473
GIQI51	01.11 - davon Herzinfarkt, Altersgruppe 20-44, Anteil Todesfälle	unter Erwartungswert	2,4%	(a)	0	0%	2,41%	0	28
GIQI51	01.12 - davon Herzinfarkt, Altersgruppe 45-64, Anteil Todesfälle	unter Erwartungswert	4%	(a)	1,73	6,94%	4,01%	10	144
GIQI51	01.13 - davon Herzinfarkt, Altersgruppe 65-84, Anteil Todesfälle	unter Erwartungswert	9,2%	(a)	0,62	5,76%	9,31%	14	243
GIQI51	01.14 - davon Herzinfarkt, Altersgruppe >=85, Anteil Todesfälle	unter Erwartungswert	18,4%	(a)	1,12	20,69%	18,39%	12	58
GIQI51	01.21 - Anteil Herzinfarkte mit Katheter der KoronargefäÙe über alle Fälle	Information	72,1%	(a)		83,09%		393	473
GIQI51	01.22 - Anteil Herzinfarkte mit Katheter der KoronargefäÙe ohne Zuverlegungen	Information	75%	(a)		82,38%		346	420
GIQI51	01.23 - Anteil Herzinfarkte mit Katheter der KoronargefäÙe nur Zuverlegungen	Information	55%	(a)		88,68%		47	53
GIQI51	01.24 - Anteil Herzinfarkte mit Linksherzkatheter u/o Koronar-OP (für Kliniken ...)	Information	87,1%	(a)		92,14%		340	369
GIQI51	01.31 - Hauptdiagnose Herzinfarkt, Direktaufnahmen ohne Verlegungen (Alter ...)	Beobachtungswert	10,2%	(a)		9,86%		34	345
GIQI51	01.32 - Hauptdiagnose Herzinfarkt, Zuverlegungen (Alter >19), Anteil Todesfälle	Beobachtungswert	7,5%	(a)		3,77%		2	53
GIQI51	01.41 - Anteil nicht näher bezeichneter akuter Infarktformen (I21.9)	Beobachtungswert	1,9%	(a)		1,27%		6	473
GIQI51	01.42 - Anteil transmuraler Herzinfarkte (STEMI)	Beobachtungswert	32,8%	(a)		32,35%		153	473
GIQI51	01.43 - Transmurales Herzinfarkt, Anteil Todesfälle	unter Erwartungswert	11,5%	(a)	1,09	12,42%	11,37%	19	153
GIQI51	01.44 - Nichttransmurales Herzinfarkt / NSTEMI, Anteil Todesfälle	Beobachtungswert	6,2%	(a)		5,1%		16	314
GIQI51	01.5 - Herzinfarkt (Alter >19) nur als Nebendiagnose, Anteil Todesfälle	Beobachtungswert	20%	(a)		18,32%		24	131
GIQI51	02 - Herzinsuffizienz								
GIQI51	02.1 - Hauptdiagnose Herzinsuffizienz (Alter >19), Anteil Todesfälle, aufgetreten	unter Erwartungswert	8,5%	(a)	1,05	9,66%	9,23%	125	1.294
GIQI51	02.11 - davon Herzinsuffizienz, Altersgruppe 20-44, Anteil Todesfälle	unter Erwartungswert	2,6%	(a)	0	0%	2,53%	0	8
GIQI51	02.12 - davon Herzinsuffizienz, Altersgruppe 45-64, Anteil Todesfälle	unter Erwartungswert	3,4%	(a)	0,66	2,33%	3,55%	3	129
GIQI51	02.13 - davon Herzinsuffizienz, Altersgruppe 65-84, Anteil Todesfälle	unter Erwartungswert	7,1%	(a)	1,11	8,37%	7,55%	63	753
GIQI51	02.14 - davon Herzinsuffizienz, Altersgruppe >=85, Anteil Todesfälle	unter Erwartungswert	13,5%	(a)	1,02	14,6%	14,3%	59	404
GIQI51	02.15 - Linksherzinsuffizienz, Anteil NYHA IV	Information	54,3%	(a)		43,08%		389	903
GIQI51	03 - Behandlungsfälle mit Linksherzkatheter								

Questions:

Create an individual tabular overview of the results (clinic, indicator, time period)

Report SMR Vergleich

- View of two years in an X-Y diagram
- Presentation of all hospitals / locations
- Simple overview of the result in two years by dividing it into quadrants 1-4
- Colour highlighting best. Clinics
- Shows name and results of a clinic (SMR, numerator, denominator) via mouseover



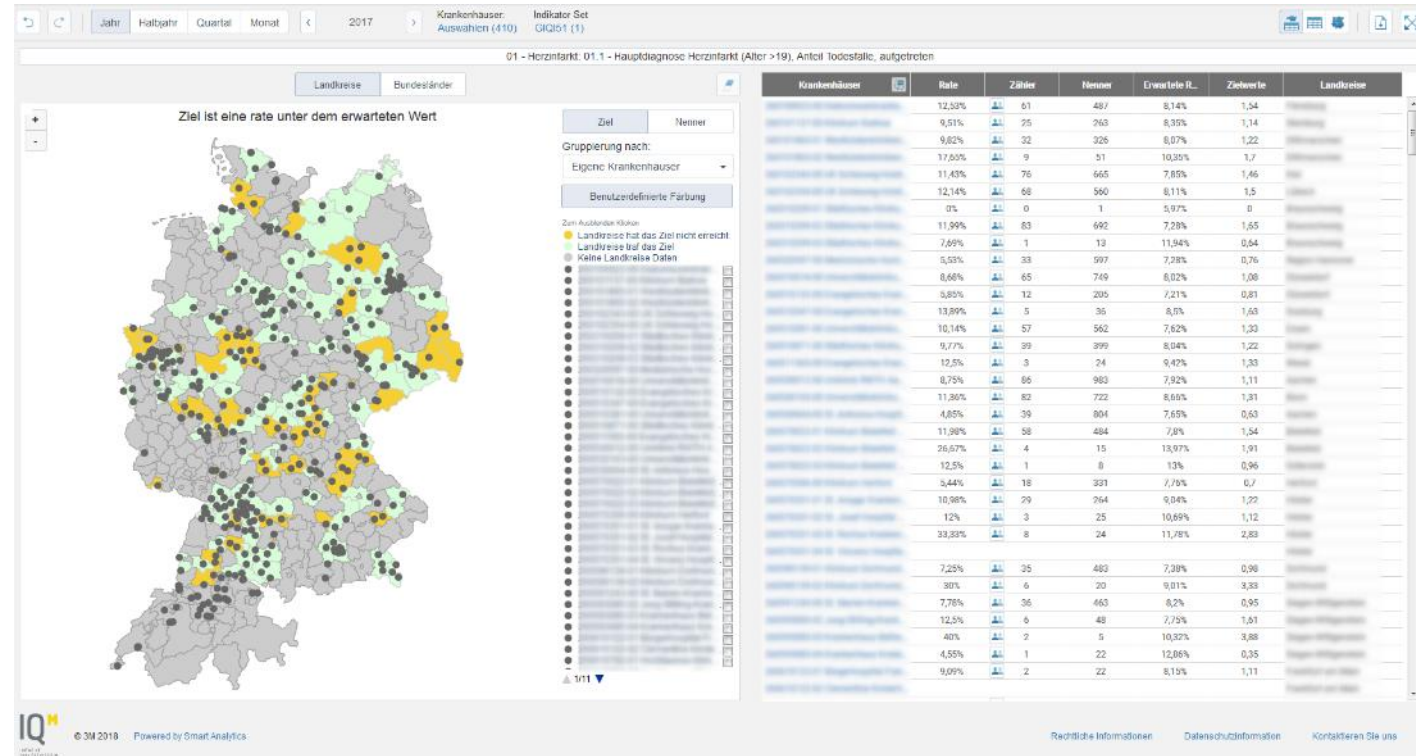
Questions:

Assessment of the results of a clinic in comparison to the entire group

Combined with the course of time

Report Geo-Analyse

- Presentation of the results of one indicator at the "area level" (related to an area)
- State and county level
- Clinics are displayed as a point on the map incl. individual result via mouseover
- Mouse click on area = tabular display of the clinics in the selected area incl. individual results
- Colour highlighting of the clinics possible



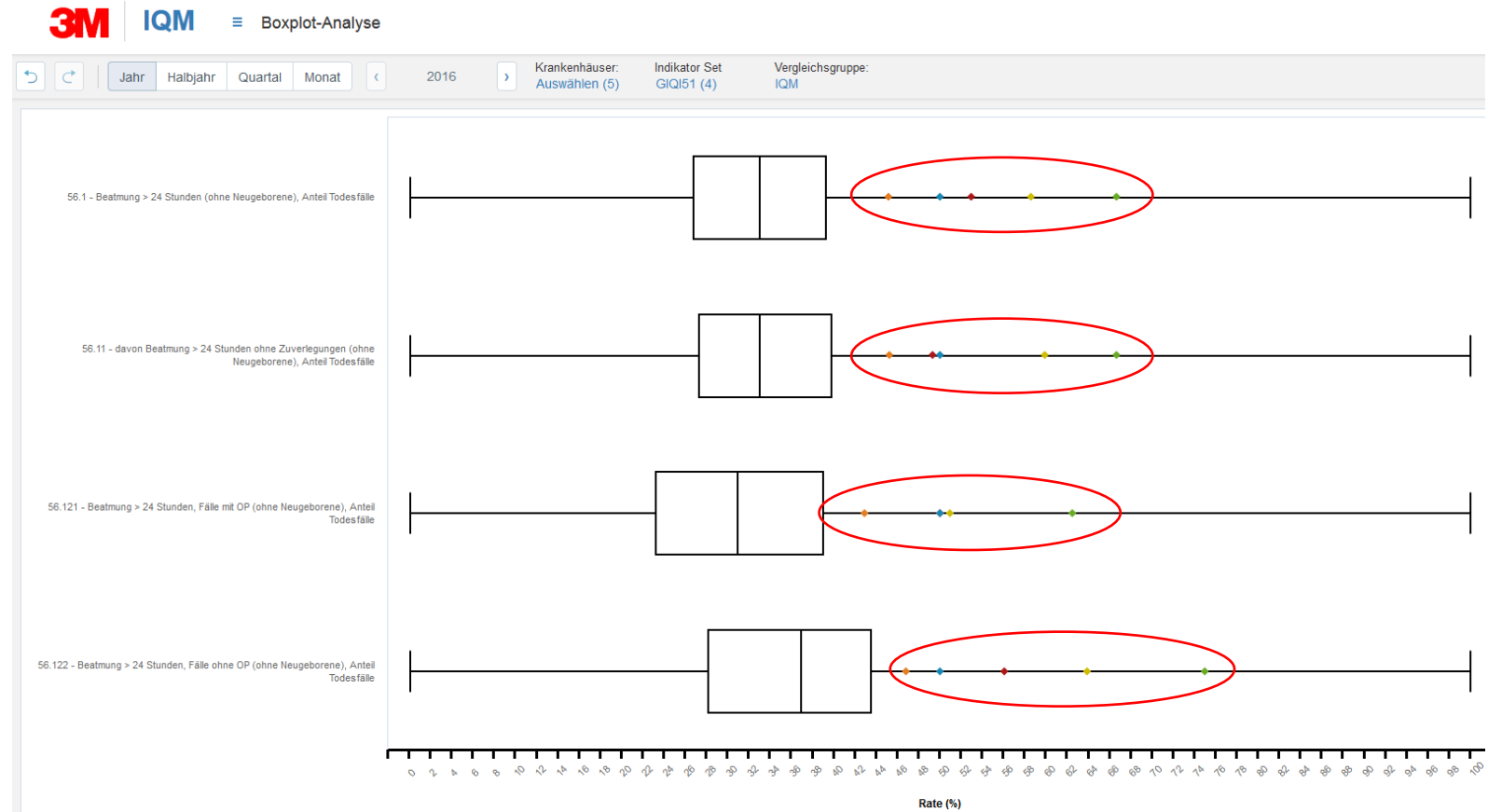
Questions:

Area-specific analysis of results

Sorting of the results of a clinic in comparison to "neighboring clinics"

Report Boxplot

- Presentation of the results of one or more indicators
- Presentation of the results of one or more clinics
- Incl. statistical position measurements (min, 1st quartile, median, 3rd quartile, max)
- Detailed display via mouseover



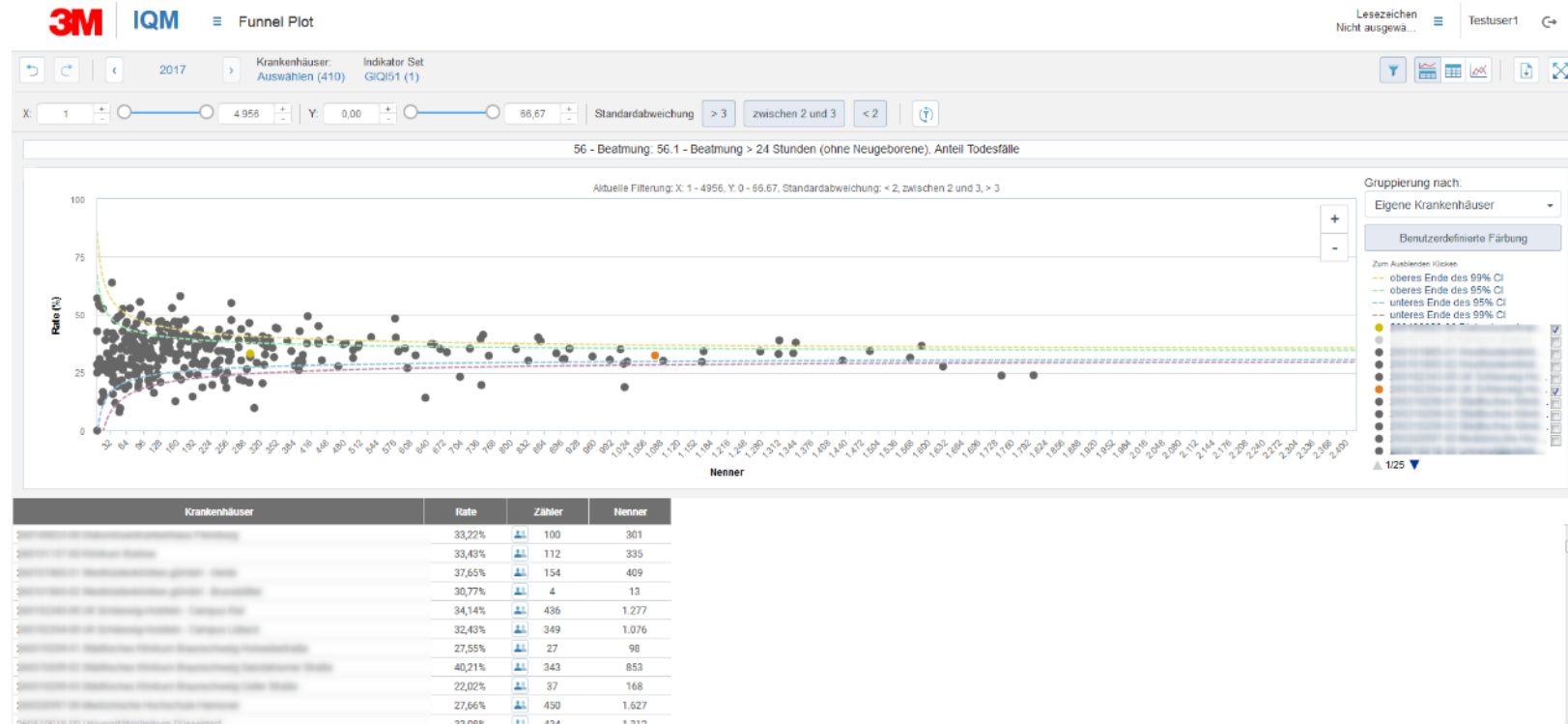
Questions:

Joint overview of the results of all indicators of one medical area (e.g. myocardial infarction)

Classification of the results incl. statistical measures

Report Funnel Plot

- Presentation of the results of all hospitals to an indicator incl. Standard deviation
- Colour highlighting of selected hospital or hospital groups
- Manually narrow down the denominator population or rate
- Detailed information (hospital name, individual hospital result) via mouseover



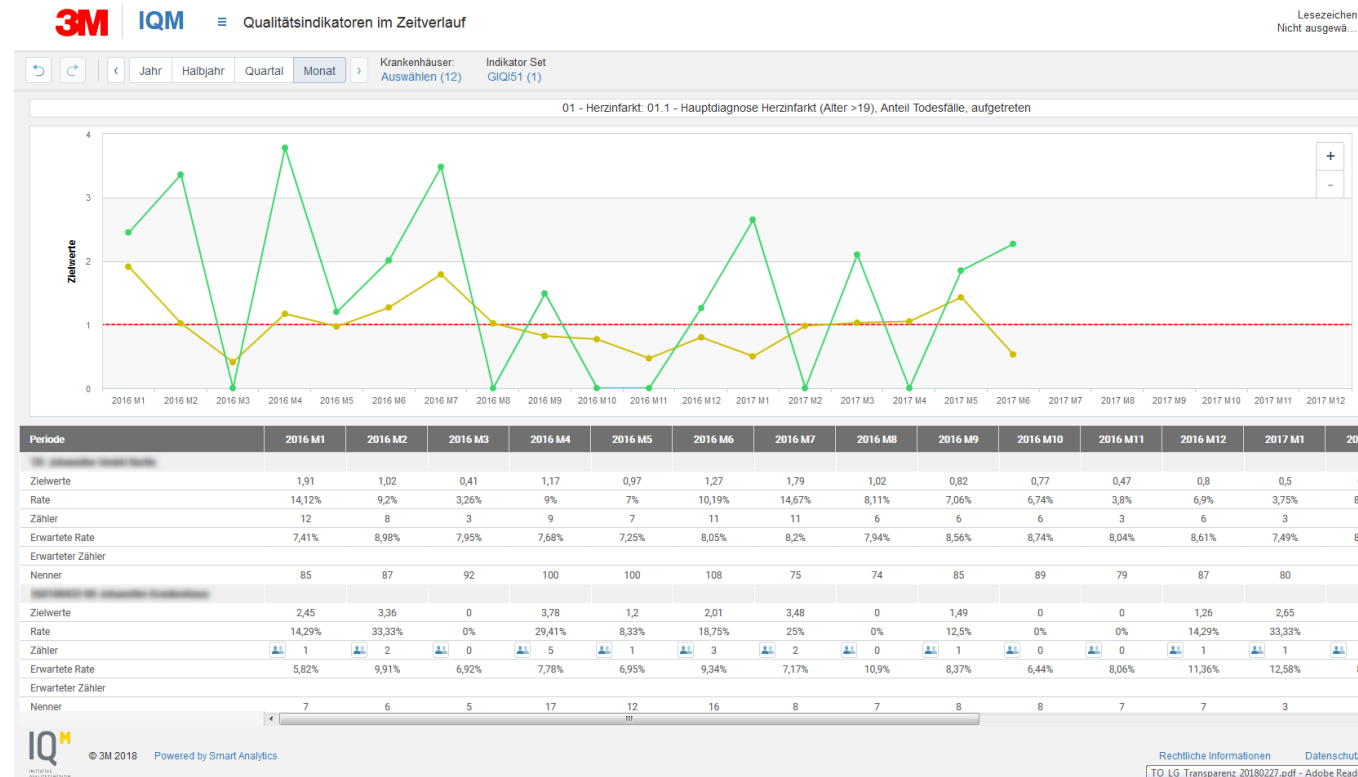
Questions:

Assessment of the results of a clinic in comparison to the entire group

Classification of the results incl. statistical measures

Report Time History

- Presentation of the results of one indicator over time (year, half-year, quarter; month)
- Supplementary tabular presentation of the individual results
- Display of several clinics (e.g. peer group) for simultaneous comparison
- Detailed results via mouseover



Questions:

Assessment of results over time

Graphical comparison of the results of several institutions

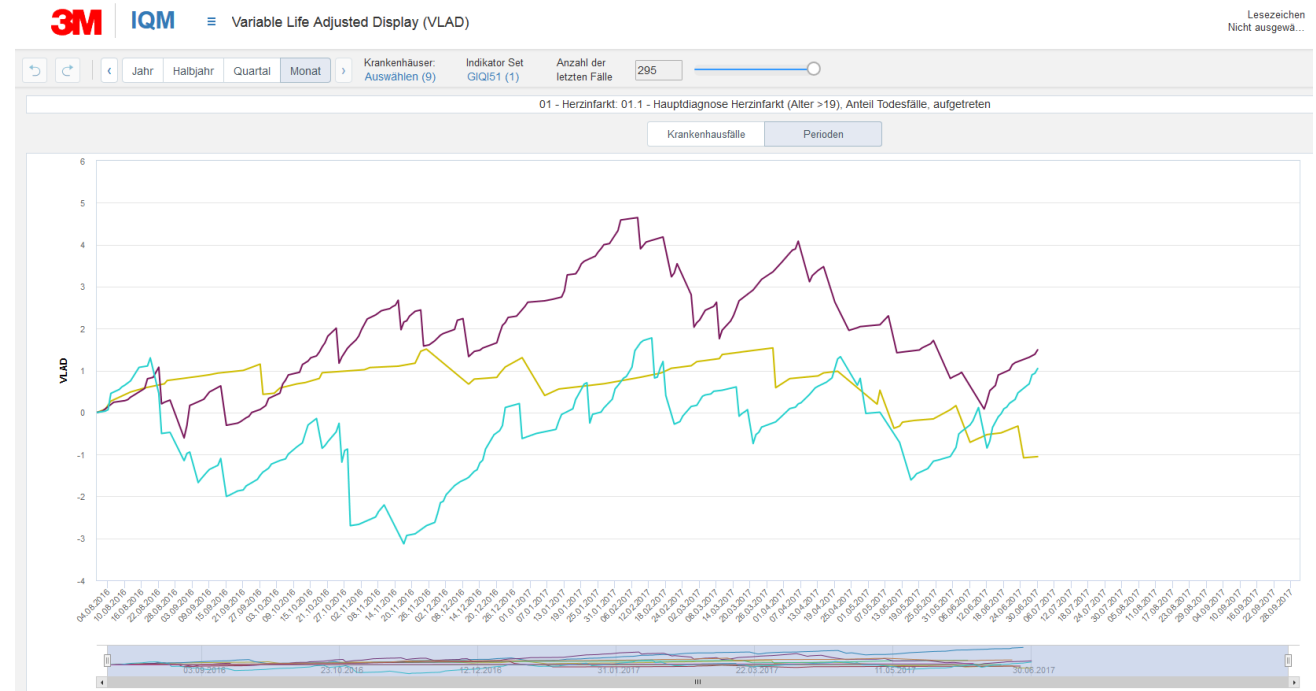
Report Variable Life Adjusted Display (VLAD)

- Presentation of the results of one indicator per individual case as a function of the expected value (EV)
- Positive: single case only in the denominator = line rises by SMR
- Negative: single case in the denominator and numerator = line decreases around 1-SMR
 - steep drop of the line = sequence of adverse events (in time)
- Direct access to pseudonymized case numbers in the period

Questions:

Assessment of case results over time

Detection of particularly conspicuous temporal episodes



3M™ FileInspector Viewer

- Includes the results of a hospital (if applicable, all sites of a hospital group)
- G-IQI, PSI from current year + previous year
- Selection of conspicuous cases per indicator (export to MS Excel possible)
- Comprehensive selection options (age, period, department, ICD, OPS, ...)
- Individual case view with all information about the patient
- Incl. de-pseudonymization function
- Identification of candidate case for peer review

The screenshot shows the 'Datenbankauswahl' (Database Selection) window with a 'Fallanzeige' (Case Display) tab selected. A red arrow points to the 'FallNr Mapping starten' button. To the right, the 'Meldungfilter' (Report Filter) window is open, showing a list of reports with columns for 'Auswahl', 'Meldung...', and 'Text'. Below these, a table displays case data with columns: IK, Ort, EntJahr, FallNr, FallNr_orig, Art, FachAbt, FachAbtInte..., Verlegungskette, AnzVerlIntern, and EntlAbt.

IK	Ort	EntJahr	FallNr	FallNr_orig	Art	FachAbt	FachAbtInte...	Verlegungskette	AnzVerlIntern	EntlAbt
<alle>	<alle>	<alle>	<alle>	<alle>	<alle>	<alle>	<alle>	<alle>	<alle>	<alle>
123456789		2020	TEONJA_000001	zlyOTE_000001	1	3600			0	3600
123456789		2020	TEONJA_000002	zlyOTE_000002	1	1500			0	1500
123456789		2020	TEONJA_000003	zlyOTE_000003	1	1500			0	1500
123456789		2020	TEONJA_000004	zlyOTE_000004	1	3600			0	3600
123456789		2020	TEONJA_000005	zlyOTE_000005	1	1500			0	1500
123456789		2020	TEONJA_000006	zlyOTE_000006	1	1500			0	1500
123456789		2020	TEONJA_000007	zlyOTE_000007	1	1500			0	1500
123456789		2020	TEONJA_000008	zlyOTE_000008	1	1300		1000-> 1300->...	1	1300
123456789		2020	TEONJA_000009	zlyOTE_000009	1	1000			0	1000
123456789		2020	TEONJA_000010	zlyOTE_000010	1	3600			0	3600
123456789		2020	TEONJA_000011	zlyOTE_000011	1	0100			0	0100

The screenshot shows the 'Datenbankabfrage durchgeführt' (Database Query Executed) window. It displays a detailed patient case view for 'Fall 30 / 61726'. The 'Diagnosen' (Diagnoses) section lists various conditions with their codes, validity, and descriptions. The 'Prozeduren' (Procedures) section lists performed procedures with their codes, validity, and descriptions. Below these, a summary table shows patient information and financial data.

Nr	Code	Gült.	Beschreibung	Nr	Code	Gült.	Beschreibung				
1	S32.00(4)	3/0	+	-	1	8-931	<>	-	20.04.2012 08:59	Monitoring von Atmung, Herz und Z	
2	L-S31.84	0/0	+	-	2	8-701	<>	+	20.04.2012 13:57	Einfache endotracheale Intubation	
3	J86.9	4/4	+	-	3	1-620.0	<>	-	21.04.2012 00:33	Diagnostische Tracheobronchoskopie	
4	J96.9	0/0	+	-	4	5-340.0	R	+	21.04.2012 00:33	Inzision von Brustwand und Pleura: Di	
5	J90	3/0	+	-	5	8-144	R	<>	-	23.04.2012 10:45	Therapeutische Drainage der Pleurah
6	A41.9	4/4	+	-	6	5-344.0	R	<>	-	23.04.2012 10:45	Pleurektomie: Pleurektomie, partiell, t
7	L-R65.1	4/0	+	-	7	5-344.x	R	+	+	23.04.2012 10:45	Pleurektomie: Sonstige
8	J15.9	3/3	+	-	8	8-800.7f	<>	-	-	24.04.2012 13:40	IDrPxTable.invalidCode
					9	3-052	<>	+	+	29.04.2012 12:10	Transösophageale Echokardiographie
					10	5-312.0	<>	-	+	04.05.2012 10:19	Permanente Tracheostomie: Tracheot

Questions:

Assessment of individual cases from the nominator of an indicator

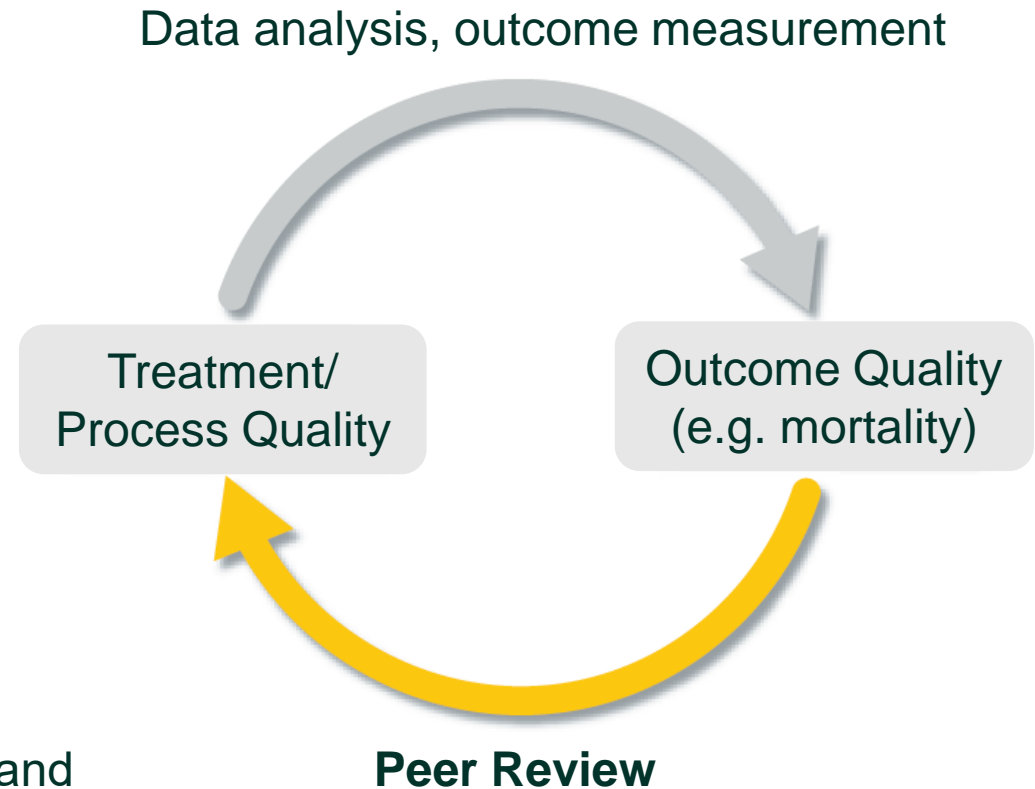
Suitable for further search for optimization potential or fateful course recognizable?

Purpose of quality indicators and IQM

Quality indicators

- are not final quality figures
- are not a perfect representation of clinical reality
- have no scientific statement
- their presentation alone does not lead to improvements

... but quality indicators, in combination with methods for system and process analysis, lead to the identification of potential for improvement!

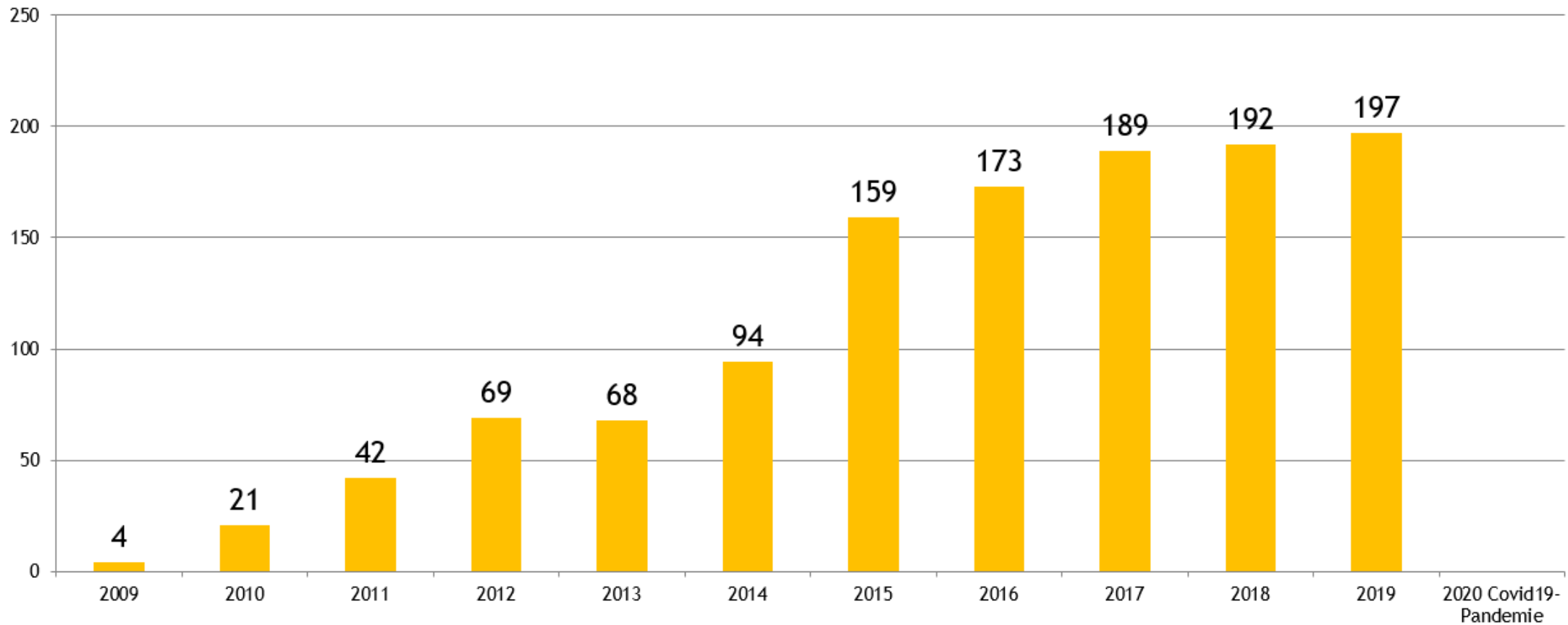


IQM Peer Review

- ✓ > 900 IQM Peers ready for use
- ✓ > 1200 peer reviews since 2009
- ✓ > 18,000 patient records analyzed
- ✓ transparent selection of peer reviews
- ✓ 1 x per year meeting and exchange for active peers
- ✓ feedback of peer review results
- ✓ very high satisfaction of visited chief physicians and peer teams (organization, final meeting, atmosphere and the results of the peer reviews)

IQM Peer Review 2009 - 2020

count IQM Peer Reviews



Thank you