NASHIP **N**ational **A**ssociation of **S**tatutory **H**ealth **I**nsurance **P**hysicians

NASHIP Develops a Starter Set of Ambulatory Quality Indicators

Results of the "AQUIK® - Ambulatory Quality Indicators and Key Measures" Study

Foreword

In an increasingly competitive health care system and in view of the resulting development of contract and care structures, increasing importance is being placed on quality-based aspects. In order to develop approaches for measuring and improving the quality of ambulatory care, the National Association of Statutory Health Insurance Physicians (NASHIP) has been working closely with the Regional Associations of Statutory Health Insurance Physicians (ASHIPs) to launch the groundbreaking study "AQUIK® - Ambulatory Quality Indicators and Key Measures".

Structurally developed and agreed quality indicators for the ambulatory sector were predominantly used abroad, for example in the USA, Great Britain and the Netherlands, before being applied as part of the Disease Management Programmes in Germany. The results of the AQUIK study have now provided the first set of reliable quality indicators for the ambulatory care system in Germany, which have been agreed upon by experts and tested in medical practices. International and national experiences were taken into consideration when developing this set as well as when selecting and assessing the indicators. Details of the methodology applied, the study results and an overview of the AQUIK set of indicators are given in the accompanying study report.

The AQUIK set contains quality indicators, of which some are specific to a single specialist field and others encompass more than one specialist field, and includes indicators for patient orientation as well as those focussed on quality management in medical practices. The results of the study form a solid, measure-based foundation for improving and demonstrating the quality of ambulatory care and enable care to be managed in a quality-oriented manner. The development and application of quality indicators thus extend the known portfolio of quality assurance and improvement tools and methods of the National and Regional Associations of Statutory Health Insurance Physicians.

The AQUIK study was supported by medical experts, more than one hundred medical practices and medical care centres, professional organisations, scientific-medical associations, scientists and representatives of Associations of Statutory Health Insurance Physicians. I would like to offer my sincere thanks to all those involved.

[Signed]
Dr. Andreas Köhler
Chairman of the Board of the National Association of Statutory Health Insurance Physicians

Part A STUDY REPORT

1 ABSTRACT

Quality is an increasingly competitive factor in the public health sector. In order to measure, analyse, assess and subsequently obtain measures for developing quality, reliable tools and methods are necessary. Developing these tools and methods was the objective of the "AQUIK® - Ambulatory Quality Indicators and Key Measures" study carried out by the National Association of Statutory Health Insurance Physicians (NASHIP). By applying international and national expertise, quality indicators used internationally which were relevant to ambulatory care in Germany were studied. The relevance and feasibility of these indicators were assessed by specialist field experts in a structured and moderated specialist field rating process and, in a further step, data availability and accessibility were tested in medical practices. The results provided a set of 48 structurally developed and reliable patient-oriented quality indicators based on quality management, some of which are specific to a single specialist field and some of which encompass more than one specialist field, for use in different fields of medical care provided by SHI*-authorised physicians. This opened up the possibilities of improved demonstration of quality of care, as well as that of quality-based pay. The study also represents an important methodological incentive for the future development of quality indicators und the creation of a supportive IT infrastructure in order to implement the quality indicators in medical practices.

2 INTRODUCTION AND BACKGROUND

In an increasingly competitive health care system and in view of the resulting development of contract and care structures, an increasing level of importance is being placed on quality-based aspects. In addition to performance levels or the morbidity of treated patients, quality is also increasingly being considered as a basis for assessing pay. Quality indicators as quality-based measures[1] are an important tool for testing the measurement, demonstration and management of the quality of care in the ambulatory health care system in Germany. In view of this, the Board of the National Association of Statutory Health Insurance Physicians decided at the end of 2006 to launch the NASHIP "AQUIK® - Ambulatory Quality Indicators and Key Measures" study. The AQUIK study focuses on quality indicators which are relevant to medical care provided by SHI-authorised physicians and which are already being used internationally. Although in the case of medical care provided by SHI-authorised physicians in Germany quality indicators are already being applied as part of Disease Management Programmes (DMPs), quality assurance guidelines or quality management systems, and various professional organisations and medical associations use their own quality indicators, systematically developed and agreed quality indicators are still the exception within the field of ambulatory care. In

* Statutory Health Insurance (SHI)

accordance with the notion of self-governance of SHI-authorised physicians, the subject has been driven forward independently by physicians in the form of the AQUIK study.

Quality indicators are measures which indirectly indicate the quality of an entity by way of numbers and/or ratios. They make it possible to make assertions regarding the three dimensions of quality of care based on Donabedian's structure-process-outcome quality model[2]. Quality indicators may thus refer to percentages and frequencies as well as one-off events or qualitative assertions. They therefore always only reflect particular aspects of the care processes.

As quantitative measures they support the monitoring and assessment of quality. They enable the quality of different care providers to be compared and the quality of care, including its development, over a set period of time to be demonstrated. The application of quality indicators helps render the results of the many quality assurance and quality development measures used in medical care provided by SHI-authorised physicians transparent and accessible. In comparison on an international scale, they can provide strong indications as to the level of quality achieved within the German health care system. Furthermore, they provide the option of introducing quality-based pay. Internationally, the term "Pay for Performance (P4P)" is used to describe this practice. The purpose of this is, on the one hand, to provide financial incentives to improve the quality of care and, on the other hand and for reasons of fairness, to reward those physicians who provide a higher level of quality.

3 METHODOLOGY

3.1 Study Objectives and Overview

The aims of the "AQUIK® - Ambulatory Quality Indicators and Key Measures" study are:

- to test and establish a reliable and transparent first set of quality indicators and measures for medical care provided by SHI-authorised physicians
- to further extend the portfolio of NASHIP's quality tools and methods for measuring care results (focussing on outcome quality)
- to examine the options for using quality indicators to improve and demonstrate quality and for linking quality indicators to payment
- to use the expertise of NASHIP/ASHIPs to systematically develop, apply and use quality indicators within the system of medical care provided by SHI-authorised physicians.

For this purpose a study plan with the stages shown in Fig. 1 was created, the stages being initiated at different points in time, each stage building on the previous stages.

3.2 Organisational Survey

As part of the study, a written organisational survey was conducted in 2007, in which all professional organisations, relevant medical associations and patient organisations across Germany took part. The objective was to be able to estimate the organisations' levels of experience with quality indicators and to obtain an initial overview regarding the state of development and application of the internal indicators used by the organisations surveyed. In order to achieve the highest return possible, the organisational survey was carried out in two stages.

1. Short survey regarding current levels of experience and internal development of indicators in the respective specialist field

2. Differentiated longer survey regarding types of indicators, possibilities for and limits of application of quality indicators as well as the extent of their introduction within the specialist field

The results of the survey were evaluated quantitatively as well as qualitatively.

STUDY PHASES	
Methodology phase	Development of methodology involving national, US and European expertise (e.g. RAND Health Organisation)
Research phase	Systematic search for all available sets of indicators, creation of a NASHIP register of quality indicators which contains the search results of available ambulatory sets of indicators and recommendations of organisations
Selection phase	Assessment and selection of quality indicators, examination of transferability to the German health care system, agreement by experts on a first set of indicators for ambulatory care comprising indicators which encompass more than one specialist field and indicators which are specific to a single specialist field
Test phase	Feasibility study (data availability, data collection, assessment) of the identified indicators in surveyed practices
Link to Payment	Examination of the conditions for and possibilities of using indicators for quality-based payment
Support studies	Supplementing the study with IT solutions

Fig. 1: Study phases

3.3 Systematic Search for Available Ambulatory Quality Indicators

The main starting point for the development of quality indicators for ambulatory care was a systematic search for nationally and internationally available quality indicators or sets of indicators. For this purpose, the websites of institutions throughout the EU and in English-speaking countries outside the EU were searched for indicators and sets of indicators. In a second step, a literature search was

carried out in appropriate databases (PubMed, Scopus, Cochrane)[3,4]. The indicators thus identified which were relevant to the field of ambulatory care were entered into the NASHIP database of quality indicators. The features of the identified indicators and sets of indicators were recorded and the methodology used to develop the quality indicators was described.

The indicators used in Disease Management Programmes, as detailed in the 2007 quality report of the National Association of Statutory Health Physicians[5], were also entered into the NASHIP database. Since these quality indicators were already in use, they were not included in the rating process of the AQUIK study.

First any duplicate entries were removed from the database of indicators. In a further study step, the approximately 600 quality indicators in the revised database of quality indicators were used as a basis for the creation of a draft set of indicators. Professional experts having both medical and methodological backgrounds agreed upon and selected the quality indicators to be included in the draft set of indicators if they met the following selection criteria:

- relevant to the ambulatory sector
- prevalence of the corresponding illnesses
- possible potential for improvement
- suitable for demonstrating good quality

Sectors which are already regulated across the country by way of guidelines or quality assurance agreements were excluded (dialysis, coloscopy, mammography, child screening). Indicators which only related to pharmacotherapy were also disregarded (influenced by legal and/or contractual regulations). All the main fields for which there are quality indicators were included. The draft set of indicators thus focussed in particular on widespread chronic diseases. Indicators for acute diseases are less prevalent in international databases and are of lesser significance in AQUIK. The selection was supplemented by indicators for practice organisation and documentation as well as those for patient orientation. The outcome of the selection process was a draft set of indicators containing 65 quality indicators relating to different aspects of care within the field of general practitioners and consultants, to be assessed in the rating process.

3.4 Rating Process

The provisional set of indicators compiled from the database of quality indicators for ambulatory medical care (draft set of indicators) was assessed in a rating process carried out by selected medical experts for relevance to the German health care system and feasibility. This was carried out in a two-stage structured consensus process based on general approved methodology (RAND/UCLA Appropriateness Method developed by RAND Health - RAND method)[6] for developing indicator systems. The basis for carrying out the rating process was a method paper developed by NASHIP and based on the RAND method, which was made available to all the experts.

3.4.1 Selection of the Expert Panel

The experts and the composition of the expert panel (general practitioners and consultants) were selected (see Figure 2) taking into consideration the subject areas of the draft set of indicators and based on the recommendations of the Regional Associations for Statutory Health Physicians (ASHIPs). The following criteria were used for the selection process:

- knowledge of evidence-based medicine; for example participation in the development of guidelines
- recognised professional leadership in the respective field
- knowledge/experience in the "quality of care" field
- participation in quality improvement/quality assurance processes (for example participation in/moderation of quality circles)
- free time available; readiness for (and commitment to) active participation

<table>
<tr><th colspan="2">PANEL STRUCTURE</th></tr>
<tr><td colspan="2">Panel A (Entire panel): Multidisciplinary Topics
28 members: 8 GPs, 4 internists, 2 paediatricians, 2 child and youth psychiatrists,
3 psychiatrists/neurologists, 2 gynaecologists, 2 urologists, 2 orthopaedists, 2 ENT physicians,
1 (+1) HIV specialists</td></tr>
<tr><td>Panel B1, Part 1: Dementia
3 psychiatrists/neurologists, 4 GPs
Panel B1, Part 2: Neuropsychiatric Illnesses
4 GPs, 2 paediatricians,
3 psychiatrists/neurologists, 2 child and youth psychiatrists</td><td>Panel C1: Cardiovascular Diseases/Presbyacusis
4 GPs, 2 internists, 2 ENT physicians</td></tr>
<tr><td>Panel B2: Musculoskeletal Disorders
4 GPs, 2 internists (rheumatologists),
2 orthopaedists</td><td>Panel C2: Gynaecological Topics, Urinary Incontinence, HIV/AIDS
4 GPs, 2 urologists, 2 gynaecologists (of which 1 HIV specialist), 1 HIV specialist</td></tr>
</table>

Figure 2: Panel structure based on the internationally established standard of the Joint Commission on Accreditation of Healthcare Organisations[7]

3.4.2 Specification of the Quality Indicators for Rating

The indicators in the draft set were prepared for the medical experts for the rating process. The indicator description was divided into three categories:

Part A contained, in addition to the name of the indicator, all information required for the rating process, such as the numerator and denominator of the quality indicator, reference information or associated aspects of care and the German translation of the original indicator, where applicable.

Part B contained selected original data of the quality indicators. These included, inter alia, the name of the original indicator, the indicator set from which the indicator originated, the source of information and original references as well as the field of application.

Lastly, part C contained the rating sheets on which the medical experts rated the relevance and feasibility of the quality indicators and could note down their recommendations for adapting the indicators.

3.4.3 Procedure and Methodology of the Rating Process

The rating process was carried out in two stages:
Stage 1: Panel workshop with information on the AQUIK study, the procedure of the rating process and the rating methodology; subsequent individual rating of the quality indicators by each medical expert

Stage 2: Second panel workshop with reflection of the results of the first rating round and discussion of the indicators within the respective panel (see Fig. 2) and subsequent second individual rating of the indicators by each medical expert at the workshop

Both panel workshops were moderated by scientists experienced in the RAND/UCLA method. The task of the medical experts was to quantitatively assess the individual quality indicators using a scale of 1 to 9 points, 1 meaning low or irrelevant/unfeasible and 9 meaning high or highly relevant/highly feasible. Rating criteria were relevance and feasibility in accordance with the RAND method (see Tables 1 and 2).

In accordance with the RAND method, an indicator was deemed to be relevant if the median of the ratings of the expert panel in question achieved a value ≥ 7 and there were no disagreements regarding the ratings, i.e. there were no major deviations between individual ratings. For feasibility, the median of the ratings had to be ≥ 4.

RELEVANCE	FEASIBILITY
▪ There is adequate scientific evidence/professional consensus for the indicator. ▪ Patients who receive care specified by the indicator experience identifiable health benefits. ▪ Physicians with significantly higher rates of adherence to an indicator would be considered higher quality providers ▪ The majority of factors that determine adherence to an indicator are under the control of the physician (or are subject to influence by the physician).	▪ The information required will most likely be found in a typical medical record. ▪ Estimates of adherence to the indicator based on medical record data are most likely to be reliable and unbiased. ▪ Failure to document relevant information about the quality indicator is itself a marker for poor quality.

Table 1: Rating criteria

INDICATOR	RELEVANCE	FEASIBILITY
Rheumatoid arthritis and disease-modifying antirheumatic drug therapy	1 2 3 4 5 6 (7) 8 9	1 2 3 4 5 6 7 8 (9)
RATING		
Classification	1-3 = irrelevant 4-6 = uncertain if relevant 7-9 = relevant	1-3 = unfeasible 4-9 = feasible
OUTCOME		
	The indicator is relevant.	The indicator is feasible.

Table 2: Rating example

3.5 Feasibility Study

The object of the feasibility study was to examine the feasibility of the quality indicators agreed upon in the rating process for practice-based physicians. For this purpose a total of 113 medical practices specialising in different fields and with different structures were surveyed regarding their views on data availability, the complexity of data acquisition and the relevance of the indicators for their practice activities. Individual practices, group practices and medical care units (MCUs) were included. The study was carried out on behalf of NASHIP by Witten-Herdecke University (Prof. Max Geraedts) and was conducted scientifically.

For the study, the main objective of feasibility was subdivided into the aspects of application, availability, feasibility, complexity, reliability and acceptance of the indicator and the collection of data therefor. These objectives were operationalised in a survey comprising ten questions, which was sent to practices together with a survey on the features of the practice structure.

In total, the set of indicators used in the feasibility study contained 48 indicators: five indicators for practice management, nine indicators encompassing more than one specialist field on topics such as blood pressure measurement, smoking, vaccinations and drug safety, as well as 34 indicators specific to specialist fields from seven subject areas (see overview of indicators in Part B). A specific set of indicators with the number of indicators depending on the specialist field was compiled and examined for each practice. The following ten specialist fields were included: gynaecology, ENT, internal medicine (HIV specialisation), paediatrics and youth medicine, child and youth psychiatry, neurology, psychiatry, orthopaedics, urology and the GP care sector. The indicators were assigned to the specialist groups/GPs by subject on the basis of the relevant activities; for example the indicator for documenting smoking status was assigned to all specialist fields.

Out of the total 113 practices surveyed, who had registered voluntarily following a request made by NASHIP and the ASHIPs, the responses of 103 practices taking part were statistically assessed. All physicians who took part were promptly sent their own results as well as the analysed results of the questionnaires of their specialist field in the form of a feedback report.

Statistical testing methods were applied in order to generate a hypothesis. In order to validate the test results, interviews regarding day-to-day documentation methods were additionally conducted in a total of 13 medical practices to obtain information regarding beneficial factors for feasibility.

4 STUDY RESULTS

4.1 Results of the Organisational Survey

The organisational survey made it possible to carry out a first comprehensive review of the state of development of quality indicators for ambulatory care in Germany. The results revealed that a high level of importance is attached to the subject, but that systematically developed and applied quality indicators are still more likely to be the exception. A return rate of 60 per cent indicates a high level of interest in the subject. Almost half of all organisations which responded have already developed quality indicators, and far more than half have knowledge of and experience with indicators. Eight out of ten organisations said they intend to develop quality indicators for their organisations.

(The report on the organisational survey can be found at http://www.kbv.de/themen/aquik.htm.)[8]

4.2 Register of Quality Indicators

By searching the websites of a total of 66 institutions in the EU and in English-speaking countries outside the EU, nine sets of indicators from eight organisations relevant to ambulatory care were identified. Approximately 1,700 quality indicators published by these organisations were entered into the NASHIP database. Approximately a further 600 indicators in the database were obtained by the literature search. All the indicators in the database were relevant to ambulatory care, however there was a high degree of overlap between similar, partially identical indicators. By revising the quality indicator database to eliminate duplicates, a register of quality indicators containing approximately 600 quality indicators was obtained.

The register of quality indicators contains indicators for 19 specialist fields. Since the search was carried out in relation to international care structures oriented predominantly towards primary care, the majority of indicators relate to the GP/internist sector, whereas there is a lack of indicators from specialist consultant sectors, such as invasive cardiology.

The register of indicators includes quality indicators for the most common widespread diseases, such as diabetes mellitus, chronic obstructive pulmonary disease, coronary heart disease, heart failure, depression and indicators for preventative care. Over 80 per cent of the quality indicators reflect process quality and 10 per cent focus on outcome quality. The register of quality indicators contains indicators which encompass more than one specialist field as well as those which are specific to individual specialist fields.

4.3 Results and Rating of the Rating Process

4.3.1 Results of the First Rating Round

A total of 28 experts took part in the panel workshop. In the first rating round 75 per cent of all 65 quality indicators were deemed to be relevant and feasible, for 23 per cent it was uncertain if they were relevant and 2 per cent were deemed irrelevant.

Based on the recommendations for adaptation submitted by experts, five quality indicators were modified by the study team. These five quality indicators were entered into the second rating round in their adapted form. One quality indicator was withdrawn before the second rating round.

4.3.2 Results of the Second Rating Round

In the results of the second rating of the remaining 64 quality indicators, 74 per cent were deemed to be relevant and feasible, for 17 per cent it was uncertain if they were relevant and 9 per cent were deemed irrelevant. The results of both rating rounds are summarised in Figure 3. Part B details the rating outcome for each individual indicator.

The rating outcomes of the second round were decisive for the ultimate inclusion of the individual indicators into the final set of indicators for the feasibility test. A pre-condition for inclusion was a consistently high rating outcome for relevance (7 to 9 points) and feasibility (>4 points).

No amendments were made to the subject areas within the rating process. The important topics within the field of chronic diseases which are relevant to the ambulatory sector, highly prevalent and with a possible potential for improvement continue to be the subject of attention. These include diseases from the cardiovascular (for example heart failure, hypertension), musculoskeletal (for example back pain, rheumatism) and also neuropsychiatric fields (for example depression, dementia). 85 per cent of the quality indicators reflect process quality.

4.3.3 Assessment of the Rating Process

The rating process confirmed that international quality indicators can, in principle, be transferred to the German health care system. Subject areas are sometimes weighted differently so the transfer is limited to individual quality indicators.

An adapted RAND method was applied successfully in Germany for the first time as part of the AQUIK rating process. Specific features of this method include assessment in discussion forums encompassing more than one specialist field and the objective of not making the results dependant on a consensus, but allowing conflicting assertions. The suitability of the method was confirmed by the rating process. Experts also recommended using the method for other agreement processes, such as the development of guidelines. The majority of the indicators presented to the experts originated from the following international indicator systems: NQMC[9], NHS[10], RAND[11] and RAND/ACOVE-3[12]. A pre-condition for acceptance into these systems/sets/publications was that the indicators already had to have been subjected to a comprehensive review of the underlying evidence. Within the scope of the AQUIK study, no new review of evidence was carried out for the indicators included, but instead they were associated with the contents of German guidelines and other recognised sources. Whilst the evidence cited is to be considered as sufficient, it would have been useful, for some quality indicators, to review the current state of studies as a basis for discussion.

Rating Outcome	First Rating Round		Second Rating Round	
	Relevance	**Feasibility**	**Relevance**	**Feasibility**
Panel A (Entire panel) Multidisciplinary Topics **(17 QI)***	**relevant: 16 QI** uncertain: 1 QI irrelevant: 0 QI	16 out of 16	**relevant: 14 QI** uncertain: 2 QI irrelevant: 1 QI	14 out of 14
Panel B1 Neuropsychiatric Illnesses **(17/16 QI)**	**relevant: 14 QI** uncertain: 3 QI irrelevant: 0 QI	14 out of 14	**relevant: 12 QI** uncertain: 3 QI irrelevant: 1 QI	12 out of 12
Panel B2 Musculoskeletal Diseases **(11 QI)**	**relevant: 5 QI** uncertain: 5 QI irrelevant: 1 QI	5 out of 5	**relevant: 6 QI** uncertain: 2 QI irrelevant: 3 QI	6 out of 6
Panel C1 Cardiovascular Diseases, Presbyacusis **(11 QI)**	**relevant: 5 QI** uncertain: 6 QI irrelevant: 0 QI	5 out of 5	**relevant: 8 QI** uncertain: 2 QI irrelevant: 1 QI	8 out of 8
Panel C2 Gynaecological Topics, Urinary Incontinence, AIDS/HIV **(9 QI)**	**relevant: 9 QI** uncertain: 0 QI irrelevant: 0 QI	9 out of 9	**relevant: 7 QI** uncertain: 2 QI irrelevant: 0 QI	7 out of 7

Figure 3: Results of the First and Second Rating Rounds

* QI = quality indicator

When discussing the question of whether a panel should be structured in the rating process so as to encompass more than one specialist field or whether it should be specific to an individual specialist field, the structure encompassing more than one specialist field proved, in essence, to be expedient. One factor involved in this finding was that this structure enabled potential care pathways and interfaces to be developed in relation to care encompassing more than one specialist field or sector. The composition of the panel encompassing more than one specialist field creates objectivity, in that it minimises the possibility of overrating of quality indicators owing to specific interests within specialist fields, the danger of resulting underrating not being ruled out. From the results of the rating process it can be seen that it is recommended to first define the target group of the respective quality indicators. The selected panel sizes have proved to be suitable.

All in all, the participating experts positively assessed the rating process within the scope of the AQUIK study. The possibility to demonstrate quality of care with the help of quality indicators was

recognised as an opportunity and considered a topic of interest for physicians. The medical experts showed an interest in further assisting in the process of developing quality indicators. However, during discussions, critical aspects of the development and application of quality indicators were also mentioned, for example the danger of risk selection, the potential misuse of quality indicators as a means of control or the intensification of social inequality. The development of criteria for interpreting the outcomes of quality indicators such as risk adjustment, reference areas and influential factors in a subsequent study step was requested by the experts.

4.4 Results of the Feasibility Study

The feasibility study was divided into two stages. Firstly, surveys regarding practice structure and feasibility (in particular data availability and acquisition) were completed by individual practices. In order to validate the data and to obtain further information regarding beneficial factors, 13 physicians were questioned in a second step during a semi-structured interview.

Since a total number of 103 practices took part, the statistical study results should be interpreted in a purely explorative and hypothesis-generating manner. The analysis of the structural features of the practices taking part revealed the following characteristics:

With regard to the participating physicians:

- the average age was 51,
- 17 per cent were female,
- they had been working as practice-based physicians for an average of 13 years,
- 44 per cent worked in individual practices, 48 per cent in joint or group practices and 8 per cent in MCUs.

It should be noted in particular that:

- 72 per cent of practices were certified by a quality management system,
- 40 per cent only kept electronic medical records, 2 per cent only kept paper records and the rest used both types of records.

This means that the analysed sample may have a greater connection with the subject matter under investigation (quality indicators) and patient data storage and, in this respect, may differ from a random sample.
Feasibility was essentially analysed based on ten key questions. These were compiled in order to condense all the results into three scores (see Figure 4).

Questions two and three were combined to give score A "data availability", questions four to seven were combined to give score B "feasibility/data accessibility" and questions eight to ten were combined to give score C "rating and assessment of indicator suitability".

On this basis, the consolidated study results of all 103 participants and all 48 indicators can be seen below (see Figure 5): The indicators examined are used and documented to a wide extent in the practices and are thus fundamentally available. Feasibility within the meaning of data accessibility is viewed much more critically. With regard to content, the AQUIK indicators are collectively rated positively for the most part, i.e. most indicators are deemed to be relevant, acceptable and reliable.

Ten Key Questions for Feasibility Study	
1. Is this indicator relevant to your practice?	**Screening question**
2. Is information needed for the numerator/denominator **collected and documented?** 3. Is the information **documented in writing or electronically**?	**Score A**
4. Can you access the information for the numerator from your PVS (practice management system) using a **statistical search function**? 5. Can you access the information for the denominator from your PVS using a **statistical search function**? 6. **How long** does it take to obtain information on all relevant patients in a single year? 7. Do you consider the **amount of time required to obtain the relevant information** to be reasonable under present practice conditions?	**Score B**
8. Do you consider the rating for quality of care achieved using the indicator to be **of significance**? 9. How do you view the **reliability for ascertaining** this indicator? 10. Would you **accept** if an aspect of the quality of care within your specialist field would be rated using this indicator?	**Score C**

Figure 4: The ten key questions of the feasibility study

In addition to this extremely condensed rating, it is still necessary to consider each result in detail since results sometimes vary greatly depending on the indicator and specialist field. Detailed results on data availability, data accessibility and the rating of each indicator are given in Part B of this report. When interpreting the results, it should be noted that each individual indicator was rated by a different number of medical experts. The number of medical experts in a group essentially varied from 18 to 92, to whom the respective indicator was a) presented and who b) declared the indicator to be appropriate for their field and rated it accordingly. Exceptions to this were the indicators for gynaecological topics and Aids/HIV. Since these indicators were, rather selectively, relevant to individual medical experts, group sizes of between three and eleven participants were formed. A corresponding note can be found in the detailed description of these indicators.

The correlation of the study results with the practice structure features suggests that the type of practice and its structure, certification of a quality management system and documentation methods

may be influential. It was found that there was a trend for joint practices, group practices and MCUs to rate the feasibility of the indicators more highly than individual practices. Practice certification as well as a completely electronic system of documentation also displayed statistical correlations with a positive feasibility rating.

The indicators encompassing more than one specialist field were rated noticeably heterogeneously. Whilst the five practice management indicators obtained a comparably high approval rating and an extremely good rating for significance, reliability and acceptance in all specialist fields, the nine clinical indicators encompassing more than one specialist field on subjects such as vaccinations, blood pressure measurement and smoking only had an average approval of 60 per cent and were rated considerably lower on the whole. Based on all indicators which were either specific to an individual specialist field or encompassed more than one specialist field, the GPs and paediatricians viewed considerably more indicators to be applicable than any of the other specialist groups, who expressed a more restricted view of their responsibilities and activities.

In addition to the written survey, interviews with a total of 13 physicians from individual medical practices were carried out in a second step. These showed that the following aspects of practice organisation proved to be beneficial:

- adaptation of the practice management system to match practice requirements
- established collaboration and division of work within the practice team
- active and pragmatic approach to the EDP of the practice

To summarise, the hypothesis proposed at the beginning of the feasibility study was confirmed – i.e. that technical EDP support is absolutely necessary in order to be able to input and access indicator information in accordance with the processes of the practice and thus establish feasibility.

In view of the reduced level of feasibility owing to the IT structures in place, the selected study design of an explorative feasibility study has also proven to be worthwhile compared with the originally intended practice test with actual data acquisition.

A detailed explanation of the feasibility study results will be published in a separate publication.

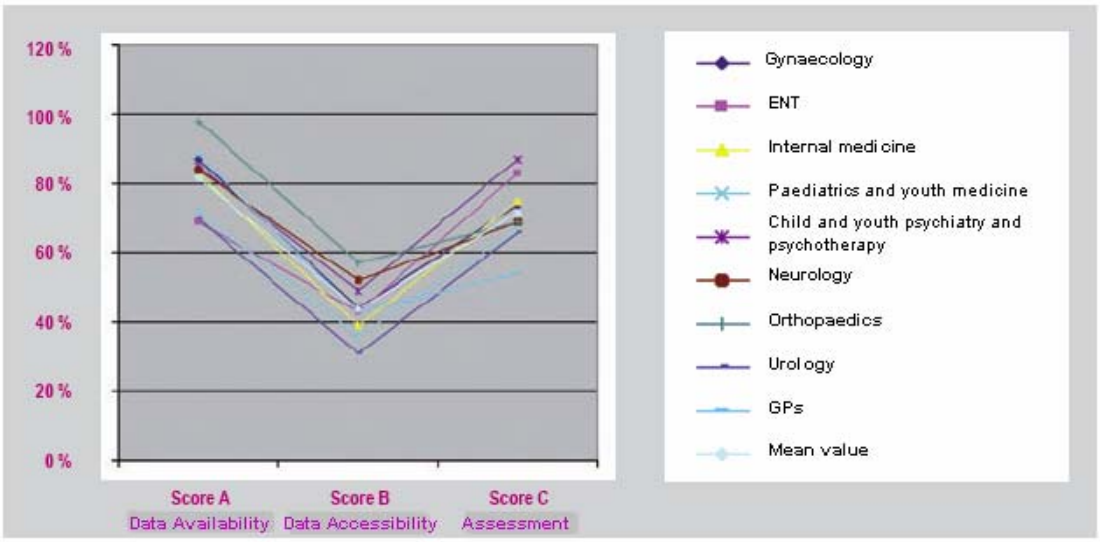

Fig. 5: Mean value of each score for all indicators in the specialist field set

5 SUMMARY OF THE RESULTS AND FURTHER ACTION

The main objectives of the AQUIK® study were achieved: The results of the search, consensus and test processes led to a first validated and transparent set of 48 quality indicators for use in ambulatory care – the AQUIK set. This set is expanded by the indicators already used in Disease Management Programmes and which had not been subjected to the AQUIK rating process. Consequently, the basis for measure-based quality improvement and demonstration within the field of medical care provided by SHI-authorised physicians and psychotherapists was established and options for quality-based care management were revealed.

Previously, quality indicators in inpatient sectors were predominantly used for surgery. Regarding the indicators contained in the AQUIK set, structurally developed and agreed indicators for conservative treatment which characterises the sector of ambulatory care are now available.

The AQUIK set contains the following compiled, evidence-based quality indicators, deemed to be relevant and feasible by medical experts and tested in medical practices:

- Indicators for the structured management of chronic diseases, inter alia diseases within the cardiovascular (heart failure, hypertension, atrial fibrillation), musculoskeletal (back pain, rheumatism, arthritis) and neuropsychiatric (depression, dementia, attention deficit hyperactivity disorder (ADHD), epilepsy) fields
- Indicators for other subject fields with an expected high potential for improvement, such as urinary incontinence, or drug safety
- Indicators focussed on patient orientation, such as carrying out patient surveys, advice on modifiable lifestyle factors (smoking, obesity)
- Indicators regarding the quality objectives of the quality management system developed by NASHIP and the ASHIPs "QEP® - Quality and Development in Practices"[13], such as practice organisation and documentation
- Indicators for preventative services, such as vaccinations and cervical screening

The entire course of the study is characterised by ongoing integration of national and international scientific expertise. By applying the adapted RAND method in order to rate quality indicators in Germany, new methodological territory was explored successfully. Valid indicators which are already available can now be rated and adapted for the German health care system. Targeted development of quality indicators is to be implemented simultaneously for both General Practitioners and Specialists in order to illustrate entire care processes or other relevant diseases and illnesses.

One of the most important stages of the study was testing the indicators for feasibility in medical practices. The results show that the data required in order to assess quality using the indicators presented is, for the most part, collected and documented, but it is not usually available in such a way that it can be automatically accessed and assessed. EDP support must be developed and implemented in order to achieve this. The use of quality indicators has generally been positively assessed by professionals in the participating practices.

The self-governing body of SHI-authorised physicians and psychotherapists has fulfilled its responsibility of addressing the use of quality indicators to improve and demonstrate quality and thus making it a physicians' topic. The participation of professional organisations, scientific-medical associations within the scope of the organisational survey, the active participation of GPs and consultants in the rating process and the feasibility study as well as the transparent structure of the course of the study have encouraged a high level of acceptance of the subject of quality indicators. By way of the study, NASHIP is sending a positive signal for further research on the subject.

Future activities are aimed at promoting the process of developing and applying quality indicators for ambulatory care together with professional organisations and scientific-medical associations and further developing currently available indicators methodologically, for example by determining reference fields or necessary risk adjustment.

Quality indicators are a further instrument in NASHIP's portfolio of quality improvement tools. Currently the following fields of application are particularly being considered for the use of the AQUIK indicators for medical care provided by SHI-authorised physicians:

- demonstration of quality of care (statistical data collection, quality reports, quality circles)
- further development of internal quality management processes (feedback reports, benchmarking)
- integration into additional contracts/contractual agreeements
- implmentation of indicator based financial incentives by integration of indicators into the medical fee schedule

Depending on the field of application, quality indicators may be used on a compulsory or voluntary basis. The time period for achieving this is medium- to long-term, starting from 2009. For all applications, EDP solutions are necessary and are often yet to be created.

Part B AQUIK SET OF INDICATORS

1 INTRODUCTION

The AQUIK set of indicators is described in detail below. The indicators contained in the set are highlighted in grey in the overview (see section 2). The other indicators included in the total of 65 listed underwent the rating process but, owing to the rating outcomes, were not included in the AQUIK set.

In addition to the most important characteristics of these indicators, the consolidated ratings of both the rating process according to the RAND/UCLA Method and the feasibility study are displayed. The detailed description of the indicators is given in accordance with the internationally established standards of the Joint Commission on Health Accreditation. The indicators already used as part of Disease Management Programmes are compiled in an overview which is appended. They were not included in the rating process but do, however, complement the AQUIK set.

In the detailed description of the 65 rated indicators, the full indicator name is given first. For the most part, the indicators are rate-based measures. A numerator and denominator are given for all rate-based measures. In order to provide a comprehensive understanding of the indicator, individual concepts are defined in greater detail under the heading "additional specification". The specification (for example medication lists and data acquisition tools) is not exhaustive. It is to be regarded as a reference only. The synopsis of each indicator, including the aim, is displayed within the category ”rationale”. The 65 indicators evaluated are evidence-based indicators which have already been validated on an international level. The origin and exact wording can be taken from the original indicators. The respective author and the associated set of indicators are also given (“original sources”). In order to facilitate scientific classification within the German health care system, the relevant recognised German guidelines are cited under the heading "German references" where available. For guidelines of the Association of the Scientific Medical Societies in Germany (AWMF), the corresponding development stage (S) is given. The section on ”Denominator-/Numerator Description” lists the data necessary to calculate the indicator. In the case of indicators which are not rate-based and do not require calculation (for example drug allergies and adverse drug reactions are documented in accordance with a standard process which is clearly recognisable), this information is omitted. The type of indicator is based on the three dimensions of quality in accordance with Donabedian's structure-process-outcome quality model.

The information on the assessment of the indicators in the rating process is based on the results of the second rating round which was decisive for the inclusion and exclusion of the individual quality indicators. The ratings for each of the indicators in the rating process in accordance with the RAND/UCLA Method for relevance and feasibility are shown (for information regarding the rating process see previous sections 3.4 and 4.3). All 48 quality indicators which were deemed to be relevant and feasible in the rating process were included in the feasibility study. The aggregate results of the feasibility study are shown using three consolidated values. These represent the key aspects of data

availability, data accessibility and assessment. The underlying questions of the feasibility study can be seen in Figure 5. The results are presented as averaged, unweighted values. The five indicators for practice management are an exception. Since these indicators are not rate-based, but instead are based on qualitative data (yes/no), only the the results of the questions referring to practical relevance were collected and are shown.

When interpreting the results of both the rating process and the feasibility study, it should be noted that each individual indicator was rated by a different number of experts depending on the assignment (expert panel in the rating process and field-specific sets of indicators in the feasibility study). The expert panels contained between 7 and 28 participants in the rating process and generally between 18 and 92 experts in the feasibility study. Exceptions were the indicators for gynaecological topics and Aids/HIV. Since these indicators are only relevant to individual experts, group sizes of between 3 and 11 participants were established in this case. A corresponding note can be found where these indicators are displayed.

2 INDICATORS AND RATING OUTCOMES

2.1 Attention Deficit Hyperactivity Disorder (ADHD)

ADHD - Criteria for Diagnosis
ADHD - Index Prescription
ADHD - Follow-up Visits
ADHD - Educational Support

2.2 AIDS/HIV

AIDS/HIV – Hepatitis C Status
AIDS/HIV – Test Viral Load
AIDS/HIV – Reduction Viral Load

2.3 Arterial Hypertension

Arterial Hypertension - Plan of Care
Arterial Hypertension - Education about Risk Factors
Arterial Hypertension - Blood Pressure Monitoring
Arterial Hypertension - Normotension
Arterial Hypertension - Patient Register

2.4 Arthritis

Arthritis - Analgesics
Arthritis - Anti-Inflammatories
Arthritis - Pain Assessment
Arthritis – Excess Weight

2.5 Drug Safety

Drug safety - Repeat Medication
Drug Safety - Oral Anticoagulation
Drug Safety – Polymedication

2.6 Dementia

Dementia - Screening for Depression
Dementia - Laboratory Diagnostics
Dementia – Medication Review
Dementia - Available Support

2.7 Depression

Depression - Criteria for Diagnosis
Depression - Assessment of Severity
Depression - Medication
Depression - Patient Register
Depression - Screening for CHD and/or Diabetes
Depression - Suicide Risk

2.8 Epilepsy

Epilepsy - Seizure Prevention
Epilepsy - Recording Seizure Frequency
Epilepsy - Information on Antiepileptics

2.9 Gynaecological Indicators

Gynaecological Indicators - Chlamydia Screening
Gynaecological Indicators - Pregnancy/ Smoking Cessation
Gynaecological Indicators - Sexually Transmitted Diseases/Counselling
Gynaecological Indicators - Cervical Screening/Follow-up

2.10 Urinary Incontinence

Urinary Incontinence - Treatment Options
Urinary Incontinence - Differential Diagnosis

2.11 Heart Failure

Heart Failure - Diagnostics
Heart Failure - Weight Measurement

2.12 Immunisations

Immunisations - Influenza Vaccine
Immunisations - Adolescent Immunisation Status
Immunisations - Infant Immunisation Status
Immunisations - Tetanus and Diphtheria

2.13 Low Back Pain

Low Back Pain - Red Flags
Low Back Pain - Incapacity to Work
Low Back Pain – Imaging Studies

2.14 Practice Management

Practice Management - Home Visits
Practice Management - Drug Allergies
Practice Management - Reviews of Significant Events
Practice Management - Emergency Drugs
Practice Management - Patient Surveys
Practice Management - Training/Updating

2.15 Presbyacusis

Presbyacusis - Amplification
Presbyacusis - Ear Examination

2.16 Multidisciplinary Topics

Multidisciplinary Topics - Blood Pressure Measurement
Multidisciplinary Topics - Tobacco Use
Multidisciplinary Topics – Smoking Cessation
Multidisciplinary Topics – Excess Weight

2.17 Rheumatoid Arthritis

Rheumatoid Arthritis - Disease Modifying Anti-Rheumatic Drug Therapy
Rheumatoid Arthritis - Diagnostics
Rheumatoid Arthritis – Monitoring of Side Effects
Rheumatoid Arthritis - Treatment Information

2.18 Atrial Fibrillation

Atrial Fibrillation - Oral Anticoagulation
Atrial Fibrillation - Thyroid Function

AQUIK set of indicators

2.1 Attention Deficit Hyperactivity Disorder (ADHD)

ADHD - CRITERIA FOR DIAGNOSIS

Percentage of patients newly diagnosed with ADHD whose medical record contains documentation of DSM-IV or ICD-10 criteria being addressed.

ADHD - INDEX PRESCRIPTION

Percentage of patients who had a follow-up visit during the 30 days after the Index Prescription Start Date of an ADHD medication

ADHD - FOLLOW-UP VISITS

Percentage of patients with ADHD and an ADHD medication whose medical record contains documentation of a follow-up visit twice a year

ADHD - EDUCATIONAL SUPPORT

Percentage of patients with ADHD whose medical record contains documentation that the clinician discussed the need for school-based support and educational service options for children with ADHD

INDICATOR ADHD - CRITERIA FOR DIAGNOSIS

Indicator	Percentage of patients 6-18 years of age and newly diagnosed with ADHD within the last 12 months whose medical record contains documentation of DSM-IV or ICD-10 criteria being addressed
Numerator	Number of patients 6-18 years of age and newly diagnosed with ADHD within the last 12 months whose medical record contains documentation of DSM-IV or ICD-10 criteria being addressed
Denominator	Number of all patients 6-18 years of age and newly diagnosed with ADHD within the last 12 months.
Rationale	This indicator documents the percentage of patients 6-18 years of age with ADHD whose diagnosis was made within the last 12 months using the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) or the ICD-10. The objective is to consolidate the use of formal diagnosis criteria for ADHD. The guidelines of the German ADHD association 'AG ADHS' use the DSM-IV criteria as a basis for recognising the illness, as do the guidelines of the American Academy of Paediatrics. The sub-type mainly relating to inattention ("ADD") must also be taken into consideration for clinical diagnosis and therapy. These patients would not fall within the narrow definition according to the ICD-10 criteria since problems must be present in all three areas (attention, hyperactivity, impulsivity). According to the European clinical guidelines for hyperkinetic disorder - first upgrade, it is helpful to use both concepts in stages [Guidelines of the Arbeitsgemeinschaft ADHS of paediatricians 2007].
German References	Guidelines of the Arbeitsgemeinschaft ADHS of Paediatricians, 2007; Guidelines of the German Society for Child and Youth Psychiatry and Psychotherapy 2007 (S1)
Denominator-/ Numerator Description	Denominator: List of all patients newly diagnosed with ADHD (ICD code) within the last 12 months and 6-18 years of age Numerator: Examination of all denominator medical records for the following statement: The diagnosis was made in accordance with DSM-IV or ICD-10 criteria
Type of indicator	Process Quality
Original Indicator	Diagnosis and management of attention deficit hyperactivity disorder (ADHD) in primary care for school age children and adolescents: percentage of patients newly diagnosed with ADHD whose medical record contains documentation of DSM-IV or DSM-PC criteria being addressed
Original Source	Institute for Clinical System Improvement: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process (RAND/UCLA Method)

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	87%
Indicator feasible	40%
Indicator clinically relevant	55%

INDICATOR ADHD - INDEX PRESCRIPTION

Indicator	Percentage of patients 6-18 years of age within the last 12 months who had a follow-up visit during the 30 days after the Index Prescription Start Date of an ADHD medication
Numerator	Number of patients 6-18 years of age within the last 12 months who had a follow-up visit during the 30 days after the Index Prescription Start Date of an ADHD medication
Denominator	Number of all patients 6-18 years of age within the last 12 months diagnosed with ADHD and having an Index Prescription Start Date of an ADHD medication
Additional Specification	ADHD medication: Methylphenidate, DL amphetamine, Atomoxetine
Rationale	In this case the percentage of patients 6-18 years of age within the last 12 months, diagnosed with ADHD and having an Index Prescription of an ADHD medication who had a follow-up visit during the 30 days after the Index Prescription Start Date should be calculated. The objective is to improve the medicinal treatment of ADHD patients by way of a close-knit support network, in particular during the initiation phase of treatment.
German References	Guidelines of the Arbeitsgemeinschaft ADHS of Paediatricians, 2007; Guidelines of the German Society for Child and Youth Psychiatry and Psychotherapy, 2007 (S1)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with ADHD (ICD code), having an Index Prescription of an ADHD medication and 6-18 years of age Numerator: Examination of all denominator medical records for the following statement: A follow-up visit took place 30 days after the Index Prescription Start Date for an ADHD medication
Type of indicator	Process Quality
Original Indicator	Percentage of children 6 – 12 years of age as of the Index Prescription Episode Start Date with an ambulatory prescription dispensed for and ADHD medication and who had one follow-up visit with a practitioner with prescribing authority during the 30-Day Initiation Phase.
Original Source	National Committee for Quality Assurance (NCQA): National Quality Forum Consensus Standards Ambulatory Care

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	92%
Indicator feasible	38%
Indicator clinically relevant	82%

INDICATOR ADHD - FOLLOW-UP VISITS

Indicator	Percentage of patients 6-18 years of age with ADHD and an ADHD medication within the last 12 months whose medical record contains documentation of a follow-up visit twice a year
Numerator	Number of patients 6-18 years of age with ADHD and an ADHD medication within the last 12 months, whose medical record contains documentation of a follow-up visit twice a year
Denominator	Number of all patients 6-18 years of age with ADHD and an ADHD medication within the last 12 months
Additional Specification	ADHD Medication: Methylphenidate, DL amphetamine, Atomoxetine
Rationale	In this case the percentage of patients 6-18 years of age, diagnosed with ADHD and having an ADHD medication within the last 12 months, and who had a follow-up visit at least twice a year should be calculated. The aim is to improve the medicinal treatment of ADHD patients by way of a close-knit support network.
German References	Guidelines of the Arbeitsgemeinschaft ADHS of Paediatricians, 2007; Guidelines of the German Society for Child and Youth Psychiatry and Psychotherapy 2007, (S1)
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with ADHD (ICD code) within the last 12 months having a long-term ADHD medication and 6-18 years of age Numerator: Examination of all denominator medical records for the following statement: At least 2 follow-up visits took place within the last 12 months
Type of indicator	Process Quality
Original Indicator	Diagnosis and management of attention deficit hyperactivity disorder (ADHD) in primary care for school age children and adolescents: percentage of patients diagnosed with ADHD and on first-line medication whose medical record contains documentation of a follow-up visit twice a year.
Original Source	Institute for Clinical System Improvement: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	93%
Indicator feasible	52%
Indicator clinically relevant	75%

INDICATOR ADHD - EDUCATIONAL SUPPORT

Indicator	Percentage of patients 6-18 years of age with ADHD within the last 12 months, whose medical record contains documentation that the clinician discussed the need for school-based support and educational service options for children with ADHD
Numerator	Number of patients 6-18 years of age with ADHD within the last 12 months, whose medical record contains documentation that the need for school-based support and educational service options were discussed
Denominator	Number of all patients 6-18 years of age with ADHD within the last 12 months
Rationale	This indicator measures the percentage of ADHD patients aged 6-18 within the last 12 months whose medical record contains documentation that the clinician discussed the need for school-based support and educational service options for children with ADHD. The objective is to promote the use of multimodal treatment.
German References	Guidelines of the Arbeitsgemeinschaft ADHS of Paediatricians, 2007; Guidelines of the German Society for Child and Youth Psychiatry and Psychotherapy 2007 (S1)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with ADHD (ICD code) and 6-18 years of age Numerator: Examination of all denominator medical records for the following statement: The need for school-based support and educational service options were discussed
Type of indicator	Process Quality
Original Indicator	Diagnosis and management of attention deficit hyperactivity disorder (ADHD) in primary care for school age children and adolescents: percentage of patients diagnosed with ADHD whose medical record contains documentation that the clinician discussed the need for school-based supports and educational service options for children with ADHD
Original Source	Institute for Clinical System Improvement: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	88%
Indicator feasible	34%
Indicator clinically relevant	57%

2.2 AIDS/HIV

AIDS/HIV – HEPATITS C STATUS

Percentage of hepatitis C negative patients with HIV infection aged 18 years and over for whom hepatitis C status was documented in the medical record within the last 12 months

AIDS/HIV –VIRAL LOAD TEST

Percentage of patients undergoing antiretroviral therapy for whom a viral load test and a CD4 count test were performed at least once every four months

AIDS/HIV –VIRAL LOAD REDUCTION

Percentage of patients with HIV infection undergoing antiretroviral (ARV) therapy whose viral load was below the limit of detection or for whom there was a significant reduction in viral load

INDICATOR AIDS/HIV – HEPATITS C STATUS

Indicator	Percentage of hepatitis C negative patients with HIV infection aged 18 years and over within the last 12 months for whom hepatitis C status was documented in the medical record within the last 12 months
Numerator	Number of hepatitis C negative patients with HIV infection aged 18 years and over within the last 12 months for whom hepatitis C status was documented in the medical record within the last 12 months
Denominator	Number of all hepatitis C negative patients with HIV infection aged 18 years and over within the last 12 months
Rationale	In this case the percentage of hepatitis C negative patients with HIV infection aged 18 years and over for whom hepatitis C status was documented since initial HIV diagnosis within the last 12 months is recorded. The objective is to detect relevant comorbidities so as to make treatment accessible and lower the transmission rate
German References	Guidelines of the German Aids Society and the Austrian Aids Society (S 3) together with other professional organisations, 2005
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with HIV (ICD code) and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: The hepatitis C status was documented in the medical record within the last 12 months
Type of indicator	Process Quality
Original Indicator	Percentage of adult and adolescent patients for whom hepatitis-C-status was documented in the medical record.
Original Source	New York Health Aids Institute: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	no

The quality indicator was adapted in accordance with advice given during the rating process and rated again in the feasibility study as worded above.

Rating of the Indicator - Feasibility Study

Data available	75%
Indicator feasible	11%
Indicator clinically relevant	29%

Note: When interpreting the results of the feasibility study it should be noted that the indicators were rated based on the selective competence of only seven medical experts.

INDICATOR AIDS/HIV –VIRAL LOAD TEST

Indicator	Percentage of patients with HIV infection undergoing antiretroviral therapy within the last 12 months, for whom a viral load test and a CD4 count test were performed at least once every four months
Numerator	Number of patients with HIV infection undergoing antiretroviral therapy within the last 12 months, for whom a viral load test and a CD4 count test were performed at least once every four months
Denominator	Number of all patients with HIV infection undergoing antiretroviral therapy within the last 12 months
Rationale	In this case the percentage of HIV/Aids patients undergoing antiretroviral therapy within the last 12 months, for whom the viral load and a CD4 count were determined quantitatively at least once every four months is calculated. A prerequisite for successful treatment is compliance with the therapy. The most accurate way to measure this is by continuously observing the most important laboratory parameters of HIV infection (CD4+ lymphocytes and HIV RNA).
German References	Guidelines of the German Aids Society and the Austrian Aids Society (S 3) together with other professional organisations: Antiretroviral Therapy of HIV Infection, 2005
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with HIV (ICD codes) and undergoing antiretroviral therapy Numerator: Examination of all denominator medical records for the following statement: A viral load test and a CD4 count test were carried out at least once every four months
Type of indicator	Process Quality
Original Indicator	1. Percentage of adult and adolescent patients for whom a viral load test was performed every four months 2. Percentage of adult and adolescent patients for whom a CD4 count test was performed every four months
Original Source	New York Health Aids Institute: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	67%
Indicator feasible	25%
Indicator clinically relevant	33%

Note: When interpreting the results of the feasibility study it should be noted that the indicators were rated based on the selective competence of only three medical experts.

INDICATOR AIDS/HIV –VIRAL LOAD REDUCTION

Indicator	Percentage of patients with HIV infection undergoing antiretroviral (ARV) therapy within the last 12 months whose viral load was below the limit of detection or for whom there was a significant reduction in viral load
Numerator	Number of patients with HIV infection undergoing antiretroviral therapy whose viral load was below the limit of detection or for whom there was a significant reduction in viral load
Denominator	Number of all patients with HIV infection undergoing antiretroviral therapy
Rationale	In this case the percentage of patients with HIV infection undergoing antiretroviral therapy within the last 12 months whose viral load was below the limit of detection or for whom there was a significant reduction in viral load is calculated. The objective of antiretroviral therapy is to reduce viral load as much as possible. Both the symptoms and the development of resistance of the virus are positively influenced.
German References	Guidelines of the German Aids Society and the Austrian Aids Society (S3) together with other professional organisations: Antiretroviral Therapy with HIV Infection, 2005
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with HIV (ICD codes) and undergoing antiretroviral therapy Numerator: Examination of all denominator medical records for the following statement: Viral load is below the limit of detection or there has been a significant reduction in viral load within the last 12 months
Type of indicator	Outcome Quality
Original Indicator	Percentage of adult and adolescent patients who are stable on antiretroviral (ARV) therapy for whom viral load is monitored every four months
Original Source	New York Health Aids Institute: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	74%
Indicator feasible	17%
Indicator clinically relevant	33%

Note: When interpreting the results of the feasibility study it should be noted that the indicators were assessed based on the selective competence of only five specialist experts.

2.3 Arterial Hypertension

ARTERIAL HYPERTENSION - PLAN OF CARE

Percentage of patients with systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg with a documented plan of care for hypertension

ARTERIAL HYPERTENSION - EDUCATION ABOUT RISK FACTORS

Percentage of patients with hypertension, for whom education about modifiable risk factors is documented in the medical record

ARTERIAL HYPERTENSION - BLOOD PRESSURE MONITORING

Percentage of patients with hypertension whose blood pressure was checked at least once within the last six months

ARTERIAL HYPERTENSION - NORMOTENSION

Percentage of hypertonic individuals who achieved normotension
(≤ 140/90 mmHg)

ARTERIAL HYPERTENSION - PATIENT REGISTER

The practice can provide a list of all patients suffering from hypertension

INDICATOR ARTERIAL HYPERTENSION - PLAN OF CARE

Indicator	Percentage of patients with systolic blood pressure ≥ 140mmHg or diastolic blood pressure ≥ 90 mmHg within the last 12 months with a documented plan of care for hypertension
Numerator	Number of patients with systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg within the last 12 months with documented plan of care for hypertension
Denominator	Number of all patients with systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg within the last 12 months
Additional Specification	Documented plan of care: Treatment in accordance with guidelines, contains both non-pharmacological and pharmacological elements
Rationale	In this case the percentage of patients with systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg within the last 12 months for whom a plan of care for hypertension was documented is calculated. The objective is to reduce the risk of secondary complications by treating the arterial hypertension in a structured manner
German References	Guidelines of the German Hypertension Society/Deutsche Hochdruckliga e.V. for treating arterial hypertension, 2008 (S2); Drug Commission of the German Medical Association: Recommendations for Treatment of Arterial Hypertension, 2004
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with hypertension (ICD code) within the last 12 months Numerator: Examination of all denominator medical records for the following statement: There is a documented plan of care for hypertension
Type of indicator	Process Quality
Original Indicator	Percentage of patient visits during which either systolic blood pressure is greater than or equal to 140 mm Hg or diastolic blood pressure is greater than or equal to 90 mm Hg, with documented plan of care for hypertension.
Original Source	American College of Cardiologiy/American Heart Association/Physician Consortium for Performance Improvement: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	89%
Indicator feasible	21%
Indicator clinically relevant	71%

INDICATOR ARTERIAL HYPERTENSION - EDUCATION ABOUT RISK FACTORS

Indicator	Percentage of patients with hypertension within the last 12 months, for whom education about modifiable risk factors is documented in the medical record
Numerator	Number of patients with hypertension within the last 12 months, for whom education about modifiable risk factors is documented in the medical record
Denominator	Number of all patients with hypertension within the last 12 months
Additional Specification	Education about modifiable risk factors: weight loss if necessary, increased physical exercise, low-salt diet, possible alcohol reduction, giving up nicotine, healthy balanced diet
Rationale	In this case the percentage of patients with hypertension within the last 12 months, for whom education about modifiable risk factors is documented in the medical record is calculated. In order to reduce the risk of secondary complications, the guidelines recommend measures for influencing the aforementioned modifiable risk factors.
German References	Guidelines of the German Hypertension Society/Deutsche Hochdruckliga e.V. for Treatment of Arterial Hypertension, 2008 (S2); Drug Commission of the German Medical Association: Recommendations for Treatment of Arterial Hypertension, 2004
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with (primary) hypertension (ICD code) Numerator: Examination of all denominator medical records for the following statement: Education about modifiable risk factors was given within the last 12 months
Type of indicator	Process Quality
Original Indicator	Examination of all denominator medical records for the following statement: Education about modifiable risk factors was given within the last 12 months
Original Source	Institute for Clinical Improvement (ICSI): National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	25%
Indicator clinically relevant	65%

INDICATOR ARTERIAL HYPERTENSION - BLOOD PRESSURE MONITORING

Indicator	Percentage of patients aged 18 years and over with hypertension whose blood pressure was checked and recorded at least once within the last six months
Numerator	Number of patients aged 18 years and over with hypertension whose blood pressure was checked and recorded at least once within the last six months
Denominator	Number of all patients aged 18 years and over with hypertension
Rationale	In this case the percentage of patients aged 18 years and over with hypertension whose blood pressure was checked and documented at least once within the last six months is calculated. In order to monitor the success of treatment the guidelines recommend, as a minimum standard, that blood pressure be measured every six months to every two years.
German References	Guidelines of the German Hypertension Society/Deutsche Hochdruckliga e.V. for Treatment of Arterial Hypertension, 2008 (S2); Drug Commission of the German Medical Association: Recommendations for Treatment of Arterial Hypertension, 2004
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with hypertension (ICD code) and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: Blood pressure measured at least once within the last six months
Type of indicator	Process Quality
Original Indicator	Percentage of patients with hypertension whose blood pressure was checked at least once within the last 12 months.
Original Source	AQUA Institute: Local Health Care Fund Quality Indicators for Doctor Networks

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	93%
Indicator feasible	45%
Indicator clinically relevant	87%

INDICATOR ARTERIAL HYPERTENSION - NORMOTENSION

Indicator	Percentage of all hypertonic individuals aged 18 years and over within the last 12 months who achieved normotension

Numerator	Number of hypertonic individuals aged 18 years and over within the last 12 months who achieved normotension
Denominator	Number of hypertonic individuals aged 18 years and over within the last 12 months
Rationale	In this case the percentage of hypertonic individuals who achieved normotension (RR systolic ≤ 140 mmHg, RR diastolic ≤ 90 mmHg) within the last complete quarter is calculated. The objective is to achieve the standard values detailed in the guidelines by treating the arterial hypertension and thus reduce the risk of secondary complications.
German References	Guidelines of the German Hypertension Society/Deutsche Hochdruckliga e.V. for Treatment of Arterial Hypertension, 2008 (S2); Drug Commission of the German Medical Association: Recommendations for Treatment of Arterial Hypertension, 2004
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with arterial hypertension (ICD code) within the last 12 months aged 18 years and over Numerator: Examination of all denominator medical records for the following statement: Normotension (≤140/90 mmHg) achieved within the last 12 months
Type of indicator	Outcome Quality
Original Indicator	Percentage of hypertonic individuals who achieved normotension
Original Source	AQUA Institute: Local Health Care Fund Quality Indicators for Doctor Networks

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR ARTERIAL HYPERTENSION - PATIENT REGISTER

Indicator	The practice can provide a list of all patients suffering from hypertension

Numerator	-
Denominator	-
Additional Specification	Patients with hypertension: all patients with the relevant ICD code Time period: Patients within the last 12 months
Rationale	This indicator examines whether the practice can provide a list of all patients suffering from hypertension. The identification of the target population (patients with hypertension) in a register is a prerequisite for determining the other indicators.
German References	Guidelines of the German Hypertension Society/Deutsche Hochdruckliga e.V. for Treatment of Arterial Hypertension, 2008 (S2)
Type of indicator	Structural Quality
Original Indicator	The practice can produce a register of patients with established hypertension
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process**.**

2.4 Arthritis

ARTHRITIS - ANALGESICS

Percentage of patients diagnosed with arthritis, for whom the use of over-the-counter analgesics was assessed

ARTHRITIS - ANTI-INFLAMMATORIES

Percentage of patients on oral pharmacotherapy to treat arthritis who took paracetamol as their drug of first choice unless a contraindication had been documented

ARTHRITIS - PAIN ASSESSMENT

Percentage of patients with a diagnosis of symptomatic arthritis of the knee or hip with an annual pain assessment

ARTHRITIS - EXCESS WEIGHT

Percentage of patients with symptomatic arthritis of the knee or hip and who are overweight who were advised to lose weight to reduce symptoms of arthritis and whose medical record contains documentation of this.

INDICATOR ARTHRITIS - ANALGESICS

Indicator	Percentage of patients diagnosed with arthritis within the last 12 months, for whom the use of over-the-counter analgesics was assessed

Numerator	Percentage of patients diagnosed with arthritis within the last 12 months, for whom the use of over-the-counter analgesics was assessed
Denominator	Number of all patients diagnosed with arthritis within the last 12 months
Rationale	In this case the percentage of patients diagnosed with arthritis within the last 12 months, for whom the use of over-the-counter analgesics was assessed is calculated. The objective is to control the use of these substances in order to reduce adverse side-effects.
German References	Treatment recommendations of the Drug Commission of the German Medical Association: Recommendations for Treatment of Degenerative Arthropathies, 2001
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with arthritis (ICD code) within the last 12 months Numerator: Examination of all denominator medical records for the following statement: The use of over-the-counter analgesics was assessed
Type of indicator	Process Quality
Original Indicator	Percentage of patient visits with assessment for use of anti-inflammatory or analgesic over-the-counter medications.
Original Source	American Academy of Orthopedic Surgeons (AAOS)/Physician Consortium for Performance Improvement (PCPI)/National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	27%
Indicator clinically relevant	33%

INDICATOR ARTHRITIS - ANTI-INFLAMMATORIES

Indicator	Percentage of patients on oral pharmacotherapy to treat arthritis within the last 12 months who took paracetamol as their drug of first choice
Numerator	Number of patients on oral pharmacotherapy to treat arthritis within the last 12 months who took paracetamol as their drug of first choice
Denominator	Number of all patients on oral pharmacotherapy to treat arthritis within the last 12 months
Rationale	In this case the percentage of patients on oral pharmacotherapy to treat arthritis within the last 12 months, who took paracetamol as their drug of first choice is calculated. First-choice pharmacotherapy is treatment with paracetamol. It is characterised by a similar analgesic profile to other non-steroidal analgesics (selective and non-selective COX-2 inhibitors). The substance is also associated with a lower rate of adverse drug reactions.
German References	Drug Commission of the German Medical Association: Recommendations for Treatment of Degenerative Arthropathies 2001
Denominator-/ Numerator Description	Denominator: List of all patients on oral pharmacotherapy within the last 12 months to treat arthritis (ICD code) Numerator: Examination of all denominator medical records for the following statement: Paracetamol was taken as the drug of first choice
Type of indicator	Process Quality
Original Indicator	If a VE is started on pharmacological therapy to treat OA, then acetaminophen should be tried first, because acetaminophen achieves pain relief comparable to that of an NSAID (nonselective and selective) for many patients and is associated with a lower burden of common serious adverse events
Original Source	RAND Corporation: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	no
Indicator feasible?	no

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR ARTHRITIS - PAIN ASSESSMENT

Indicator	Percentage of patients with a diagnosis of symptomatic arthritis of the knee or hip within the last 12 months with an annual pain assessment
Numerator	Number of patients with a diagnosis of symptomatic arthritis of the knee or hip within the last 12 months with an annual pain assessment
Denominator	Number of all patients with a diagnosis of symptomatic arthritis of the knee or hip within the last 12 months
Additional Specification	Pain Assessment: for example by way of a visual analogue scale, two weeks after the initial diagnosis at the latest
Rationale	In this case the percentage of patients with a diagnosis of symptomatic arthritis of the knee or hip within the last 12 months, who had an annual pain assessment is calculated. Alleviating pain and improving joint function are important objectives of arthritis treatment, and the structured organisation of the pain assessment is thus crucial when making a clinical decision.
German References	Drug Commission of the German Medical Association: Recommendations for Treatment of Degenerative Arthropathies, 2001
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months with symptomatic arthritis of the knee or hip (ICD code) Numerator: Examination of all denominator medical records for the following statement: annual pain assessment is carried out
Type of indicator	Process Quality
Original Indicator	Percentage of patients with a diagnosis of symptomatic osteoarthritis of the knee or hip with an initial and annual pain assessment
Original Source	Arthritis Foundation RAND Health: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	no
Indicator feasible?	no

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR ARTHRITIS - EXCESS WEIGHT

Indicator	Percentage of patients with symptomatic arthritis of the knee or hip and who are overweight within the last 12 months who were advised to lose weight to reduce symptoms of arthritis
Numerator	Number of patients with symptomatic arthritis of the knee or hip and who are overweight within the last 12 months who were advised to lose weight to reduce symptoms of arthritis
Denominator	Number of all overweight patients with a diagnosis of symptomatic arthritis of the knee or hip within the last 12 months
Additional Specification	Excess weight: BMI of 30 kg/m² or more
Rationale	In this case the percentage of overweight patients with symptomatic arthritis of the knee or hip within the last 12 months who were advised to lose weight to reduce symptoms of arthritis is calculated. The objective is to reduce the progression of the disease and to alleviate symptoms.
German References	Drug Commission of the German Medical Association: Recommendations for Treatment of Degenerative Arthropathies, 2001
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months with symptomatic arthritis of the knee or hip (ICD code) Numerator: Examination of all denominator medical records for the following statement: Recommendation to lose weight in order to reduce the symptoms of arthritis
Type of indicator	Process Quality
Original Indicator	Percentage of patients with symptomatic osteoarthritis of the knee or hip and who are overweight (as defined by body mass index of greater than or equal to 27 kg/m2) and who are advised to lose weight to reduce symptoms of osteoarthritis
Original Source	Arthritis Foundation RAND Health: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

2.5 Drug Safety

DRUG SAFETY - REPEAT MEDICATION

Percentage of patients prescribed four or more repeat medicines, whose medication was reviewed in the last 12 months and whose medical record contains documentation of this

DRUG SAFETY - ORAL ANTICOAGULATION

Percentage of patients prescribed repeat oral anticoagulants that had an INR test at least every 6 weeks

DRUG SAFETY - POLYMEDICATION

Percentage of patients aged 65 and over within the last 12 months who take at least 6 prescribed medicines every day

INDICATOR DRUG SAFETY - REPEAT MEDICATION

Indicator	Percentage of patients being prescribed four or more repeat medicines, whose medication was reviewed in the last 12 months and whose medical record contains documentation of this
Numerator	Number of patients being prescribed four or more repeat medicines, whose medication was reviewed in the last 12 months and whose medical record contains documentation of this
Denominator	Number of all patients prescribed four or more repeat medicines
Additional Specification	Time period: 12 months Repeat medicine: has been taking the medicine for at least 6 months
Rationale	In this case the percentage of patients prescribed four or more repeat medicines whose medication was reviewed in the last 12 months and whose medical record contains documentation of this is calculated. The objective is to regularly review the continuing need for medicines/dosages, in particular for patients being prescribed more than one medicine, in order to make any necessary changes.
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months having any ICD code and documentation of repeat medication consisting of four or more repeat medicines Numerator: Examination of all denominator medical records for the following statement: Documentation and review of medication within the last 12 months after repeat medication has been assessed
Type of indicator	Process Quality
Original Indicator	A medication review is recorded in the notes in the preceding 15 months for all patients being prescribed four or more repeat medicines.
Original Source	National Health System: NHS-Set für britische Hausärzte

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	87%
Indicator feasible	22%
Indicator clinically relevant	57%

INDICATOR DRUG SAFETY - ORAL ANTICOAGULATION

Indicator	Percentage of patients prescribed repeat oral anticoagulants within the last 12 months who had an INR test at least every 6 weeks

Numerator	Percentage of patients prescribed repeat oral anticoagulants within the last 12 months who had an INR test at least every 6 weeks
Denominator	Number of all patients being prescribed repeat anticoagulants within the last 12 months
Rationale	In this case the percentage of patients prescribed repeat oral anticoagulants within the last 12 months who had an INR test at least every 6 weeks is calculated. The objective is to keep within the therapeutic INR range to avoid bleeding complications and thromboembolisms.
German References	Guideline Group Hessen: Anticoagulation, GP Guidelines, 2006
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months being prescribed repeat oral anticoagulants (ICD code) Numerator: Examination of all denominator medical records for the following statement: An INR test was carried out at least every 6 weeks
Type of indicator	Process Quality
Original Indicator	Percentage of patients with a 30-day supply (or more) of anticoagulants who had at least one blood clotting test per each 45-day period
Original Source	Manitoba Centre for Health Policy: National Quality Measurement Clearinghouse (NQMC)-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	50%
Indicator clinically relevant	70%

INDICATOR DRUG SAFETY - POLYMEDICATION

Indicator	Percentage of patients aged 65 and over within the last 12 months who take at least 6 prescribed medicines every day
Numerator	Number of patients aged 65 and over within the last 12 months who take at least 6 prescribed medicines every day
Denominator	Number of all patients aged 65 and over within the last 12 months
Rationale	In this case the percentage of patients aged 65 and over within the last 12 months who take at least 6 prescribed medicines every day is calculated. Adverse side-effects increase with age owing to the increased likelihood of being prescribed more than one medicine and age-related changes in metabolism. This applies in particular to those taking at least 6 medicines every day. Information supplied by the patient concerned makes it possible to review treatment.
German References	Guideline Group Hessen: Pharmacotherapy in Later Life, GP Guidelines, 2005
Denominator-/ Numerator Description	Denominator: List of all patients aged 65 and over within the last 12 months Numerator: Examination of all denominator medical records for the following statement: at least 6 prescribed medicines being taken every day
Type of indicator	Process Quality
Original Indicator	Percentage of patients aged 65 and over with polymedication
Original Source	AQUA Institute: Local Health Care Fund Quality Indicators for Doctor Networks

Rating of the Indicato (Rating Process)

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

2.6 Dementia

DEMENTIA - SCREENING FOR DEPRESSION

Percentage of patients newly diagnosed with dementia who were screened for depression

DEMENTIA - LABORATORY DIAGNOSTICS

Percentage of patients newly diagnosed with dementia for whom the following blood tests were performed: blood count, thyroid-stimulating hormone, electrolytes, glucose, vitamin B12

DEMENTIA – MEDICATION REVIEW

Percentage of patients newly diagnosed with dementia whose medication was reviewed for any substances which may increase cognitive impairment

DEMENTIA - AVAILABLE SUPPORT

Percentage of patients with dementia who, with the involvement of relatives/caregivers, were given information on dementia diagnosis, prognosis and available support

INDICATOR DEMENTIA - SCREENING FOR DEPRESSION

Indicator	Percentage of patients aged 65 and over, newly diagnosed with dementia within the last 12 months who were screened for depression during the first 3 months following the initial diagnosis of dementia
Numerator	Number of patients aged 65 and over, newly diagnosed with dementia within the last 12 months who were screened for depression during the first 3 months following the initial diagnosis of dementia
Denominator	Number of all patients aged 65 and over, newly diagnosed with dementia within the last 12 months
Rationale	This indicator measures the percentage of patients newly diagnosed with dementia within the last 12 months who were screened for depression during the first 3 months following the initial dementia diagnosis. In a third of all cases dementia is accompanied by other psychiatric conditions, in particular depression. This should be taken into consideration during diagnosis and treatment, because the treatment of depression may improve symptoms of dementia.
German References	Treatment recommendations of the Drug Commission of the German Medical Association 2004: Dementia; Witten/Herdecke University, 2005: Dementia: Guidelines for Diagnosis and Treatment; Guidelines of the German Society for Neurology, 2005: Diagnosis of Degenerative Dementia, Guidelines of the German Society of General Practice and Family Medicine (DEGAM) for Dementia, 2008
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with dementia (ICD code), newly diagnosed within the last 12 months and ≥ 65 years of age Numerator: Examination of all denominator medical records for the following statement: Screening for depression was carried out during the first 3 months following the initial diagnosis of dementia
Type of indicator	Process Quality
Original Indicator	If a vulnerable elder has newly diagnosed dementia, then he or she should be screened for depression during the initial evaluation period, because the recognition and treatment of depression will improve symptoms of dementia.
Original Source	RAND Corporation: RAND ACOVE-3-Set

Rating of the Indicato (Rating Process)

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	37%
Indicator clinically relevant	58%

INDICATOR DEMENTIA - LABORATORY DIAGNOSTICS

Indicator	Percentage of patients aged 65 and over, newly diagnosed with dementia within the last 12 months and for whom the following laboratory blood tests were performed: blood count, thyroid-stimulating hormone, electrolytes, glucose, vitamin B12
Numerator	Number of patients aged 65 and over, newly diagnosed with dementia within the last 12 months and for whom the following laboratory blood tests were performed: blood count, TSH, electrolytes, glucose, vitamin B12
Denominator	Number of all patients aged 65 and over, newly diagnosed with dementia within the last 12 months
Rationale	In this case the percentage of patients aged 65 and over who were newly diagnosed with dementia within the last 12 months and for whom the following laboratory blood tests have been performed: blood count, thyroid-stimulating hormone, electrolytes, glucose, vitamin B12 is calculated. Deviations from standard values in these tests may be indicative of reversible and treatable causes of cognitive impairment and may thus contribute to successful treatment of the underlying condition.
Additional Specification	Blood tests: during the first 6 weeks after the initial diagnosis
German References	Treatment recommendations of the Drug Commission of the German Medical Association 2004: Dementia; Witten/Herdecke University, 2005: Dementia: Guidelines for Diagnosis and Treatment; Guidelines of the German Society for Neurology, 2005: Diagnosis of Degenerative Dementia
Denominator-/ Numerator Description	Denominator: List of all patients aged 65 and over who were newly diagnosed with dementia (ICD code) within the last 12 months Numerator: Examination of all denominator medical records for the following statement: The following laboratory blood tests were performed: blood count, TSH, electrolytes, glucose, vitamin B12
Type of indicator	Process Quality
Original Indicator	If a VE is newly diagnosed with dementia, then a complete blood count, thyroid testing, electrolytes, liver function tests, glucose, blood urinary nitrogen, serum B12, and a syphilis test should be performed, because abnormalities in these laboratory tests may identify common and treatable conditions that can manifest as and contribute to cognitive impairment
Original Source	RAND Corporation: RAND ACOVE-3-Set

Rating of the Indicato (Rating Process) and in the Feasibility Study

The indicator was withdrawn for content-related reasons.

INDICATOR DEMENTIA – MEDICATION REVIEW

Indicator	Percentage of patients aged 65 and over, newly diagnosed with dementia within the last 12 months whose medication was reviewed for any substances which may increase cognitive impairment
Numerator	Number of patients aged 65 and over, newly diagnosed with dementia within the last 12 months whose medication was reviewed for any substances which may increase cognitive impairment
Denominator	Number of all patients aged 65 and over, newly diagnosed with dementia within the last 12 months
Additional Specification	Substances which may increase cognitive impairment: e.g. antidepressants, anxiolytics, hypnotics, sedatives, antiarrhythmics, antihypertensives, anticonvulsants (DEGAM Guidelines for Dementia, 2008)
Rationale	In this case the percentage of patients aged 65 and over newly diagnosed with dementia within the last 12 months whose medication was reviewed for any substances which may increase cognitive impairment is calculated. The aim is to recognise reversible causes of dementia and to thus make treatment accessible.
German References	Treatment recommendations of the Drug Commission of the German Medical Association, 2004: Dementia; Witten/Herdecke University, 2005: Dementia: Guidelines for Diagnosis and Treatment; Guidelines of the German Society for Neurology, 2005: Treatment of Degenerative Dementia, DEGAM Guidelines for Dementia, 2008
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with dementia (ICD code), receiving an initial diagnosis of dementia within this period and ≥ 65 years of age Numerator: Examination of all denominator medical records for the following statement: Medication was reviewed for any substances which may increase cognitive impairment
Type of indicator	Process Quality
Original Indicator	If a vulnerable elder screens positive for dementia, then a physician should review the patient´s medication (including over the counter) for any that may be associated with mental status changes, because medications can increase cognitive, physical, or functional disability; hasten decline; or nessecitate institutionalization.
Original Source	RAND Corporation: RAND ACOVE-3-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	89%
Indicator feasible	41%
Indicator clinically relevant	73%

INDICATOR DEMENTIA - AVAILABLE SUPPORT

Indicator	Percentage of patients aged 65 and over with dementia within the last 12 months who, with the involvement of relatives/caregivers, were given information on dementia diagnosis, prognosis and available support
Numerator	Number of patients aged 65 and over with dementia within the last 12 months who, with the involvement of relatives/caregivers, were given information on dementia diagnosis, prognosis and available support
Denominator	Number of all patients aged 65 and over with dementia within the last 12 months
Additional Specification	Available Support: e.g. social services, counselling, self-help groups, educational interventions, dementia care concepts, physiotherapy, behaviour therapy
Rationale	In this case the percentage of patients aged 65 and over with dementia within the last 12 months who, with the involvement of relatives/caregivers, were given information on available support is calculated. In the case of advanced dementia syndrome, information regarding institutions and contact people, including local state help, is important. Relatives and other possible caregivers should be involved as early as possible in order to reduce the need for nursing care.
German References	Treatment recommendations of the Drug Commission of the German Medical Association, 2004: Dementia; Witten/Herdecke University, 2005: Dementia: Guidelines for Diagnosis and Treatment; Guidelines of the German Society for Neurology, 2005: Treatment of Degenerative Dementia, DEGAM Guidelines for Dementia, 2008
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with dementia (ICD code), who received an initial diagnosis of dementia within the last 12 months and ≥ 65 years of age Numerator: Examination of all denominator medical records for the following statement: Patient was given information on dementia diagnosis, prognosis and available support with the involvement of relatives/caregivers
Type of indicator	Process Quality
Original Indicator	If a vulnerable elder with dementia has a caregiver, then the patient or caregiver should be given information on dementia diagnosis, prognosis, and associated behavioral symptoms; home occupational safety; and community resources, because the patient's nursing home placement can be delayed and quality of life for the caregiver can be improved through educational interventions and comprehensive support and counseling.
Original Source	RAND Corporation: RAND ACOVE-3-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	89%
Indicator feasible	31%
Indicator clinically relevant	58%

2.7 Depression

DEPRESSION - CRITERIA FOR DIAGNOSIS

Percentage of patients receiving an initial diagnosis of depression or a new episode of the disorder, whose diagnosis was established using ICD-10 criteria

DEPRESSION - ASSESSMENT OF SEVERITY

Percentage of patients newly diagnosed with depression who had an assessment of severity at the outset of treatment using a reliable assessment tool

DEPRESSION - MEDICATION

Percentage of patients with depression who have medical record documentation of improvement of symptoms within four to six weeks of starting antidepressant treatment and whose antidepressant medication was continued for at least four additional months

DEPRESSION - PATIENT REGISTER

Percentage of patients diagnosed with depression

DEPRESSION - SCREENING FOR CHD AND/OR DIABETES

Percentage of patients with a diagnosis of diabetes mellitus and/or coronary heart disease who were screened for depression on one occasion within the last 12 months using 2 screening questions

DEPRESSION - SUICIDE RISK

Percentage of patients who had a suicide risk assessment completed at each consultation

INDICATOR DEPRESSION - CRITERIA FOR DIAGNOSIS

Indicator	Percentage of patients receiving an initial diagnosis of depression or a new episode of the disorder within the last 12 months, whose diagnosis was established using ICD-10 criteria
Numerator	Number of patients receiving an initial diagnosis of depression or a new episode of the disorder within the last 12 months, whose diagnosis was established using ICD-10 criteria
Denominator	Number of all patients receiving an initial diagnosis of depression or a new episode of the disorder within the last 12 months
Rationale	In this case the percentage of patients receiving an initial diagnosis of depression or a new episode of the disorder within the last 12 months and whose diagnosis was established using ICD-10 criteria is calculated. The aim is to objectify both the diagnosis and severity established by examining the ICD-10 criteria.
Denominator-/ Numerator Description	Denominator: List of all patients receiving an initial diagnosis of depression or a new episode of the disorder within the last 12 months Numerator: Examination of all denominator medical records for the following statement: Diagnosis made using ICD-10 criteria
Type of indicator	Process Quality
Original Indicator	Percentage of patients with a diagnosis of major depressive disorder who met the DSM–IV™ criteria during the visit in which the new diagnosis or recurrent episode was identified.
Original Source	American Medical Association, Physician Consortium for Performance Improvement: National Quality Forum (NQF) Consensus Standards Ambulatory Care

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR DEPRESSION - ASSESSMENT OF SEVERITY

Indicator	Percentage of patients newly diagnosed with depression within the last 12 months who had an assessment of severity at the latest at the outset of treatment using a reliable assessment tool
Numerator	Number of patients newly diagnosed with depression within the last 12 months who had an assessment of severity at the latest at the outset of treatment using a reliable assessment tool
Denominator	Number of all patients newly diagnosed with depression within the last 12 months
Additional Specification	Reliable assessment tools: e.g.: Patient Health Questionnaire-Depression (PHQ-D; Löwe et al., 2001; Spitzer et al., 1999), Beck Depression Inventory (BDI; Beck et al., 1961; Hautzinger, Bailer, Keller & Worrall, 1995; BDI II: Beck, Steer & Braun, 1996; German Hautzinger, Keller & Kühner, 2006), Hospital Anxiety and Depression Scale (HADS; Herrmann, Buss & Snaith, 1993), Classification using ICD-10 criteria
Rationale	In this case the percentage of patients newly diagnosed with depression within the last 12 months and who had an assessment of severity at the outset of treatment using a reliable assessment tool is calculated. The severity of depression is a key factor when deciding on which course of treatment should be followed and should therefore be established as objectively as possible using a reliable assessment tool.
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with depression (ICD code), receiving an initial diagnosis of depression within the last 12 months Numerator: Examination of all denominator medical records for the following statement: Assessment of severity was, at the latest, carried out at the outset of treatment using a reliable assessment tool and this is documented in the medical record
Type of indicator	Process Quality
Original Indicator	In those patients with a new diagnosis of depression, recorded between the preceeding1 April to 31 March, the percentage of patients who have had an assessment of severity at the outset of treatment using an assessment tool validated for use in primary care.
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	85%
Indicator feasible	34%
Indicator clinically relevant	59%

INDICATOR DEPRESSION - MEDICATION

Indicator	Percentage of patients with depression within the last 12 months who have medical record documentation of improvement of symptoms within four to six weeks of starting antidepressant treatment and whose antidepressant medication was continued for at least four additional months

Numerator	Number of patients with depression within the last 12 months who have medical record documentation of improvement of symptoms within four to six weeks of starting antidepressant treatment and whose antidepressant medication was continued for at least four additional months
Denominator	Number of patients with depression within the last 12 months who have medical record documentation of improvement of symptoms within four to six weeks of starting antidepressant treatment
Rationale	In this case the percentage of patients with depression and who have medical record documentation of improvement of symptoms within four to six weeks of starting antidepressant treatment and should be continued on an antidepressant for at least four additional months is calculated. The objective is to achieve a state of remission using on-going medicinal treatment following successful acute treatment.
Denominator-/ Numerator Description	Denominator: List of all patients with depression within the last 12 months (ICD code) who have medical record documentation of improvement of symptoms within four to six weeks of starting antidepressant treatment Numerator: Examination of all denominator medical records for the following statement: Patients were continued on an antidepressant for at least four additional months
Type of indicator	Process Quality
Original Indicator	Patients with major depression who have medical record documentation of improvement of symptoms within 6 weeks of starting antidepressant treatment should be continued on an antidepressant for at least 4 additional months.
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR DEPRESSION - PATIENT REGISTER

Indicator	Percentage of patients diagnosed with depression within the last 12 months

Numerator	Number of patients diagnosed with depression within the last 12 months
Denominator	Number of all patients within the last 12 months
Rationale	In this case the percentage of patients within the last 12 months who were diagnosed with depression is calculated. Depression is one of the most frequent and, in the majority of cases, underestimated illnesses. A register of patients suffering from depression makes it easier to treat this patient group effectively. Identifying the target population (patients with depression) in a register is also a prerequisite for ascertaining other indicators.
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months Numerator: Examination of all denominator medical records for the following statement: Diagnosis of depression (ICD code)
Type of indicator	Process Quality
Original Indicator	Percentage of patients diagnosed with depression
Original Source	AQUA Institute: Local Health Care Fund Quality Indicators for Doctor Networks

Rating of the Indicator - Rating Process

Indicator relevant?	no
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR DEPRESSION - SCREENING FOR CHD AND/OR DIABETES

Indicator	Percentage of patients newly diagnosed with diabetes mellitus and/or coronary heart disease within the last 12 months who were screened for depression within the last 12 months using 2 screening questions
Numerator	Number of patients newly diagnosed with diabetes mellitus and/or coronary heart disease within the lat 12 months who were screened for depression within the last 12 months using 2 screening questions
Denominator	Patients newly diagnosed with diabetes mellitus and/or coronary heart disease within the last 12 months
Additional Specification	a) Main symptoms: depressive mood, loss of interest/joylessness, increased fatigue, lack of drive b) Additional symptoms: reduced concentration/attention, low level of self-esteem/self-confidence, feelings of guilt/worthlessness, negative and pessimistic outlook, suicidal thoughts/behaviour Possible tools for early detection: WHO-Five Well-Being Index [WHO, 1998], Patient Health Questionnaire (abbreviated to PHQ-D) [Läwe et al., 2001; Spizer et al., 1999], 2-Question Test [Whooley et al., 1997]
Rationale	In this case the percentage of patients diagnosed with diabetes mellitus and/or coronary heart disease within the last 12 months and who were screened for depression on one occasion within the last 12 months using 2 screening questions is calculated. Since depressive disorders have high comorbidity with cardiovascular diseases, measures should be taken when caring for this high-risk group in order to ensure early detection.
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with diabetes mellitus and/or CHD, newly diagnosed within the last 12 months Numerator: Examination of all denominator medical records for the following statement: The patient was screened for depression within the last 12 months using 2 screening questions
Type of indicator	Process Quality
Original Indicator	The percentage of patients with diabetes and/or coronary heart disease (CHD) for whom case finding for depression has been undertaken on one occasion during he previous 15 months using two standard screening questions.
Original Source	British Medical Association: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	79%
Indicator feasible	26%
Indicator clinically relevant	35%

INDICATOR DEPRESSION - SUICIDE RISK

Indicator	Percentage of patients diagnosed with depression within the last 12 months who had a suicide risk assessment completed at each consultation

Numerator	Number of patients diagnosed with depression within the last 12 months who had a suicide risk assessment completed at each consultation
Denominator	Number of all patients diagnosed with depression within the last 12 months
Additional Specification	Suicide Risk Assessment: clinical assessment, examination if necessary, for example by enquiring about risk features
Rationale	In this case the percentage of patients diagnosed with depression within the last 12 months and who had a suicide risk assessment completed at each consultation is calculated. The objective is to regularly assess the patient's current suicide risk so as to start any appropriate therapy management in good time.
Denominator-/ Numerator Description	Denominator: List of all patients with depression within the last 12 months (ICD code) Numerator: Examination of all denominator medical records for the following statement: Assessment of suicide risk completed at each consultation
Type of indicator	Process Quality
Original Indicator	Percentage of patients who had a suicide risk assessment completed at each visit
Original Source	American Medical Association, Physician Consortium for Performance Improvement: National Quality Forum (NQF) Consensus Standards Ambulatory Care

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

2.8 Epilepsy

EPILEPSY - SEIZURE PREVENTION

Percentage of patients on drug treatment for epilepsy who have been seizure-free for the last 12 months and whose medical record contains documentation of this

EPILEPSY - RECORDING SEIZURE FREQUENCY

Percentage of patients on drug treatment for epilepsy who have a record of seizure frequency

EPILEPSY - INFORMATION ON ANTIEPILEPTICS

Percentage of patients who were informed about common and serious side effects of specific antiepileptic drugs prescribed

INDICATOR EPILEPSY - SEIZURE PREVENTION

Indicator	Percentage of patients on drug treatment for epilepsy within the last 12 months who have been seizure-free for the last 12 months and whose medical record contains documentation of this
Numerator	Number of patients on drug treatment for epilepsy within the last 12 months who have been seizure-free for the last 12 months and whose medical record contains documentation of this
Denominator	Number of all patients on drug treatment for epilepsy within the last 12 months
Rationale	In this case the percentage of patients suffering from epilepsy within the last 12 months, who are on drug treatment and whose medical record contains documentation that they have been seizure-free for the last 12 months is calculated. The objective of effective epilepsy treatment is to control seizure frequency
German References	Guidelines of the German Society for Neuropaediatrics: Diagnostic Principles for Epilepsy in Children, 2008 (S2); German Society for Neurology: Epilepsy in Adults, 2005 (S1)
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with epilepsy (ICD code) within the last 12 months Numerator: Examination of all denominator medical records for the following statement: The patient has been seizure-free within the last 12 months.
Type of indicator	Outcome Quality
Original Indicator	The percentage of patients aged 18 and over on drug treatment for epilepsy who have been seizure free for the last 12 months recorded in the last 15 months.
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	88%
Indicator feasible	34%
Indicator clinically relevant	64%

INDICATOR EPILEPSY - RECORDING SEIZURE FREQUENCY

Indicator	Percentage of patients on drug treatment for epilepsy within the last 12 months who have a record of seizure frequency within the last 12 months
Numerator	Number of all patients on drug treatment for epilepsy within the last 12 months who have a record of seizure frequency within the last 12 months
Denominator	Number of all patients on drug treatment for epilepsy within the last 12 months
Rationale	In this case the percentage of patients suffering from epilepsy who have been on drug treatment within the last 12 months and who have a record of seizure frequency within the last 12 months is calculated. The objective is to assess the progress of the illness by determining and recording seizure frequency in a structured manner and to make decisions about which course of treatment should be followed based on this information.
German References	Guidelines of the German Society for Neuropaediatrics: Diagnostic Principles for Epilepsy in Children, 2008 (S2); German Society for Neurology: Epilepsy in Adults, 2005 (S1)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with epilepsy (ICD code) and on antiepileptic drug treatment Numerator: Examination of all denominator medical records for the following statement: Records of seizure frequency
Type of indicator	Process Quality
Original Indicator	The percentage of patients aged 18 and over on drug treatment for epilepsy who have a record of seizure frequency in the previous 15 months.
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	34%
Indicator clinically relevant	68%

INDICATOR EPILEPSY - INFORMATION ON ANTIEPILEPTICS

Indicator	Percentage of patients diagnosed with epilepsy within the last 12 months who were informed about common and serious side effects of specific antiepileptic drugs prescribed
Numerator	Number of patients diagnosed with epilepsy within the last 12 months who were informed about common and serious side effects of specific antiepileptic drugs prescribed
Denominator	Number of all patients diagnosed with epilepsy within the last 12 months
Rationale	In this case the percentage of patients diagnosed with epilepsy within the last 12 months and who were informed about common and serious side effects of specific antiepileptic drugs prescribed is calculated. The pharmacotherapy of epilepsy is, in many cases, associated with adverse drug reactions. In order to achieve the objective of adjusting dosages and switching drugs in good time, it is important to inform and sensitize patients regarding the corresponding side effects, so if any such effects do occur they make a doctor's appointment promptly.
German References	Guidelines of the German Society for Neuropaediatrics: Diagnostic Principles for Epilepsy in Children, 2008 (S2); German Society for Neurology: Epilepsy in Adults, 2005 (S1)
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with epilepsy (ICD code) within the last 12 months Numerator: Examination of all denominator medical records for the following statement: The patient was informed about common and serious side effects of the antiepileptic drugs prescribed
Type of indicator	Process Quality
Original Indicator	Family informed about potential common or serious side effects of specific AED prescribed, outlining plans to monitor.
Original Source	Caplin DA, Rao JK, Filloux F, Bale JF, Van Orman C: Development of Performance Indicators for the Primary Care, Management of Pediatric Epilepsy: Expert Consensus Recommendations Based on the Available Evidence. Epilepsia, 47(12):2011–2019, 2006 (no Set)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	86%
Indicator feasible	34%
Indicator clinically relevant	53%

2.9 Gynaecological Indicators

GYNAECOLOGICAL INDICATORS - CHLAMYDIA SCREENING

Percentage of women aged 25 and below who are sexually active and who had at least one test for chlamydia every year

GYNAECOLOGICAL INDICATORS - PREGNANCY – SMOKING CESSATION

Percentage of pregnant women who smoke and who discussed strategies for giving up smoking with their physician at least once during the pregnancy

GYNAECOLOGICAL INDICATORS - SEXUALLY TRANSMITTED DISEASES - COUNSELLING

Percentage of patients whose medical record documents that counselling regarding sexually transmitted diseases was given as part of family planning advice

GYNAECOLOGICAL INDICATORS - CERVICAL SCREENING - TEST FOLLOW-UPS

Percentage of patients having abnormal Pap test results whose medical record contains documentation that these results were followed up

INDICATOR GYNAECOLOGICAL INDICATORS - CHLAMYDIA SCREENING

Indicator	Percentage of women aged 25 and below within the last 12 months who are sexually active and who had at least one test for chlamydia every year
Numerator	Number of women aged 25 and below within the last 12 months who are sexually active and who had at least one test for chlamydia every year
Denominator	Number of all women aged 25 and below within the last 12 months who are sexually active
Rationale	In this case the percentage of young women within the last 12 months who are sexually active and who underwent chlamydia screening within the last 12 months is calculated. The objective is to increase the number of women undergoing the chlamydia screening introduced in 2008. The test and subsequent treatment of an infection demonstrably lead to a considerable reduction in serious complications.
German References	Directives of the German Federal Joint Committee (G-BA) for Family Planning and Abortion
Denominator-/ Numerator Description	Denominator: List of all patients aged 25 and below within the last 12 months who are sexually active. Numerator: Examination of all denominator medical records for the following statement: A chlamydia test was taken at least once every year
Type of indicator	Process Quality
Original Indicator	Percentage of eligible women who were identified as sexually active who had at least one test for chlamydia during the measurement year
Original Source	National Committee for Quality Assurance (NCQA): National Quality Forum (NQF) Consensus Standards Ambulatory Care

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR GYNAECOLOGICAL INDICATORS - PREGNANCY – SMOKING CESSATION

Indicator	Percentage of pregnant women aged 14 and over who attended check-ups during the pregnancy, who smoke and who discussed strategies for giving up smoking with their physician at least once during the pregnancy
Numerator	Number of pregnant women aged 14 and over who attended check-ups during the pregnancy, who smoke and who discussed strategies for giving up smoking with their physician at least once during the pregnancy
Denominator	Number of all pregnant patients aged 14 and over who attended check-ups during the pregnancy
Rationale	In this case the percentage of pregnant women aged 14 and over who attended check-ups during the pregnancy, who had the risk factor of being a smoker and who discussed strategies for giving up smoking with their physician at least once during the pregnancy is calculated. On-going counselling to stop smoking, in particular in the case of pregnant women, with the aim of abstaining from nicotine reduces associated risks, such as a low birth weight.
German References	Guidelines of the German Society for Addiction Research and Addiction Therapy and the German Society of Psychiatry, Psychotherapy and Neurology, 2004: Smoking cessation; Treatment recommendations of the Drug Commission of the German Medical Association: Tobacco Addiction, 2001 (S2); Directives of the German Federal Joint Committee (G-BA regarding Medical Care During Pregnancy and Following Birth, 2008
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months who smoked during pregnancy (ICD code) and ≥ 14 years of age Numerator: Examination of all denominator medical records for the following statement: Strategies for giving up smoking were discussed with a physician at least once during the pregnancy
Type of indicator	Process Quality
Original Indicator	Pregnant women identified as smokers should receive counseling to stop smoking from their physician.
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	87%
Indicator feasible	34%
Indicator clinically relevant	58%

Note: When interpreting the outcome of the feasibility study it should be noted that the indicators were rated based on the selective competence of only 9 medical experts.

INDICATOR GYNAECOLOGICAL INDICATORS - SEXUALLY TRANSMITTED DISEASES - COUNSELLING

Indicator	Percentage of patients whose medical record documents that counselling regarding sexually transmitted diseases was given as part of family planning advice within the last 12 months

Numerator	Number of patients whose medical record documents that counselling regarding sexually transmitted diseases was given as part of family planning advice within the last 12 months
Denominator	Number of all patients who received family planning advice within the last 12 months
Rationale	In this case the percentage of women who, as part of family planning advice, also received counselling regarding the significance of sexually transmitted siseases and ways of preventing them within the last 12 months is calculated. The objective is to improve the rate of prevention of sexually transmitted diseases
German References	Directives of the German Federal Joint Committee (G-BA) for Family Planning and Abortion
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months who received family planning advice Numerator: Examination of all denominator medical records for the following statement: Counselling regarding sexually transmitted diseases was given as part of family planning advice
Type of indicator	Process Quality
Original Indicator	Record that counseling regarding sexually transmitted diseases is offered to sexually active patients
Original Source	Barnsley J, Berta W, Cockerill R, MacPhail J, Vayda E: Indetifying Performance Indicators for Family Practice. Can Fam Physician; 51:700-701, 2005 (no set)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	22%
Indicator clinically relevant	54%

Note: When interpreting the outcome of the feasibility study it should be noted that the indicators were rated based on the selective competence of only 8 medical experts.

INDICATOR GYNAECOLOGICAL INDICATORS - CERVICAL SCREENING - FOLLOW-UP EXAMINATIONS

Indicator	Percentage of patients aged 20 and over having abnormal Pap test results in the context of early cancer detection within the last 12 months whose medical record contains documentation that these results were followed up
Numerator	Number of patients aged 20 and over having an abnormal Pap test results in the context of early cancer detection within the last 12 months whose medical record contains documentation that these results were followed up
Denominator	Number of patients aged 20 and over having abnormal Pap test results in the context of early cancer detection within the last 12 months
Additional Specification	Abnormal Pap test results: Group 3 and above based on the Munich Nomenclature II
Rationale	In this case the percentage of patients aged 20 and over having abnormal results of a cytological examination in the context of early cancer detection within the last 12 months and whose medical record contains documentation that these results were followed up is calculated. The objective is to increase the quality of the follow-up of abnormal results and thus the efficacy of the screening programme.
German References	Diagnosis and Treatment of Cervical Carcinomas: Interdisciplinary Guidelines of the German Cancer Society (DKG) and the German Society for Gynaecology and Obstetrics (DGGG) (S2); Directives of the German Federal Joint Committee (G-BA) regarding the Early Detection of Cancer
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months having abnormal Pap test results in the context of early cancer detection (ICD code) and ≥ 20 years of age Numerator: Examination of all denominator medical records for the following statement: There is documentation that the results were followed up
Type of indicator	Process Quality
Original Indicator	Record that patients who have abnormal Pap test results are followed up
Original Source	Barnsley J, Berta W, Cockerill R, MacPhail J, Vayda E: Indetifying Performance Indicators for Family Practice. Can Fam Physician; 51:700-701, 2005 (no set)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	91%
Indicator feasible	44%
Indicator clinically relevant	96%

Note: When interpreting the outcome of the feasibility study it should be noted that the indicators were rated based on the selective competence of only 9 medical experts.

2.10 Urinary Incontinence

URINARY INCONTINENCE - TREATMENT OPTIONS

Percentage of patients newly diagnosed with urinary incontinence and with whom treatment options were discussed

URINARY INCONTINENCE - DIFFERENTIAL DIAGNOSIS

Percentage of patients newly diagnosed with urinary incontinence, the origin of which was identified by way of differential diagnosis

INDICATOR URINARY INCONTINENCE - TREATMENT OPTIONS

Indicator	Percentage of patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months and with whom treatment options were discussed within 3 months
Numerator	Number of patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months and with whom treatment options were discussed within 3 months
Denominator	Number of all patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months
Rationale	In this case the percentage of patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months and with whom treatment options were discussed within 3 months is calculated. Discussion with the patient and family or caregiver makes it possible to match the treatment plan to the patient's wishes and ideas and thus improves compliance with the treatment plan. The three main categories of treatment for urinary incontinence are behavioural therapy, including physical therapy, drug therapy and surgery.
German References	German Society of General Practice and Family Medicine: Guidelines for Urinary Incontinence, Guideline Group Hessen: GP Guidelines: Pharmacotherapy in Elderly Patients, 2006 (S2)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months newly diagnosed with urinary incontinence (ICD code) and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: Treatment options were discussed
Type of indicator	Process Quality
Original Indicator	If a VE has new UI or established UI with bothersome symptoms, then treatment options should be discussed within 3 months, because an explicit discussion of treatment options with a patient, family, or caregiver may improve the likelihood that a treatment plan consistent with the patient's goals is formulated and that the patient, family, or caregiver adheres to the treatment plan.
Original Source	RAND Corporation: RAND ACOVE-3-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	33%
Indicator clinically relevant	53%

INDICATOR URINARY INCONTINENCE - DIFFERENTIAL DIAGNOSIS

Indicator	Percentage of patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months, the origin of which was identified by way of differential diagnosis
Numerator	Number of patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months, the origin of which was identified by way of differential diagnosis
Denominator	Number of all patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months
Rationale	In this case the percentage of patients aged 18 and over newly diagnosed with urinary incontinence within the last 12 months and for whom the type of urinary incontinence was identified is calculated. Identification by way of differential diagnosis is desired so therapeutic measures can be discussed and introduced in accordance with the classification.
German References	German Society of General Practice and Family Medicine: Guidelines for Urinary Incontinence; Guideline Group Hessen: GP Guidelines: Pharmacotherapy in Elderly Patients, 2006 (S2)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with urinary incontinence (ICD code), receiving an initial diagnosis of urinary incontinence within the last 12 months and ≥ 18 years of age
	Numerator: Examination of all denominator medical records for the following statement: The origin of the urinary incontinence was identified by way of differential diagnosis
Type of indicator	Process Quality
Original Indicator	Percentage of female patients aged 65 years and older with a diagnosis of urinary incontinence whose urinary incontinence was characterized at least once within 12 months.
Original Source	AQA Alliance: AQA-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	90%
Indicator feasible	36%
Indicator clinically relevant	59%

2.11 Heart Failure

HEART FAILURE - DIAGNOSTICS

Percentage of patients with heart failure with quantitative or qualitative results of left ventricular function assessment recorded

HEART FAILURE - WEIGHT MEASUREMENT

Percentage of patient visits with weight measurement recorded for patients with congestive heart failure

INDICATOR HEART FAILURE - DIAGNOSTICS

Indicator	Percentage of patients aged 18 and over with heart failure within the last 12 months and with quantitative or qualitative results of left ventricular function assessment recorded
Numerator	Number of patients aged 18 and over with left heart failure within the last 12 months and with quantitative or qualitative results of left ventricular function assessment recorded
Denominator	Number of all patients aged 18 and over with left heart failure within the last 12 months
Rationale	In this case the percentage of patients aged 18 and over with left heart failure within the last 12 months and with quantitative or qualitative results of left ventricular function assessment recorded is calculated. The aim of this indicator is to objectify the diagnosis method by quantifying left ventricular function and to improve causal treatment of heart failure using qualitative information. The best diagnostic method is echocardiography.
German References	Guidelines of the German Society of General Practice and Family Medicine, 2006 (S3). Treatment recommendations of the Drug Commission of the German Medical Association: Congestive Heart Failure, 2007; Guidelines for the Treatment of Congestive Heart Failure, German Society for Cardiology - Heart and Circulation Research, 2005
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with left heart failure (ICD code) and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: Quantitative or qualitative results of left ventricular function assessment are recorded
Type of indicator	Process Quality
Original Indicator	Percentage of patients with HF with quantitative or qualitative results of left ventricular function (LVF) assessment recorded.
Original Source	American College of Cardiology, American Heart Association, Physician Consortium for Performance Improvement: AQA-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	88%
Indicator feasible	38%
Indicator clinically relevant	67%

INDICATOR HEART FAILURE - WEIGHT MEASUREMENT

Indicator	Percentage of patient visits with weight measurement recorded for patients aged 18 and over with congestive heart failure within the last 12 months
Numerator	Number of patient visits with weight measurement recorded for patients aged 18 and over with congestive heart failure within the last 12 months
Denominator	Number of all patient visits for patients aged 18 and over with congestive heart failure within the last 12 months
Additional Specification	Weight measurement: carried out at the practice or by the patient him-/herself at home
Rationale	In this case the percentage of cases with a diagnosis of heart failure in patients aged 18 and over within the last 12 months and for whom weight was measured and documented within the last 12 months is calculated. The objective of this indicator is to optimise symptomatic treatment of heart failure based on regular weight checks.
German References	Guidelines of the German Society of General Practice and Family Medicine, 2006 (S3). Treatment recommendations of the Drug Commission of the German Medical Association: Congestive Heart Failure, 2007; Guideline Group Hessen: GP Guidelines for Congestive Heart Failure, 2007; Guidelines for the Treatment of Congestive Heart Failure, German Society for Cardiology - Heart and Circulation Research, 2005
Denominator-/ Numerator Description	Denominator: List of all patients diagnosed with congestive heart failure (NYHA II-IV) (ICD code) ≥ 18 years of age within the last 12 months Numerator: Examination of all denominator medical records for the following statement: Number of patients who presented at the practice within the last 12 months with recorded weight measurement
Type of indicator	Process Quality
Original Indicator	Percentage of patient visits with weight measurement recorded for patients aged greater than or equal to 18 years with diagnosed heart failure.
Original Source	American College of Cardiology, American Heart Association, Physician Consortium for Performance Improvement: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	89%
Indicator feasible	34%
Indicator clinically relevant	69%

2.12 Immunisations

IMMUNISATIONS - INFLUENZA VACCINE

Percentage of patients aged 60 and over who were offered influenza vaccine within the last 12 months or whose medical record contains documentation that they received it elsewhere

IMMUNISATIONS - ADOLESCENT IMMUNISATION STATUS

Percentage of adolescents who are on time with all recommended immunisations

IMMUNISATIONS - INFANT IMMUNISATION STATUS

Percentage of children fully vaccinated by their second birthday

IMMUNISATIONS - TETANUS AND DIPHTHERIA

Percentage of patients with a notation of the date that they received a tetanus**/**diphtheria (booster) immunisation within the last 10 years

INDICATOR IMMUNISATIONS – INFLUENZA VACCINE

Indicator	Percentage of patients aged 60 and over within the last 12 months who were offered influenza vaccine within this period or whose medical record contains documentation that they received it elsewhere
Numerator	Number of patients aged 60 and over within the last 12 months who were offered influenza vaccine within this period or whose medical record contains documentation that they received it elsewhere
Denominator	Number of all patients aged 60 and over within the last 12 months
Rationale	In this case the percentage of patients aged 60 and over within the last 12 months who were offered influenza vaccine within this period or whose medical record contains documentation that they received it elsewhere is calculated. The objective is to reduce the incidence of influenza among these patients by way of comprehensive prophylactic immunisation. Those aged 60 and above are at a greater risk of suffering worse from the viral disease. Immunisation is the most effective preventative measure.
German References	Epidemiological Bulletin No. 30, 2007: Recommendations of STIKO (German Permanent vaccination Commission) at the Robert Koch Institute
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months ≥ 60 years of age Numerator: Examination of all denominator medical records for the following statement: Notation of the date that a patient received/was offered influenza vaccine
Type of indicator	Process Quality
Original Indicator	All patients aged 65 and over should have been offered influenza vaccine annually or have documentation that they received it elsewhere
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	76%
Indicator feasible	44%
Indicator clinically relevant	56%

INDICATOR IMMUNISATIONS - ADOLESCENT IMMUNISATION STATUS

Indicator	Percentage of young people aged 12 to 18 within the last 12 months who are on time with recommended immunisations

Numerator	Number of young people aged 12 to 18 within the last 12 months who are on time with recommended immunisations
Denominator	Number of all young people aged 12 to 18 within the last 12 months
Additional Specification	see Epidemiological Bulletin 2007: Recommendations of STIKO (German Permanent Vaccination Commission) at the Robert Koch Institute
Rationale	In this case the percentage of young people aged from 12 to 18 within the last 12 months and who are on time with all recommended immunisations is calculated. Reference information is provided by the immunisation calendar listing the standard immunisations recommended by STIKO. The objective is for all adolescents to be completely immunised in accordance with STIKO recommendations. The immunisation calendar for children and adolescents includes vaccines against diphtheria, whooping cough, tetanus, haemophilius influenzae type b, hepatitis B, polio, measles, mumps, rubella, chicken pox, pneumococci, meningococci, human papilloma viruses (standard immunisation for girls). Irrespective of the dates specified, any missed immunisations should be received at a later date. The standard immunisations in the immunisation calendar are important to protect the health of individuals and of the general population.
German References	Epidemiological Bulletin No. 30, 2007: Recommendations of STIKO at the Robert Koch Institute
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months who presented at least once at the practice and aged from 12 to 18 Numerator: Examination of all denominator medical records for the following statement: The patient is on time with all recommended immunisations
Type of indicator	Process Quality
Original Indicator	Immunizations: percentage of adolescents who are on time with recommended immunizations (Hep B, MMR, tetanus, and verification of varicella immunity).
Original Source	Institute for Clinical Systems Improvement, ICSI/NQMC/AHRQ-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	84%
Indicator feasible	36%
Indicator clinically relevant	61%

INDICATOR IMMUNISATIONS - INFANT IMMUNISATION STATUS

Indicator	Percentage of children who, within the last 12 months, turned 2 years of age and are fully vaccinated
Numerator	Number of children who, within the last 12 months, turned 2 years of age and are fully vaccinated
Denominator	Number of children who turned 2 years of age within the last 12 months
Additional Specification	Immunisations against the following diseases: Diphtheria, tetanus, whooping cough, haemophilius influenzae b, polio, hepatitis B, measles, mumps, rubella, chicken pox
Rationale	In this case the percentage of children who, within the last 12 months, turned 2 years of age and are fully vaccinated is calculated. The objective is for all children to be fully vaccinated in accordance with recommendations from STIKO (German Permanent Vaccination Commission) at the Robert Koch Institute by their second birthday. The immunisation calendar for babies and children includes immunisations against diphtheria, whooping cough, tetanus, haemophilius influenzae type b, hepatitis B, polio, measles, mumps, rubella, chicken pox, pneumococci and meningococci. The standard immunisations in the immunisation calendar are important to protect the health of individuals and of the general population.
German References	Epidemiological Bulletin No. 30, 2007: Recommendations of STIKO at the Robert Koch Institute
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months who presented at least once at the practice and are aged 2 and above Numerator: Examination of all denominator medical records for the following statement: Patient is fully vaccinated by their second birthday
Type of indicator	Process Quality
Original Indicator	Children fully vaccinated by second birthday
Original Source	District Health Boards New Zealand, DHBNZ / DHBNZ-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	84%
Indicator feasible	49%
Indicator clinically relevant	72%

INDICATOR IMMUNISATIONS - TETANUS AND DIPHTHERIA

Indicator	Percentage of patients under the age of 50 who, within the last 12 months, presented at the practice and whose medical record contains a notation of the date that they received a tetanus and diphtheria immunisation within the last 10 years
Numerator	Number of patients aged 50 and below who, within the last 12 months, presented at the practice and whose medical record contains a notation of the date that they received a tetanus and diphtheria immunisation within the last 10 years
Denominator	Number of all patients aged 50 and below who presented at the practice within the last 12 months
Rationale	In this case the percentage of patients under the age of 50 who, within the last 12 months, presented at the practice and whose medical record contains a notation of the date that they received a tetanus and diphtheria (booster) immunisation within the last 10 years is calculated. The objective is to optimise prevention of the diseases in question by ensuring the target population is immunised in accordance with recommendations. Immunisation against diphtheria is generally administered together with immunisation against tetanus. In accordance with recommendations from STIKO (German Permanent Vaccination Commission) at the Robert Koch Institute, patients should be immunised if basic immunisation has not been carried out or is incomplete or if the last immunisation of the basic immunisation set or the last booster immunisation was received more than 10 years ago.
German References	Epidemiological Bulletin No. 30, 2007: Recommendations of STIKO at the Robert Koch Institute
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months having any ICD code and under the age of 50 Numerator: Examination of all denominator medical records for the following statement: Notation of the date a tetanus and diphtheria immunisation was received within the last 10 years
Type of indicator	Process Quality
Original Indicator	For patients under age 50, notation of the date that a patient received a tetanus/diphtheria booster within the last ten years should be included in the medical record.
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	85%
Indicator feasible	49%
Indicator clinically relevant	64%

2.13 Low Back Pain

LOW BACK PAIN – RED FLAGS

Percentage of patients with acute low back pain who received a focused medical history regarding warning signs (red flags)

LOW BACK PAIN - INCAPACITY TO WORK

Percentage of patients with acute low back pain and unable to work for more than 14 days

LOW BACK PAIN – IMAGING STUDIES

Percentage of patients with acute low back pain for whom imaging studies did not occur

INDICATOR LOW BACK PAIN – RED FLAGS

Indicator	Percentage of patients with acute low back pain within the last 12 months who received a focused medical history regarding warning signs (red flags)
Numerator	Number of patients with acute low back pain within the last 12 months who received a focused medical history regarding warning signs (red flags)
Denominator	Number of all patients with acute low back pain within the last 12 months
Additional Specification	Acute low back pain: Pain began within the last 4 weeks Definition of warning signs: Guidelines, treatment recommendations
Rationale	In this case the percentage of patients with acute low back pain within the last 12 months and who received a focused medical history regarding warning signs (red flags) is calculated. The objective is to identify patients who may have a more serious prognosis using warning signs (red flags). These flags are warning signs for a specific cause which often requires urgent diagnostic and therapeutic treatment.
German References	Guidelines of the German Society of General Practice and Family Medicine, 2007 (S3); Treatment recommendations of the Drug Commission of the German Medical Association: Low Back Pain, 2007
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months acute low back pain (ICD code) Numerator: Examination of all denominator medical records for the following statement: A focused medical history regarding warning signs (red flags) was carried out
Type of indicator	Process Quality
Original Indicator	Patients presenting with acute low back pain should receive a focused medical history and physical examination. The history should include questions about red flags in at least one of the following areas: spine fracture: trauma, prolonged use of steroids; cancer, history of cancer, unexplained weight loss, immunosuppression; infection: fever, IV drug use. Red flags for cauda equina syndrome (CES) or rapidly progressing neurologic deficit are: acute onset of urinary retention or overflow incontinence, loss of anal sphincter tone or fecal incontinence, saddle anesthesia, and global progressive motor weakness in the lower limbs.
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	94%
Indicator feasible	38%
Indicator clinically relevant	67%

INDICATOR LOW BACK PAIN - INCAPACITY TO WORK

Indicator	Percentage of patients with acute low back pain within the last 12 months and unable to work for more than 14 days
Numerator	Number of patients with acute low back pain within the last 12 months and unable to work for more than 14 days
Denominator	Number of all patients with acute low back pain within the last 12 months
Additional Specification	Pain lasting for less than 12 weeks Duration of incapacity to work: This is a set period of consecutive days (14 days), not working days.
Rationale	In this case the percentage of patients with acute low back pain within the last 12 months and unable to work for more than 14 days is calculated. The objective is to identify patients with an increased risk of developing chronic pain with the aim of reducing the duration of incapacity to work as much as possible since, according to study results, longer incapacity to work is a predictor of the development of chronic low back pain or a disadvantage when returning to work.
German References	Guidelines of the German Society of General Practice and Family Medicine, 2007 (S3); Treatment recommendations of the Drug Commission of the German Medical Association (AKdÄ): Low Back Pain, 2007
Denominator-/ Numerator Description	Denominator: List of all patients with acute low back pain within the last 12 months (ICD code) Numerator: Examination of all denominator medical records for the following statement: Incapacity to work for more than 14 days
Type of indicator	Outcome Quality
Original Indicator	Number of patients with acute low back pain and unable to work for more than 14 days
Original Source	AQUA Institute: Local Health Care Fund Quality Indicators for Doctor Networks

Rating of the Indicator - Rating Process

Indicator relevant?	no
Indicator feasible?	no

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR LOW BACK PAIN - IMAGING STUDIES

Indicator	Percentage of patients with acute low back pain within the last 12 months, for whom imaging studies did not occur
Numerator	Number of patients with acute low back pain within the last 12 months, for whom imaging studies did not occur
Denominator	Number of all patients with acute low back pain within the last 12 months
Additional Specification	Pain began within the last 4 weeks
Rationale	In this case the percentage of patients with acute low back pain within the last 12 months and for whom imaging studies did not occur is calculated. Once the existence of warning signs (red flags) has been ruled out, an imaging study is not initially indicated in the case of acute unspecified low back pain. The objective is to avoid the development of chronic low back pain by placing too much importance on radiological findings and to also counter the possibility of excessive care being provided in this area.
German References	Guidelines of the German Society of General Practice and Family Medicine, 2007 (S3). Treatment recommendations of the Drug Commission of the German Medical Association (AkdÄ): Low Back Pain, 2007
Denominator-/ Numerator Description	Denominator: List of all patients with acute low back pain within the last 12 months (ICD code) Numerator: Examination of all denominator medical records for the following statement: imaging studies did not occur
Type of indicator	Process Quality
Original Indicator	Use of imaging studies for low back pain: proportion of health plan members with acute low back pain for whom imaging studies did not occur
Original Source	National Committee for Quality Assurance (NCQA): National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	no

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

2.14 Practice Management

PRACTICE MANAGEMENT - HOME VISITS

The practice provides home visits for patients who have serious physical disabilities

PRACTICE MANAGEMENT - DRUG ALLERGIES

There is a standard procedure for the clear recording of drug allergies and adverse drug reactions

PRACTICE MANAGEMENT - REVIEWS OF SIGNIFICANT EVENTS

The practice has undertaken a minimum of three significant event reviews within the last year

PRACTICE MANAGEMENT - EMERGENCY DRUGS

There is a standard procedure for checking the expiry dates of emergency drugs on at least an annual basis

PRACTICE MANAGEMENT - PATIENT SURVEYS

The practice will have undertaken an approved patient survey within the last year

PRACTICE MANAGEMENT - TRAINING/UPDATING

There is a record of all practice-employed staff having attended training/updating in first aid within the last 36 months

INDICATOR PRACTICE MANAGEMENT - HOME VISITS

Indicator	Based on the last 12 months, the practice provides home visits for patients who have serious physical disabilities

Numerator	-
Denominator	-
Rationale	This indicator records whether, based on the last 12 months, the practice provides home visits for patients who have serious physical disabilities. The right to a home visit of patients who cannot frequent, or cannot reasonably frequent, the practice in person due to illness is thus ensured.
German References	Treatment recommendations of the Drug Commission of the German Medical Association; QEP-Qualitätsziel-Katalog® kompakt, revised version 2005, 1.1.5 (1)
Type of indicator	Structural Quality
Original Indicator	Practice provides home visits for patients who have serious physical disabilities.
Original Source	Barnsley J, Berta W, Cockerill R, MacPhail J, Vayda E: Can Fam Physician 2005;51:700-701

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	-
Indicator feasible	-
Indicator clinically relevant	61%

INDICATOR PRACTICE MANAGEMENT - DRUG ALLERGIES

Indicator	There is a standard procedure for the clear recording of drug allergies and adverse drug reactions within the last 12 months

Numerator	-
Denominator	-
Rationale	This indicator documents whether there is a standard procedure for the clear recording of drug allergies and adverse drug reactions. There should thus be clear and standardised documentation of events and the occurrence of allergic reactions to and side effects of drugs.
German References	Treatment recommendations of the Drug Commission of the German Medical Association; QEP-Qualitätsziel-Katalog® kompakt, revised version 2005, 1.3.2 (2)
Type of indicator	Structural Quality
Original Indicator	There is a designated place for the recording of drug allergies and adverse reactions in the notes and these are clearly recorded
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	-
Indicator feasible	-
Indicator clinically relevant	76%

INDICATOR PRACTICE MANAGEMENT - REVIEWS OF SIGNIFICANT EVENTS

Indicator	The practice has undertaken a minimum of three significant event reviews within the last year

Numerator	-
Denominator	-
Rationale	This indicator documents whether, within the last 12 months, the practice has undertaken a minimum of three significant event reviews. These enable employees to be involved and informed. They may also provide information regarding possibilities for improvement and proposed solutions.
German References	QEP-Qualitätsziel-Katalog® kompakt, revised version 2005, 2.1.4 (2)
Type of indicator	Process Quality
Original Indicator	The practice has undertaken a minimum of three significant event reviews within the last year
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	-
Indicator feasible	-
Indicator clinically relevant	86%

INDICATOR PRACTICE MANAGEMENT - EMERGENCY DRUGS

Indicator	The expiry dates of emergency drugs are checked in accordance with a standard procedure on at least an annual basis

Numerator	-
Denominator	-
Rationale	This indicator documents whether the expiry dates of emergency drugs are checked in accordance with a standard procedure at least on an annual basis. Each practice should thus be equipped with a functional emergency kit.
German References	Treatment recommendations of the Drug Commission of the German Medical Association; QEP-Qualitätsziel-Katalog® kompakt, revised version 2005, 1.7.2 (1)
Type of indicator	Process Quality
Original Indicator	There is a system for checking the expiry dates of emergency drugs on at least an annual basis
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	-
Indicator feasible	-
Indicator clinically relevant	88%

INDICATOR PRACTICE MANAGEMENT - PATIENT SURVEYS

Indicator	The practice will have undertaken an approved patient survey within the last year
Numerator	-
Denominator	-
Additional Specification	Examples of approved patient surveys: E.-M. Bitzer, M.-L. Dierks, F.-W. Schwartz: ZAP - Survey on Satisfaction with Ambulatory Care - Quality from a Patient's Perspective, Hannover Medical School; http://www2.mh-hannover.de/1608.html (accessed 04/2008) Pfaff H, Bentz J: Patient Survey: IfOS - Institute for Organisational Diagnosis and Social Research, Deutscher Ärzte-Verlag
Rationale	This indicator records whether the practice will have undertaken an approved patient survey within the last year. Patient surveys provide feedback and may provide information regarding possibilities for improvement.
German References	Drug Commission of the German Medical Association; QEP-Qualitätsziel-Katalog® kompakt, revised version 2005, 5.1.4 (2) QM Directives of the German Federal Joint Committee (G-BA): Quality Management Guidelines for Medical Care Provided by SHI-authorised Physicians, 2005, Federal Gazette 248:17329
Type of indicator	Process Quality
Original Indicator	The practice will have undertaken an approved patient survey each year.
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	no
Indicator feasible?	no

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

INDICATOR PRACTICE MANAGEMENT - TRAINING/UPDATING

Indicator	There is a record of all practice-employed staff (doctors and other employees) having attended training/updating in first aid within the last 36 months.

Numerator	-
Denominator	-
Additional Specification	Practice-employed staff: Doctors and other employees
Rationale	This indicator documents whether there is a record of all practice-employed staff (doctors and other employees) having attended training/updating in first aid within the last 36 months. It is thus ensured that patients requiring emergency attention are recognised and treated immediately
German References	Treatment recommendations of the Drug Commission of the German Medical Association; QEP-Qualitätsziel-Katalog® kompakt, revised version 2005, 1.7.1 (1) and (2)
Type of indicator	Structural Quality
Original Indicator	There is a record of all practice-employed staff having attended Training/updating in basic life support skills in the preceding 36 months.
Original Source	National Health Service (NHS): Quality and Outcomes Framework (QOF)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	-
Indicator feasible	-
Indicator clinically relevant	87%

2.15 Presbyacusis

PRESBYACUSIS - AMPLIFICATION

Percentage of patients with a hearing problem or complaint without reversible cause who were offered a formal evaluation for amplification

PRESBYACUSIS - EAR EXAMINATION

Percentage of patients failing a hearing screening test who had an ear examination and a formal audiological examination within 3 months

INDICATOR PRESBYACUSIS - AMPLIFICATION

Indicator	Percentage of patients aged 65 and over with a hearing problem or complaint without reversible cause within the last 12 months who were offered a formal evaluation for amplification

Numerator	Number of patients aged 65 and over with a hearing problem or complaint without reversible cause within the last 12 months who were offered a formal evaluation for amplification
Denominator	Number of all patients aged 65 and over with a hearing problem or complaint without reversible cause within the last 12 months
Rationale	In this case the percentage of patients aged 65 and over with a hearing problem or complaint without reversible cause within the last 12 months and who were offered a formal evaluation for amplification is calculated.
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months newly diagnosed with presbyacusis without reversible cause (ICD code) and ≥ 65 years of age Numerator: Examination of all denominator medical records for the following statement: The patient was offered a formal evaluation for amplification.
Type of indicator	Process Quality
Original Indicator	Patients age 65 and older noted to have a hearing problem or complaint without reversible cause or that persists despite treatment for reversible cause should have formal evaluation for amplification offered or discussed.
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	89%
Indicator feasible	37%
Indicator clinically relevant	53%

INDICATOR PRESBYACUSIS - EAR EXAMINATION

Indicator	Percentage of patients aged 65 and over who failed a hearing screening test within the last 12 months and who had an ear examination and a formal audiological examination within 3 months
Numerator	Number of patients aged 65 and over who failed a hearing screening test within the last 12 months and who had an ear examination and a formal audiological examination within 3 months
Denominator	Number of all patients aged 65 and over who failed a hearing screening test within the last 12 months
Rationale	In this case the percentage of patients aged 65 and over who failed a hearing screening test and who had an ear examination and a formal audiological examination within 3 months is calculated. The ear examination and audiometry are basic tests which provide information so as to classify the hearing problem or complaint by way of differential diagnosis.
Denominator-/ Numerator Description	Denominator: List of all patients aged 65 and over who failed a hearing screening test within the last 12 months Numerator: Examination of all denominator medical records for the following statement: An ear examination and a formal audiological examination were carried out within 3 months
Type of indicator	Process Quality
Original Indicator	If a person age 75 or older has a hearing problem or fails an audiologic screening, then he or she should have an ear examination within 3 months.
Original Source	RAND Corporation: RAND ACOVE-2-Set und ACOVE-3-Set

Rating of the Indicator - Rating Process

Indicator relevant?	no
Indicator feasible?	no

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

2.16 Multidisciplinary Topics

MULTIDISCIPLINARY TOPICS - BLOOD PRESSURE MEASUREMENT

Percentage of patients presenting for care for any reason whose systolic and diastolic blood pressure was measured at least once during the year

MULTIDISCIPLINARY TOPICS - TOBACCO USE

Percentage of patients who were queried about tobacco use at least once during the last 2 years

MULTIDISCIPLINARY TOPICS – SMOKING CESSATION

Percentage of smokers to whom methods or strategies for giving up smoking were recommended and whose medical record contains documentation of this

MULTIDISCIPLINARY TOPICS - EXCESS WEIGHT

Percentage of overweight patients who were given counsel for weight loss strategies and whose medical record contains documentation of this

INDICATOR MULTIDISCIPLINARY TOPICS - BLOOD PRESSURE MEASUREMENT

Indicator	Percentage of patients aged 45 and over presenting for care for any reason within the last 12 months, whose systolic and diastolic blood pressure was measured at least once during the year

Numerator	Percentage of patients aged 45 and over presenting for care for any reason within the last 12 months and whose systolic and diastolic blood pressure was measured at least once during the year
Denominator	Number of all patients aged 45 and over who presented for care for any reason within the last 12 months
Rationale	In this case the percentage of patients aged 45 and over presenting for care at the practice for any reason within the last 12 months and whose blood pressure was measured at least once during the year is calculated. The objective is to satisfy a prerequisite for early diagnosis and treatment of arterial hypertension by carrying out regular blood pressure checks. The recommendations in various guidelines vary with regard to routine blood pressure checks as a screening method. Until now there has been no substantial evidence. In order to detect arterial hypertension as early as possible, guidelines recommend checking blood pressure every 1 to 5 years.
German References	Guidelines of the German Hypertension Society/Deutsche Hochdruckliga e.V. for Treatment of Arterial Hypertension, 2008 (S2); Drug Commission of the German Medical Association: Recommendations for Treatment of Arterial Hypertension, 2004
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months having any ICD code and ≥ 45 years of age Numerator: Examination of all denominator medical records for the following statement: Blood pressure was measured within the last 12 months
Type of indicator	Process Quality
Original Indicator	Systolic and diastolic blood pressure should be measured on patients otherwise presenting for care at least once each year
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	86%
Indicator feasible	36%
Indicator clinically relevant	64%

INDICATOR MULTIDISCIPLINARY TOPICS - TOBACCO USE

Indicator	Percentage of patients aged 12 and over presenting for care within the last 24 months, who were queried about tobacco use at least once within the last 2 years and whose medical record contains documentation of this
Numerator	Number of patients aged 12 and over presenting for care within the last 24 months, who were queried about tobacco use at least once within the last 2 years and whose medical record contains documentation of this
Denominator	Number of all patients aged 12 and over presenting for care within the last 24 months
Rationale	In this case the percentage of patients aged 12 and over presenting for care within the last 24 months and who were queried about tobacco use at least once within the last 2 years is calculated. Guidelines recommend regular documentation of tobacco use. The identification of smokers is a prerequisite for intervention. It is part of the '5 A' strategy (see Additional Specification, Indicator - Smoking, Smoking cessation).
German References	Guidelines of the German Society for Addiction Research and Addiction Therapy and the German Society of Psychiatry, Psychotherapy and Neurology 2004 (S2); National Care Guidelines for COPD, 2008; Treatment Recommendations of the Drug Commission of the German Medical Association: Tobacco Addiction, 2001, Guidelines of the German Society of Pneumology and Respiratory Medicine: Smoking cessation with COPD, 2008 (S3)
Denominator-/ Numerator Description	Denominator: List of all patients presenting at the practice within the last 24 months and ≥ 12 years of age Numerator: Examination of all denominator medical records for the following statement: Tobacco use was queried and documented within the last 24 months
Type of indicator	Process Quality
Original Indicator	Preventive care and screening: percentage of patients who were queried about tobacco use one or more times during the two-year measurement period
Original Source	Physician Consortium for Performance Improvement: NQMC/AHRQ-Set

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	82%
Indicator feasible	30%
Indicator clinically relevant	46%

INDICATOR MULTIDISCIPLINARY TOPICS – SMOKING CESSATION

Indicator	Percentage of smokers within the last 12 months who were recommended methods or strategies for giving up smoking and whose medical record contains documentation of this
Numerator	Number of smokers within the last 12 months who were recommended methods or strategies for giving up smoking and whose medical record contains documentation of this
Denominator	Number of all smokers within the last 12 months
Additional Specification	Possible methods or strategies for giving up smoking: • Documentation of tobacco use during each occasion of contact with the patient / • individual advice for each smoker in accordance with the 5 As (see below) / • possible placement in programmes for giving up smoking / • possible medicinal aids for giving up smoking The 5 As for counselling smokers (based on German National Guidelines (NVL) for COPD 2007) 1. Ask about tobacco use 2. Advise on giving up smoking 3. Assess patient motivation for stopping smoking 4. Assist the patient in giving up smoking 5. Arrange aftercare
Rationale	In this case the percentage of smokers (based on ICD 10 criteria) amongst the patients within the last 12 months, who were recommended methods or strategies for giving up smoking and whose medical record contains documentation of this is quantified. The objective is for as many patients as possible to abstain from nicotine and thus reduce the number and severity of secondary complications.
German References	Guidelines of the German Society for Addiction Research and Addiction Therapy and the German Society of Psychiatry, Psychotherapy and Neurology, 2004 (S2); National Care Guidelines for COPD, 2008; Treatment Recommendations of the Drug Commission of the German Medical Association: Tobacco Addiction, 2001, Guidelines of the German Society of Pneumology and Respiratory Medicine: Smoking cessation with COPD 2008 (S3)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months with the relevant ICD code Numerator: Examination of all denominator medical records for the following statement: Recommendation of methods or strategies for giving up smoking
Type of indicator	Process Quality
Original Indicator	Percentage of patients whose practitioner recommended or discussed smoking cessation methods or strategies.
Original Source	National Committee for Quality Assurance (NCQA): NQF Consensus Standards Ambulatory Care

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	86%
Indicator feasible	17%
Indicator clinically relevant	35%

INDICATOR MULTIDISCIPLINARY TOPICS - EXCESS WEIGHT

Indicator	Percentage of overweight patients within the last 12 months who were given counsel for weight loss strategies and whose medical record contains documentation of this
Numerator	Number of overweight patients within the last 12 months who were given counsel for weight loss strategies and whose medical record contains documentation of this
Denominator	Number of all overweight patients within the last 12 months
Additional Specification	Excess weight: Body Mass Index (BMI) ≥ 30
Rationale	In this case the percentage of overweight patients who were given counsel for weight loss strategies and whose medical record contains documentation of this is calculated. Patients should be motivated and enabled to lose weight by way of counselling. By losing weight the individual risk of secondary complications should be reduced.
German References	German Obesity Society: Guidelines for diagnosis and Treatment of Obesity, 2007 (S3)
Denominator-/ Numerator Description	Denominator: List of all overweight patients within the last 12 months (ICD code) Numerator: Examination of all denominator medical records for the following statement: Counsel for weight loss strategies was given and documented
Type of indicator	Process Quality
Original Indicator	Prevention and management of obesity (mature adolescents and adults): Percentage of patients with a documented Body Mass Index (BMI) equal to or greater than 25 who were given education and counsel for weight loss strategies
Original Source	Institute for Clinical Systems Improvement: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	maybe
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

The indicator was not included in the feasibility study owing to the outcome of the rating process.

2.17 Rheumatoid Arthritis

RHEUMATOID ARTHRITIS - DISEASE MODIFYING ANTI-RHEUMATIC DRUG THERAPY

Percentage of patients newly diagnosed with rheumatoid arthritis who have had at least one course of treatment with a disease-modifying anti-rheumatic drug

RHEUMATOID ARTHRITIS - DIAGNOSTICS

Percentage of patients diagnosed with rheumatoid arthritis, for whom the following are documented at appropriate time intervals: a joint examination of three or more joint areas, functional status, disease activity, acute phase reactant and pain

RHEUMATOID ARTHRITIS – MONITORING OF SIDE EFFECTS

Percentage of patients treated with a disease-modifying antirheumatic drug, for whom monitoring of side effects is performed

RHEUMATOID ARTHRITIS - TREATMENT INFORMATION

Percentage of patients newly prescribed a disease-modifying antirheumatic drug, with whom the risks and advantages of the selected treatment were discussed and whose medical record contains documentation of this

INDICATOR RHEUMATOID ARTHRITIS - DISEASE MODIFYING ANTI-RHEUMATIC DRUG THERAPY

Indicator	Percentage of patients aged 18 and over newly diagnosed with rheumatoid arthritis within the last 12 months who have had at least one course of treatment with a disease-modifying anti-rheumatic drug within the last 12 months
Numerator	Number of patients aged 18 and over newly diagnosed with rheumatoid arthritis within the last 12 months who have had at least one course of treatment with a disease-modifying anti-rheumatic drug within the last 12 months
Denominator	Number of all patients aged 18 and over newly diagnosed with rheumatoid arthritis within the last 12 months
Additional Specification	Disease-modifying antirheumatic drugs (DMARDs): adalimumab, anakinra, antimalarial drugs (hydroxychloroquine, chloroquine), azathioprine, cyclosporin, D-penicillamine, etanercept, infliximab, leflunomide, methotrexate, oral gold (auranofin), parenteral gold, sulfasalazine etc.
Rationale	In this case the percentage of all patients aged 18 and over, newly diagnosed with rheumatoid arthritis (RA) within the last 12 months and who, within this period, had at least one course of treatment with a disease-modifying antirheumatic drug is calculated. The objective is to delay progression of the disease by way of early basic treatment and to improve the long-term prognosis. Ideally, this should start within the first 3 months after onset of the disease.
German References	Guidelines of the German Society for Rheumatology: Rheumatoid Arthritis, 2007 (S3)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months receiving an initial diagnosis of rheumatoid arthritis (ICD code) within this period and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: Treatment with at least one disease-modifying drug
Type of indicator	Process Quality
Original Indicator	Percentage of patients diagnosed with rheumatoid arthritis who have had at least one ambulatory prescription dispensed for a disease modifying anti-rheumatic drug (DMARD)
Original Source	National Committee for Quality Assurance (NCQA): National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	94%
Indicator feasible	53%
Indicator clinically relevant	69%

INDICATOR RHEUMATOID ARTHRITIS - DIAGNOSTICS

Indicator	Percentage of patients aged 18 and over diagnosed with rheumatoid arthritis within the last 12 months, for whom the following are documented at appropriate time intervals: a joint examination of three or more joint areas, functional status, disease activity, acute phase reactant and pain
Numerator	Number of patients aged 18 and over diagnosed with rheumatoid arthritis within the last 12 months, for whom the following are documented at appropriate time intervals: a joint examination of three or more joint areas, functional status, disease activity, acute phase reactant and pain
Denominator	All patients aged 18 and over diagnosed with rheumatoid arthritis within the last 12 months
Additional Specification	Time intervals: every 3 months Functional status: complete assessment of the progression of the disease by the patients; Use of/support by the Hanover Functional Questionnaire (FFBH) Disease activity: presence/absence of synovitis Acute phase reactant: ESR/CRP Pain: for example by visual analogue scale As an alternative to the four methods above (functional status, disease activity, acute phase reactant, pain), the disease activity score (DAS) may also be used.
Rationale	In this case the percentage of patients aged 18 and over, diagnosed with rheumatoid arthritis within the last 12 months and for whom the following are documented at appropriate time intervals: a joint examination of three or more joint areas, functional status, disease activity, acute phase reactant and pain is calculated. The objective is to closely monitor the progression of the disease. Insufficient response to treatment should lead to a prompt modification of treatment.
German References	Guidelines of the German Society for Rheumatology: Rheumatoid Arthritis, 2007 (S3)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with rheumatoid arthritis (ICD code) and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: The following are carried out and documented at appropriate time intervals: a joint examination of three or more joint areas, functional status, disease activity, acute phase reactant and pain.
Type of indicator	Process Quality
Original Indicator	Percentage of patients with a diagnosis of rheumatoid arthritis for whom each of the following are documented within 3 months of diagnosis and at appropriate time intervals thereafter: a joint examination of three or more joint areas, functional status, disease activity (presence/absence of synovitis), acute phase reactant (defined by erythrocyte sedimentation rate [ESR] or C-reactive protein [CRP]) and pain (by visual analog scale [VAS] or other mechanism)
Original Source	Arthritis Foundation: Nat. Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	91%
Indicator feasible	36%
Indicator clinically relevant	55%

INDICATOR RHEUMATOID ARTHRITIS – MONITORING OF SIDE EFFECTS

Indicator	Percentage of patients with rheumatoid arthritis aged 18 and over treated with a disease-modifying antirheumatic drug within the last 12 months, for whom monitoring of side effects was performed
Numerator	Number of patients with rheumatoid arthritis aged 18 and over treated with a disease-modifying antirheumatic drug within the last 12 months, for whom monitoring of side effects was performed
Denominator	All patients with rheumatoid arthritis aged 18 and over treated with a disease-modifying antirheumatic drug within the last 12 months
Additional Specification	Disease-modifying antirheumatic drugs (DMARDs): adalimumab, anakinra, antimalarial drugs (hydroxychloroquine, chloroquine), azathioprine, cyclosporin, D-penicillamine, etanercept, infliximab, leflunomide, methotrexate, oral gold (auranofin), parenteral gold, sulfasalazine etc. Treatment monitored for adverse side effects using specialist information or treatment monitoring curves, for example of the Rheumatology Competence Network (http://www.rheumanet.org/content/m3/k3/k31/index.aspxx, accessed 04/2008)
Rationale	In this case the percentage of patients aged 18 and over, with rheumatoid arthritis and established treatment with a DMARD within the last 12 months and for whom monitoring of side effects was performed is calculated. The aim of this is to quickly identify patients at risk of toxic side effects of DMARDs.
German References	Guidelines of the German Society for Rheumatology: Rheumatoid Arthritis, 2007 (S3)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months with a corresponding ICD code and treated with a DMARD and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: Monitoring of side effects is performed.
Type of indicator	Process Quality
Original Indicator	Percentage of patients with established treatment with a disease-modifying antirheumatic drug (DMARD) or glucocorticoids for whom monitoring for drug toxicity is performed
Original Source	Arthritis Foundation: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	94%
Indicator feasible	48%
Indicator clinically relevant	70%

INDICATOR RHEUMATOID ARTHRITIS - TREATMENT INFORMATION

Indicator	Percentage of patients with rheumatoid arthritis aged 18 and over and newly prescribed disease-modifying antirheumatic treatment within the last 12 months, with whom the risks and advantages of the selected treatment were discussed and whose medical record contains documentation of this
Numerator	Number of patients with rheumatoid arthritis aged 18 and over an newly prescribed disease-modifying antirheumatic treatment within the last 12 months, with whom the risks and advantages of the selected treatment were discussed and whose medical record contains documentation of this
Denominator	Number of all patients with rheumatoid arthritis aged 18 and over and newly prescribed disease-modifying antirheumatic treatment within the last 12 months
Additional Specification	Disease-modifying antirheumatic drugs (DMARDs): adalimumab, anakinra, antimalarial drugs (hydroxychloroquine, chloroquine), azathioprine, cyclosporin, D-penicillamine, etanercept, infliximab, leflunomide, methotrexate, oral gold (auranofin), parenteral gold, sulfasalazine etc.
Rationale	In this case the percentage of patients aged 18 and over with rheumatoid arthritis and newly prescribed disease-modifying antirheumatic treatment within the last 12 months, with whom the risks and advantages of the selected treatment were discussed and whose medical record contains documentation of this is calculated. The objective is to educate the patient. In view of the potentially toxic treatment and the chronic progression of the disease in particular, this is important for patient compliance with the plan of care and, ultimately, for success of the treatment.
German References	Guidelines of the German Society for Rheumatology: Rheumatoid Arthritis, 2007 (S3)
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with rheumatoid arthritis (ICD code), newly prescribed a DMARD and ≥ 18 years of age Numerator: Examination of all denominator medical records for the following statement: The risks and advantages of the selected treatment were discussed and the medical record contains documentation of this.
Type of indicator	Process Quality
Original Indicator	Percentage of patients with established treatment with a disease-modifying antirheumatic drug (DMARD) or glucocorticoids for whom monitoring for drug toxicity is performed
Original Source	Arthritis Foundation: National Quality Measurement Clearinghouse

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	95%
Indicator feasible	39%
Indicator clinically relevant	62%

2.18 Atrial Fibrillation

ATRIAL FIBRILLATION - ORAL ANTICOAGULATION

Percentage of patients with atrial fibrillation or atrial flutters and displaying risk factors for thromboembolism who received an oral anticoagulation

ATRIAL FIBRILLATION - THYROID FUNCTION

Percentage of patients newly diagnosed with atrial fibrillation who had a thyroid function checked within the first 2 weeks of presentation

INDICATOR ATRIAL FIBRILLATION - ORAL ANTICOAGULATION

Indicator	Percentage of patients with atrial fibrillation or atrial flutters and displaying risk factors for thromboembolism within the last 12 months who received an oral anticoagulation

Numerator	Number of patients with atrial fibrillation or atrial flutters and displaying risk factors for thromboembolism within the last 12 months who received AN oral anticoagulation
Denominator	Number of patients with atrial fibrillation or atrial flutters and displaying risk factors for thromboembolism within the last 12 months, excluding all patients with contraindications for, or objection to AN oral anticoagulation
Additional Specification	Definition of risk factors for thromboembolism: see tools for risk stratification, such as Hessen Guidelines 2006 or ACC/AHA/ESC Guidelines 2006
Rationale	In this case the percentage of patients with atrial fibrillation or atrial flutters, displaying risk factors for thromboembolism within the last 12 months and who received an oral anticoagulation is calculated. In order to reduce the risk of thromboembolism, the guidelines recommend oral anticoagulants, depending on the risk profile for thromboembolisms and bleeding risk.
German References	Guideline Group Hessen, GP Guidelines: Anticoagulation, 2006; German Society for Cardiology: Reference to ACC/AHA/ESC Guidelines 2006: Guidelines for the management of patients with atrial fibrillation
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months diagnosed with atrial fibrillation or atrial flutters which is/are intermittent, persistent or permanent over a period of at least 48 hours (ICD code) and displaying risk factors for thromboembolism and no contraindications for an oral anticoagulation and no objection on the part of the patient against the administration of oral anticoagulants Numerator: Examination of all denominator medical records for the following statement: The patient received oral anticoagulants.
Type of indicator	Process Quality
Original Indicator	Patients presenting with new-onset atrial fibrillation or atrial fibrillation of unknown duration should have a thyroid function checked within the first two weeks of presentation.
Original Source	Institute for Clinical Systems Improvement: National Quality Measurement Clearinghouse (NQMC)

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	96%
Indicator feasible	27%
Indicator clinically relevant	73%

INDICATOR ATRIAL FIBRILLATION - THYROID FUNCTION

Indicator	Percentage of patients newly diagnosed with atrial fibrillation within the last 12 months who had a thyroid function checked within the first 2 weeks of presentation
Numerator	Number of patients newly diagnosed with atrial fibrillation within the last 12 months who had a thyroid function checked within the first 2 weeks of presentation
Denominator	Number of all patients newly diagnosed with atrial fibrillation within the last 12 months
Rationale	In this case the percentage of patients newly diagnosed with atrial fibrillation within the last 12 months and who had a thyroid function checked within the first 2 weeks of presentation is calculated. Excessive thyroid function may be a cause of atrial fibrillation. In this case the atrial fibrillation can usually be treated successfully by treating the excessive thyroid function (reversible cause).
German References	German Society for Cardiology: Reference to ACC/AHA/ESC Guidelines, 2006: Guidelines for the management of patients with atrial fibrillation
Denominator-/ Numerator Description	Denominator: List of all patients within the last 12 months receiving an initial diagnosis of atrial fibrillation (ICD code) Numerator: Examination of all denominator medical records for the following statement: A TSH test was performed within the first 2 weeks following the initial diagnosis.
Type of indicator	Process Quality
Original Indicator	Patients presenting with new-onset atrial fibrillation or atrial fibrillation of unknown duration should have a thyroid function checked within the first two weeks of presentation.
Original Source	RAND Corporation: RAND Quality Tools Indicators

Rating of the Indicator - Rating Process

Indicator relevant?	yes
Indicator feasible?	yes

Rating of the Indicator - Feasibility Study

Data available	95%
Indicator feasible	40%
Indicator clinically relevant	76%

- **APPENDIX: OVERVIEW OF DMP INDICATORS**
- **INDEX OF ABBREVIATIONS**
- **REFERENCES**
- **IMPRINT**

APPENDIX: OVERVIEW OF DMP INDICATORS

DMP FOR BRONCHIAL ASTHMA
Number of enrolled patients* who have been taking part in the DMP for at least 6 months, who had to receive emergency in-patient treatment within the last 6 months owing to bronchial asthma
Number of enrolled patients whose inhalation technique is checked
Number of enrolled patients on repeat medication who receive repeat medication with inhalation glucocorticosteroids
Number of enrolled patients who were initially treated with systemic glucocorticoids on two successive documented occasions and were referred to a specialist

*patients enrolled in the DMP for Bronchial Asthma

DMP FOR BREAST CANCER
Number of enrolled patients* receiving an initial diagnosis of histologically confirmed invasive breast carcinoma pT1 who underwent breast-preserving surgery
Number of enrolled patients with axillary dissection and an invasive tumour or sentinel lymph node biopsy and lymph node involvement with an invasive tumour, from whom ≥ 10 lymph nodes were removed
Number of enrolled patients following breast-preserving surgery and with an invasive tumour, who regularly underwent post-operative irradiation
Number of enrolled patients displaying initial manifestation of a primary tumour, for whom a hormone receptor analysis was performed
Number of enrolled patients with a hormone receptor positive tumour and invasive carcinoma, excluding patients who are low-risk based on St. Gallen (> 35 years of age, receptor positive, G1 at most, T1, N0 at most), whose adjuvant endocrine therapy is still on-going or was performed regularly
Number of enrolled patients with an node-positive and hormone receptor-negative invasive tumour, whose adjuvant chemotherapy is still ongoing or has been performed
Number of enrolled patients with bone metastases who are receiving bisphosphonate treatment

*patients enrolled in the DMP for Breast Cancer

DMP FOR COPD
Number of enrolled patients* who smoke
Number of enrolled patients who have been taking part in the DMP for at least 6 months, who required emergency in-patient treatment within the last 6 months owing to COPD
Number of enrolled patients who have been taking part in the DMP for at least 6 months, who experienced two or more exacerbations during monitoring over the last 6 months
Number of enrolled patients whose inhalation technique is checked
Number of enrolled patients who received systemic glucocorticosteroids in successive documented occasions
Number of enrolled patients who were initially treated with systemic glucocorticoids on two successive documented occasions and were referred to a specialist

*patients enrolled in the DMP for COPD

DMP FOR TYPE 1 DIABETES MELLITUS
Number of enrolled patients* with an HbA1c value ≥ 8.5%
Number of enrolled patients with an HbA1c value which should be maintained since they have achieved an individually agreed target value
Number of enrolled patients who have been taking part in the DMP for at least 12 months, for whom severe hypoglycaemia was documented within the last 12 months
Number of enrolled patients who have been taking part in the DMP for at least 6 months, who received emergency in-patient treatment on one or more occasions within the last 6 months of the DMP owing to diabetes
Number of enrolled patients aged 11 and over with known or newly presenting arterial hypertension, who have normotensive blood pressure values
Number of enrolled patients aged 11 and over with persistent pathological albuminuria, for whom serum creatinine levels were determined
Number of enrolled patients aged 11 and over displaying no existing diabetic nephropathy whose urine albumin levels are tested annually
Number of enrolled patients aged 18 and over, for whom regular measures were performed for the early detection of secondary complications
Number of enrolled patients with PVD, CHD or who have suffered a stroke, who take a thrombocyte aggregation inhibitor as a measure of secondary prevention
Number of enrolled patients with an obvious foot disorder (foot lesion, Wagner stage 2-5 and/or Armstrong class C or D), who are referred to a centre specialising in the treatment of diabetic foot

*patients enrolled in the DMP for Type 1 Diabetes Mellitus

DMP FOR TYPE 2 DIABETES MELLITUS
Number of enrolled patients whose HbA1c value is ≥ 8.5%
Number of enrolled patients with an HbA1c value which should be maintained since they have achieved the individually agreed target value
Number of enrolled patients who have been taking part in the DMP for at least 6 months, who received emergency treatment on two or more documented occasions owing to severe hypoglycaemias
Number of enrolled patients who have been taking part in the DMP for at least 6 months, who received emergency in-patient treatment on one or more occasions within the last 6 months owing to diabetes
Number of enrolled patients with known or newly presenting arterial hypertension, who have normotensive blood pressure values
Number of enrolled patients who have been taking part in the DMP for at least 12 months, for whom serum creatinine levels were determined within the last 12 months
Number of enrolled patients with PVD, CHD or who have suffered a stroke, who take a thrombocyte aggregation inhibitor as a measure of secondary prevention
Number of enrolled patients who are overweight, take an oral anti-diabetic drug as monotherapy and are treated using metformin
Number of enrolled patients who have been taking part in the DMP for at least 12 months, who were examined by an ophthalmologist within the last 12 months
Number of enrolled patients with an obvious foot disorder (foot lesion, Wagner stage 2-5 and/or Armstrong class C or D), who are referred to a centre specialising in the treatment of diabetic foot

*patients enrolled in the DMP for Type 2 Diabetes Mellitus

DMP FOR CHD WITH HEART FAILURE MODULE
Number of enrolled patients* with known or newly presenting arterial hypertension, who have normotensive blood pressure values
Number of enrolled patients who smoke
Number of enrolled patients with no contraindications, who take a thrombocyte aggregation inhibitor as a measure of secondary prevention
Number of enrolled patients with no contraindications who take a beta-blocker
Number of enrolled patients with heart failure and no contraindications, who take an ACE inhibitor
Number of enrolled patients with no contraindications who take an HMG-CoA-reductase inhibitor (statin)
Number of enrolled patients with no contraindications and newly presenting typical or atypical symptoms of AP and/or newly presenting heart failure who were referred
Number of patients taking part in the heart failure module who take an ACE inhibitor
Number of patients taking part in the heart failure module who have been participating in the DMP for at least 12 months and for whom serum electrolyte levels were determined
Number of patients taking part in the heart failure module who take a beta-blocker

*patients enrolled in the DMP for CHD

Index of Abbreviations

ACOVE	Assessing Care of Vulnerable Elders (RAND Health Project)
ADHD	Attention Deficit/Hyperactivity Disorder
AIDS	Acquired Immunodeficiency Syndrome
AQUIK	Ambulatory Quality Indicators and Key Measures
ASHIP	(regional) Association of Statutory Health Insurance Physicians
AWMF	Association of the Scientific Medical Societies in Germany
DMP	Disease Management Programme
DSM	Diagnostic and Statistical Manual of Mental Disorders
EDP	Electronic Data Processing
ENT	Ear Nose and Throat Doctor
EU	European Union
GP	General Practicioner
HIV	Human Immunodeficiency Virus
ICD	International Statistical Classification of Diseases and Related Health Problems
JCAHO	Joint Commission on Accreditation of Healthcare Organisations
NASHIP	National Association of Statutory Health Insurance Physicians
NHS	National Health Service, Great Britain
NQMC	National Quality Measures Clearinghouse
RAND	Research and Development (Rand Corporation, USA)
P4P	Pay for Performance
QI	Quality Indicator
SHI	Statutory Health Insurance
UCLA	University of California, Los Angeles

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