

International exchange

A strategy for the implementation of a quality indicator system in German primary care

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ABSTRACT

Background The Quality and Outcomes Framework (QOF) has had a major impact on the quality of care in British general practice. It is seen as a major innovation amongst quality indicator systems and as a result various countries are looking at whether such initiatives could be used in their primary care. In Germany also the development of similar schemes has started.

Aim To propose a strategy indicating key issues for the implementation of a quality indicator scheme in German primary care.

Methods Literature review with a focus on the QOF and German quality indicator literature.

Results There are major differences between the German and British healthcare and primary care systems. The development of quality indicator systems for German general practice is in progress and there is a net force for the implementation of such systems. The following ten key factors are suggested

for the successful implementation of such a system in German primary care: involvement of general practitioners (GPs) at all levels of the development, a clear implementation process, investment in practice information technology (IT) systems, an accepted quality indicator set, a quality indicator setting institution and data collection organisation, clear financial and non-financial incentives, a 'practice registration' structure, an exception reporting mechanism, delegation of routine clinical data collection tasks to practice assistants, a stepped implementation approach and adequate evaluation processes.

Conclusion For the successful implementation of a quality indicator system in German primary care a number of key issues, as presented in this article, need to be taken into account.

Keywords: general practice, quality and outcomes framework, quality indicators

How this fits in with quality in primary care

What do we know?

The Quality and Outcomes Framework (QOF) has had a major impact on primary care in the UK. Similar schemes are being developed for German general practice, yet it is unclear how these schemes can be successfully implemented.

What does this paper add?

This paper provides a strategy consisting of an analysis of healthcare system characteristics and political forces suggesting ten key issues for the successful implementation of a quality indicator system in German general practice.

Introduction

The British Quality and Outcomes Framework (QOF) has attracted a lot of international attention as a means of how healthcare in general practice can be improved.¹

The framework consists of a set of indicators covering common clinical areas, such as heart disease, hypertension and diabetes, organisational issues and patient

experience. Indicators cover structural, process and to a lesser extent outcome measures of quality. QOF is a pay-for-performance system linking doctors' pay to achieving certain percentages. For example, the higher the percentage of practice registered diabetic patients that have a blood pressure below 140/85 mmHg, the more the general practitioner (GP) gets paid.²

In the 1990s there had been important changes for UK general practice which made the development of QOF feasible, for example the emergence of 'evidence-based medicine', the development of methods to measure the quality of care, demonstrable deficiencies in care which were accepted by the GP profession and the political will to increase healthcare funding. In 2002 negotiations started between the British Medical Association (BMA), which acted as the doctors' representative, the National Health Service (NHS) Confederation, which acted on behalf of the government, and a small group of academic advisors regarding developing a pay-for-performance scheme. Based on national guidelines as sources for evidence and consensus the QOF was introduced in UK primary care in April 2004.³ The scheme is well accepted in the UK with the vast majority of GPs participating and consistent achievement levels of over 90%.⁴ Early studies suggested that the QOF may have had a positive impact on quality and may have reduced health inequalities.^{5,6} However, a recent review indicates that the evidence regarding the impact of QOF remains inconclusive, that consultations and continuity may have suffered and that there is limited research on patients' views or about the aspects of care not measured, such as caring, context and complexity.⁷ Another topical reflection paper suggests that alternative modes of improving patient care may be better than QOF, for example the assessment of patient focused care and practitioners' reflective practice.⁸

Notwithstanding these recent insights, in Germany the development of schemes similar to QOF has started, despite that country having a very different healthcare system from that of the UK. Progress has been made in Germany regarding development of sets of quality indicators. Some of these sets are intended for pay for performance, others are not.^{9,10} Therefore in this article the wider term 'quality indicator system' will be used.

The aim of this article is to pose a strategy on how such a quality indicator system can be implemented in German primary care. In line with the management ideas of Johnson and Scholes this strategy will cover several elements, which partially overlap.¹¹ First, an analysis will be presented consisting of background information on the German healthcare system and German primary care, and comparison with both the British system and the main German quality healthcare initiatives in place and under development. Second, forces for and against the implementation of a

quality indicator scheme in German primary care will be described to assess whether there actually is a net force for implementation. Finally, and most importantly, a list of ten issues that are relevant for the implementation of such a system will be put forward. The information in this paper was gathered via a literature review with a focus on the relevant QOF literature, key German documents on quality indicators and pay for performance and an article about German GPs' views on QOF clinical indicators, written by the author *et al.*¹² In this way it is hoped that the article amalgamates both 'top down' and 'bottom up' views. By definition this one-author paper will not be objective, as inevitably choices are made on what is included and what is left out, yet it is hoped that it may provoke discussion among readers on the way forward regarding quality indicator systems in German primary care.

The German healthcare system and primary care compared with the UK

In Germany health insurance is mandatory for all. Approximately 90% of the 82 million German population is insured via the statutory health insurance (SHI) system, while the other 10% is insured privately. Cover through SHI is compulsory for workers whose gross income does not exceed a certain level. Both the employee and the employer pay part of the insurance contributions.¹³ The German healthcare system is formally regulated by the Federal Ministry of Health. However, it is mainly the various institutions and stakeholders that have formed and created the German healthcare system as it is. Some of the key institutions and stakeholders, without the intention of being exhaustive, are presented in Table 1. Several of these institutions will be mentioned later on in this article.

In Germany there is a strong divide between hospital care and ambulatory care. Although the government has tried to loosen up this system most care provision is still strictly divided. Hospital care is provided by in-house specialists who are paid by the hospital. The hospital gets paid by the health insurance funds based on diagnosis related groups (DRGs), which means that fixed fees are paid for certain clusters of diagnoses and activities. Ambulatory care is delivered by primary care surgeries (GPs, general medicine doctors, paediatricians etc. who provide general practice care) and community specialist practices (e.g. ophthalmologists, dermatologists). Ambulatory care doctors need to be members of the KV (Association of SHI Physicians) to be entitled to provide care to SHI patients. As mentioned, 90% of the population is

Table 1 Some key institutions and stakeholders in the German healthcare system and in German primary care^{10,14,15,26–28,31}

KV	Association of Statutory Health Insurance Physicians. There is a KV in each German 'Land' (two in Nord Rhein-Westfalen). For its Land, the KV is responsible for assuring that comprehensive care is provided, functions as an intermediary between health insurance funds and ambulatory care doctors and represents the interests of ambulatory care doctors
KBV	National Association of Statutory Health Insurance Physicians: as per KV but at national level
G-BA	Federal Joint Committee, a national committee consisting of representatives of statutory health insurance funds and provider organisations, for example KBV: the most influential body in German health care, which sets what care will be funded by the statutory health insurance funds and gives guidance on the quality of care
IQWiG	Institute for Quality and Efficiency in Health Care: examines the advantages and disadvantages of medical services for patients. Works solely for G-BA and the Federal Ministry of Health. Comparable to NICE (National Institute for Health and Clinical Excellence) in the UK
Sachverständigenrat	German Advisory Council on the assessment of and developments in the healthcare system
Statutory health insurance (SHI) funds	Provide healthcare cover for approximately 90% of the German population
AOK	Large health insurance fund controlled by the federal association of local health insurance funds
German pharmaceutical industry	An innovative industry, a large employer with strong influence in the political world and on the German medical profession
BÄK	German Medical Association: represents all doctors
DEGAM	German Society of General Practice and Family Medicine: represents doctors providing primary care
HÄV	German General Practitioner Association: represents about 33 000 GP members
AQUA	Institute for Applied Quality Improvement and Research in Health Care: independent institution
ÄZQ	Agency for Quality in Medicine: joint institution of BÄK and KBV

insured in this way and therefore the vast majority of ambulatory care doctors are members. Doctors looking after SHI patients get a fee for service for a small number of procedures (for example influenza vaccinations), but mostly a fixed fee for certain clustered diagnoses and procedures. These fixed fees are capped and not paid directly from the health insurance fund to the doctor, the KV functioning as an intermediary between both parties. For privately insured patients the doctor is paid by the patient, who can claim the money back from his or her insurance.

Patients have a free choice of doctor (GP and/or ambulatory specialist) and can register with a practice, yet can still go to another surgery should they wish to do so. As such there is no real gate-keeping system.^{14,15}

Although QOF has been successfully introduced in UK primary care, a similar system may not function in Germany because of healthcare system differences.¹⁶ The major differences between the German and British healthcare and primary care systems are presented in Table 2. System differences have been simplified to provide an overview of the essential features. One can

Table 2 Overview of key differences in healthcare systems and GP care in Germany and the UK^{15,17}

	German healthcare system	UK healthcare system
Organisation	Decentralised institutions and organisations	Central/state
Financing of system	Mainly via statutory healthcare insurance contributions	Via tax
Provision of primary care	GPs and community consultants (such as general medicine doctors, paediatricians etc.)	GPs
Finance of primary care	For statutory insured patients: combination of fee for service and fixed fees, via KV For privately insured patients: fee for service	Capitation
Role of primary care	Open access	Gate-keeper, registered patients

see that in the UK there is a centralised health system while in Germany this is decentralised with more institutions and more key players.^{14,15,17} This means that in Germany it will probably be more difficult than in the UK to implement a quality indicator system, as the views of various stakeholders will need to be taken into account. As such it is useful to perform a force field analysis to assess whether there is a net supporting force for implementation of such a system.¹⁸ This will be done under the related subheading ('Forces for and against the implementation of a quality indicator system in German primary care').

Also due to the large number of stakeholders there is a higher risk than in the UK that the views of the German GPs may not be heard, which would have a detrimental effect on successful implementation.¹² There are also funding differences, with a tax-based system in the UK and the SHI system in Germany. The special position of the SHIs would have to be taken into account; as the purchasers of care, there could be a conflict of interest if they also set the quality indicators and collect the quality data.¹⁷ Finally, another key difference is that in the UK patients are registered with a GP, who acts as gate-keeper to specialist care, while in Germany a patient can register and consult more or less any GP or community specialist. This poses the question – which German doctor would be responsible for achieving the quality indicator percentages?^{14,15,17}

Quality initiatives in German primary care

An important quality initiative in German primary care is the use of disease management programmes (DMPs). Problems related to the quality of care of chronically ill patients led to legislative changes in 2002, which provided SHIs with incentives for the development and enrolment of patients into these structured programmes. Currently there are DMPs covering coronary heart disease, type 1 and type 2 diabetes, asthma, chronic obstructive pulmonary disease (COPD) and breast cancer. Although each SHI fund has developed its own DMPs, most of them are very similar and consist of mainly structure and process indicators. For instance, a coronary heart disease programme usually contains indicators such as performed diagnostic tests, height, weight, smoking, blood pressure, cholesterol levels etc. The principle is that individual patients can opt to participate and are reviewed regularly. The patient data collected are sent to the SHI fund and KV. In return the GP receives a small fee for each participating patient and feedback regarding performance.^{13,19} Evaluation of the DMPs suggests that a large number of patients have enrolled, and that the programmes may have improved the quality of care and may have reduced the mortality of participating patients.^{20–22} As DMPs cover only a few conditions and are provided on an individual basis they do not constitute a practice quality indicator system like the QOF.

Another quality initiative in German primary care is the internal quality management programme. Legal changes in 2004 required that from 2009 all hospitals and organisations providing healthcare should have an internal quality management system. Although each GP practice is free to set up its own system, there are also non-profit-making and commercial providers who offer set accreditation programmes, for example KPQM (KV Practice Quality Management), EFQM (European Foundation of Quality Management) and EPA (European Practice Assessment). Although each programme is different, the focus is typically on organisational indicators, for example the presence of practice team discussions, complaints procedures, significant event analyses etc. The practice usually uses a handbook to work through the programme, is visited by the programme assessors and, if it fulfils all criteria, is accredited for a certain period of time.²³

These accreditation programmes are not compulsory and are rarely used. It is unclear what the impact of these programmes has been and there is no hard evidence that they have improved the quality of care in German general practice.

On 15 June 2009, KBV (the national association of statutory health insurance physicians) launched AQUIK (quality indicators and key data for ambulatory care). The AQUIK set consists of 48 quality indicators covering areas like hypertension, coronary heart disease, dementia, prevention and practice management. It consists of structure, process and some outcome indicators and is focused on ambulatory care doctors. It was developed by KBV with involvement of GPs and specialists. Most doctors that participated in a survey on AQUIK indicated that the indicators were acceptable, but that data access was problematic and that practice information technology (IT) solutions were required before the indicator set would work in practice.⁹ AQUIK is not yet in use.

On 17 June 2009, two days after the presentation of AQUIK, AQUA (Institute for Applied Quality Improvement and Research in Health Care) in cooperation with AOK (a large health insurance fund) presented its own quality indicator programme: QISA (Quality Indicator System for Ambulatory Care). It consists of 100 quality indicators with an emphasis on general practice covering domains related to asthma, hypertension, depression etc. It covers structure, process and, to a lesser extent, outcome measures of quality. The set is based on experiences of AQUA and AOK with GP networks and has been used within these networks, however, hard evidence regarding a measurable effect on quality in primary care is limited.¹⁰ QISA has not yet been used in regular care.

AQUA has also been tasked to set up comprehensive quality indicators covering the cross-over between ambulatory and hospital care. AQUA has presented the first indicators related to cataract operations,

colorectal carcinoma and percutaneous transluminal coronary angioplasty (PTCA).²⁴ However, it is too early to provide any information regarding a potential effect on quality.

Finally ÄZQ (an agency for quality in medicine, see Table 1) has a national guideline programme in which indicators are produced.²⁵

Forces for and against the implementation of a quality indicator system in German primary care

So far this article has shown that there are significant healthcare system differences between German and UK primary care and that in Germany QOF-like quality indicator systems are being developed. Figure 1 provides an overview of estimated key forces for and against the implementation of such a quality indicator system in German primary care. This is simplified, in reality more institutions and organisations could have been included and most organisations influence each other. Also, although the estimation of size and direction of the forces is based on the available literature and information, inevitably it is a matter of judgement.

The German Federal Department of Health is considered the biggest supportive force for implementation of a quality indicator system in German primary care. In 2007 the government's advisory council recommended the introduction of quality based remuneration elements.²⁶ Health reforms in 2007 advised that quality indicators needed to be developed.²⁷ Although a new government was elected in 2009, there is no indication that support for quality indicator systems will diminish.

The G-BA (Federal Joint Committee) is also a strong force for the implementation of such quality schemes. It has published guidance on the development of cross-sector quality indicators and has allocated AQUA as the institute to develop these.²⁴ AOK has been working with AQUA on quality indicators for GP networks for a long time, and as such this SHI fund can be considered as a supportive force.¹⁰ Similarly KBV, as the driver of AQUIK, can be considered to be a force supporting the implementation of such systems.⁹ Finally, the consumer advice centre which represents patients' views supports the use of quality indicators.²⁷

The biggest force against such systems is probably the German pharmaceutical industry. As a large employer with a strong political lobby it has a major influence on politicians and clinicians. This industry may have an interest in indicators that promote the

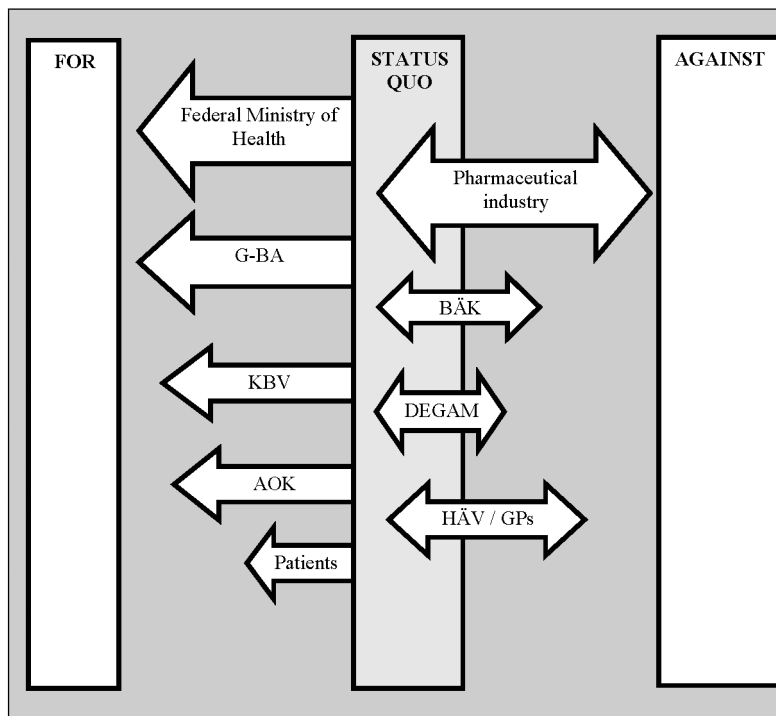


Figure 1 Forces for and against the implementation of a quality indicator system in German primary care^{9,10,24,26–33} 'For' means support for implementation of a quality indicator system in German primary care. 'Against' indicates the opposite, 'status quo' suggests a neutral position. Each arrow represents the views of key stakeholders in the German healthcare system. The position and the size of each arrow stands for the extent of support or rejection of such a system. An arrow pointing in both directions means mixed views

use of medication, for example tight targets for cholesterol levels, which may increase the use of statins. However, the stronger force seems to be against, as the pharmaceutical industry mainly wants to support innovation, which does not fit with generic prescribing guidelines and rational quality indicators.²⁷ BÄK (the German Medical Association) indicates that it supports quality systems, especially in hospitals, yet also voices strong scepticism regarding imposed external quality programmes.^{27,28} Similarly, in DEGAM (the German Society of General Practitioners and Family Physicians) there are strong conflicting views amongst its members and its position paper indicates that more research is required before pay for performance and quality indicators can be implemented.^{29–31} Finally, grassroots GPs indicate various concerns regarding the implementation of these systems.¹² They are important as they are the ones 'who have to do it' and as, due to the ageing German population, more GPs are required while fewer doctors want to work in primary care.³² Many GPs are represented by the HÄV, the German General Practitioner Association, making this a strong force.³³

Overall there is a net force for implementation of a quality indicator system in German primary care, with

GPs likely to have an important impact on whether it will work.

Implementation of a quality indicator system in German primary care

This subheading is based on the above presented information and the key quality literature. The main documents used are reports from the German Advisory Council on the assessment and developments in the healthcare system, and a book from Emmert on pay for performance for German primary care which provide a 'top down' view and an article by the author *et al* concerning views of German GPs on the QOF clinical indicators to provide a 'bottom up' perspective.^{12,17,26,32}

The following are suggested as key recommendations for the successful implementation of a quality indicator system in German primary care:

- Practising GPs need to be involved in all steps of the development, implementation and evaluation pro-

cess of the indicator system.^{12,17,26} Although it is not easy to involve grassroots GPs, and though many GPs have been involved in the development of the AQUIK and QISA sets, involvement needs to be extended to indicator setting institutions, local pilots, 'feeding up' information mechanisms, quality circles etc.^{9,10,26,34}

- The lack of IT infrastructure and use in German primary care must be tackled.^{12,26} Currently, relatively large groups of GPs hardly use IT in the consultation and very diverse software packages make clinical data collection and extraction cumbersome.^{9,35} Financial investments need to be made to create consultation software with fully integrated quality indicators, templates, reminder systems, easy to use search functions etc. There is also a need for an investment in training, ensuring that GPs and other practice staff know how to use these new systems. This is a matter of negotiation between GPs and SHI funds, with the argument that investment in IT saves money in the long run.
- A set of indicators acceptable to the large majority of GPs needs to be developed.^{12,26} For it to be acceptable this set should consist of a small number of indicators, mainly structure and process indicators with fewer outcome indicators. These should be based on well established GP practice and cover common areas like hypertension, diabetes, asthma, depression etc.¹² It should focus mainly on provider indicators and less on public health interests.^{12,26} The AQUIK and QISA sets seem to fulfil these requirements, but will need exposure to a large group of GPs to assess their nationwide acceptance.
- There should be an independent indicator setting institution which is acceptable to GPs.¹⁷ IQWiG (Institute for Quality and Efficiency in Health Care, see Table 1) is closely linked to the Federal Ministry of Health and G-BA and therefore is unlikely to be acceptable to GPs.¹⁴ Hence KBV (AQUIK) and AQUA (QISA) are the main players. Although neither is independent (KBV has strong ties with the ambulant doctors, AQUA has worked closely with AOK to develop its set), it seems unlikely that another indicator setting party will emerge. Of the two, AQUA seems better suited for primary care, as the indicator set is focused on GPs, it has previously been used by GP networks and AQUA is the organisation that has been appointed to develop cross-sector indicators.^{9,10} However, the presence of both could provide choice to GPs.
- There needs to be an accepted, ideally independent, institution for data collection,¹⁷ but it is unlikely that a new such institution will be developed. AQUA would not have the capacity to collect data whereas either the KBV, via its KVs, or the SHI funds could do so, or both could be involved.¹⁹

- It must be clear what incentives will be used and financial incentives should at least cover investment and opportunity costs.²⁶ In the literature there is debate regarding what an adequate financial reward would be.³⁶ In the USA, figures of between 1% and 40% of the practice's total annual revenue, with an average of 10%, are mentioned.¹⁷ Therefore a figure of 10% of the physician's income is suggested. This is a matter of negotiation with the SHI funds, who have indicated that these quality initiatives should be cost neutral.²⁷ Also, non-financial incentives should be used, for example a quick and appropriate feedback system, making it easier to monitor practice performance.^{12,26} Public disclosure is not advisable at this stage as it may alienate GPs in the implementation phase.
- There must be a 'practice registration' structure.¹⁷ One of the reasons for the success of QOF is the gate-keeper system in the UK, with patients registered with one general practice. In Germany patients have a free choice of doctor and it is unlikely that this will change.^{14,15,17} However, patients can be bound 'informally' to general practices. For example, more than 90% of SHI patients are thought to have one GP and in that way are attached to a practice.³⁷ Also the use of GP networks can work as a binding mechanism.¹⁰
- There needs to be a risk adjustment structure^{17,26} as in QOF, where an exception reporting system (certain patients can be excluded from the statistics based on terminal illness, contra-indications for recommended medication, patients refusing to be included etc.) is used.³ Exception reporting should be preferred instead of sectoring (to set thresholds lower in certain deprived areas) as a quality indicator system with an exception reporting mechanism may actually help to reduce health inequalities.^{17,38} However, exception reporting should be monitored closely to reduce the risk of gaming.³⁸
- GPs should have the possibility of delegating routine clinical data collection tasks to practice assistants,^{12,32} and if this were so extra training would be needed for this group.
- Experience with these quality systems is limited, so implementation should proceed in small steps, via local pilots, and should be closely monitored and evaluated by both GPs and academics.^{12,26,32} Research through these pilots using patient reported outcomes (PROs) would provide important information regarding the success of the intervention.³⁹

Conclusions

Quality indicator systems are being developed in Germany and there are political forces that support

their implementation. This article proposes ten key issues for the successful implementation of such a system: the involvement of GPs at all levels of the development, implementation processes, financial investment and training related to practice IT systems, an accepted quality indicator set, a quality indicator setting institution and data collection organisation, clear financial and non-financial incentives, a 'practice registration' structure, an exception reporting mechanism, delegation of routine clinical data collection tasks to practice assistants and a stepped implementation approach with adequate evaluation.

Previous research on the QOF has shown that such a system can have negative consequences for general practice care, for example conflicting patient and QOF agendas, a practice culture merely focused on ongoing performance monitoring and reduced continuity of care.⁴⁰ As such, worries that are expressed by grassroots GPs and academics should be taken seriously.^{12,29,30} The presented strategy does take these into account and it is hoped that the use of the implementation list will prevent these negative effects. Above all it is hoped that this paper will generate discussion on how to progress quality indicator systems in German primary care.

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ADDRESS FOR CORRESPONDENCE

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