WHICH QUALITY AND OUTCOMES FRAMEWORK (QOF) CLINICAL INDICATORS ARE APPLICABLE FOR BRITISH FORCES GERMANY HEALTH SERVICE (BFG HS) PRIMARY CARE?

HGJ Van Den Heuvel[1], RG Simpson[2]

[1]Civilian Medical Practitioner, Medical Centre Gütersloh, Princess Royal Barracks; [2]Defence Professor of General Practice, Royal Centre of Defence Medicine, Birmingham Research Park, Vincent Drive, Birmingham

Abstract

Objectives: To determine which QOF clinical indicators are applicable for BFG HS primary care.

Method: In depth cross-sectional survey of BFG HS general practitioners. Participants were requested to assess all 19 QOF clinical domains (80 clinical indicators) and to indicate to what extent these were applicable for BFG HS (Likert scale 1 – 5). Response rate was documented. Cronbach's alpha reliability was calculated and a comparison of the mean responses of training and non-training practices was made.

Results: The response rate was 80% (28/35). Cronbach's alpha was 0.91.The mean score for both training practices and non-training practices was 3.9. Based on the mean score the applicable indicators were (in descending order): Hypothyroidism (mean 4.6, 95% confidence interval 4.5 - 4.8), Hypertension (4.6, 4.5- 4.8), Asthma (4.3, 4.2- 4.5), Diabetes mellitus (4.3, 4.2- 4.3), Obesity (4.1, 4.0- 4.2), Chronic Heart Disease (4.1, 3.9- 4.2), Epilepsy (4.0, 3.9- 4.2) and Smoking (4.0, 3.7- 4.2). Problematic were (descending means): Cancer (3.9, 3.6- 4.2), Stroke and TIA (3.8, 3.7- 4.0), Atrial fibrillation (3.6, 3.3- 3.8), Learning disabilities (3.5, 3.1- 4.0), Chronic kidney disease (3.5, 3.3- 3.8), Chronic Obstructive Pulmonary Disease (3.5, 3.3- 3.7), Mental health (3.5, 3.3- 3.6), Heart failure (3.4, 3.1- 3.7), Depression (3.2, 2.8- 3.5) and Palliative care (3.2, 2.7- 3.6). Not applicable was Dementia (2.4, 2.0- 2.8).

Conclusion: This study shows that several but not all QOF clinical indicators are applicable in BFG HS. Therefore QOF cannot be directly transferred to BFH HS and an adapted quality framework is required.

Introduction

"As a group, physicians strive for quality but often resist quality measurement. Cost, inconvenience, lack of time, mistrust of quality measures, and fear of what assessment may find are factors contributing to this resistance" [1].

Improving the quality of medical care has become a major issue for all health care systems. Most health problems are presented to and managed in primary care and the quality agenda is starting to focus on this area of healthcare delivery [2].

One of the key initiatives to measure quality in primary care is the Quality and Outcomes Framework (QOF) that was introduced in April 2004 as part of the General Medical Services (GMS) contract between the National Health Service (NHS) and civilian general practitioners (GP's). Currently the clinical part of QOF covers 19 disease / problem domains including Secondary prevention in Coronary Heart Disease (CHD), Heart failure, Stroke and Transient Ischaemic Attacks (TIA), Hypertension, Diabetes mellitus, Chronic Obstructive Pulmonary Disease (COPD), Epilepsy, Hypothyroidism, Cancer, Palliative care, Mental Health, Asthma, Dementia, Depression, Chronic Kidney Disease (CKD), Atrial Fibrillation, Obesity, Learning disabilities and Smoking.

For each of the mentioned domains there are between one to 16 clinical indicators, in total there are 80 clinical indicators [3]. QOF is based on a point system whereby each point is attached to a financial incentive. In the first year (2004/2005) on average 91.3 % of the maximum score was achieved, in 2006/2007 on average the score was 95.5 % [4].

British Forces Germany Health Service (BFG HS) primary care is currently not using QOF but is about to introduce key performance indicators. Taking into account the success of the QOF system and the importance of quality measurement in general practice it may be tempting to use QOF clinical indicators. However BFG HS primary care is a different system with its own population and pathology and care is required transferring one system to another [5,6]. Little is known whether QOF clinical indicators are actually applicable to BFG HS general practice or whether specific indicators need to be developed. On the other hand for BFG HS to develop its own scheme is cost and time intensive and could move the care away from NHS standards. As such before implementing a system like QOF it would be important to research whether it actually can be used in BFG HS primary care.

This study intended to address this issue. The focus was on QOF clinical indicators and the aim was to determine to which ones were applicable in BFG HS primary care.

Corresponding Author: HGJ van den Heuvel, Civilian Medical Practitioner, Medical Centre Gütersloh, Princess Royal Barracks, British Forces Post Office 47
Tel: 0049 5241 84 2536 Fax: 0049 5241 84 28218
Email: rickvandenheuvel@doctors.org.uk

Methods

The method was an in depth cross sectional survey. The sample consisted of 35 BFG HS GP's. This was justified in the following way: At the time of writing (December 2007) 43 permanent GP's were recorded as part of BFG HS. 36 GP's worked in the BFG HS medical centres in Germany, one of them being the principle investigator. 7 GP's were either on operational tour or had a management role only. GP's on operational tour had been excluded as they were not providing NHS type of GP care and as they could not be easily reached. The GP's not working in a GP role had been excluded, as the opinion is required of GP's with daily experience of GP care. Also the principle investigator could not be included. Locum doctors had been excluded as they were often only for a short time in the practice and were not officially attached to BFG HS. Doctors not qualified as GP's had been excluded as they did not provide chronic GP care.

From December 2007 sample GP's were sent an invitation to participate. Participants were sent the full and complete list of all QOF clinical indicators (19 domains, 80 indicators, version 2006). Box 1 shows some example clinical indicators [3].

- The practice can produce a **register** of all patients aged 17 years and over with **diabetes mellitus,** which specifies whether the patient has **Type 1 or Type 2 diabetes.**
- The percentage of patients with diabetes whose notes record **BMI** in the previous 15 months.
- The percentage of diabetic patients who have a record of **HbA1C** or equivalent in last 15 months.

The full list of indicators can be found under:
www.dh.gov.uk/en/Policyandguidance/Organisationpolicy/Primarycarecontracting/GMS/index.htm

Box 1. Example QOF clinical indictors (version 2006).

Participants were asked to what extent they agreed that a clinical indicator was applicable / could be used in BFG HS primary care. Responses were indexed on a Likert scale using values from 1 to 5 (1 = SD / Strongly Disagree, 2 = D/ Disagree, 3 = N/Neutral, 4 = A/Agree, 5 = SA/Strongly Agree) [7]. For each indicator the frequencies were documented and mean scores and 95 % confidence intervals were calculated. Participants were asked to indicate whether they work in a training- or non-training practice.

Replies were collected for the period 16 December 2007 – 15 March 2008. The response rate was documented.

Cronbach's alpha reliability was assessed based on the various domains as measure for internal consistency. The result for the overall list was calculated [8]. Content validity was optimised, as only original QOF clinical indicators without adaptation were used [9,10]. Construct validity was tested by comparing responses of GP's working in BFG HS GP training practices with those working in non-training practices. It is known that training practices perform better at QOF related activity, although the difference is small [11,12]. As such GP's working in BFG HS training practices were expected to find the clinical indicators more easily applicable as the doctors in non-training practices and therefore to have higher scores. Mean scores were compared.

All calculations were made using SPSS 15.0 and Excel software.

Results

The response rate was 80% (28/35). Cronbach's alpha was 0.91. The mean score for both training practices and non-training practices was 3.9.

Table 1 provides the scores regarding the QOF domains indicating the number of questions answered, frequencies, mean score and 95% confidence intervals (in descending order, starting with the highest mean value).

Discussion

This study has a very good response rate (80%) and a very high Cronbach's alpha (0.91) indicating good internal consistency. There is no difference regarding the mean scores in BFG HS training practices and BFG HS non-training practices (mean 3.9). The studies in the literature described (small) differences in QOF score and the expected (small) differences in applicability between these are not confirmed [11,12].

The study shows that several but not all QOF clinical indicators are applicable in BFG HS primary care. Based on the mean score the applicable indicators are (in descending order): Hypothyroidism, Hypertension, Asthma, Diabetes Mellitus, Obesity, Chronic Heart Disease, Epilepsy and Smoking. These have mean scores between 4.6 (Hypothyroidism) and 4.0 (Smoking) indicating that most BFG HS doctors agreed (A=4) or strongly agreed (SA=5) that the indicators in the mentioned domains were applicable. Problematic are: Cancer, Stroke and TIA, Atrial fibrillation, Learning disabilities, Chronic kidney disease, COPD, Mental health, Heart failure, Depression and Palliative care. Arbitrarily this "problem area" starts with Cancer (3.9) and finishes with Palliative Care (3.2) indicating that most GP's were neutral (N=3) or agreed (A=4) that the indicators in the mentioned domains were applicable. Although the indicators are potentially still applicable adjustment is probably required. Not applicable is Dementia (2.4, indicating disagree to neutral).

QOF indicators are evidence based and have been developed for NHS General Practice [13]. BFG HS works according to NHS standards. The results match with this as most of the indicators related to common BFG HS problems are seen as applicable. For example Hypothyroidism, Hypertension, Asthma and Diabetes are common in BFG HS and have the highest scores regarding applicability. Notable exceptions are the domains Mental Health and Depression. Looking more specifically at Mental Health the QOF indicators are mainly related to patients with schizophrenia, bipolar disorder and other psychoses. These conditions are very rare in BFG HS and as such it is understandable that this domain is seen as not applicable.

One of the Depression indicators is related to case finding for depression in patients with diabetes or chronic heart disease. The other is regarding the use of an assessment tool to assess the severity of depression. Both indicators seem relevant to BFG HS. A potential barrier could be that that the use of assessment tools in the GP consultation room may not part of the "usual routine" [14]. This seems an area that needs to be explored at organisation level.

Taking into account the above what would be the way forward for BFG HS? Firstly, in line with the NHS and other health care organisations, a framework looking at the quality and outcomes of the care seems required [2]. The basis of this framework could consist of 'applicable' QOF indicators identified in this study. Great care is required if "problematic" indicators would be used and most of them would have to be adapted to be applicable. For example the already mentioned Mental Health indicator would be a lot more useful for BFG HS if the focus would be on issues like Post Traumatic Stress Disorder (PTSD), stress, self harm and alcohol use as opposed to rare conditions like schizophrenia. Specific BFG HS indicators may be required. For example areas like Occupational Health (Medical boards, PULHHEEMS, audiometry, vaccination status etc.), Musculo- skeletal problems (Anterior Knee Pains, shin splints, cold injuries etc.) and Contraception (form of contraception used, uptake of relevant checks etc.) may be particularly useful for the organisation.
Whichever indicators are applied the framework should be a dynamic system that is regularly reviewed [13].

Secondly effective implementation of such a framework is a science in itself [14]. If the BFG HS framework is based on professional values this will enhance the internal motivation and as such increase the chance of success. Also good IT support and

	Questions answered	1(SD)	2(D)	3(N)	4(A)	5(SA)	Mean	95% Confidence Interval	
Hypothyroidism	56	0	0	2	16	38	4.6	4.5	4.8
Hypertension	84	0	1	1	25	56	4.6	4.5	4.8
Asthma	112	2	3	9	39	59	4.3	4.2	4.5
Diabetes Mellitus	445	0	26	62	129	228	4.3	4.2	4.3
Obesity	28	1	3	2	8	14	4.1	4.0	4.2
Coronary Heart Disease	273	5	30	16	116	106	4.1	3.9	4.2
Epilepsy	112	0	10	16	45	41	4.0	3.9	4.2
Smoking	56	2	4	3	32	15	4.0	3.7	4.2
Cancer	56	2	8	5	19	22	3.9	3.6	4.2
Stroke And TIA	221	18	21	12	97	73	3.8	3.7	4.0
Atrial Fibrillation	84	9	6	18	31	20	3.6	3.3	3.8
Learning Disabilities	28	1	8	1	11	7	3.5	3.1	4.0
Chronic Kidney Disease	110	15	3	31	31	30	3.5	3.3	3.8
COPD	133	9	20	31	44	29	3.5	3.3	3.7
Mental Health	166	15	19	44	53	35	3.5	3.3	3.6
Heart Failure	83	14	8	11	28	22	3.4	3.1	3.7
Depression	55	8	11	9	18	9	3.2	2.8	3.5
Palliative Care	55	10	12	11	4	18	3.2	2.7	3.6
Dementia	56	25	4	14	6	7	2.4	2.0	2.8

Legend: 1(SD) = Strongly disagree, 2(D) = Disagree, 3(N) = Neutral, 4(A) = Agree, 5(SA) = Strongly agree

Table 1. BFG HS QOF domain scores.

systems and clarity regarding which READ codes to use will help the success of the scheme. Not unimportantly are financial incentives. QOF is a pay for performance system and a major part of its success is based on this. As such a mix of professional, financial and managerial approaches seems required to implement the BGF HS framework successfully [13].

Finally the framework is not a panacea for all quality issues. For example QOF is limited in capturing interpersonal care and more attention is required in this area. Other approaches like for example Quality Team Development (QTD) or General Practice Education Committee (GPEC) assessments may be better in addressing areas like consultation skills, practice culture and teamwork. It must be remembered that QOF and a "BFG HS framework" can merely be seen as an adjunct to other improvement initiatives [13,15,16].

Acknowledgements

Special thanks go to Col C. Dieppe and Col T. Jones for their help and support. Also the participation of many of the BFG HS GP's in this study is appreciated.

Approval

This study was approved by the Army Scientific Accreditation Committee (ASAC) who indicated that ethical approval was not required.

References

1. Peabody J. Why We Love Quality but Hate to Measure It. Quality Management in Health Care 2006; 15 (2) : 116-120
2. Seddon ME, Marshall MN, Campbell SM, Roland MO. Systematic review of studies of quality in general practice in the UK, Australia and New Zealand. Quality in Health Care 2001;10: 152-158
3. www.dh.gov.uk/en/Policyandguidance/Organisationpolicy/Primarycarecontracting/GMS/index.htm (29.07.2007)
4. Quality and Outcomes Framework 2006/07, www.qof.ic.nhs.uk/ (23.03.2008)
5. Engels Y, Campbell S et al, Developing a framework of quality indicators for general practice management in Europe. Family Practice 2005; 22 (2): 215-222
6. Engels Y, Dautzenberg M et al. Testing a European set of indicators for the evaluation of the management of primary care practices. Family Practice 2005; 137-147
7. Likert R. A technique for the measurement of attitudes. Archives of Psychology. New York: Columbia University Press, 1931
8. Cronbach LJ. Coefficient alpha and internal structure of tests. Psychometrika, 1951; 16(3), 297-334
9. Fink A. The Survey Handbook, Sage Publications, London, 1995
10. Litwin M. How to Measure Survey Reliability and Validity, Sage Publications, London, 1995
11. Ashworth M, Armstrong D. The relationship between general practice characteristics and quality of care: a national survey of indicators used in the UK 'Quality and Outcomes Framework'. BMC Family Practice 2006; 7: 68
12. Ashworth M, Seed P. et al. The relationship between social deprivation and the quality of primary care: a national survey using indicators from the UK Quality and Outcomes Framework, British Journal of General Practice 2007; 57: 441- 448
13. Lester J, Roland M. The future of quality measurement. British Medical Journal 2007; 335: 1130 –1131
14. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. Lancet 2003; 362
15. Roland M. The Quality and Outcomes Framework: too early for a final verdict, British Journal of General Practice 2007; 525-527
16. Macfarlane F, Greenhalgh T, Schofield T, Desombre T. The RCGP Quality Team Development Programme: an illuminative evaluation. Qual Saf Health Care 2004; 13: 356-362.