A descriptive study of the implementation of the EFQM excellence model and underlying tools in the Basque Health Service

ELENA SÁNCHEZ1, JON LETONA2, ROSA GONZÁLEZ2, MARBELLA GARCÍA2, JON DARPÓN1 AND JOSU I. GARAY3

1Osakidetza/Basque Health Service, Hospital Basurto, Bilbao, 2Department of Care Quality, Osakidetza/Basque Health Service, and 3Health Department, Basque Government, Vitoria, Spain

Abstract

Objective. To describe the implementation of the European Foundation for Quality Management (EFQM) excellence model as a common framework for quality management in a regional health care service.

Design. Prospective, descriptive observational study.

Setting. Thirty-one organizations (hospitals, primary care organizations, mental health institutions, and emergency services) of the Basque Health Service (serving a population of 2200000 inhabitants) in Basque Country, Spain.

Methods. Since 1995, the experiences with the EFQM excellence model were initiated by training, the design of quality tools and application guidelines, and actions related to criteria of the EFQM model.

Results. Four assessment cycles in which most of the organizations have participated were completed. Scores for most of the criteria improved, particularly in ‘processes’. The overall patients’ satisfaction was higher than 89% in all settings, in most of the cases higher than 95%. Ten organizations (32%) exceeded 400 points in an external evaluation with the EFQM excellence model, and 2 (6%) 500 points. Eighty-three percent of hospitals have some ISO-certified areas of activity. In the primary care setting, 40% of people were attended in a certified center.

Conclusions. Stimulating actions towards quality have resulted in progressive implementation of the EFQM model, this approach being possibly related to positive evolution of some outcomes. Key factors identified have been pursuing the objective of total quality management during several years and the assignment of the resources for training and implementation of quality systems.

Keywords: clients’ satisfaction, clinical management, EFQM excellence model, quality
Methods

Setting

State provision of Health Services are transferred in Spain to the Autonomous Regions (total of 17), one of them is the Basque Country, with some functions of coordination remaining with the Spanish Health Ministry. The Basque Health Service is the public body that provides health services to the Basque Country population, about 2,200,000 inhabitants. Universal, free health care is provided except for a part of expenditures in medicines consumed at home. The Health Service has the following resources: hospital care with 18 hospitals, primary care including seven primary care regions with 309 health centres, mental care with 28 mental health centres, and a network for emergency services. All these centres of health care provision are grouped into 31 organizations, each of which has management autonomy. The annual budget is approximately 1.9 billion euro. Somewhat more than 24,000 people are working in the Health Service.

Quality as a target objective of the Basque Health Service

The purpose of the Basque Health Service is to provide public care services in accordance with the principles of universality, equity, solidarity, efficiency, and quality. Since 1995 and coinciding with a movement towards integral quality promoted by the Basque government, this service began to work with the EFQM model. Since 1998, total quality became a target objective in the plurianual management plans both for the Health Service as a whole and its 31 organizations individually.

Training with the EFQM model

A key factor for the progress of the EFQM model has been the alliance between the Basque Health Service and the Basque Foundation for Quality Promotion [5]. This is a public, non-profit making institution which, since its introduction in 1993, carries out different activities including training programs about the EFQM model for managers of private companies, education centres, health care centres, and public administration. In 1995, with the support of this Foundation, we started the first training activities initially directed to executive teams and technicians of quality in the 31 organizations of the Health Service. Training included a practical, case-based approach, and practical experience in the self-assessment process.

To achieve an advanced training level, we have promoted that many professionals of the health centres will become evaluators of the Basque Foundation for Quality Promotion. They receive an advanced training and participate free in the evaluations of this entity. Throughout this process, many quality managers and technicians have acquired training and experience, which has been very useful for the implementation of the EFQM model in our centres. Currently, there are 90 evaluators.

Structure and supportive tools

The Department of Care Quality was created in 1992 and endowed with technical and human resources to promote and facilitate total quality management in all components of the Health Service. Individual organizations have also been progressively endowed with quality technicians and administrative resources according to their needs.

All of them have contributed to develop different tools which have facilitated the implementation of the EFQM model, such as:

1. Design, exploitation, and analysis of corporate surveys for patients in different health care settings. These surveys have been necessary to evaluate customer satisfaction regularly and to supply to the Basque organizations comparative data among them as the EFQM model requires for criteria 5 and 6.
2. Design, exploitation, and analysis of a corporate survey to measure motivation and people satisfaction in health care organizations [6]. This initiative facilitates comparative people satisfaction data between organizations, which accomplish requirements of criteria 3 and 7.
3. Development of indicators and standards of patients’ safety, effectiveness, accessibility [7], etc., and design and exploitation of internal corporate care information systems for the follow-up of indicators and benchmarking (criteria 5 and 9).
4. Development of guidelines to adapt the use of methodologies related with different criteria of the EFQM model, to the health care setting: self assessments, process management methodology [8], 5S [9], etc.

Enabler’s criteria-related actions

Since 1995, different projects related to the five enabler’s criteria of the EFQM model aimed to improve results have been developed.

With regard to ‘leadership’, a specific training program in health care management including quality has been offered to directors and all other people in team leadership positions to improve their roles as leaders. In addition, training activities in quality care and the EFQM model for the remaining professionals have been scheduled.

In relation to the second criterion of the model ‘policy and strategy’, total quality management was included in the strategic planning of the Basque Health Service for 1998–2002 and 2003–2007 plurianual cycles. In 2003, the 2003–2007 Quality Plan has been implemented with the objective of improving both health service quality and management quality [10]. This approach has contributed to spreading out quality through all organizations of the Health Service to the extent to which they had to implement management plans in accordance with corporate directives.

In the area of ‘people’, two highly relevant projects were developed: clinical management and professional development. The first strategy was developed with the objective of involving clinical personnel in management by the implementation of clinical management contracts in numerous
care services. Professional development is currently being approached by a new system of recognition of advances in professional qualification.

In the fourth criterion of ‘partnerships and resources’, efforts have been made in the following areas: optimization of material resources, improvement of information systems technologies, implementation of health technology assessment systems, and support to health care research and knowledge.

Many actions associated with the ‘processes’ criterion have been developed. First of all, we have conducted different multicentre studies on ‘processes management’ approach and implementation in the health care segment [11]. They allowed us, on one side, to define the standard map of processes and the ‘key processes’ for different kinds of organizations (hospitals, primary care, or psychiatric centres…) and, on the other side, to establish a simple methodology to apply this approach in health centres.

Afterwards, ISO 9001:2000 certification has been promoted [12,13] as an effective way to deploy progressively processes management in our organizations. The most advanced primary care centres and hospital services were the target of the ISO certification. The number of them is indicated in the results paragraph.

To improve clinical processes, usually the ‘key processes’ in the health organizations, and to supply indicators for their follow-up, we have developed different specific programmes. These include standardization of the nursing process of care; surveillance, prevention, and control strategies for nosocomial infection; establishment and accreditation of bioethics committees; strategies to improve the waiting lists for surgical procedures and specialized care, etc. In association with clinical leaders groups, clinical guidelines have been developed, as well as standards and indicators of technical quality for the care of patients with some diseases, such as cancer, diabetes mellitus, hypertension, acute myocardial infarction, and hip replacement surgery. Some of these indicators have been incorporated into the clinical management contracts of health care services and are currently considered contractual requirements to receive public funding.

Assessments and measurement

Since 1996, biennial assessments using the EFQM model have been performed by the organizations. Self-assessments were only initially performed but since 2000 some organizations, the most advanced, underwent external auditing processes by the Basque Foundation for Quality Promotion. The number of organizations involved and the type of assessment (external or self assessment) are shown in Table 1. Before each assessment the Department of Care Quality in collaboration with the Basque Foundation, provided training activities for participants without sufficient knowledge of the EFQM model, and guidelines and criteria for the right implementation of the assessment. Always an observer expert in the Model EFQM was facilitated to support the assessment. In self-assessments, different criteria scores were obtained by consensus among the participants (usually the management body integrated by 5–20 people, exceptionally more) according to the RADAR (Results, Approach, Deployment, Assessment and Review) scheme of the EFQM model [1]. When an external assessment was made, the scores were assigned by consensus by 6 external assessors of the Basque Foundation for Quality Promotion, using also the RADAR scheme. The scores and the areas prioritized for improvement were communicated to the Department of Care Quality by each organization assessed, so a complete corporate report was elaborated biennially. All the results were integrated in the report, independently of the methodology (external or self assessment).

Results

We present some relevant outcomes of our organizations: scores obtained in the evaluations according to EFQM RADAR system, and relevant figures of external assessments and awards. Also, we show some corporate relevant available tendencies related to 2 EFQM model results criteria: customers and key performance results. At the moment, we do not have available corporate tendencies for criteria 7 (people results) and 8 (society results); although individual organizations, mainly the most advanced, have them.

Scores obtained in the evaluations

Figure 1 shows the scores obtained from the different criteria of the EFQM model in the four assessment cycles performed.
Implementation of the EFQM in a regional health care service

Enabler criteria

<table>
<thead>
<tr>
<th>Enabler criteria</th>
<th>Percentages of maximum possible scores</th>
</tr>
</thead>
</table>

Results criteria

<table>
<thead>
<tr>
<th>Results criteria</th>
<th>Percentages of maximum possible scores</th>
</tr>
</thead>
</table>

**Figure 1** Evolution in the mean percentages (maximum possible score 100) for enablers and results criteria of the European Foundation for Quality Management (EFQM) model in the four general assessment cycles of the BHS organizations.

biennially since 1995. With the aim of observing the criteria profile and the variability between organizations, a graphic display of results obtained for the 2002–2003 period is depicted in Figure 2. Mean highest scores, greater than 40%, were achieved for ‘partnership and resources’, ‘customer results’, and ‘key performance results’. However, there was a large range spread, which indicates a large variability of the percentages obtained for the nine criteria, particularly wide in ‘customer results’. The explanation of this finding is that some specific organizations such as psychiatric ones did not start to use customer surveys until recently, so their punctuation was much lower than the rest. On the opposite side,
some organizations had long tendencies and good data, obtaining for these reasons remarkable results.

External assessments and awards

Several organizations have passed external evaluations by the BFQP according to criteria of the EFQM model and obtained awards. At the moment, 10 out of them (32%) have reached 400 points (Q silver award of the Basque government), and 2 (6%), Hospital Bidasoa [14] and Hospital Zumárraga [15], have scored more than 500 points (Q gold award of the Basque government).

As a demonstration of the progress in the criterion processes, now 54 primary care centres, the most advanced in quality, attending 40% of the population, are certified by the ISO standards. In the hospital setting, 74 services belonging to 83% of the hospitals are certified.

Table 2 summarizes the progression of these external recognitions of quality during the last 5 years.

Customer results

Surveys of customer’s satisfaction are carried out regularly in organizations of the BHS according to questionnaires specifically designed as a part of the supportive tools mentioned before. These surveys are conducted yearly or biennially, and their results elaborated by the Department of Care Quality and used for benchmarking amongst Basque organizations. All questionnaires of customer’s satisfaction include a final item of overall assessment, with a 5-point categorical scale (excellent, very good, good, fair, and poor). Table 3 summarizes the percentage of positive evaluations (good, very good, and excellent responses) obtained during 2000–2003.

The Spanish Ministry of Health, which conducted a survey for inter-regions benchmarking using a different methodology, has provided other data, for the first time in 2003. Some of the most outstanding indicators as well as the ranking position of the Basque Country are summarized in Table 4. Always, results of the Basque Country were largely above the average, with a leadership position in some of them.

Key performance results

Different indicators of processes and results, elaborated and published by the Department of Care Quality, according to their own methodology [7], are summarized in Table 5. Some aspects, such as appointment delays for specialized care, are objectives for improvement in the 2003–2007 quality plans.

Discussion

In recent years, there has been a debate about the advantages and disadvantages of different quality models used in the health sector. In our case, we have used the EFQM model as a framework for all improvement activities. This includes the use of ISO as an important tool integrated in the ‘processes’ criterion of the EFQM model. ISO standards were taken as a reference for improvement of the processes. Technical
Implementation of the EFQM in a regional health care service

Aspects established in evidence-based medicine are included among requirements of the processes quality systems, so that management of the health processes will be a key link between total quality management and evidence-based medicine [16].

This study refers to a quality approach based in the EFQM model as a quality framework for 10 years. The majority of EFQM criteria improved, especially noticeable in ‘processes’ and ‘people results’. The first one in relation to numerous actions oriented to improve processes carried out. The second one was mostly due to the introduction of regular people’s satisfaction and motivation measurements. However, a decrease in ‘key performance results’ criterion was observed, which may be related to two factors: (i) an increase in the number of external evaluations, which are usually more demanding and strict regarding scoring and (ii) the conceptual change of the EFQM model for the identification of key performance results introduced in 2000.

Some limitations of the study could be outlined. First of all, this is a descriptive study, so the causal relationship interpretation between the methods described and the results obtained is therefore restricted. Nonetheless, future reported experiences with similar results could reinforce the causal link. Other limitations of the score evolution data are 2000 changes in the EFQM model, although the changes were minimal, or the different assessors along the study. In this case, specific training of the assessors tried to guarantee enough consistency between different self-assessments.

We want to remark on improvement in criteria ‘processes’. This can be largely attributed to efforts made towards systematization of concepts, development of indicators, and stimulus for improvement. This criterion is usually one of the priority areas for improvement detected in the self-assessment [17,18].

Table 3 Overall evaluations of the degree of satisfaction (excellent or very good or good) (%) obtained in the Basque Health Service Surveys (5-point scale used: excellent, very good, good, fair, and poor) in the different health care settings during 2000–2003

<table>
<thead>
<tr>
<th>Setting</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute care hospitalizations</td>
<td>97.0</td>
<td>97.5</td>
<td>97.0</td>
<td>96.5</td>
</tr>
<tr>
<td>Outpatient clinics</td>
<td>95.5</td>
<td>95.8</td>
<td>96.2</td>
<td>96.2</td>
</tr>
<tr>
<td>Emergency departments</td>
<td>91.0</td>
<td>93.0</td>
<td>92.2</td>
<td>93.1</td>
</tr>
<tr>
<td>Day surgery admissions¹</td>
<td>NI</td>
<td>98.9</td>
<td>97.6</td>
<td></td>
</tr>
<tr>
<td>Home hospitalizations¹</td>
<td>NI</td>
<td>NI</td>
<td>98.4</td>
<td></td>
</tr>
<tr>
<td>Mothers–fathers of hospitalized children¹</td>
<td>96.9</td>
<td>96.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid- and long-stay hospitals</td>
<td>94.9</td>
<td>95.7</td>
<td>93.6</td>
<td>94.8</td>
</tr>
<tr>
<td>Primary care (family medicine)</td>
<td>NI</td>
<td>96.4</td>
<td>94.9</td>
<td>95.4</td>
</tr>
<tr>
<td>Primary care (paediatrics)¹</td>
<td>NI</td>
<td>NI</td>
<td>NI</td>
<td>96.9</td>
</tr>
<tr>
<td>Acute psychiatric hospitalizations¹</td>
<td>NI</td>
<td>NI</td>
<td>NI</td>
<td>89.5</td>
</tr>
<tr>
<td>Outpatient psychiatric care¹</td>
<td>NI</td>
<td>NI</td>
<td>93.8</td>
<td></td>
</tr>
<tr>
<td>Breast cancer programme¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detection</td>
<td>95.7</td>
<td>96.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis and treatment</td>
<td>97.0</td>
<td>97.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NI, surveys not implemented yet.
¹Biennial surveys.

Table 4 Population satisfaction with the Spanish National Health Care system, measured by a Survey, coordinated by the Spanish Health Ministry. Comparison of the results obtained in 2003 in the 17 autonomous communities (regions) for some indicators selected

<table>
<thead>
<tr>
<th>Concept (scale)</th>
<th>Basque Health Care Service</th>
<th>National Health Care system mean (range)</th>
<th>Basque Health Service ranking¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with the health care system (0–10 points), mean</td>
<td>7.2</td>
<td>6.1 (5.3–7.2)</td>
<td>2/17</td>
</tr>
<tr>
<td>Care provided in his/her community is better than in other autonomous communities (%)</td>
<td>56%</td>
<td>20 (4.4–79)</td>
<td>2/17</td>
</tr>
<tr>
<td>Satisfaction with the information provided by the administration (0–10 points), mean</td>
<td>6.5</td>
<td>4.8 (3.5–6.5)</td>
<td>1/17</td>
</tr>
<tr>
<td>Satisfaction with primary care (very good or good) (%)²</td>
<td>93%</td>
<td>82.6 (71.3–94)</td>
<td>3/17</td>
</tr>
<tr>
<td>Consider that primary care has improved in recent years (%)</td>
<td>64.9%</td>
<td>50.7 (43–68)</td>
<td>3/17</td>
</tr>
<tr>
<td>Satisfaction with specialized care (very good or good) (%)²</td>
<td>81.8%</td>
<td>67.6 (50–85)</td>
<td>5/17</td>
</tr>
<tr>
<td>Consider that specialized care has improved in recent years (%)</td>
<td>56.1%</td>
<td>40.7 (29.8–62.9)</td>
<td>3/17</td>
</tr>
</tbody>
</table>

¹Position of the Basque Health Service among the 17 autonomous communities.
²Five-point scale used by the Spanish Ministry of Health in this question: very good, good, fair, poor, and very poor.
This study shows other positive results in health care sector such as customer’s satisfaction and key performance indicators related with the EFQM model criterion 9. Customer’s satisfaction has had a high-sustained performance and offers favourable comparisons with other regional Spanish health services. Some of the key performance indicators have not been so good, such as waiting delay for specialized consultation, this related in part with an increase in the health services demand.

As suggested before, we could ask if the quality politics have influenced the results presented. Really we cannot be certain that other quality politics would have been conducive to obtaining similar or better results. Nevertheless, experiences reported in the health sector related to the use of the EFQM model in Europe [19–21] or the Malcolm Baldrige framework in USA [22,23] emphasize that these approaches help organizations to perform better. Studies published have identified success factors and best practices of self-assessment, as well as limitations, barriers, and lessons learned [24]. For us, the methodological support of the Basque Foundation for Quality Promotion, facilitating training and experience with the use of the EFQM model and promoting the quality Basque awards, has been a relevant factor for success. The influential effect of this type of activities on quality improvement plans has also been recognized in other countries [25,26]. On the other hand, understanding the EFQM approach may be found difficult by health care professionals, given that it is a non-specific model. In our experience, like others [27,28], it was considered important to develop guidelines for the practical application of the model [29]. The commitment of the Basque government on management excellence has been another crucial factor. This EFQM model implementation experience is one of the longest duration reported. The administrative support for quality, extended to governing bodies of the Basque Health Service and most of the directors of health care organizations, resulted in multiple initiatives along the years [30]. This support has facilitated the assignment of the necessary resources for training and consultancy services, which are indispensable for the long-lasting maintenance of a quality improvement project.

**Acknowledgements**

We are indebted to the Basque Foundation for Quality Promotion for valuable support and unconditional help in the implementation of quality management programmes; directors and experts in quality methodology of the Basque Health Service for personal encouragement, constructive comments, and suggestions on methodology; all professionals of the health centres who represent an added value to our daily activities; and Marta Pulido, MD, for editing the manuscript and editorial assistance.

**Table 5** Some key performance results obtained in the Basque Health Service during 2000–2003

<table>
<thead>
<tr>
<th>Areas evaluated</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of the medical consultation in primary care, minutes, mean</td>
<td>7.4</td>
<td>8.1</td>
<td>8.2</td>
<td>8.5</td>
</tr>
<tr>
<td>Length of stay in acute care hospitals, days, mean</td>
<td>6.1</td>
<td>6.0</td>
<td>6.1</td>
<td>5.9</td>
</tr>
<tr>
<td>Delay in surgical waiting lists, days, mean</td>
<td>57.1</td>
<td>53.7</td>
<td>55.2</td>
<td>53.8</td>
</tr>
<tr>
<td>Patients waiting less than 1 month for specialized care (%)</td>
<td>63.1</td>
<td>65.8</td>
<td>55.5</td>
<td>60.1</td>
</tr>
<tr>
<td>Prevalence of patients admitted with an infection episode (%)</td>
<td>6.7</td>
<td>6.0</td>
<td>5.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Minimally invasive tumours detected in the Early Detection Breast Cancer programme (%)</td>
<td>43.3</td>
<td>46.5</td>
<td>47.0</td>
<td>40.9</td>
</tr>
</tbody>
</table>

**References**

Implementation of the EFQM in a regional health care service


Accepted for publication 7 August 2005