A proposed adaptation of the EFQM fundamental concepts of excellence to health care based on the PATH framework

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Abstract

Objective. The use of the European Foundation for Quality Management (EFQM) Model in health care has found that this model is useful in promoting quality improvement, but its use in health care organizations is challenging because being a generic model, it does not cover the clinical aspects or the specifics of this field. For that reason, this article aims to bring the EFQM fundamental concepts of excellence closer to health care, using a specific model as a reference to this field: the Performance Assessment Tool for quality improvement in Hospitals (PATH) conceptual framework, developed by the WHO Regional Office for Europe.

Method. A content analysis was performed to independently identify the contents that defined the elements of both frameworks. Then, using defined criteria, two independent researchers compared the contents of the elements of both frameworks. The elements from both frameworks that were equivalent were aggregated. Several experts discussed the aspects with discrepancies between the two comparisons. Finally, the EFQM framework is adapted to health care by adding to those aggregated elements the aspects that were exclusive from one of the models.

Results. The EFQM framework has many correspondences to a health care-specific framework. The EFQM-health care-adapted framework has eight quality dimensions, two of them (customer focus and safety) being overlapped with the other six (staff, results orientation, responsive governance, leadership and constancy of purpose, clinical effectiveness, and partnership development). This model also has two methodological dimensions (management by processes and facts and continuous learning; improvement and innovation).

Conclusion. This adapted model seems useful for health care organizations, but it needs to be further used to corroborate this preliminary finding.

Keywords: EFQM, quality improvement, theory of quality management, TQM

The experiences of application of European Foundation for Quality Management (EFQM) in health care that have been published in the international academic literature widely agree on the conclusion that the EFQM is applicable to health care [1–8] and it promotes improvement on the quality of the organizations [9] and even on the quality of the treatment provided to patients [10]. One of the most positive aspects of EFQM is the use of self-assessment [11], because it is considered a motivating activity for managers and professionals who participate in it [8,12,13] and it promotes improvement by a simple system of identification of areas for improvement [1,4,5]. The possibility of doing benchmarking activities [2,12,14], its face validity [1,7], and

the flexibility of its framework that allows the inclusion of already existing practices [5,13,15,16] also stand out as positive features.

Despite these benefits, some aspects make the application of EFQM challenging in the health care sector. One of these aspects is that this model is not specific enough to address all areas relevant to this field [1,7]. Some authors consider that even when the criteria could be adequate, the subcriteria must be adapted to health care [17], especially for public organizations [3]. It is also difficult to develop operative indicators to evaluate the result criteria on health care, because expected outcomes are not specified. The language used to describe the model is identified as one of its main difficulties [3,13],

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because it is complex, unclear, and distant for health care professionals who are used to clinical terminology [18]. In general, all these opportunities show the challenges of covering aspects that are specific to health care with the EFQM model. This is not an unexpected finding, because the EFQM is a generic model and, by definition, a generic model will never cover the specificities of any given field.

Building upon these circumstances, there have been efforts to take advantage of this model's strengths while reducing its limitations, bringing it closer to health care by developing new versions of the model that are specific to health care [4,9,19,20], guidelines for the use of the model in health care organizations [11], strategies to implement it combined with other approaches [21], or indicators that are specific to this field [22]. Most of these experiences have been focused on the adaptation of the contents of the model, meaning the criteria and subcriteria, to the health care field.

Despite all these projects related to the EFQM evaluation system, it has not been possible to find in the international academic literature (published in English) any project attempting to bring the eight fundamental concepts of excellence from EFQM closer to health care. That is, therefore, the aim of this article. This article compares the fundamental concepts of excellence with a conceptual framework that is specific to health care, to propose an adaptation of the EFQM conceptual framework to this field. The aim is to bring the EFQM framework closer to health care by keeping all its theoretical principles and merging them with some aspects considered essential to guarantee appropriate health care quality and to make it more understandable and acceptable for clinical professionals.

To adapt the EFQM conceptual framework to health care, a framework that is specific to this field has been used as a reference. Among all the available ones, we chose the dimensions of quality of the PATH conceptual framework, developed by the WHO Regional Office for Europe. The reason to select this model is that for its development, a literature review of published conceptual models of performance was carried out in 2003, and workshops with 31 international experts on this field were held in order to discuss this background information and define the dimensions to be included on the PATH framework [23]. Because it is a very up-to-date and comprehensive framework based on previous existing knowledge, it can be considered a good reference for the comparison.

The EFQM conceptual framework

The EFQM excellence model is a non-prescriptive framework for continuous quality improvement that can be used by any kind of organization, regardless of sector, size, structure, or maturity. The essential elements that constitute the EFQM are the fundamental concepts of excellence, which are the theoretical conceptualization that supports the model and its contents and structure, which are the nine criteria. The fundamental concepts of excellence are directly and indirectly related to the criteria and subcriteria [24].

The fundamental concepts of excellence is the theoretical framework that constitutes the basis of the EFQM and defines 'Excellence'. This framework has eight generic concepts that provide the theoretical guidelines that should guide the organization. These Fundamental Concepts are results orientation, customer focus, leadership and constancy of purpose, management by processes and facts, people development and involvement, continuous learning, improvement and innovation, partnership development, and corporate social responsibility [25]. Regarding the structure and the contents of the model, the EFQM has nine criteria grouped in 'enabler' and 'result' criteria: the enabler criteria are concerned with how the organization undertakes the key activities (leadership, policy and strategy, people, partnerships and resources, and processes) and the result criteria are concerned with what results are being achieved (customer results, people results, society results, and key performance results) [24].

The PATH conceptual framework

The WHO Regional Office for Europe launched in 2003 a project aiming to develop a flexible and comprehensive framework for the assessment of hospital performance, which is called the Performance Assessment Tool for quality improvement in Hospitals (PATH). The PATH conceptual model of performance includes dimensions, subdimensions, and how they are related to each other. Because the purpose of this model is the assessment of hospital performance, indicators to assess each subdimension have been identified.

The PATH conceptual framework advocates a multidimensional approach with six interrelated dimensions that should be assessed simultaneously. Two of these dimensions (safety and patient centredness) cut across the other four dimensions (clinical effectiveness, efficiency, staff, and responsive governance), because they are interrelated. Safety relates to clinical effectiveness (patient safety), staff orientation (staff safety), and responsive governance (environmental safety), whereas patient centredness relates to responsive governance (perceived continuity), staff orientation (interpersonal aspects), and clinical effectiveness (continuity of care within the organization) [23]. The graphical view of this model is shown in Figure 1.

Methods

The field of study is the two conceptual or theoretical frameworks for quality improvement proposed by EFQM and the PATH project. Each of these two frameworks is composed of a group of elements that are called concepts of excellence in EFQM and dimensions of quality in PATH. These elements also have a definition that states the concepts that make them up. Therefore, these two conceptual frameworks have a three-level structure:

1. The higher level is the conceptual framework itself (EFQM or PATH) that contains all the elements, the

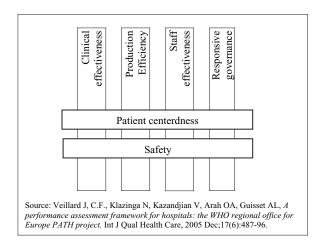


Figure 1 Dimensions of Quality from the PATH theoretical model for hospital performance. PATH, Performance Assessment Tool for quality improvement in Hospitals.

structure that organizes these elements, and the relations between them. In the EFQM, all these elements are independent and do not follow any specific order. In the PATH framework, two elements interrelate to the others (Figure 1).

- 2. The second level is the set of elements that make up the framework, meaning the fundamental concepts of excellence from EFQM and the quality dimensions from PATH. In order to facilitate the discussion of this work, both the concepts of excellence and the dimensions of quality have been denominated with the generic term 'elements'.
- 3. The third level has the concrete contents that build up the definition of each of the elements.

To bring the EFQM conceptual framework closer to health care using the PATH model as a reference, we need to identify the aspects that both models have in common and in which aspects they differ. To do so, the comparison of the frameworks needs to be done through the comparison of their lower levels. Therefore, a conceptual comparison of each of the elements that builds up both frameworks was realized by the comparison of their contents. The method of this article, therefore, has three consecutive phases: (i) comparison of the contents, (ii) comparison of the elements (concepts of excellence from EFQM and quality dimensions from PATH), and (iii) merging of the EFQM fundamental concepts with the PATH concepts.

Step 1: comparison of the contents

A qualitative methodology of content analysis [26] was used to identify all the independent concepts with significance contained on the definition of the elements, in order to avoid that the wording of the definition would influence the comparison. The list of independent

concepts for both models is included in Table 1 (columns 1 and 2). Once this was ready, two independent researchers compared the contents of the elements of both frameworks, using a pre-defined criterion that had three possible situations:

- 1. Situation A. Two contents are equivalent when they belong to the same category, understanding category as a group of words with similar meaning or connotations [26]. For example, 'maximization of people involvement through shared values' is considered equivalent to 'work implication and values', because they both represent the same concept, phrased in different ways.
- 2. Situation B. A content is included in another one when the first content only represents some part of the second one (a part of the whole concept). For example, 'quality of hospital amenities' is included in 'orientation to client needs and expectations', because it is one of the aspects that are included in this concept, but the orientation to clients needs and expectations also include many other items.
- 3. Situation C. A content is different to the contents of the elements of the other framework when it is not possible to find any content on the other framework that represents the same concept.

Step 2: the comparison of elements

Once the comparison of concepts was performed, the two researchers independently made the comparison of elements, using a qualitative criterion that yields only two different outcomes:

- 1. When one element from each of the models had several contents that had been considered equivalent or that were included in another one (situations A and B of the previous comparison), a new element is formed by adding all the contents of the original elements of both frameworks. This new element will take the broader name of the two existing ones, so the new denomination covers all the contents included. For example, the element 'customer focus' from EFQM is compiled with the element 'patient centredness' from PATH. Because patients are some of the main clients of health care organizations, but they are not the only ones, the broadest name 'customer focus' is used for the final element.
- 2. When all or almost all the contents from one element are considered different to the contents of the elements of the other framework (situation C), the element is maintained in its original format, keeping its own list of contents and its original title.

A multidisciplinary panel of five experts from different fields of quality improvement (QI coordinator, researchers, quality managers, and clinicians) reviewed the comparison of the contents and the aggregation of elements where the results from both independent researchers had discrepancies.

ЕҒОМ	PATH	EFQM-health care-adapted framework
Customer focus Segmentation of clients to improve the	Patient centredness	Customer focus Segmentation of clients to improve the effectiveness of the responses
Identification of present and future		Identification of present and future customers for the organization
Anticipation of customer's future needs		Anticipation of customer's future needs and actuation in order to meet them
and actuation in order to meet them Building and maintaining excellent relationships with all customers		Building and maintaining excellent relationships with all customers
Responsiveness to customer's needs and expectations	Prompt attention and continuity of care	Responsiveness to customer's needs and expectations. Including, at least: attention to patient rights (dignity, autonomy, confidentiality), empowerment, prompt attention (timely and continuity of care), accessibility (including choice of provider), quality of basic hospital amenities and access to hospital support network
	Quality of hospital amenities Access to the hospital's social support network Choice of provider Dignity Autonomy Confidentiality	
Monitoring and review of customer's perceptions	Patient's satisfaction	Monitoring and review of customer's perceptions and satisfaction
Corporate social responsibility Ethical approach in the organization Transparency and accountability as a responsible organization Ecological sustainability and minimization of any adverse impact	Responsive governance	Responsive governance Ethical approach in the organization Transparency and accountability as a responsible organization Ecological sustainability and minimization of any adverse impact
Meeting and exceeding local and global community's needs and expectations	Responsiveness to society's needs and demands	Meeting and exceeding local and global community's needs and expectations
Promotion of working on mutually beneficial projects with society Meeting and exceeding local and global regulations	Integration of the organization in the community Equality and equity concerns	Integration of the organization in the community, working on mutually beneficial projects with society Meeting and exceeding local and global regulations, including concerns on equality and equity to all citizens, regardless of their race, culture, society, demographic and economic characteristics
	Promotion of care to all citizens irrespective of racial, physical, cultural, social, demographic, or economic characteristics	
	Continuity of care (integrated care delivery)	Continuity of care (integrated care delivery)
	Health promotion Institutional innovation (growth and learning)	Health promotion Institutional innovation (growth and learning)

continued

Table I continued

ЕҒОМ	PATH	EFQM–health care-adapted framework
People development and involvement Identification of the competencies needed for the organization, use of them for recruitment	Staff Description of job content Recruitment	ion of the competencies needed ed on this information
	Perspectives and recognition of individual needs	Perspectives and recognition of individual needs Perspectives and recognition of individual needs. Opportunities for continued learning and training (staff growth and learning), both for personal and professional development. People are prepared to meet and adapt to changes
Personal development is promoted Professional development People are prepared to meet and adapt to changes	Opportunities for continued learning and training (staff growth and learning)	
Culture of trust, openness, and empowerment	Adequate work climate	Adequate work climate, which promotes a culture of trust, openness, and empowerment and maximizes the involvement of people through shared values (including respect to people)
Maximizing the involvement of people through shared values	Work implication and values (including respect to people)	
Seeking to care, reward, and recognize people	Supervision, evaluation, compensation, orientation Health promotion activities and safety initiatives Staff satisfaction	Supervision, evaluation, compensation, orientation. Seeking to care, reward, and recognize people Health promotion activities and safety initiatives Staff satisfaction
Results orientation Information gathering	Efficiency	Results orientation Information gathering and anticipation of needs and expectations of stakeholders
Anticipation of needs and expectations of stakeholders		
Setting and implementing policies, strategies, objectives, targets, measures, and plans based on information from stakeholders		Setting and implementation of policies, strategies, objectives, targets, measures, and plans based on information from stakeholders
Developing and achieving a balance set of results that delight all the organization's stakeholders	Input-related outputs of care/services (given available hospital resources)	Developing and achieving a balance set of results that delight all the organization's stakeholders, including input-related outputs of care/services (given available hospital resources) and efficient staff ratios
	Efficient staff ratios Maximal use of available technology to provide best possible care	Optimization of resources, including maximal use of available technology to provide best possible care
Agility, flexibility, and responsiveness as stakeholder needs and expectations change Monitoring experiences and perception of		Agility, flexibility, and responsiveness as stakeholder needs and expectations change Monitoring experiences and perception of stakeholders

EFQM, European Foundation for Quality Management; PATH, Performance Assessment Tool for quality improvement in Hospitals.

stakeholders

Step 3: merging the EFQM fundamental concepts with the PATH concepts

Finally, because the aim of this article was to maintain all EFQM concepts while adding to them important principles specific to health care, the group of experts put together the new elements that had been integrated from both frameworks. All the elements from each of the frameworks that had been kept in their original format were also added. The set of all these elements together constitutes the new EFQM—health care-adapted framework.

Results

The two researchers who independently compared the frameworks had a significant congruence on the comparison of the elements: both researchers found three elements that should be integrated according to the criteria used (customer focus, responsive governance, and people). The main discrepancy was that one researcher found a fourth element that should also be integrated (result orientation from EFQM and efficiency from PATH), whereas the second researcher did not find enough evidence to integrate it, even when he also found some equivalent contents. The experts discussed this discrepancy, and the final agreement was to integrate these two elements.

Finally, four concepts of excellence from EFQM had an equivalent dimension in the PATH framework, so they were integrated: customer focus, responsive governance, result orientation, and people. Table 1 presents the comparison of the contents of these four elements. The remaining elements did not show significant equivalences, so they are kept in their original format: leadership and constancy of purpose and partnership development from EFQM and safety and clinical effectiveness from PATH.

As a result of this analysis, the EFQM concepts of excellence are adapted to health care by putting together the set of compiled elements and adding to them the rest of the elements. The EFQM—health care-adapted framework, therefore, has eight dimensions of quality and two methodological dimensions. Following the PATH principles, two of the eight dimensions of quality are at the centre of the framework and are considered 'inner-core' dimensions, because they overlapped with the other six. The other two concepts are considered methodological dimensions, because they support the dimensions of performance. The EFQM—health care-adapted framework, therefore, has a three-level hierarchy, as it is shown in Figure 2. These levels are:

1. Inner-core quality dimensions: *Customer focus* (considering that patients are some of the main customers for health care organizations) and *safety* are at the centre of the framework and overlap with all the other dimensions of quality, representing that all the company activities must be oriented to accomplish, first, these two requisites. Furthermore, the activities oriented to fulfil any of the other six dimensions of quality will also need to have these two aspects as their ultimate goal. For example, the partnership development must

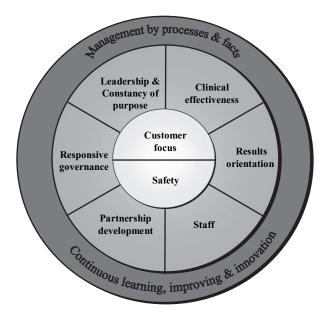


Figure 2 EFQM—health care-adapted framework. EFQM, European Foundation for Quality Management.

accomplish, above all the other issues, customer's requisites and clinical safety in those areas it can affect. People, meaning staff development and involvement, must also be oriented to a better focus on customers and safety. The same will happen with all the rest of the dimensions.

- 2. Outer-core quality dimensions: All the rest of the concepts that, together with the inner-core quality dimensions, define quality at an organizational level are the outer-core quality dimensions. These dimensions are clinical effectiveness, result orientation, staff, responsible governance, partnership development, and leadership and constancy of purpose.
- 3. Methodological dimensions: The elements continuous learning, innovation and improvement, and management by processes and facts are considered methodological dimensions, because they state the system that must be on the basis of all the activities of the company and, therefore, they constitute the methodology that will help fulfil all the rest of the dimensions of quality. These two dimensions are prerequisites that enable and facilitate the accomplishment of the quality dimensions and have been represented peripherally to the core dimensions.

Table 2 summarizes the contents of each of the eight dimensions of quality and the two methodological dimensions that constitute this EFQM—health care-adapted framework.

Discussion

Even when health care professionals have found some challenges in the use of EFQM—mainly because being a generic model it may seem distant to health care—the fundamental

Table 2 Dimensions of the EFQM-health care-adapted framework

Quality dimensions

Inner-core quality dimensions

Customer focus

Identification of present and future customers for the organization

Segmentation of clients to improve the effectiveness of the responses

Anticipation of customer's future needs and actuation in order to meet them

Responsiveness to customer's needs and expectations. Including, at least: attention to patient rights (dignity, autonomy, and confidentiality), empowerment, prompt attention (timely and continuity of care), accessibility (including choice of provider), quality of basic hospital amenities and access to hospital support network

Building and maintaining excellent relationships with all customers

Monitoring and review of customer's perceptions and satisfaction

Safety

Hospital structures minimize environmental risk

Service processes minimize risk of care

Patient risk reduction

Staff safety

Outer-core quality dimensions

Leadership and constancy of purpose

Leaders define clear direction of the organization and communicate it

Leaders establish values, ethics, and principles, providing a unique identity for the organization

Leaders at all levels constantly drive others towards excellence

Leaders recognize their stakeholders and work with them

Leaders demonstrate capability to adapt and realign the direction of their organization in the light of the external changing environment

Leaders display role model behaviour and performance, being a reference in the organization

Clinical effectiveness

Provision of technical care in the correct manner

Care based on best known scientific guideline

Care provided to those who benefit most (without overuse or underuse)

Desired patient outcomes are achieved

Risk-minimized outcomes of care

Result orientation

Information gathering and anticipation of needs and expectations of stakeholders

Setting and implementation of policies, strategies, objectives, targets, measures, and plans based on information from stakeholders

Optimization of resources, including maximal use of available technology to provide best possible care

Agility, flexibility, and responsiveness as stakeholder needs and expectations change

Developing and achieving a balance set of results that delight all the organization's stakeholders, including inputrelated outputs of care/services (given available hospital resources) and efficient staff ratios

Monitoring experiences and perception of stakeholders

Staff

Staff satisfaction

Adequate work climate, which promotes a culture of trust, openness, empowerment, and staff and maximizes the involvement of people through shared values (including respect to people)

Description of job content and identification of the competencies needed for the organization. Recruitment of staff based on this information

Perspectives and recognition of individual needs. Opportunities for continued learning and training (staff growth and learning), both for personal and for professional development. People are prepared to meet and adapt to changes Supervision, evaluation, compensation, orientation. Seeking to care, reward, and recognize people

Health promotion activities and safety initiatives

Partnership development

Seeking out and development of partnerships with other organizations (with customers, society, suppliers, or even competitors)

Partnership is based on clearly identified mutual benefit

continued

Table 2 continued

Partners' work together to achieve shared goals, supporting one another with expertise, resources, and knowledge

Partnership enables to deliver enhanced value to stakeholders through optimizing core competencies

Organizations build a sustainable relationship based on mutual trust, respect, and openness

Responsive governance

Meeting and exceeding local and global community's needs and expectations

Integration of the organization in the community, working on mutually beneficial projects with society

Ethical approach in the organization

Transparency and accountability as a responsible organization

Meeting and exceeding local and global regulations, including concerns on equality and equity to all citizens, regardless of their race, culture, society, demographic, and economic characteristics

Ecological sustainability and minimization of any adverse impact

Health promotion

Continuity of care (integrated care delivery)

Institutional innovation (growth and learning)

Methodological dimensions

Management by processes and facts

Management system designed to fulfil the needs and expectations of all stakeholders

Systematic implementation of the policies, strategies, objectives, and plans of the organization through a clear and integrated set of processes

Deployment, management, and improvement of processes on a day-to-day basis

Decisions based on factually reliable information, which is also used for identification of risks

Information includes data on performance, processes and system capability, stakeholders' needs, expectations, and experiences and performance of other organizations

Continuous learning, improving, and innovation

Continuously learning from own performance and results and from that of others

Continuous challenging the status quo and seeking opportunities for innovation and improvement that add value

Openness to accept and use ideas from all stakeholders

Maximizing learning across and within the organization by sharing people's knowledge

Benchmark, both internally and externally

EFQM, European Foundation for Quality Management.

concepts of excellence are close to a quality framework that is specific to this field. This work shows that four of the six dimensions that constitute the PATH framework are also present to some degree in the EFQM model. Regarding their divergences, besides the common dimensions, the EFQM contains concepts that are relevant to the management of an organization, whereas PATH contributes with specific concepts related to clinical practice and safety of the clinical work.

The identification of some quality dimensions that were not present in the EFQM conceptual framework does not imply that those items cannot be covered on this framework. On the contrary, all the PATH quality dimensions that have been added to the final framework could be included in one of the EFQM fundamental concepts, but they are not specifically approached or stated. Because they are not specifically approached, health care organizations working with this model have the risk to overlooking or underestimating aspects that are essential to the care provision process, such as safety or clinical effectiveness. The EFQM—health careadapted framework will provide to clinical professionals who are working with EFQM a clear guide to orientate their quality improvement activities in all the aspects that affect quality in health care organizations.

This article did not intend to develop a new theoretical framework to guide improvement in any health care organization, because there are already valid frameworks for this purpose. This article only intended to provide a guideline for those health care organizations that are using the EFQM model as their self-assessment instrument and need a clear and comprehensive framework to approach the quality improvement activities of the organization. For those organizations, this framework constitutes a guide to organize their quality improvement activities, eliminate duplications, and, specially, identify shortcomings on their improvement work.

Although the PATH framework was created specifically for hospitals, at Foundation Avedis Donabedian (FAD), we have also used it in mental health with satisfactory results. More studies are needed to establish whether this framework could be used for other health care organizations as long-term care or primary care. Because the EFQM—health care-adapted framework is based on the PATH project, its use in long-term care, primary health care, or mental health is also subject to more research.

The framework proposed in this article needs to be field-validated to ascertain its practical usefulness for the goals

discussed in this article. Because this EFQM-health careadapted framework was just developed, there has only been one opportunity to use it. This framework has been used as the conceptual basis to develop a quality improvement plan for a hospital that had undertaken a self-assessment using the EFQM model. This experience seems to be quite positive, because it preliminarily indicates that the EFQM-health careadapted framework is understandable by the clinical professionals and the dimensions provide a useful structure to organize the areas for improvement that had been previously identified. A wider use of this adapted framework would help validate these preliminary findings.

References

- Moeller J. The EFQM Excellence Model. German experiences with the EFQM approach in health care. Int J Qual Health Care 2001; 13: 45–49.
- Arcelay A, Sanchez E, Hernandez K et al. Self-assessment of all the health centres of a public health service through the European Model of total quality management. Int J Health Care Qual Assur Inc Leadersh Health Serv 1999; 12: 54–58.
- Mira JJ, Lorenzo S, Rodríguez-Marín J, Aranaz J, Sitges E. Application of the European improvement model to health-care: benefits and limitations. *Rev Calidad Asistencial* (in Spanish) 1998; 13: 92–97.
- Holland K, Fennell S. Clinical governance is 'ACE' using the EFQM excellence model to support baseline assessment. Int J Health Care Qual Assur Inc Leadersh Health Serv 2000; 13: 170–177.
- Jackson S. Exploring the possible reasons why the UK Government commended the EFQM (European Foundation for Quality Management) excellence model as the framework for delivering governance in the new NHS. Int J Health Care Qual Assur Inc Leadersh Health Serv 1999; 12: 244–253.
- Klazinga N. Re-engineering trust: the adoption and adaptation of four models for external quality assurance of health care services in western European health care systems. *Int J Qual Health Care* 2000; 12: 183–189.
- Nabitz U, Klazing N, Walburg J. The EFQM excellence model: European and Dutch experiences with the EFQM approach in health care. *Int J Qual Health Care* 2000; 12: 191–201.
- Simón R, Guix J, Nualart L, Surroca RM, Carbonell JM. Use of several models as diagnostic and quality improvement tool: EFQM and Joint Commission. *Rev Calidad Asistencial* (in Spanish) 2001; 16: 308–312.
- Nabitz UW, Walburg JA. Addicted to quality—winning the Dutch Quality Award based on the EFQM Model. Int J Health Care Qual Assur Inc Leadersh Health Serv 2000; 13: 259–265.
- Jackson S, Bircher R. Transforming a run down general practice into a leading edge primary care organisation with the help of the EFQM excellence model. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 2002; 15: 255–267.

- Nabitz UW, Klazinga N. EFQM approach and the Dutch Quality Award. Int J Health Care Qual Assur Inc Leadersh Health Serv 1999; 12: 65–70.
- 12. Moeller J, Breinlinger J, O'Reilly, Elser J. Quality management in German health care—the EFQM Excellence Model. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 2000; **13:** 254–258.
- Stewart A. An investigation of the suitability of the EFQM Excellence Model for a pharmacy department within an NHS Trust. Int J Health Care Qual Assur Inc Leadersh Health Serv 2003; 16: 65–76.
- Moeller J, Sonntag HG. Systematic analysis and controlling of health care organisations lead to numerical health care improvements. *Health Manpow Manage* 1998; 24: 178–182.
- 15. Pitt DJ. Improving performance through self-assessment. Int J Health Care Qual Assur Inc Leadersh Health Serv 1999; 12: 45–53.
- Geraedts HP, Montenarie R, van Rijk PP. The benefits of total quality management. Comput Med Imaging Graph 2001; 25: 217–220.
- Moracho O, Colina A, Amondarain MA, Aguirre L, Ruiz-Álvarez E, Salgado MV. Practical experience of the external evaluation process with the EFQM Excellence Model in the Hospital of Zumarraga. Rev Calidad Asistencial (in Spanish) 2001; 16: 322–329.
- Rodríguez Balo A, Ferrándiz-Santos B. Integration of the EFQM Model and the Hoshin Kanri deployment in a primary care area. Rev Calidad Asistencial (in Spanish) 2004; 19: 45–52.
- Guide for Self-assessment of Healthcare Organizations (simplified version) (in Spanish). Vitoria-Gasteiz: Osakidetza-Servicio Vasco de Salud, 2000.
- Lorenzo S, Arcelay A, Bacigalupe M et al. Guide for Self-assessment of Healthcare Centres Using as a Reference the Self-assessment Model of the European Foundation for Quality Management (EFQM) (in Spanish). Madrid: MSD, 2001.
- 21. Brandt E, Schmidt W, Dziewas R, Groene O. Implementing the Health Promoting Hospitals Strategy through a combined application of the EFQM Excellence Model and the Balanced Scorecard. In Groene O, Garcia-Barbero M, eds. *Health Promotion* in Hospitals: Evidence and Quality Management. Copenhagen: WHO Regional Office for Europe, 2005, EUR/05/5051709, 80–99.
- Identification of a Set of Key Quality Indicators in the Hospital Setting Using the European Excellence Model (in Spanish). Madrid: Club Gestión de Calidad, 2001.
- Veillard J, Champagne F, Klazinga N, Kazandjian V, Arah OA, Guisset AL. A performance assessment framework for hospitals: the WHO regional office for Europe PATH project. *Int J Qual Health Care* 2005; 17: 487–496.
- Introducing Excellence. Brussels: European Foundation for Quality Management, 2003. http://www.efqm.org/uploads/ introducing_english.pdf Accessed 19 July 2006.
- The fundamental concepts of excellence. Brussels: European Foundation for Quality Management, 2003: http://www.efqm. org/Portals/0/FuCo-en.pdf Accessed 19 July 2006.
- Weber RP. Basic Content Analysis, second edition. Newbury Park: CA, 1990.

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