



ISO 9001 and residential homes for the elderly: a Delphi study

Iñaki Heras

The University of The Basque Country, San Sebastian, Spain, and

Ernesto Cilleruelo and Jon Iradi

The University of The Basque Country, Bilbao, Spain

Abstract

Purpose – The purpose of this study is to assess the appropriateness of applying the ISO 9001 quality standard to the residential aged-care sector.

Design/methodology/approach – The study undertakes a prospective qualitative survey using the Delphi methodology. A panel of 14 experts in the field constitutes the panel.

Findings – ISO 9001 has certain shortcomings in the context of the residential aged-care sector. There is a need to fit generic quality-management models to the specific characteristics of the sector, and to integrate those generic quality management models with specialised models.

Practical implications – Managers of residential aged-care services should ensure: that they have sufficient resources to implement quality-management models; that all personnel are involved in the implementation; and that generic models are appropriately adapted to the specific needs of the aged-care sector.

Originality/value – The paper provides an original conceptual overview of the application of a generic quality-management system to a specific services sector.

Keywords ISO 9001 series, Nursing homes, Elderly people, Spain

Paper type Research paper

1. Introduction

The objective of this paper is to assess the suitability of the quality-management standard ISO 9001 to the needs of a specific service sector – the residential aged-care sector. The ISO 9001 standard was first published in 1987. It was revised in 1994, and again in 2000. Because the original ISO (1987) considered only industrial sectors, one of the main objectives of the second revision was to adapt the standard to all sorts of organisations. However, despite these modifications, service organisations continue to lag behind industrial organisations in ISO 9001 implementations and certifications.

The findings of research regarding the effectiveness of ISO 9001 within the industrial sector have been mixed. Some studies have claimed that the implementation of ISO 9001 has been beneficial for the organisations involved (Skrabek *et al.*, 1997; Quazi and Padibjo 1998; Casadesús *et al.* 2001), whereas other studies have cast doubt on that conclusion (Seddon, 1997; Aarts and Vos, 2001; Martínez-Lorente and Martínez-Costa, 2004). Some authors have suggested that the explanation for these apparently conflicting findings regarding the effectiveness of ISO 9001 lies with the motives for undertaking the implementation (Lee, 1995; Jones, 1997). If the reasons for implementation are entirely “external” in nature, the emphasis will be on quality, control, and customer relationships. As Gore (1994) has observed, if the principal reason for ISO 9001 implementation is “customer pressure”, the implementation is likely to adopt a minimalist approach. In contrast, if the motivation is also “internal”,



improvement will not only take place in the above-mentioned areas, but also in terms of internal efficiency, personal relationships, and finances (Van der Wiele *et al.*, 2000).

Although there have been many studies of ISO 9001 in the industrial sector, research on the application of the quality standard in service industries has been relatively limited (Dick *et al.*, 2001). Nevertheless, in the field of health-care management, the pursuit of “quality” has increasingly become an important strategic element in health-care systems; moreover, this paradigm has been extended to the related areas of social care and social services (Øvretveit, 2003; Grimshaw *et al.*, 2003). In these sectors, as in many other service industries in Europe, the increased prominence of the paradigm of quality has mirrored the increased interest in the implementation of international standards, including ISO 9000 and the “Excellence Model” of the European Foundation for Quality Management (EFQM). However, despite the increasing use of these quality systems and models in the field of health care, no studies have been conducted with the aim of rigorously assessing their results in this field. As Øvretveit (2003) has observed, there is little research assessing the effectiveness of quality strategies in the health sector.

Despite there being little evidence of rigorous assessment of its effectiveness, it would seem that ISO 9001 is being increasingly implemented in specific areas of the health-care sector (Sweeney and Heaton, 2000; Van den Heuvel *et al.*, 1998). According to Kalzinga (2000), this implementation has mainly been focused on services that can be easily standardised, such as radiology and laboratory departments. In addition, in view of its document control system, ISO 9001 has been implemented with a view to reducing bureaucracy in organisations, including hospitals (Van den Heuvel *et al.*, 2005). However, there are few references in the literature to ISO 9001 having been applied across all the activities of a hospital. In Europe, only a small number of hospitals have obtained an ISO certificate (Van den Heuvel *et al.*, 2005). In this regard, Øvretveit (2000) has questioned whether it is appropriate to apply “industrial” quality strategies to health care. Similarly, with respect to the residential aged-care sector, Reed *et al.* (2003) have noted that there can be a discrepancy between “quality” (in terms of procedural control) and “quality of life” (as experienced by those who use home-care services) – that is, there is a risk in imposing quality-control frameworks that do not reflect the concerns and priorities of the residents who live in care homes and/or the national cultural values of the countries in which residential care is provided. In a similar vein, Porter and Tanner (1996) have suggested that external quality audits can degenerate into bureaucratic procedures that are limited to assessments of control procedures, with little attempt being made to explore real quality improvement. Similarly, McAdam and Canning (2001) have contended that ISO 9001 has primarily been used in service industries to project the image of the firm in the marketplace, whereas issues related to internal quality improvement have been relegated to secondary importance. As McAdam and Fulton (2002) have noted, if service organisations wish to improve themselves through the implementation of ISO 9001, they must incorporate the notion of “quality” into all aspects of their organisations.

In accordance with these views and in view of the need for rigorous assessment of the suitability of applying the ISO 9001 standard in health care and related service industries, the present study of residential aged care was carried out, using Delphi methodology, in the Autonomous Region of the Basque Country, in Spain.

The remainder of this paper is arranged as follows. Following this introduction, the paper presents a review of the relevant literature on the concept of quality in the residential aged-care sector and the application of quality-management models in this specific sector. The paper then presents the working hypotheses for the study. This is followed by an explanation of the Delphi methodology used in the empirical study. The results of the survey are then presented and discussed. The main conclusions and implications to be drawn from the study are then summarised.

2. Literature review

The scope and content of the concept of “quality” in the context of health and social services differ from notions of “quality” within other contexts in the service sector. In particular, there are distinctive features regarding the nature of the care service that is provided and the responsibility assumed by the professionals who provide that care (Donabedian, 2002, 1980; Sacanell, 1994). According to Donabedian (2002), three main components of the quality of care can be distinguished:

- (1) the technical component: which refers to the adaptation of care in accordance with advances in science and the professional expertise of providers;
- (2) the interpersonal component: which refers to the importance of the relationship between the patient and the health-care professional; and
- (3) the environmental component: which refers to the importance of the framework (or “amenities”) within which care is carried out.

The technical component of quality of care is of particular significance in understanding the notion of “quality” in the fields of health care and social services. In these sectors, situations commonly occur in which the wishes or demands of the consumer (the patient or resident) cannot be met because they could produce adverse outcomes for the person who requests them (Donabedian, 2002; Sacanell, 1994). This means that assessments of the “quality” of care in certain situations must be made by professionals because it is unlikely that patients have the technical “know-how” to make a considered judgement about the benefits that are likely to be achieved.

Other authors have distinguished different dimensions of “quality” in the field of health care. For example, Øvretveit (2000) described three dimensions of “quality” in this context:

- (1) *patient quality*: whether the service gives patients what they want;
- (2) *professional quality*: whether the service meets patients’ needs as assessed by professionals, and whether personnel correctly select and carry out procedures to meet patients’ needs; and
- (3) *management quality*: whether the most efficient and productive use is made of resources to meet client needs, without waste and within limits and directives set by higher authorities.

The notion of “quality” in this field is further complicated by the fact that the term “customer” is difficult to define. Apart from those who are immediately using the services, relatives, professionals, public authorities, and society in general all have a legitimate interest in the “quality” of care (Qureshi and Henwood, 2000). Moreover, other qualitative factors – such as the comfort of the care environment, social and

affective relations, communication processes between people, and the right to privacy – represent important aspects of “quality” in this sector (Donabedian, 1980).

It is thus apparent that “quality” is a complex concept to analyse in the health and social-service sectors. Nevertheless, the main models of quality management that have been implemented in residential aged care in Europe have been based on generic models of quality, such as the ISO 9001 and EFQM standards. These models, to a greater or lesser extent, have been adapted to the specific services provided in homes for the elderly. However, in doing so, relatively little attention has been paid in European countries to the specialist models of quality in this sector that have been developed in some other countries, such as the United Kingdom (UK) (Reed *et al.*, 2003; Heras *et al.*, 2006). Of special note in this regard are:

- the person-centred model “Homes Are For Living In” (HAFLI) (Department of Health, 1989);
- the “Multiphase Environmental Assessment Procedure” (MEAP) (Moos and Lemke, 1979);
- “Inside Quality Assurance” (CESSA, 1992); and
- “Quality in Action” (NFRFC, 1996).

Of these, the HAFLI model is perhaps the most ambitious. It is based on the philosophy that the aim of residential aged care should go beyond keeping residents well looked after, fed, and clean; rather, the aim of these homes should be living in the home (Department of Health, 1989). HAFLI was thus developed as a code of practice for inspectors, proprietors, and managers of homes based on the principles of dignity, self-determination, and individuality for residents.

More recently, the “Qual A Sess” quality-management model has been developed by German and UK organisations to assess the quality of residential aged care and mechanisms to improve the quality of care through the development of action plans involving residents, families, and staff (Reed *et al.*, 2003). The “Qual A Sess” system integrates some characteristics of the HAFLI model with the EFQM excellence model. It is interesting to note that the UK and German versions of the system differ in reflecting the varying cultural and institutional characteristics of the respective countries.

In the context of calls for the harmonisation of standards across the European Union (EU), the “E-Qalin” project aims to develop a European Quality Certificate self-assessment model for residential aged care based on the paradigm of “plan-do-check-act” (PDCA). Although it is still in its draft stages, “E-Qalin” is comparable to EFQM, but the project aims to translate total quality management (TQM) specifically to the aged-care field (Bader *et al.*, 2006). Another contribution to standardisation has been made by the Spanish Association for Standardisation and Certification (AENOR), which published the first European-specific management system standard for residential aged care (known as the “UNE 158001 standard”) in 2000.

It is thus apparent that various generic and specific models have been developed to improve the quality of service provided to users in the health and social-service sectors. In the health sector, generic and specific models have increasingly been used in a complementary fashion (Øvretveit, 2001); however, in the residential aged-care sector,

little attempt has been made to implement generic and specific models in a complementary fashion. One of the reasons for this has been concern regarding possible divergence between theoretical notions of “quality” and understandings of “quality” in terms of the welfare provided to elderly residents in this sector of activity (Heras *et al.*, 2006). In particular, no special attention has been paid to analysing the suitability of general models of quality management (such as ISO 9001 and EFQM), which were originally developed for the industrial sector, in the specific field of residential home care for the elderly.

3. Hypotheses

As noted above, there is little empirical research on the application of generic quality models to the specific setting of residential care for the elderly. Therefore, in attempting to establish whether the ISO 9001 standard is well adapted to the current and future needs of the Spanish residential aged-care sector, it is necessary to seek guidance from the literature that has addressed the extent and implementation of quality-management systems in the health-care sector (Nabitz *et al.*, 2000; Minkman *et al.*, 2007; Sánchez *et al.*, 2005; Moeller and O’Reilly, 2000; Chan and Ho, 1997). In the opinion of some researchers, the application of quality systems in the health sector has helped to ensure health quality in residential aged care (Chan and Ho, 1997). In contrast, other researchers have contended that the application of these systems has not improved the quality of the service (Melander, 1997).

Empirical research on the implementation of generic quality systems in this field has been limited to occasional qualitative surveys in Germany and the UK (Klein, 1997). As a consequence of the limited research on this subject, the starting-point for the present study has necessarily been in-depth interviews with Spanish experts in the field. These interviews not only canvassed the current reality of the sector, but also the desirable future scenario for residential care of the elderly in Spain.

On the basis of the limited research available and the in-depth interviews described above, the following working hypotheses are proposed:

- H1. The ISO 9001 standard is a suitable quality-management tool for implementation in residential aged care, irrespective of the size of individual homes.
- H2. Implementation of the ISO 9001 standard improves the quality of care and the quality of life for residents in residential aged care.

4. Methodology

4.1 Experimental setting

The empirical study focused on residential care homes in the autonomous region of the Basque Country in Spain. The influence of quality management in this geographical region has been noteworthy; indeed, service industries in this region lead Europe in terms of implementing the ISO 9001 standard and winning EFQM awards (Heras *et al.*, 2006).

In 2006 there were 26 certified homes for the elderly in the Basque Country (6 per cent of the total number of homes for the elderly in the region). Almost all of these homes had received their certification relatively recently (since 2003).

4.2 Delphi methodology

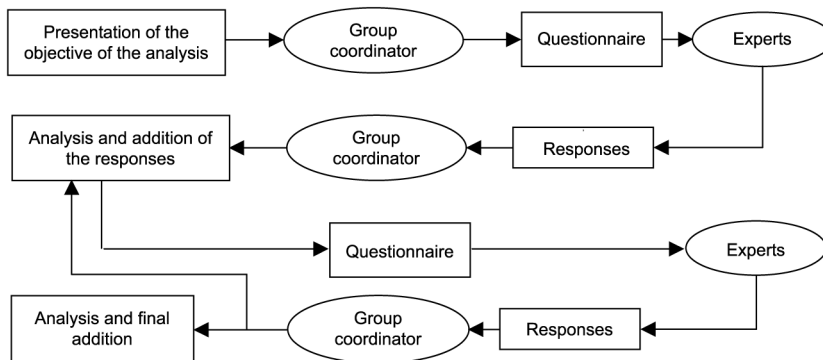
The study was conducted between June 2004 and December 2006 using the Delphi survey methodology to ascertain the assessments of 13 local and international specialists with regard to quality-management issues in residential aged care. The Delphi method structures communication to enable a group of individuals, functioning as a whole, to deal with complex problems (Linstone and Turoff, 2002). According to McCarthy and Atthirawong (2003), the Delphi method results in more open and in-depth research because each individual contributes to the group consensus by suggesting new aspects of the problems to be investigated. The Delphi method originally focused on prospective studies of market technology, but it has since been applied to the analysis of questions relating to education, public administration, and health (Helmer, 1966; Campbell, 1966).

It has been suggested that success in this type of research requires the selection of 7-30 panel members who have appropriate capabilities, knowledge, and independence (Reid, 1988; McCarthy and Atthirawong, 2003; Linstone and Turoff, 1975; Landeta, 1999). Larger groups of participants are less likely to demonstrate sufficient expertise; moreover, in larger groups, the proportion of participants who prematurely withdraw increases (Reid, 1988; Landeta, 1999).

To achieve effective communication within the group, it is necessary to avoid any one member dominating the others. According to numerous authors, the Delphi method minimises this danger by adopting a communication process (illustrated in Figure 1) in which the participants do not know the identities of the other members of the group when expressing their opinions (Ray and Sahu, 1990; Klassen and Whybark, 1994; Green and Price, 2000; McCarthy and Atthirawong, 2003).

4.3 Selection of panel

Great care was taken to ensure the creation of a multidisciplinary group that would be familiar with both the residential aged-care sector and various models of quality management. Collaboration was therefore sought with representatives from SIIS (the Basque Documentation and Study Centre) and the Matia Foundation (an influential Spanish social-services organisation). A total of 27 potential participants were



Source: Landeta, (1999)

Figure 1. Communication process in a Delphi study

contacted, of whom 14 agreed to take part. The final composition of the group was as follows:

- four people in charge of quality in residential aged-care homes (all of whom were pioneers in the application of both general and specific quality-management models);
- three professional consultants in the implementation of the ISO 9001 standard in residential aged care;
- two technical consultants in the implementation of specific quality-management models in residential aged care;
- three public-sector social-service administrators;
- one UK-based academic with particular expertise in the area of residential aged care; and
- one specialist representative from the Spanish Association for Standardisation and Certification (AENOR).

4.4 Data collection

An initial questionnaire was prepared to be sent to the panel of participants. It included a series of open-ended and closed questions (with a 1-5 Likert scale to answer) that were based on the experience of the researchers and the relevant literature. A pilot version of the questionnaire had been reviewed and corrected by an assessment group consisting of a manager, a consultant, an assessor, and two academics with extensive research experience.

After the questionnaire was reviewed, it was sent to the panel of participants to receive their opinion. The procedure was then repeated one more time until the responses were refined and a convergence of responses was achieved.

In each round the median and the quartile average of the closed questions were calculated, as a measurement of concentration and dispersion of the various assessments of the group. This, in turn, formed part of the information that was subsequently provided to the participants in reaching consensus.

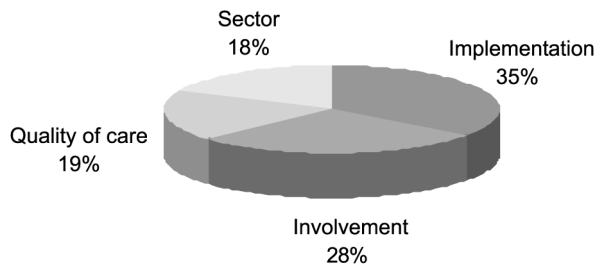
The results of the survey were analysed and triangulated with the results of previous studies, as well as with information gathered during several in-depth interviews with the experts who participated in the present Delphi panel.

5. Results

The contributions of the participants, which became focused over successive rounds of discussions, can be categorised into four major groups:

- (1) *Implementation*: implementation process and adoption of models.
- (2) *Involvement*: involvement of management and personnel of residential care homes (including knowledge and training).
- (3) *Quality of care*: improvements in quality of care as a result of implementing quality-management models.
- (4) *Sector characteristics*: features of the residential aged-care sector.

Figure 2 shows the proportion of contributions in each of the above categories.



Source: Prepared by the authors

Figure 2.
Grouping of the factor in
relations to contributions

It is apparent that most of the contributions related to the reasons for implementing the models, difficulties during the implementation, and the involvement of various people in the applications. This is understandable in view of the relative novelty of implementing ISO 9001 in this context.

5.1 Implementation

The participants did not envisage significant growth in the implementation of ISO 9001 in the residential aged-care sector. In general, the main limitation was considered to be a lack of physical and human resources in the sector, especially in the smaller homes. In particular, the participants felt that the implementation of generic models of quality management was likely to be limited by:

- lack of a “culture” of assessing the quality of direct care;
- lack of involvement of those in charge;
- small size of most residential care homes;
- low priority given to quality of care and quality of life of residents;
- lack of awareness of the quality-management models;
- excessive “red tape”; and
- inadequate training of personnel.

Another of the difficulties identified by the participants related to the role of consultants. To a large extent, the experience of such consultants is derived from the industrial sector, and the participants noted that such consultants often had difficulties in assimilating the distinctive features of the aged-care sector and in applying management principles and processes to the sector. Moreover, the participants noted that the implementation of quality-management systems increases the workload of care personnel in the initial stages until the systems become assimilated. This is especially the case for personnel who have responsibility for the direct care of residents. In this regard, one participant observed:

These systems and models are quite often used in some way to legitimise processes in which the quality of working life of direct-care workers is objectively reduced.

This is clearly an issue that clashes with the basic principles of TQM and continuous improvement. The problem is of particular concern in a sector in which the welfare of

direct-care workers has the potential to have a major influence on the quality of the service provided.

Despite these limiting factors, the participants noted the growth in implementations and certifications occurring in the sector. They attributed this to two main external factors:

- (1) the “image” projected to the market; and
- (2) the increasing demands of government administration.

With regard to the first, the participants noted that the residential aged-care sector is in full view of the general public, and that:

... being in possession of a quality certificate is a distinguishing factor which provides an image of security.

Moreover, because ISO 9001 is a well-known and widespread tool, some participants noted that it provides a certain “legitimacy” to a sector that is generally considered to have many managers with limited managerial training. However, there was no consensus on this point of ISO 9001 conferring “legitimacy” because some participants considered that the implementation of ISO 9001 was currently suffering from the effects of “saturation”, and that it was actually in an “improvement” phase in other sectors.

With regard to the question of ISO 9001 being implemented at the behest of government administration, there was consensus among the participants that the use of the standard should not be promoted by public administrators. Indeed, the participants stated that it could be detrimental to promote the standard in some smaller homes in which managers have limited skills and training. Implementing the standard increases the administrative burden on management, and this can adversely affect the motivation of management and the quality of care provided by direct-care personnel in such homes.

5.2 Involvement

With regard to the involvement of management and personnel of residential aged-care homes, there was consensus among the participants that involvement in the implementation of these models must be from “top to bottom”; however, it was acknowledged that this is difficult to achieve in a sector in which there is significant room for improvement in staff training and qualifications among both direct-care personnel and management.

The participants from consultancy firms that implement the ISO 9001 standard emphasised the importance of committed leadership from the management of residential aged-care homes. As one participant commented:

... the implementation of a quality-management system entails investment in terms of time and money. The management must be convinced of obtaining some benefit in exchange for investing their time and effort via an improvement in their processes.

5.3 Quality of care

There was a degree of consensus among the participants that a standard such as ISO 9001 can improve the quality of care provided to residents. They affirmed that administrative and management processes can be improved by implementing the standard, but they were less confident about its efficacy in enhancing health-care

quality. In their opinion, the contribution that the ISO-9001 standard can make to direct care is very limited; indeed, it might even prove to be detrimental.

The participants were concerned that generic models such as ISO 9001 might be introduced in the sector without limitation or adaptation. As one of the experts pointed out:

There is a risk that the quality-assurance system could become transformed into mere red tape without any heart and soul in the organisation, and that it [could refer] to superfluous bureaucratic aspects [while neglecting] other key aspects that affect the quality of life of residents and their families and the development of . . . people who work in the organisation.

There was almost total unanimity that the ISO standards can be adapted or integrated with other models in the residential aged-care sector. However, success in implementing the standard is dependent on the motivation being derived from within the residential aged-care homes themselves with a view to improving direct care to the residents. As one participant commented (with the full consensus of other participants):

Quality cannot be understood as an abstract thing; rather . . . [it] refers to the elements or processes that comprise it.

The participants noted that there is no guarantee that the implementation of the ISO 9001 standard will lead to an improvement in the quality of users' care. Unless the standard is sustained by an underlying "welfare model" it runs the risk of becoming transformed into mere red tape, which could even prove to be counterproductive to the aim of developing the people who work in the organisation. Furthermore, according to the participants, application of the standard in the residential aged-care sector should be carried out on an individual basis in each home because standardised measures of quality for all types of home are not reliable (although, regrettably, such standards have been used in many cases in the sector).

In discussing these quality issues, the participants again emphasised that the size of individual residential aged-care homes must be taken into account. Indeed, the related issues of small size and inadequate resources repeatedly emerged as the principal factors to be considered in the implementation of this type of model in the residential aged-care sector.

5.4 Summary of findings

Tables I and II provide summaries of the opinions of the participants with respect to the adaptation of ISO 9001 for use in the residential aged-care sector. Table I shows the medians and the quartile averages of the main obstacles to ISO 9001 certification within the sector. In Table II, the general opinion of the participants on the objective of the study is summarised in the left-hand column, whereas the right-hand column shows the degree of consensus for each subgroup of the panel on a scale of 1 to 5 (1 = a weak degree of consensus; 5 = a high level of consensus).

6. Conclusions and implications

6.1 Major conclusions

This study has used the Delphi methodology to assess whether the ISO 9001 standard can be adapted for use in the residential aged-care sector in the Basque Country of Spain. In doing so, the study proposed two working hypotheses for assessment.

	Median	Quartile average
<i>Characteristics of the sector</i>		
Lack of resources due to small size of individual residential homes	5	4.66
Lack of knowledge of the main quality-management models	4	3.75
No pressure on demand side	3	2.81
<i>Motivation and leadership</i>		
Lack of leadership by management	4	4.00
Lack of motivation among employees	3	3.33
<i>Implementation</i>		
Expense of ISO 9001 implementation and certification	4	3.75
Additional bureaucracy	5	4.66
Externally conducted ISO 9001 implementation	4	4.00
<i>Quality of care</i>		
ISO 9001 having nothing to do with quality of care of residents	4	3.75
Some health professionals seeing ISO 9001 as an "industrial" quality model	4	4.00

Table I.

Main obstacles to ISO 9001 certification

Notes: Median and quartile average of the valuations made by experts on a Likert scale (1.5)**Source:** Prepared by the authors

The first hypothesis proposed that the ISO 9001 standard is a suitable quality-management tool for implementation in residential aged care, irrespective of the size of individual homes. Although the qualitative nature of the data collected in this study did not allow a formal statistical analysis to be made, the qualitative empirical evidence gathered in the study suggests that ISO 9001 would not be a suitable tool for application in all homes. The expert participants in the Delphi study emphasised that application of the standard in smaller homes with fewer resources could increase the workload on management and direct-care personnel, and that this could even prove to be counterproductive. The first working hypothesis is therefore rejected.

With regard to the second working hypothesis, which proposed that the ISO 9001 standard improves the quality of care and the quality of life for residents in residential aged care, the available data do not enable the hypothesis to be accepted or rejected with any certainty. According to the participants on the panel, some aspects of the system (such as the definition and standardisation of work procedures) might benefit from implementation of the standard, and those aspects could indirectly benefit the quality of care of the residents. However, there was no evidence to suggest that the homes that have implemented ISO 9001 provide a higher level of quality of care (measured according to the specialist models) than those that have not done so.

The study concludes, in accordance with the view of the expert Delphi panel, that the widespread implementation of generic quality-assurance models (such as ISO 9001 or the EFQM model) in residential aged-care homes could have positive effects. In particular, these models have the potential to improve the systematisation of work routines in the sector. However, the efficacy of these models is less apparent in terms of improving the quality of care for residents – an area in which there exists a long tradition of knowledge and expertise from various disciplines (gerontology, nursing, social work, and so on). This expertise should not be denigrated by

	Degree of consensus		General opinion
<i>Future of Implementation</i>	QM ●●●●○	A ●●●●○	ISO 9001 is a tool which has been clearly successful in other sectors; its use in our sector would legitimize managers' work There is a certain degree of saturation in other sectors with the ISO 9001, which may affect the image it conveys in our sector
	GC ●●●●●	As ●●○○○	
	SC ●●○○○	M ●●●●○	
	QM ●●●○○	A ●●●●○	
	GC ●●●○●	As ●●●●●	
	SC ●●●●●	M ●●●●○	
<i>Involvement of managers of residential care homes</i>	QM ●●●●○	A ●●●●○	Involvement of managers does not tend to be significant; they view the ISO 9001 as merely one further requirement which needs to be met
	GC ●●●●●	As ●●○○○	
	SC ●●●●○	M ●●●●○	
<i>Involvement of employees of residential care homes</i>	QM ●●●●●	A ●●●●●	The implementation of the ISO 9001 standards does not have significant consequences on the workers, although in many cases they feel more controlled
	GC ●●●●●	As ●●●●●	
	SC ●●●●●	M ●●●●●	
<i>Effects on quality of care</i>	QM ●●●○○	A ●●●●○	Implementation of the ISO 9001 standard does not have any significant consequences for the improvement of quality of care
	GC ●●○○○	As ●●●●●	
	SC ●●●●●	M ●●●●○	
<i>Effects on image</i>	QM ●●●●●	A ●●●●●	Certification leads to improve image. Therefore, in many cases it is used as an important advertising tool
	GC ●●●●●	As ●●●●●	
	SC ●●●●●	M ●●●●○	

Notes: QM = Quality area managers; GC = Consultants of general models; SC = Consultants of specific models; A = Technicians from the administration; As = Academic specialist and M = Member of AENOR

Source: Prepared by the authors

Table II. Summary of the main opinions of the experts on ISO 9001

quality-management experts; rather, it should be integrated with attempts to enhance overall quality in this sector. It is apparent that approaches to quality management need to be holistic and comprehensive if they are to support an ongoing process of quality improvement that is responsive to the needs of the individuals living in care homes and the needs of the wider community.

6.2 Theoretical implications

The present study contributes to the extant literature in this area by differentiating between the concept of “quality of care” and the concept of “quality management”. Scholars who have analysed the influence of the main models of quality management (Dale, 2005; Øvretveit, 2001; Toffel, 2007) have noted that there is a lack of research on the benefits of those models in terms of improving the real quality of products and services. In this regard, this paper provides an interesting contribution with regard to the residential aged-care sector – a sector of increasing economic and social significance in an ageing society.

The generalisability of the present research findings to other sectors is limited in view of the specific characteristics of each sector. However, some findings of the present study could be generalised to other sectors – such as the need to establish a clear differentiation between the concept of “quality management” and the concept of “product quality” (or “service quality”). In addition, the methodology of the research approach adopted here could be generalised to other service sectors. In particular, the methodology adopted here is readily adaptable to situations in which the impact of a quality-management paradigm can be significant in terms of the quality of the services that are delivered (such as health care, education, tourism, and public administration).

6.3 Managerial implications

For managers in the residential aged-care sector, the present study shows that ISO 9001 can be a useful tool for improving the quality of life of residents if:

- its implementation has the objective of improving the quality of care;
- it is adapted to the needs of all stakeholders (residents, their families, employees, managers, public administration, and so on);
- there are sufficient resources for effective implementation; and
- all persons directly involved in the care of residents participate in the implementation.

Taking into account the fact that quality systems have only recently been introduced in this sector, and the relative ignorance of these systems among practitioners, it is understandable that systems based on quality of care have not yet been widely applied in the sector. ISO 9001 implementation has often been promoted by public-sector administrators with the primary aim of homogenising work routines in care homes for the elderly. This can be the first step in improving the quality of care in a given organisation, but the necessary prerequisites are that the organisation must have the appropriate resources and that all personnel participate in the implementation.

Managers can integrate the approach of the generic models of quality management and the specialised models of quality of care if they:

- focus on the quality of life of the residents;
- ensure that residents’ rights as citizens are respected;
- respect the privacy and dignity of residents;
- offer choices to residents (in accordance with their physical and mental capabilities);
- encourage the involvement of all people in the organisation;
- utilise a “process and system” approach to the management of resources; and
- encourage continuous improvement with a view to achieving more efficient and effective homes.

References

- Aarts, F. and Vos, E. (2001), “The impact of ISO registration on New Zealand firms’ performance: a financial perspective”, *The TQM magazine*, Vol. 13 No. 13, pp. 180-91.

-
- Bader, E., Lintner, P. and Wallner, J. (2006), "Quality management for the care of elderly – a project with 29 pilot-homes in seven countries", *ESN European Social Service Conference Vienna*.
- Campbell, R. (1966), *A Methodological Study of the Utilization of Experts in Business Forecasting*, UCLA, Los Angeles, CA.
- Casadesús, M., Giménez, G. and Heras, I. (2001), "Benefits of ISO 9000 implementation in Spanish industry", *European Business Review*, Vol. 13 No. 6, pp. 327-36.
- Centre for Environmental and Social Studies in Ageing (1992), *Inside Quality Assurance – the IQA Pack*, Centre for the Environmental and Social Studies in Ageing, London.
- Chan, Y.C. and Ho, S. (1997), "Continuous quality improvement: a survey of American and Canadian healthcare executives", *Hospital and Health Services Administration*, Vol. 42 No. 4, pp. 525-44.
- Dale, B. (2005), "Prólogo introductorio", in Casadesús, M., Heras, I. and Merino, J. (Eds), *Calidad Práctica*, Prentice Hall-Financial Times, Madrid.
- Department of Health, SSI (1989), *Homes Are For Living In*, HMSO, Londres.
- Dick, G., Gallimore, K. and Brown, J.C. (2001), "ISO 9000 and quality emphasis", *International Journal of Service Industry Management*, Vol. 12 No. 2, pp. 114-36.
- Donabedian, A. (1980), *Explorations in Quality Assessment and Monitoring*, Health Administration Press, MI.
- Donabedian, A. (2002), *An Introduction to Quality Assurance in Health Care*, Oxford University Press, Oxford.
- Gore, M. (1994), "The quality infrastructure", *Purchasing and Supply Management*, February, pp. 41-3.
- Green, A. and Price, I. (2000), "Whither FM? Delphi study of the profession and the industry", *Facilities*, Vol. 18 No. 7, pp. 281-93.
- Grimshaw, J., McAuley, L.M., Bero, L.A. and Grilli, R. (2003), "Systematic reviews of the effectiveness of quality improvement strategies and programmes", *Quality and Safety in Health Care*, Vol. 12 No. 4, pp. 298-303.
- Helmer, O. (1966), *Use of the Delphi Technique. Problems of Educational Innovations*, RAND Corporation, Santa Monica, CA.
- Heras, I., Arana, G. and Casadesús, M. (2006), "The impact of quality management in European companies' performance: the case of the Spanish companies", *European Business Review*, Vol. 18 No. 2, pp. 114-31.
- Jones, I. (1997), "Mixing qualitative and quantitative methods on sports fan research", *The Qualitative Report*, Vol. 3 No. 4.
- Kalzinga, N. (2000), "Re-engineering trust: the adoption and adaption of four models for external quality assurance of health-care services in western European health-care systems", *International Journal for Quality Health Care*, Vol. 12 No. 3, pp. 183-9.
- Klassen, R.D. and Whybark, D.C. (1994), "Barriers to the management of international operations", *Journal of Operations Management*, Vol. 11 No. 4, pp. 385-96.
- Klein, B. (1997), "Quality management and quality assurance in residential and nursing home care in Britain and Germany", in Evers, A., Haverinen, R., Leichsenring, K. and Witow, G. (Eds), *Developing Quality in Personal Social Services. Concepts, Cases and Comments*, Ashgate/European Centre, Vienna, pp. 139-54.
- Landeta, J. (1999), *El método Delph*, Ariel, Barcelona.

- Lee, T. (1995), "The experience of implementing ISO 9000 in Hong Kong, Asia Pacific", *Journal of Quality Management*, Vol. 4 No. 4, pp. 6-16.
- Linstone, A. and Turoff, M. (1975/2002), *The Delphi Method: Technique and Applications*, available at: www.is.njit.edu/pubs/delphibook/
- McAdam, R. and Canning, N. (2001), "ISO in the service sector: perceptions of small professional firms", *Managing Service Quality*, Vol. 11 No. 2, pp. 80-92.
- McAdam, A. and Fulton, F. (2002), "The impact of the ISO 9000:2000 quality standards in small software firms", *Managing Service Quality*, Vol. 12 No. 5, pp. 336-45.
- McCarthy, B.L. and Atthirawong, W. (2003), "Factors affecting location decisions in international operations – a Delphi study", *International Journal of Operations & Production Management*, Vol. 23 No. 7, pp. 704-818.
- Martínez-Lorente, A. and Martínez-Costa, M. (2004), "ISO 9000 and TQM: substitutes or complementaries?", *International Journal of Quality & Reliability Management*, Vol. 21 No. 3, pp. 260-76.
- Melander, P. (1997), "Styringen af det syge væsen. Om kampen for livet i dødsspiralen", in Hildebrandt, S. and Schultz, M. (Eds), *Fokus på sygehusledelse*, Munksgaard, Copenhagen.
- Minkman, M., Ahaus, K. and Huijsman, R. (2007), "Performance improvement based on integrated quality management models: what evidence do we have? A systematic literature review", *International Journal for Quality in Health Care*, Vol. 19 No. 2, pp. 90-104.
- Moeller, J. and O'Reilly, J.E. (2000), "Quality management in German health care – the EFQM Excellence Model", *International Journal of Health Care Quality Assurance*, Vol. 13 No. 6, pp. 254-8.
- Moos, R.H. and Lemke, S. (1979), *The Multiphasic Environmental Assessment Procedure (MEAP) Preliminary Manual*, Stanford University Medical Center, Palo Alto, CA.
- Nabitz, U., Klazinga, K. and Walburg, K. (2000), "The EFQM excellence model: European and Dutch experiences with the EFQM approach in health care", *International Journal for Quality in Health Care*, Vol. 12 No. 3, pp. 191-202.
- Norah Fry Research Centre (1996), *Norah Fry Research Centre Quality in Action: A Resource Pack For Improving The Quality Of Services For People With Learning Difficulties*, Pavilion Publishing, Brighton.
- Øvretveit, J. (2000), "The economics of quality – a practical approach", *International Journal of Health Care Quality Assurance*, Vol. 13 No. 5, pp. 200-7.
- Øvretveit, J. (2001), "Evaluating quality and quality measures for comparison", *Evidence-based Health Care*, Vol. 5 No. 1, pp. 43-51.
- Øvretveit, J. (2003), *What are the Best Strategies for Ensuring Quality in Hospitals?*, WHO Regional Office for Europe, Copenhagen.
- Porter, L. and Tanner, S. (1996), *Assessing Business Excellence*, Butterworth-Heinemann, Oxford.
- Quazi, H.A. and Padibjo, S.R. (1998), "A journey toward total quality management through ISO 9000 certification – a study on small-and medium-sized enterprises in Singapore", *International Journal of Quality & Reliability management*, Vol. 15 No. 5, pp. 489-508.
- Qureshi, H. and Henwood, M. (2000), *Older People's Definition of Quality Services*, Joseph Rowtree Foundation/York Publishing Services, York.
- Ray, P.K. and Sahu, S. (1990), "Productivity management in India: a Delphi study", *International Journal of Operations & Production Management*, Vol. 10 No. 5, pp. 25-51.

-
- Reed, J., Klein, B., Cook, G. and Stanley, D. (2003), "Quality improvement in German and UK care homes", *International Journal of Health Care Quality Assurance*, Vol. 16 No. 5, pp. 248-56.
- Reid, N. (1988), "The Delphi technique: its contribution to the evaluation of professional practice", in Ellis, R. (Ed.), *Professional Competence and Quality Assurance in the Caring Professions*, Chapman Hall, London.
- Sacanell, E. (1994), "El concepto de calidad en la gestión de los servicios sociales", *Zerbitzuan-Revista de servicios sociales*, Vol. 26, pp. 63-87.
- Sánchez, E., Letona, J., González, R., García, M., Darpón, J. and Garay, J. (2005), "A descriptive study of the implementation of the EFQM excellence model and underlying tools in the Basque Health Service", *International Journal for Quality in Health Care*, Vol. 18 No. 1, pp. 58-65.
- Seddon, J. (1997), *In Pursuit of Quality: The Case Against ISO 9000*, Oak Tree Press, London.
- Skrabek, Q.R., Ragu Nathan, T.S., Subba, R.S. and Bhatt, B.T. (1997), "ISO 9000: do the benefits outweigh the cost", *Industrial Management*, Vol. 39 No. 6, pp. 26-30.
- Sweeney, J. and Heaton, C. (2000), "Interpretations and variations of ISO 9000 in acute health care", *International Journal for Quality Health Care*, Vol. 12 No. 3, pp. 203-9.
- Toffel, M. (2007), *Industry Self-Regulation: What's Working (and What's Not)? HBS Working Knowledge*, April, Harvard Business School, Cambridge, MA.
- Van den Heuvel, J., Hendriks, M.J. and van Waes, P.F.G.M. (1998), "An ISO-quality system in the radiology department: a benefit analysis", *Academic Radiology*, Vol. 5 No. 2, pp. S441-5.
- Van den Heuvel, J., Koning, L., Bogers, A., Berg, M. and van Dijen, M. (2005), "An ISO 9001 quality management system in a hospital: bureaucracy or just benefits?", *International Journal of Health Care Quality Assurance*, Vol. 18 No. 5, pp. 365-9.
- Van der Wiele, T., Dale, B. and Williams, R. (2000), "Business improvement through quality management systems", *Management Decision*, Vol. 38 No. 1, pp. 19-23.

Further reading

- Dick, G. (2000), "ISO 9000 certification benefits, reality or myth?", *TQM Magazine*, Vol. 12 No. 6, pp. 365-71.
- Heras, I. (2006), "How quality management models influence company results", *Total Quality Management & Business Excellence*, Vol. 17 No. 6, pp. 775-94.
- Husband, S.G. (1997), *Innovation in Advanced Professional Practice: Doctor of Technology*, Deakin University, Geelong.
- Institute of Medicine (2001), *Institute of Medicine Crossing the Quality Chasm: A New Health System for the 21st Century*, National Academy Press, Washington, DC.
- Iradi, J. (2007), "Análisis de la integración de las normativas y los modelos genéricos de gestión de la calidad con los modelos de evaluación de la calidad asistencial en el sector de las residencias para personas mayores en la CAPV", (PhD thesis, The Basque Country University).
- Juran, J.M. (1999), "Juran urges research. What they're saying about standards", *Quality Progress*, July, pp. 30-1.
- Staines, A. (2000), "Benefits of an ISO 9001 certification – the case of a Swiss regional hospital", *International Journal of Health*, Vol. 13 No. 1, pp. 27-33.

Vaarama, M. (2004), "Quality management", in Nies, H. and Berman, P.C. (Eds), *Integrating Services for Older People: A Resource Book for Managers*, European Health Management Association, Dublin, pp. 14-32.

About the authors

Iñaki Heras is a Professor at the University of Basque Country in Spain. He studied Business Economics in the University of Basque Country. Likewise, he studied at the ESST Master Program (Production systems, innovations and development models) in Roskilde University (Denmark). His Doctoral Thesis is about the "Quality Management Policies in The Basque Autonomous Region (Spain)". He has published several articles in both national and international academic journals (i.e. *Total Quality Management and Business Excellence*, *International Journal of Quality & Reliability Management*, *Management Auditing Journal*, *European Business Review*). Iñaki Heras is the corresponding author and can be contacted at: iheras@ehu.es

Ernesto Cilleruelo, is a full Professor at the University of Basque Country in Spain. He studied Management Engineering. His Doctoral Thesis is about the integration of "Quality Management Systems with other systems within the companies". In the last years his work has been related to the adaptation of the EFQM model to different services sectors (e.g. the higher educational sector). He has published several articles in academic and professional journals. On the other hand, he has participated as a main researcher in several projects on Quality Management financed by The Basque Country University and the Spanish Administration.

Jon Iradi, is an Assistant Professor at the University of Basque Country in Spain. He studied Management Engineering. He has just finished his Doctoral Thesis related to the integration of "General Quality Management Systems and Generic Quality Evaluation Models within the residential care homes for the elderly".