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Health Management Challenges: The Case of Hospital from Behind-os-Montes and Alto Douro and East Kent Hospitals University NHS Foundation Trust

Antonio Ferreira, Sara Andre

Institute of Management and Organizations of Health, Portuguese Catholic University, Viseu, Portugal

Email address:
ajmferreira@ucp.pt (Antonio Ferreira), sara.m.m.andre@gmail.com (Sara Andre)

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Abstract: It is imperative that healthcare systems, regardless of their source of funding, are sustainable, provide quality care and develop towards their customers' expectations. This study aims at a comparative analysis between two hospital centres, one belonging to the Portuguese National Health Service and the other to the British National Health Service, in order to identify which strategies have been adopted by their hospital management to reduce health costs without prejudice to the quality of the services provided. To this end, semi-structure interviews were conducted with the financial directors of both hospitals. The questions presented focus on changes in terms of financing, the relationship between costs and quality, improving efficiency by cutting costs, strategies for reducing waste and operating vectors for improving efficiency. In the Portuguese case, his perspective focuses on the management and organisation of services from a perspective intrinsic to the organisation, characterised by restructuring and innovation, based on close and cooperative interrelations between sectors and hierarchies. In the British testimony, we verify a perspective more focused on the outside of the organisation, placing its focus on an inter-relational triangulation between population, organisations and professionals. The focus on health professionals, technology, reorganisation of services and waste stands out as being four fundamental pillars of action for an efficient cost reduction, without impairing quality, considered as areas of intervention relevant to the development of future studies. We also highlight the managers' concern in cost reduction without prejudice to quality and in promoting services adjusted to the needs of the users.

Keywords: Health Management, Expenditure Management, Health Sector, Quality, Efficiency

1. Introduction

It is imperative that healthcare systems, regardless of their source of funding, are sustainable, provide quality care and develop towards their customers' expectations. When these are public and free systems, this need is even more demanding, considering the risk of their extinction.

Reforms in the health sectors have been a constant in developed countries, aiming at achieving the systems' greatest efficiency, improving their quality and seeking to reduce the costs associated with their operation [8]. For cost reduction to be a reality, without prejudice to the quality of services, it is essential that managers have research that proves the positive relationship between the adoption of a specific management practice and its impact [2]. Thus, it is crucial that more research is created in the health management context, in particular, that underpins the development of health efficiency strategies. Since costs are one of the major problems in health management, this becomes one of the main lines of action towards improving efficiency.

Alexander et al. considers that the greatest challenge for the 21st century health system in Portugal is "to place it at the service of the health interests and needs of the population, in a context of scarcity of resources, of great demand in quality in its response and permanent technical and technological evolution" [2] (quoted in [5]).

There is an interrelation between healthcare expenditure, accessibility and quality [7]. However, research on these

three factors still seems very deficient and the existing one, for the most part, precedes the developments that took place in the last decade in terms of management and demand for healthcare.

Cost control is one of the main challenges for management in the health sector, though the existing research on this subject is sparse and sometimes not very rigorous [35].

Analysing the relationship between costs and quality is a complex and sometimes even somewhat contradictory process, with different suggestions emerging from the literature [19].

Bernardino holds that there is a lack of analysis of health financing models and that the focus of these analyses is frequently on the operational efficiency [5]. Therefore, there seems to be a weak concentration in terms of analysing the costs associated with healthcare and the consequent improvement in its management.

2. Literature Review

2.1. Health Sector Management

The interest in improving the financial management of health systems is not a recent concern, having been the focus of researchers in recent decades [27].

Users' expectations and their growing demand in terms of quality and speed of the health processes in responding to their desires, the nonconformity of professionals regarding their professional perspectives, added by the rapid technological and scientific evolution in a sector with strong, sometimes even contradictory, regulatory measures, represent the great challenges in health management [5].

The peculiarity of health management resides in the management of interests that are potentially distinct from its stakeholders [5]. The analysis of the costs, quality and efficiency factors must consider the influence that each one has over all the others, therefore, their analysis and decision should not be individualised, but considering their interactions [2].

2.2. Challenges for Health Management

The existing complex problems inherent to the efficiency of healthcare provision are a fact recognised by all the stakeholders in this process, from its beneficiaries to providers and financiers [24].

The increase in life expectancy, technological innovation and access to information by citizens lead to greater demands and higher expectations regarding their health. The population ageing, the growing weight of chronic diseases and therapeutic and technological innovation are also strong pressure agents. Thus, the great challenge of health management is reflected in the ability to create strategies to respond to these challenges, without prejudice to previously established commitments which aim at improving equity in access and quality of health services, ensuring its efficiency [4].

The reliability of the data produced, associated with costs, which are often inconsistent and not very credible, not reflecting the reality, equally represents a problem for the effectiveness of management [27].

The sustainability of health services is a common concern for every developed country and there is consensus in recognising the need to change development models, aiming at their sustainability [24].

2.3. Costs in the Health Sector

Although sometimes quite different in their approach, the truth is that most countries have been implementing measures to reduce health expenditure [35], with the majority of the countries part of the Organisation for Cooperation and Economic Development (OECD) facing problems in terms of cost control and management, as expenditure shows a tendency to increase at a faster rate than the increase in wealth [5]. It is essential that countries develop mechanisms to improve the efficiency of their health systems [10].

An identical scenario is shared by the United States of America (USA). Berwick & Hackbarth claim that the costs in this sector are unsustainable, affecting the public and private sector in a very similar way [6].

The growing needs of citizens, along with technological progress and the market's own characteristics, are contributing factors to this increase in costs [30].

2.4. The Emergency of Reducing Costs

Ferrinho et al. identify the medicines sector, both at the level of sale in pharmacies and those dispensed in the hospital setting, and the conventions with complementary diagnostic and therapeutic means, celebrated between the NHS and private providers, as the two sectors responsible for the large share of health expenditure in Portugal [14].

The need to rationalise costs results from the government perceiving the limitations to the health sector financing and the simultaneous growing demand of healthcare by the citizens. Although it has been felt more intensely in recent years, in the light of research it is revealed as a longstanding problem which has persisted over the years [30].

The difficulty in financing the high costs of the sector, added by the identification of waste in its operation, constitute two fundamental pillars for the intervention of governmental and financing agents, in order to promote the reduction of health expenditures [35].

For Northcote & Llewellyn the accounting of costs in each activity or clinical procedure, problems in information quality and the heterogeneity of the nature of costs in this sector are the three crucial points for the accuracy of the information in its identification and control [27].

2.5. Costs Reduction Strategies

Reducing health costs cannot be a mere act of cutting expenses, but rather choosing, among the various options for a given objective, the one that represents the lowest consumption of resources [4].

There is a need to share experiences and resources between different countries, regarding strategies to reduce health costs,

although this is a structuring subject for most [4].

Human resources play a central role in the management of heath costs [27] and decreasing their productivity contributes to the increase in expenditure [2]. The ratio of professionals must also be highlighted as an important contribution to management both in terms of quality and cost control [1]. Therefore, their captivation by attributing benefit packages and better salaries must be seen as an important strategy for the control of health costs [3].

The awareness of the users for the responsible use of services must also be considered when thinking about strategies to reduce health costs [1].

The search for management efficiency in this sector must be guided by fighting waste, identifying the best combination of resources and determining the amount of care to be made available to the population [4], in contrast to the reduction strategies or the attribution of funding ceilings, as these measures require caution under the risk that healthcare will become too expensive or even inaccessible to the most vulnerable beneficiaries [6].

Alexandre et al. point out the technological investment and the computerisation of services as an effective strategy for reducing expenses in the long term, despite its high initial investment [2]. However, the balance between the cost-benefit of investing in medical technology must be ensured in each decision, as the acquisition of new, more modern medical equipment is not always reflected in a reduction in costs or in the improvement of the effectiveness of care.

An efficient management in terms of cost control requires credible knowledge about them [27].

Lewandowski suggests the existence of a positive relationship between the involvement of management teams and the improvement in the efficiency of hospital costs, indicating the admission of patients to the emergency department, the adequacy of treatments, the procedural costs resulting from any complaints, as well as the awareness of the need to reduce costs in general, as the main factors in the performance of health managers [22].

2.6. Waste in the Health Sector

The New England Healthcare Institute classifies health waste as "expenses that can be eliminated without causing a consequent reduction in the quality of care" [26].

Reducing waste represents an opportunity for the decrease of health expenditure [32], being a fundamental strategy in maintaining the processes, products and services that really interest the client and systematically reducing the work elements that do not contribute to this effect [6].

The health sector has a certain predisposition for the accumulation of inefficiencies, ranging from the provision of unnecessary care, to its fragmentation, waste, unjustified variations in clinical practice, administrative bureaucracies, fraud and abuse [6].

Shrank et al. believe that, in the USA, the annual cost of waste, resulting from inefficiencies in the provision of health services, is more than $100 billion [32].

In the case of the Portuguese NHS, it is estimated that the waste, resulting from the non-use or misuse of resources, is around 25% [1].

Despite such high numbers, Berwick & Hackbarth state that there is an enormous potential for action to reduce waste in the health sector [6]. Although there is still much to do in characterising waste, this exercise will allow more to be done in the future with lower costs [10].

To Berwick & Hackbarth, reducing waste in health is a fair and efficient counterpoint to the cuts in financing and the decrease of services that are often presented as the immediate strategy to reducing health costs, despite their associated risks and the consequent reduction in equity of access to services [6].

Stadhouders et al. also argue that a bet on improving coordination in the provision of care has a positive effect on reducing costs [35].

According to Brown, the excessive use of health services, their fragmentation and their poor coordination represent considerable factors in the undue increase in health costs, with their consequences varying from a mere waste resulting from the performance of unnecessary procedures or duplication of services, or even result in the provision of care at costs much higher than necessary [7].

Shrank et al. note the failures in the provision of health services and in the coordination of care, performing excessive or under-valuable treatments, the excessive cost of drugs and some procedures, the fraud and abuse of power, as well as the excessive complexity at the administrative level, as the 6 fundamental axes of action in fighting waste [32].

Colombo emphasises the improper use of emergency services, the unnecessary or too long hospital admissions and the increased pressure on hospitals caused by a weak investment in primary healthcare and in the community [10]. He also stresses the need to adopt strategies that allow reducing errors and accidents related to clinical practice, which affect between 4 and 17% of hospital admissions and the consequent increase in associated costs.

According to Lopes the reduction of waste leads to a decrease in the production cost and increases productivity, thus reinforcing the close relationship between waste, costs and profits [21].

2.7. Quality in the Health Sector

Quality is fundamental to the survival and success of organisations. An effective quality management allows the improvement of the organisation's image and reputation, protects it against risks associated with non-quality, encourages and promotes its efficiency and, consequently, enhances the profits and the global position of the organisation, stimulating its growth [12].

Quality may be considered a timeless issue due to its interconnection with the fundamental values of the human being, from family, education and school or organisations [21].

In order to obtain competitive advantages over their competitors, organisations increasingly look at the quality of processes, products and organisational factors as

competitiveness factors [11]. Hence, quality management aims at a constant search for excellence, guaranteeing not only the fulfilment of previously established requirements, but also its continuous improvement [12]. To this end, the existence of quality management and control mechanisms that incorporate the implementation of cost quantification and optimisation methods is essential, aiming at ascertaining the costs of non-quality [21].

Organisations with a greater investment in terms of quality are healthier organisations from a relational perspective, more competitive and with a better image in their business context, showing greater respect for people and the environment.

The principles of quality management and quality cost management systems have acquired positions of greater relevance and prominence in organisational management, driven by the globalisation of markets and increased competitiveness among organisations [9].

The analysis of quality costs can provide a valuable tool to support management and its applicability is particularly useful in terms of planning, cost reduction or quality improvement [11].

The growing demand for efficiency in the management of organisations is reinforced through the planning and control of quality costs as a managerial tool and organisations that separately identify the quality costs in their management reports have a greater competitive advantage in the search for quality excellence in their products [9].

In general, the quality costs result from the poor execution of the activities in the different phases of each production process, with an impact on organisational productivity and competitiveness [15]. A systematic analysis of these costs may act as a lever for the organisation to give due attention to working conditions, training and motivation of its human resources, creating conditions conducive to increasing quality [21].

2.8. Quality in Healthcare Organisations

Quality should focus on the customer and his needs, however, the particularities of its specific domains must be considered [21].

In the health sector, quality has been the subject of growing interest by various stakeholders [37]. This presents a greater complexity compared to other organisations because in the health sector quality does not act according to a single final product and does not present a uniform concept of quality [23]. On the other hand, it may present different conditions, depending on the perception of each individual. If for some it is characterised by the superiority of excellence, for others it defines the lack of care for the user and the failures in services [29].

Donabedian defines seven fundamental attributes for determining the quality level of health organisations, which he classifies as "The Seven Pillars of Quality": (1) Efficiency – the ability to take care, the best possible, in obtaining improvement in the health status; (2) Efficacy – refers to the level at which the care must be provided, so that it is possible to obtain the degree of quality previously defined as attainable or expected; (3) Effectiveness – the ability to achieve better health outcomes at the lowest cost; (4) Optimisation – the ideal balance between costs and benefits; (5) Acceptability – compliance with the user's preferences with regard to accessibility, patient relationship, healthcare professional, amenities, service results and its associated cost; (6) Legitimacy – compliance with social preferences and values; (7) Equity – fairness in the distribution of care and its effects on health for the population to which it is determined [13].

Quality assessment in the health sector results from the interaction between beneficiaries and providers and their expectations and needs determine the perception of service quality [31].

Accreditation is an important agent for improving the quality of organisations, promoting changes and the professionals' own development [37]. However, this alone is not enough [9]. Interest in the search for benchmarking systems has also been growing [37], being defined by managers as an important ally in improving healthcare quality [2].

To Urdan, when addressing the subject of health quality, it is essential to consider the variability of quality assessment dimensions, namely, distinguishing the concepts of "Service quality" and "Perceived quality", since the perceived quality refers to the way in which the beneficiary of the service perceives and evaluates the quality, based on his expectations and his own understanding [36]. On the other hand, being a subjective assessment, inherent to each client, the result can differ greatly in its interpretations [17, 16, 18]. Assuming that, in most cases, the client has no control over technical knowledge, his assessment of the service will be influenced by the interpersonal relationship created with the health professional, based on the interest and concern he shows towards his condition, while contextual factors of comfort and courtesy are added, such as the setting where care is provided [13].

Quality management enables hospitals to better organise information and monitor their services [28]. In order to develop quality improvement strategies, it is essential to identify and analyse the different conceptions of quality from providers and beneficiaries, aiming subsequently at developing mechanisms for satisfying the needs of both and promoting continuous improvements [31].

Urdan presents 3 differentiating characteristics of healthcare units, which must be considered when addressing quality assessment in this sector: (1) the lack of clarity in the relationship between entrances and exits, partly for the period of time necessary until the results are manifested; (2) patients' difficulty in evaluating technical aspects; (3) the existence of two distinct currents of authority, administrative and clinical, as opposed to the single authority pyramid, characteristic of other organisations [36].

Implementing quality improvement strategies will bring a consequent benefit in terms of hospital performance [28].

Nyakala et al. determine that knowledge, technical skills, capacity and resources, along with the implementation of

electronic clinical records and other technological information resources as essential tools for improving the efficiency of cost and quality management [28]. Computerising clinical records contributes not only to improving the quality of the collection of clinical information, but also to reducing errors and duplicating services [2].

Nyakala et al. identify performance, durability, responsiveness, empathy and its tangibility as the 5 most preponderant factors in the assessment of quality by customers [28].

Alexander et al. also add the need to establish national action protocols for the healthcare practice, in order to promote its uniformity and consequently improve its effectiveness and quality, with consequent cost reduction [2].

Health professionals play a central role in the quality of health services. Alexander et al. highlight competence, as well as the quality of training, as essential factors for the improvement of cost management and quality in health, as well as the effective management of the existing professional resources, hence it is important that management considers their allocation, according to the specificities of their training and professional experience [2].

Song et al. state that the relationship established between providers and financiers will be crucial for the future success of reforms in the cost and service delivery system [34]. Nyakala et al. also include the predominant role of managers in motivating their human resources for the development and commitment to quality management activities [28].

3. Research Methodology

This research aims at comparing the approach of two different health systems, towards the same problem: health costs and their relationship with quality.

Based on the literature review performed and in order to analyse the relationship between cost control measures and the quality of services provided, the following research question was formulated: What strategies have been adopted by Portuguese and British hospital managers to reduce health costs without prejudice to the quality of services provided?

Based on these assumptions and considering the defined research question, the authors opted for a case study between two hospital centres with similar characteristics in dimension, the population they serve, the number of hospital units and the type of services provided. The choice of a British and a Portuguese representative is related to the similarity of their constraints, regarding efficiency and management, and also for their similarity in functioning, being both free and universal in character health systems.

A semi-structured interview was conducted with the financial directors of each of the organisations, with the objective of allowing the interviewees to share their own opinion and experiences, maintaining, however, a guiding thread of the content to be analysed.

The interviews elapsed between June and August 2020, and their organisation and implementation were conditioned by the current pandemic caused by the SARS CoV-2 virus. Considering the current restrictions, aimed at reducing the risk of contagion, and taking into account that the object of study is hospital units, the interviews were conducted using digital technologies, by videoconference.

Due to the distinct linguistic nature of each interviewee, the interview guide was previously translated into each language.

In the following Table, both Hospital Centres are compared, regarding their dimension.

Table 1. *Characterisation of the Sample (elaborated by the author).*

	EK	**TM**
Population served by the Hospital Centre	+/- 695.000	+/- 500.000
No. of Units integrated in the Hospital Centre	5	4
No. of inpatient Units integrated in the Hospital Centre	3	4
No. of beds available at the Hospital Centre	1133	833 (2018 data)

4. Presentation and Discussion of Results

4.1. How Has the Hospital Management Adapted to the Recent Health Challenges

EK highlights the recent transformations, regarding efficiency in health, which impose a cut in expenditure around 2-3% per year, which led to a restructuring in the management models of primary healthcare and the consequent regrouping of units, reducing expenses with infrastructures and managerial teams, without reducing health professionals. In parallel, the cooperation between hospital units was promoted, appealing to a better coordination of care in responding to the needs of users, aiming at avoiding an excessive and unnecessary use of the emergency services, namely through investment in the care in the community.

In the Portuguese case, TM stresses the importance of establishing a strong and cohesive connection between the board of directors and the units as a way of responding efficiently to the new needs of the users.

Regarding financing, TM infers the existence of budgetary reinforcements, including occasional capital injections, which aim at supporting the increase in expenditure and investment in health, particularly in terms of equipment, in order to meet the new needs of the users at the organisational, structural or human resources levels.

EK reiterates the difficulty in managing the consecutive cuts in health, associated with a constant increase in inflation on products, annihilating most of the efficiencies achieved in management. In an attempt to fight these financial

constraints, he emphasises the relevance of *Benchmarking*, which allows to establish a comparison with other similar organisations and to understand in which areas they present lower expenses and how.

Barros also defends a periodic review of every external entities' service contract and the consequent market consultation for establishing new contracts, as well as adopting waste reduction actions that have been successful in other organisations with similar characteristics, such as procedures for cost reduction [4].

In this regard, the Portuguese case seems to present a very different reality, as TM states that there have been budgetary reinforcements and occasional capital injections to cope with the increase in expenditure.

4.2. Impact of Cost Management on Quality

TM establishes a relationship of direct proportionality between the increase in costs and the quality of care, also induced by the increase in investment in health innovation, both by technological investment and in the training and qualification of professionals. This perspective of action is corroborated by Lopes who hold the importance of organisations understanding the increase in costs caused by the increase in quality, when analysed in the long haul, will always be lower than the increase in costs associated with unnecessary waste, non-conformity errors and elimination of defects, on which betting on quality improvement will act [21]. Even so, TM admits the possibility of improving the relationship between cost control and quality, but he stresses that the increase in demand for more innovative care and treatments, which tend to be more expensive, should be considered. He stresses that, contrary to what has been seen in the industrial sector, where more technology represents less costs, in the healthcare sector, more technology represents more costs, as technological developments allow the treatment of new diseases and with better results, by resorting to new therapeutic approaches.

Investing in the professionals' training, as well as introducing technological advances, are some of the factors that persistently contribute to health expenditure [33]. However, Alexander et al. highlight the unanimous opinion of managers in affirming the advantages of implementing information technologies to control costs and improve quality [2].

TM also reiterates that the Portuguese NHS presents a course of action that is more centred on the users' needs than on resource management. On the other hand, Alexander et al. argue that the concern with an efficient cost management inherent to the quality standards expected by costumers, when associated with the shortage of professionals, is a factor of concern frequently mentioned by managers, thus emphasising the need for a balanced analysis between the satisfaction of the users' needs and the management of the available resources [2]. It will not be possible to meet the needs and requirements of users, if we lack availability of human resources.

The English case, on the other hand, presents a rhetoric centred on the essence of maintaining the previous quality standards despite the need to reduce costs. Thus, for each defined cost reduction plan, a "Quality Impact Assessment" is prepared which must be reviewed and accepted by the medical and nursing directors, thus ensuring that it maintains the safety of the care provided. The successful adoption and implementation of waste reduction measures requires health professionals to exercise an active participation, as they are the ones who can best identify what is and is not a waste in the provision of care [6, 1].

EK argues that it is possible to invest even more in improving the "cost control/quality" relationship, giving as an example the improvement of the interaction between the NHS and the social sector, facilitating the transfer of patients from hospitals to the extra-hospital responses that best suit their needs, promoting the release of hospital beds for those who need them.

Although quality is a central point for both respondents, the observation angle that each presents seems to differ. To TM, the maintenance of quality standards seems to depend on the level of investment made, so it is crucial that there is investment, at the cost of loss of quality of the services provided. In the case of EK, he admits the need to make cuts in expenditure in order to ensure the system's sustainability, however, these cuts must be pondered and evaluated, so that they do not negatively affect the quality of the services provided.

Although the action strategies may be different, as we comparatively analyse different countries, the centrality of issues related to costs and quality is indisputable. Globally, health systems evolve around three fundamental axes: reducing costs, increasing quality of care and improving accessibility [3].

The existence of a strong relationship between the ratios of the available health professionals and the increase in quality is emphasised [2].

4.3. Improved Efficiency by Reducing Costs

TM emphasises the efforts of health professionals in the efficient management of resources, even when they are scarce considering the needs. In his opinion, cost reduction alone is not the solution, as cost reduction in the present may generate new expenses in the future, due to the worsening of the disease and the impact on people's health. On the other hand, he stresses the importance of a timely and preventive approach, which aims at preventing disease worsening and the consequent need for more costly treatments or approaches.

To EK, based on the assumption that "the health sector must either reduce costs or begin to rationalise the care provided", the focus on reducing costs is a good tool for perceiving the process of events and improving efficiency, thus, defending a cost reduction based on knowledge on relevant facts which support the decision.

As there is the need to reduce costs in a hospital context, TM argues that this reduction should not occur by reducing consumption, but by negotiating better conditions for the acquisition of goods and services, as well as a reduction in waste. To Barros, this hospital supply goods and services price reduction can be achieved through negotiation

processes with the suppliers, by diverting demand to other alternative forms or by introducing greater competition, in order to influence the price reduction [4].

TM considers that management efficiency depends on the design and dimension of the institution and on the decentralisation and coordination of its management model, favouring the creation of intermediate management units, which allow the monitoring of deviations, in qualitative, quantitative or expenditure terms.

EK also shares this idea, stating that it is essential for a manager to understand where and how his funding is spent. Going further, he argues that management must understand the concepts of clinical practice, namely in terms of equipment, its function and need, especially when purchasing new equipment, thus being able to establish a clear and objective relationship of its cost/benefit.

Both interviewees defend investing in primary healthcare and in the community as a strong bet for reducing health costs. EK highlights care restructuring in the community as a crucial strategy in supporting the reduction of overcrowding the emergency services and improving the quality of care, by reducing this overcrowding.

A very significant part of health resources is spent on the treatment of complications or worsening in the health status often in chronic patients. Investing in improving health quality implies acting in preventing these complications and, for that, it is essential to consider the change in methodologies to promote the citizens' health quality [24].

In terms of cost control, the British interviewee also defends the importance of reducing clinical practice-associated costs. To this end, it is imperative to affirm that the incorporation of health professionals in the coordination of cost control processes is a "breaking point forward", considering that they have been too undervalued in this matter.

4.4. Waste in the Health Sector

Both interviewees share the acceptance that there is waste in the health sector and that fighting it is one of the ways to reduce health costs, improving its efficiency. That is, without losing the quality of care provided.

For both organisations, waste in seen as a reality that needs to be tackled, reinforcing the transversality of this problem.

Waste reduction is therefore essential as a factor for promoting efficiency and reducing health expenditures.

In his approach, EK emphasises the excessive waiting times in the emergency service, as one of the major agents of waste in health. One of the main causes of this delay is the absence of available beds for the admission of users. In a snowball effect, these patients wait for inexhaustible periods of time in the emergency department, absorbing professionals who must perform non-urgent activities, delaying the treatment of urgent cases. In parallel, these users exhaust the physical capacity of the service, stealing the ability to admit new cases.

TM highlights the difficulties in adapting human resources to the needs of the services, as well as their absenteeism as healthcare-associated waste. He also refers to waste related to the availability of drugs or analysis kits, food, electricity, water and gas.

As the main strategies to fight waste, TM considers that these should be related to health professionals' motivation and cooperation. Another form of waste reduction focuses on monitoring and control mechanisms through appropriate indicators and benchmarking between services and organisations. This is also defended by interviewee EK, referring benchmarking as a mechanism to fight the financial constraints he experiences.

Melo highlights the importance of benchmarking for the reduction of problems or complications associated with the provision of healthcare and the consequent improvement of its quality and its repercussions on financial optimisation as well [24]. It seems safe to declare that benchmarking is an important strategy towards identifying and reducing health waste and consequent reduction in health costs.

EK even adds the need to act in terms of access to emergency services, considering that there is an exaggeration in its resort. He argues that there is a trend in resorting to emergency services for any reason, without considering whether it is really necessary. In order to reduce the pressure on the Emergency Services, [4] also suggests the adoption of measures to prevent the use of emergency services, such as the creation of a telephone triage system. This type of screening is also suggested by EK.

To EK, the reduction of waste in health must necessarily occur through the collaboration of health professionals, in a joint analysis of the care delivering processes, in order to identify which elements do not add value, acting towards their elimination.

This methodology of action is based on research, especially in studies performed in the USA, which focus on the analysis and identification of the "Low-Value Care", which represents a very significant part of the waste in health, thus it is essential to develop strategies for its identification and elimination [25].

Following this line of action, TM also defends the action on waste as the path that must be followed, emphasising the need to find ways to highlight what health waste is.

Regarding possible action strategies for improving health efficiency, the interviewees present different perspectives.

Hence, in the Portuguese case, his perspective focuses on the management and organisation of services from a perspective intrinsic to the organisation, characterised by restructuring and innovation, based on close and cooperative interrelations between sectors and hierarchies. In the British testimony, we verify a perspective more focused on the outside of the organisation, placing its focus on an inter-relational triangulation between population, organisations and professionals.

Along with the literature, both interviewees reinforced the importance of acting on waste in this sector too.

5. Conclusions and Challenges for the Future

The analysis of this case study identifies 4 major sectors for reflection and possible action, when defining cost control strategies, namely:

1) Health professionals;
2) Technology;
3) Reorganising services, namely Emergency and Surgical;
4) Waste.

Aware of the need to improve the efficiency of health services, which largely translates into a reduction in expenses, it is essential that research supporting change is developed and even in its own definition and formulation.

Thus, based on the 4 sectors of action identified in this study, it is suggested that research axes are developed, based on:

1) Health professionals – the centrality of their role in management efficiency is indisputable, which is corroborated both by researchers and the aspects presented in this investigation. The relevance of their role is transversal to different moments and areas of activity, as they are crucial both in defining strategies and ensuring the effectiveness of their implementation, being agents of this change themselves. Also, their training and motivation are essential factors for the success of health management.
2) Technology – it seems to play a somewhat contradictory role in the analysis presented. Its relationship with cost reduction is not linear and technological investment is often identified as one of the factors of increased expenditure. However, reward is verified in terms of gains in quality. The relevance of more in-depth studies on this subject is emphasised, namely in its long-term impact, in order to prove studies that argue that, in a broader perspective, technological investment, in addition to its contribution to the improvement of quality, also contributes to the reduction of general expenses.
3) Reorganising services – this aspect, although without much fundament in the literature review that supports this study, is a factor mentioned by both organisations studied here, especially regarding emergency and surgical services. Thus, it would be pertinent to develop research in this sense, which would allow to identify and indicate new paths for management, aiming at promoting their efficient and sustained use.
4) Waste – this seems to be the main focus of action in the management and efficiency of health services. According to [20], waste is an act or effect of wasting, squandering, losing or unexploiting; useless expense. Based on its definition, it seems relevant that it develops as the focus of cost reduction in this sector. The most recent research denotes this specifically, although it is easy to define waste grammatically, its conceptualisation does not seem to be that simple. The challenge of conceptualisation is followed by the challenge of its elimination: "how, where and when?". Thus, it is essential to continue to investigate the issue of waste in the health context, as a way of improving efficiency, reducing costs and even as a quality improvement mechanism.

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