Section One

INTRODUCTION & OBJECTIVES

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This introductory thesis section is subdivided in two sequential parts. The first part, labeled as "thesis introduction", outlines the need and context for developing the broader and complex subject addressed by this thesis. The second part, called "objectives", defines the ultimate purposes and more specific goals to be accomplished by this thesis development.

A- THESIS INTRODUCTION

In this sub-section we begin to outline the current need for enhancing the quality of healthcare systems and services, as a mean to provide better care to patients/populations, while simultaneously turning healthcare systems more efficient and sustainable. Then, we direct our focus towards the quality of a specific context, namely the context of the United States (US) of America. Thereafter, we briefly outline the major challenges and opportunities for quality and quality-initiatives specifically regarding the Post-Acute (PAC) Rehabilitation in the US context. Finally, we expose the reasons for choosing this context to be addressed by this thesis development.

1- Enhancing the Quality and Efficiency of Healthcare Systems: A global sociopolitical priority

Enhancing the quality and efficiency/sustainability (it can be included into a quality definition) of healthcare systems are among the major socio-political priorities for the industrialized countries ⁽¹⁾. Although, healthcare quality-gaps and the need to address them exist for long time, the release of a landmark report by the US Institute of Medicine, in 2001, was able to bring wide stakeholders' attention to the need of making transformational *Tiago Jesus*

changes for the quality of healthcare systems and services. This quality is, according to such report, achievable through the development and advancement of an inter-linked set, or system, of strategic healthcare quality-initiatives they recommend after reviewing the relevant literature and action being made at that time ⁽²⁾. Indeed, the report was able to catalyze a new wave of attention, research agendas, political strategies, and actions for advancing the quality of healthcare over the last decade, as well as the 'quality' of healthcare quality-initiatives as the instrumental mean to achieve enhanced levels of healthcare quality.

The need for the quality and efficiency/sustainability of healthcare systems gained, more recently, a reinforced political momentum with the current advent of the world economic-crisis and the increasing awareness that healthcare systems could be no longer sustainable, in the long-run, if healthcare is to be organized and delivered in the exact same of way they were made so far ^(3; 4; 5; 6). Indeed, due the decreased world economic growth, and aging population ⁽⁷⁾; if nothing of great differential value would be done, on a systems-based perspective, the scenario can only become worst for the sustainability of healthcare systems. In synthesis, among multiple prejudices, the advent of world's economic-crisis can have the potential benefit of re-calling global attention and awareness for developing active, systems-based, large-scale, and aligned efforts towards producing high quality and efficiency healthcare systems ^(8; 9; 10).

It is worth noting that when we mention the word 'efficiency' or sustainability, we do not mean to a synonym of indiscriminate or rate-based cuts on healthcare expenditures, but rather referring to the allocation of resources to the places, conditions, services, and care approaches that can bring the best health and healthcare value/return to the patient and population for each unit of money spent. Cuts on resources are only to be made notably on wasteful spending options that bring no or sub-optimal/marginal health/healthcare value for the amount of expenditures or investments. It means that these spent resources could produce better health/healthcare results if used/allocated in a different way ⁽²⁾. Furthermore, better quality of care can improve efficiency/savings simultaneously with benefits — or at least with no meaningful prejudices — for the health and well-being of patients and populations. A major example that quality benefits efficiency, among many others possible, remains at the clinical and hospital measures that were able to effectively reduce the hospital-acquired infections — an unwanted and avoidable source of harm both to patients and to expenditures ⁽¹¹⁾. In synthesis, avoiding healthcare misuse, overuse, and underuse

(the latter case mostly regarding the low provision of health-promotion, preventive, and primary-care services that lately result on higher spending to treat acute diseases/recurrences) are among the major prescriptions for improving the quality and efficiency/sustainability of healthcare systems ⁽²⁾.

The great magnitude of task makes that simple evolutionary changes or improvements (doing more/better in the current way) can no longer totally overcome the systemic quality problem. Rather, it is called for nothing less than fundamentally transform, change, or redesign the way healthcare systems and services are framed, managed, organized, and delivered. However, such a fundamental transformational change requires an alignment among stakeholders' perspectives, at the outset, for strategic directions to be taken for developing a 'system' of quality-initiatives capable of promoting high-quality and sustainable healthcare (2; 10; 12; 13).

2- A prescription for quality for the United States of America

As outlined, quality and efficiency/sustainability of healthcare systems are among the major socio-political priorities for the industrialized world. However, specifically in the United States of America (US) ⁽²⁾, the quality and sustainability of healthcare falls even shorter than in most other countries, with disappointing quality and health-indicators for each dollar spent per-capita, and particularly considering the greater proportion healthcare expenditures occupies into the US gross domestic product, which is additionally increasing on a rate clearly above the US economic growth ^(14; 15).

Indeed, it seems clear that there is in the US a huge contrast among the enormous advances in biomedical research and top healthcare practices, and the health-indicators (worst also by unhealthy feeding habits and sedentary lifestyles) and quality of care effectively delivered to most patients or broader population. Moreover, the quality and efficiency of care delivered significantly and illogically varies across providers and geographic regions, enhancing concerns of societal equity, and ultimately showing there is many room for quality-improvement. This is for the standard practice to become equal, or very close, to the current state-of-the-science or 'best in class' level (2; 14; 15; 16).

As aforementioned, a system-based transformational change for a sustained healthcare system became also an urgent policy priority particularly in the US. For instance, increasing the quality of healthcare - in conjunct with prevention investment and enlarged access to adequate healthcare – represent the three America's top health priorities expressed in the most recent, and widely discussed, healthcare reform in the United States ^(3; 17). Even more recently, the US federal government released a preliminary National Health Care Quality Strategy and Plan, seeking public consultation and stakeholders feedback about their major pillars, priorities, goals, strategies, and actions for bringing more quality and efficiency to the America's healthcare ⁽¹⁸⁾.

Indeed, an enlarged consensus, alignment, and endorsement among all relevant healthcare stakeholders - including patients/population endorsement ⁽¹⁹⁾ – might be a solid base for the development of strategies and actions to be taken with quality and quality-initiatives regards. Without wide stakeholders' contribution and endorsement, strategies can be narrowly defined, and the desired systemic impacts on measures to be taken may not be achieved by lack of field implementation as well ^(2; 18; 20; 21; 12; 22).

A major example of a relevant strategic active-partnership among different healthcare stakeholders for major quality definitions is the one promoted by the US National Priorities Partnership (www.nationalprioritiespartnership.org), which is a multi-stakeholder collaborative effort convened by the National Quality Forum (www.qualityforum.org): the leading US consensus-building organization in the healthcare quality field. The National Priorities Partnership, through consensus on its multiple stakeholders' representatives, delineates major goals, priorities and comprehensive action-lines to be taken nationally and advance the US healthcare system to the desired levels of performance (12; 22).

3- Quality challenges in the Post-Acute (PAC) Rehabilitation

Post-Acute (PAC) Rehabilitation has a quite unique and distinct scope of care and quality as compared to other healthcare areas ⁽²³⁾. The rehabilitative philosophy focuses on a functional recovery paradigm - with a distinct framework and classification - targeting dysfunction rather than diseases ⁽²⁴⁾. Therefore, this distinct care scope and unique

rehabilitation paradigm should be reflected in a unique framing and strategies for quality and quality-initiatives.

For instance, recent applied literature has been denoting a lack of specificity, and subsequently lack of meaningfulness and effectiveness (25; 26; 27), in quality-initiatives applied to PAC Rehabilitation. This lack of specificity seems to be among the causes of the called PAC Rehabilitation 'quality paradox': a phenomenon that refers to a perception among the PAC Rehabilitation practitioners about the sub-optimal, or even counterproductive, effectiveness of most quality-improvement initiatives (often primarily designed to address typical acute-care quality challenges) being prescribed, and sometimes top-down imposed/implemented in the field, without accounting for the specific scope and quality challenges of PAC Rehabilitation (28). This is a phenomenon gets parallel with the so-called 'unintended consequences' being pointed to many quality-initiatives that are narrowly applied to general healthcare (29; 30; 31). Specifically within the PAC Rehabilitation field, the 'quality paradox' phenomenon seems to be seminally promoted by a lack of an enlarged stakeholder's understanding of the specific and distinctive characteristics of PAC Rehabilitation. In synthesis, it seems there is a lack of a shared PAC Rehabilitation stakeholders' understanding of what quality specifically means, or might conceptually contemplate for this unique and complex healthcare area (28).

4- The US and its Post-Acute Rehabilitation system as the context for the thesis development. Why?

Enhanced healthcare quality and quality-initiatives are not priorities exclusive for the US context, but rather worldwide issues ⁽¹⁾. The same applies to the PAC Rehabilitation field, for instance illustrated by recent concerted advances in Europe for the quality of PAC Rehabilitation ⁽³²⁾. However, towards promoting a more direct applicability to this thesis (soon outlined its objectives), and avoiding to stay just vague in the resultant recommendations; we felt the need to tailor our study to a specific context of application (e.g. a nation), accounting for its specificities and inherent complexities that vary from context to context ⁽³³⁾. The US, and specifically the US PAC Rehabilitation system, was the

context chosen to be addressed by this thesis. We have made this option due the following set of reasons:

- The US healthcare system as wider room for improvements due the current suboptimal quality performance on almost all indicators (2; 14; 15; 16).
- We can observe in the US very recent inputs from healthcare political reforms for quality, as well as and increased stakeholders' attention and awareness to actively develop a set of healthcare quality-initiatives (3; 18), facilitating further recommendations and possible implementations;
- In the US, there was a policy reform few years ago creating the basis for a systematic promotion of PAC Rehabilitation quality ⁽³⁴⁾, being on-going developed to be widely deployed in the field ⁽³⁵⁾;
- Finally, among US rehabilitation stakeholders, there is a growing awareness for the need to develop strategies and active-efforts towards enhancing the PAC Rehabilitation quality through an articulated development of quality-initiatives (27; 36; 37)

All these criteria create the 'momentum' and suitability for transformational changes regarding the quality of PAC Rehabilitation, particularly in the US context. This transformational change might be achieved through a strategic development and wide implementation of an articulated set or system of quality-initiatives, ideally consensus-based, in the target field. This is an opportunity for transformational advances we aim to seminally support with this thesis development.

B-OBJECTIVES

A three-level, backwards, hierarchical structure of goals led to the development of this thesis. This structure is composed by:

1. One long-term goal, referring to the ultimate and long-term vision for the applicability of the thesis product or to what this thesis might be able to contribute, yet not directly accomplished by its development. This long-term goals helps to shape our thesis goal.

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- 2. One thesis goal, referring to the final product or endpoint of this thesis, which is presented in the form of strategic recommendations for actions. The achievement of the thesis goal accounts, however, for the accomplishment of a set of specific goals.
- 3. Three specific goals, referring to the inter-linked or complementary mediating steps designed towards supporting the accomplishment of our thesis goal. These specific goals are the ones that fill the section 'Results' of this thesis due representing conceptual and empirical literature-basis and support for the accomplishment of our major thesis goal.

1- Long-Term Goal

The long-term goal or vision for this thesis, yet not directly or exclusively accomplished by the thesis, is to:

• Contribute towards the development of an optimized 'system' of PAC Rehabilitation quality-initiatives (e.g. monitoring, assessment, public-report, improvement, as well as quality-aligned policies and payments). This 'system' of aligned quality-initiatives might be able to support a fundamental transformation for quality at the PAC Rehabilitation level for the US context.

It is very important to reinforce that this long-term goal goes far beyond the ability of being exclusively or directly accomplished by this thesis. However, it is our hope to contribute towards its accomplishment by carrying out the following major thesis goal and the subsequent specific goals.

2- Thesis Goal

The major goal to be accomplished by this thesis refers to:

• Develop a set of integrative, systems-based, and future-oriented recommendations, supported by the literature, regarding a strategic roadmap able to catalyze the development of the optimized 'system' of PAC Rehabilitation quality-initiatives.

Since we do not start in the 'vacuum', our recommendations shall be built upon, and further complement the, actions and recommendations already being framed, suggested, or in place for a US 'system' of PAC Rehabilitation quality-initiatives.

3- Specific Goals

Towards supporting the accomplishment of our major thesis goal, we defined the following set of complementary specific goals:

- 1) To frame what PAC Rehabilitation quality might conceptually contemplate.
- 2) To synthesize the state-of-the-science and -action regarding the quality-initiatives being developed and applied to general healthcare.
- 3) To synthesize and integrate the state-of-the-action regarding quality and quality-initiatives specifically applied to the PAC Rehabilitation field.

The first specific goal is mostly conceptual in nature thereby it is less context-specific. But the second and third specific goals hold a more context-specific scope. Therefore, the second and third specific goal are more specifically framed by, and directed to, the US context. These three specific goals, which are synthesized in the Objectives diagram (fig.1), are respectively accomplished by three literature reviews presented as the thesis 'Results'.

Later in time, along with the accomplishment of the 1st specific review, we were able to identify a gap in the PAC Rehabilitation literature regarding the definition of the interpersonal dimension of care, and specifically regarding how the health-related outcomes of PAC Rehabilitation could be seminally influenced by this dimension. Therefore, within the broader scope of the 1st specific goal, we later defined the following sub-goal to be accomplished by this thesis.

1b) To conceptually frame the mechanisms by which PAC Rehabilitation health-related outcomes can be influenced by its specific interpersonal dimension of care and, responsive to these conceptual pathways, preliminary defining the key-aspects for an optimized PAC Rehabilitation interpersonal dimension of care.



This sub-goal is accomplished by an independent review that, nonetheless, complements the broader scope of 1^{st} specific aim and subsequent review. This sub-goal yielded the development of a '1st review part – B', presented in the 'Results' section.

Below, we generally depict the need for, and role of, each specific aim and subsequent review towards supporting the accomplishment of our major thesis goal.

1) To frame what PAC Rehabilitation quality might conceptually contemplate.

This 1st aim and review aims to develop literature-based conceptual framework which might be able to outline and conceptually organize the putative dimensions and constructs that, altogether, could provide a comprehensive yet parsimonious vision and understanding of what PAC Rehabilitation specifically means, contemplates, or even might conceptually consist on. By defining what are the dimensions and constructs that pertain to PAC Rehabilitation quality, we begin to outline what dimensions and constructs could, or shall, be targets to be improved by PAC Rehabilitation quality-initiatives. Therefore, once accomplishing this review, we are defining what constructs and dimensions might be addressed by our set of integrative recommendations (our major thesis goal).

1b) To conceptually frame the mechanisms by which PAC Rehabilitation health-related outcomes can be influenced by its specific interpersonal dimension of care and, responsive to these conceptual pathways, preliminary defining the key-aspects for an optimized PAC Rehabilitation interpersonal dimension of care.

This is a sub-goal and subsequent review which is defined in the sequence of the accomplishment of the 1st specific goal and review. As told, while performing the review we denoted gaps in PAC Rehabilitation-specific literature regarding the conceptual framing of its specific interpersonal dimension of care and how the PAC Rehabilitation health-related outcomes could be seminally influenced by this unspecified dimension. Indeed, this was one of the reasons, although not the only one, leading us to include the interpersonal dimension of care as a dimension of PAC Rehabilitation quality. Furthermore, once representing a sub-developed dimension of PAC Rehabilitation quality, this subject matter corresponds to a suitable dimension to be addressed by our future-oriented set of integrative

recommendations on a path to follow towards a comprehensive 'system' of US PAC Rehabilitation quality-initatives.

In the 'Results' section, this 1st review – part B is presented next to the broader 1st review. However, as aforementioned, we shall denote this complementary review was the last to be framed, defined, and operationally accomplished. Concretely, it was mostly executed during the 3-month research-stage the author coursed into a research-center outside Spain. This course and period was embedded into the accomplishment of the requirements for the attribution of a European Doctorate (see the formal documentation in the Appendixes section).

Finally, due being innovative conceptual-frameworks for the PAC Rehabilitation field, we must outline that both, the broad 1st review and the 1st review part – B, were developed with the parallel interest to be submitted to, and thereby published into, an international peer-reviewed or scientific periodic within the PAC Rehabilitation field. The immediate consequence of this option is the limitation, at the outset, of the length of words and references we could use in the final version of these reviews. It does not refer to a simplified or less amount of review work, but rather the contrary. Indeed, it resulted in a lot of more time and effort spent in a parsimonious and integrative reduction of information, accomplished by multiple synthetic and conceptual integrative efforts, as later depicted in the 'Methods' section. These restrictions do not apply, so strictly, to the following specific goals and subsequent reviews.

2) To synthesize the state-of-the-science and -action regarding the quality-initiatives being developed and applied to general healthcare.

Integrative and future-oriented recommendation towards fostering a 'system' of US PAC Rehabilitation quality-initiatives cannot be established without a good degree of knowledge and awareness of the state-of-the-science and -action regarding healthcare quality and quality-initiatives. Considering that this thesis is specifically directed to the US healthcare system, we were naturally particularly interested in the current trends, policies, perspectives, priorities, or actions being prepared, or currently taken, into the US context with quality and quality-initiatives regards.

This specific goal and review should bring a wide systems-based perspective (the major current paradigm for an highly-impacting quality-improvement (2; 38)) and an updated 'big picture' about current quality-initiatives being developed or deployed in the field for our specific context, which could support the development of our integrative recommendations in two major ways. First, the review might set the whole background scenario in which a 'system' of US PAC Rehabilitation quality-intatives might be able to flourish, as well as to be framed and embedded on. Second, the review might provide models or tips/suggestions in which we might be based on towards supporting the design and operationalization of a set of integrative recommendations we proposed ourselves to provide.

3) To synthesize and integrate the state-of-the-action regarding quality and quality-initiatives specifically applied to the PAC Rehabilitation field.

As aforementioned, the scope of our integrative recommendations does not intent to be framed in a 'vacuum', but rather based upon, and complementing the, the perspectives and actions being framed, catalyzed, or already in place for the scope of quality and quality-initiatives specially regarding the PAC Rehabilitation field, and particularly framed and tailored to the US context.

This 3rd specific aims and review, therefore, shall critically outline the state-of-action in PAC Rehabilitation quality-initiatives, integrating the challenges and potential solutions directly pointed to PAC Rehabilitation quality and quality-initiatives, or fitting the scope of their specific and current quality-challenges. This review might, therefore, represent the starting-point for the further development of our integrative recommendations for an optimized 'system' of PAC Rehabilitation quality-initiatives, which is the thesis major goal.

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