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Managing Healthcare Service Ecosystems: Abstracting a Sustainability-Based View from Hospitalization at Home (HaH) Practices

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Abstract: Sustainability seems to be a hot topic today upon which a paradigmatic transformation is going on; this affects many fields and sectors by revealing the significant implications for actors' participation, such as in healthcare. Today, healthcare calls for renewing and increasing its own main processes of hospitalization, as inspired by the current new light of sustainability; hospitalization at home (HaH) practices allow for new forms of hospitalizations, which are much more adherent to the real needs of patients and caregivers. Studies in service dominant logic (S-D logic) on service ecosystems help us in understanding which are the dynamics that are shaping actual conditions in healthcare. With the aim of contributing to the challenging debate about the role of "sustainability for healthcare", this manuscript proposes a conceptual framework for investigating healthcare domains through the interpretative lens provided by the service ecosystems view. Previous managerial contributions are analyzed in an attempt to emphasize the contact points between studies about service ecosystem and sustainability so as to outline the possible roadmaps for sustainability in the healthcare domain. The three dimensions of HaH—efficiency of healthcare service, effectiveness in resource usage, and patients' satisfaction—have been identified as possible levers on which promoting healthcare processes inspired by sustainability principles and their relations with the three pillars of sustainability science—the economy, society, and environment—have been analyzed. The reflections herein are finally discussed for proposing possible future directions for research interested in promoting a sustainability-based healthcare management.

Keywords: healthcare; service ecosystem; hospitalization at home; sustainability; sustainable service ecosystem

1. Introducing a Sustainability-Based View for Hospitalization at Home: A Conceptual Framework

For a long time, managerial and business studies have exclusively focused their attention on the dynamics and variables able to influence companies' profitability [1–3]. Therefore, a large part of studies and contributions rooted in the business domain were strongly influenced by win–lose logic [4] and competitive approaches [5]. For many years, both practitioners and researchers engaged in a business domain have stated that companies' survival were only related to their ability to make a

profit [6]. This basic statement is nowadays under discussion [7–10]; changing social and economic dynamics and market turbulence, indeed, have highlighted the need for companies interested in survival so as to enlarge their approaches and catch the emerging challenges and dynamics [11–13]. Accordingly, market trends have progressively shown an increasing relevance of consumers' needs as well as the related need for companies to adapt their approaches and strategies to the market expectations [14–16]. Traditional managerial approaches have exhibited an increasing incapability to explain the growing market interest in social and environmental topics, and to support both practitioners and researchers in defining models for adapting companies' structure and dynamics to the emerging market configuration [17–20].

As underlined by Golinelli et al. [21], increasing market turbulences are requiring a rethinking of traditional approaches and perspective by shifting the attention from a competitively-based view to a collaboration-oriented one. Among the multiple contributions that have tried to support the proposed change in perspective, the studies developed under the conceptual umbrella of service dominant (S-D) logic [22–24], and specifically the contributions related to the service ecosystems (SES) [25–27], seem to provide interesting stimuli of reflections. Specifically, it seems that an increasing number of scholars are engaged in proposing contributions and advancements in knowledge, with reference to the contextualization of SES logic in several domains [28–30]. Accordingly, a number of contributions have been provided, with reference to the effect of SES logic on contexts' complexity [31], service quality [32], innovative processes [33], trans-disciplinarily [34], institutionalized rules of resource integration [35], systems' interactions [36], role of actors [37], higher education [30], and international business [38].

Building upon these contributions, intriguing shared points emerge between the studies on SESs and the reflections provided by another challenging domain—sustainability. In more detail, sustainability studies have progressively shifted from a focus strictly related to the environmental dimensions, to a perspective that today also includes economic and social dimensions, in order to support the definition of models and approaches that are able to join multiple expectations, and a willingness to ensure the satisfaction of both actual and future needs [39–42]. From another perspective, SES' studies concerning the definition of sustainable service ecosystems [28,43] focuses its attention on the interactions among the actors as ways for ensuring actual and future system wellbeing [44–46]. Accordingly, SES seems to provide an interesting interpretative path for explaining and showing evidence of the sustainability logic [47].

Following these preliminary reflections, this manuscript aims at analyzing the contributions of SES logic in supporting a better understanding of the application of sustainability logic. In such a direction, the paper focuses its attention on healthcare as a stimulating domain for validating the applicability of the SES view on the hospitalization at home (HaH) practices [48] as an example of the processes through which healthcare services ecosystems (HSES) can be managed in the light of sustainability. Specifically, the paper focuses on healthcare value propositions [44], co-creation practices [45,49,50], managerial aspects [51], and service innovation [52] as relevant research areas through which we explain the applicability of the SES view on new forms of re-configuration and re-organization experienced today in healthcare, and its coherence to sustainability logic.

This is a conceptual paper, and it is structured as follows: Section 2 proposes the theoretical framework of SES in the service dominant logic (S-D logic) paradigm, in which the reflections herein are built—in this section, new assumptions on SES and HSES are outpointed; Section 3 depicts possible alternative approaches for managing HSES in the light of sustainability principles—in this section, the HaH practices are intended as processes fostering a sustainability approach in the healthcare domain; and in Section 4, assumptions are discussed, some implications are derived, and preliminary conclusions are proposed.

More specifically, starting from the recent advance in service research (and S-D logic particularly) on SES, HSES, and sustainable SES, a number of reflections have been synthetized in terms of the actors' engagement and participation, design and re-configuration, adaptive processes, and the ability to face the emergence in the systems—this led to assumption n.1. Furthermore, the need to give an alternative

to traditional hospitalizations, the growing systems medicine and the patient empowerment allows for proposing a new understanding of HSES in light of sustainability—this led to the assumption n.2. Moreover, HaH practices are highlighted in depth, the three main dimensions—efficiency of healthcare service, effectiveness in resource usage, and patients' satisfaction—have been explored, and the link with the sustainability-based approach is exploited and defined as levers for promoting healthcare processes inspired by sustainability principles—this led to assumption n.3. Finally, a comparison between HaH and the triple bottom line model in light of sustainability is described.

The flow of topics can be captured here with the following picture (see Figure 1).

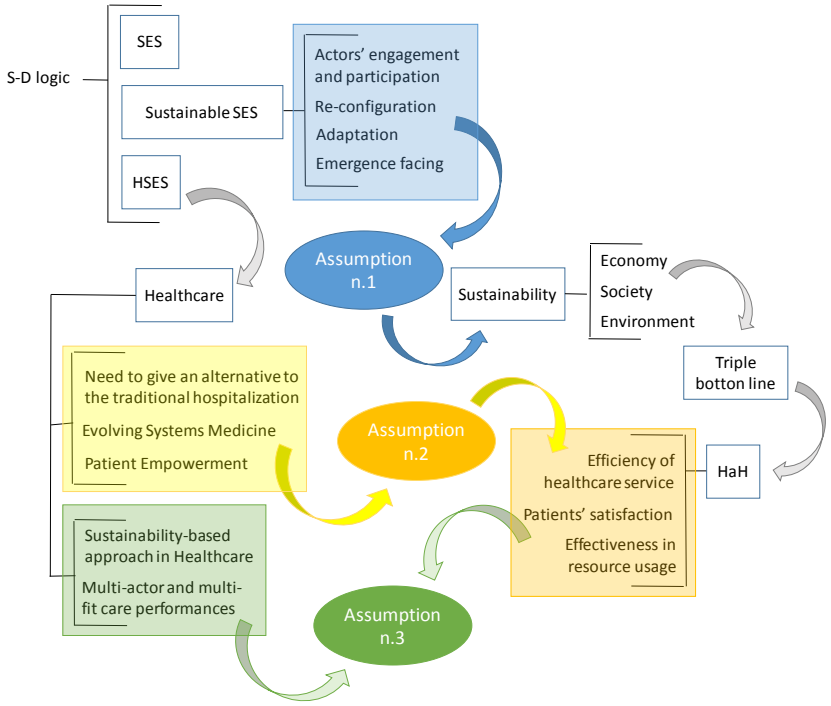

Figure 1. Contents' flow. Source: authors' elaboration. SES—service ecosystems; HSES—healthcare services ecosystems; HaH—hospitalization at home.

In short, today, healthcare calls for renewing and increasing its own main processes of hospitalization, as inspired by the current new light of sustainability. HaH practices allow new forms of hospitalizations, which are more adherent to real needs of patients and caregivers.

Studies in S-D logic on SES, HSES, and sustainable SES help us to understand which are the dynamics that are shaping the actual conditions in healthcare. The sustainability-based approach is used to match the HaH three dimensions and the main spheres of sustainability. The original comparison made between HaH and the triple bottom line model appears as the the core of this work, as a potential contribution of a new way for managing HSES.

Matching contextualized reflections from HaH practices, a sustainably-based management in HSES could be abstracted.

2. Theoretical Background and Assumptions Development

2.1. A Road-Map for Sustainability through the Service Ecosystems View

According to Vargo and Lusch [53], studies about SESs are still in the conceptual phase, and they are strongly interested in providing models for approaching "the same phenomena from different levels of aggregation". A general description of SES has been provided by Vargo and Lusch [54] for which it is a "relatively self-contained, self-adjusting system of resource[s]—integrating actors connected by shared institutional arrangements and mutual value creation through service exchange".

Analyzing previous managerial contributions about SES, it is possible to note that it is interpreted "a spontaneously sensing and responding spatial and temporal structure of largely loosely coupled, value-proposing social and economic actors interacting through institutions, technology, and language to (1) co-produce service offerings, (2) engage in mutual service provision, and (3) co-create value" [25]. Accordingly, SES can be considered a dynamic configuration interested in ensuring actors' long-term well-being through the adoption of sustainability models [44] and central institutions and decision-making processes [50,55]. With reference to this point, Siltaloppi et al. [56] state that institutions consist of a set of formalized rules "such as laws, more informal norms including social expectations, values and moral codes that define appropriate behavior, and cultural meanings including cognitive frame and schemas that encapsulate the assumptions and beliefs fundamental to making life comprehensible".

Thanks to this definition, the dynamic configuration of SES can be highlighted [57], and the relevant role of actors as resource integrators that are able to co-create value through the application of individual competencies, knowledge, and experiences can be emphasized [25,55,58,59].

Building upon the consolidated definition of SES provided by the managerial literature and reflecting on its dynamic configuration, it seems that SES is strongly impregnated by sustainability principles [38]. This assumption is more evident if the attention is focused on the relevance of the ethical, environmental, and social principles for policymakers engaged in the management of SES [53]. Accordingly, SES sounds as inherently related to sustainability principles and it seems to be an interesting configuration for managing sustainability, challenged through multi-actor service-for-service exchanges based on mutual resource integration [53]. Moreover, it is possible to state that sustainability in SES is related to the ability of facing stress processes [60] to maintain its configuration and preserve the available resources for future generations [30].

Extending the above interpretative approach to the link between sustainability and SES, the sustainability-based orientation could be an emerging challenge for managing relationships, resources sharing, and interactions [36,61,62]. Furthermore, the concept of sustainability services can be defined as being responsive to customers', providers', and suppliers' needs, and being able to adapt itself to the surrounding environment and its ever-changing conditions [28,43]. In such a view, Polese et al. [37] state that SES "emerges by the interaction of completed and viable systems (actors/systems) that are integrating resources" (p. 787), and that "the actors/systems interact sharing the final purpose of the ecosystem, following sustainable principles, reducing their own expectations and generating benefits primarily for the whole ecosystem" (p. 788). Thanks to this approach, SES offers the opportunity to overcome consolidated organizational boundaries enabling multiple actors to interact with, share, and use resources in a "responsible way" [63]. It also offers the opportunity for emphasising that sustainability challenges can be faced only through managerial approaches, which are able to ensure that value is co-created acting on the build, re-build, and maintaining of resources and capabilities [64] through multidimensional and multi-actor interactions [28] in a defined context [59]. Furthermore, according to the reflections derived from previous contributions on the topic of SES, the following assumption can be formalized: sustainable service ecosystem is a dynamic configuration able to be re-configured, and it faces sustainability challenges through continuous adaptation, actors' interaction, and resource sharing.

2.2. Healthcare as Service Ecosystem

Healthcare can be intended as a SES, based on the interactions among multiple actors [44]. It has specific features to deal with reference to provided services and service processes [65]. Within HSES, service providers are responding to the shift toward consumer-directed care by offering new value propositions that are dynamically co-created [44]. The shared institutional logic on which HSES is based boosts resource integration and re-bundling processes as a way for ensuring sustainability and the well-being of all of the involved actors [66].

According to Ignone et al. [67], the current situation in healthcare is strongly focused on the hospital system and deserves to be changed through a sort of reconstruction and new care formulas. This change must take into account the cost-effectiveness and appropriateness of care needs, both inside and outside the hospital. As a consequence, the need for rethinking the managerial approach in healthcare domain appears to be evident, and the attention on the possible collaboration (and value co-creation) among the involved actors seems to be a solution [68,69].

In such a vein, the consolidated approaches to "patient flow management" need to be changed [70]. Approaches to patients in the healthcare domain should shifted from a transactional view based only on the provision of services able to "solve" a specific problem, to a relational approach in which the patient is a relevant partner in healthcare processes, and its knowledge, competencies, and capabilities are key resources for defining a sustainability-based view for healthcare management [69].

In such a vein, increasing attention both from researchers and practitioners can be noted with reference to the way in which patient-centered and patient empowerment practices can impact on and shape the healthcare SES [44]. Several solutions have been designed for improving healthcare service quality [70] and for improving healthcare assistance performance [71]. This increasing attention has pushed for a radical change in service healthcare management for chronic patients [72], in the cost-effectiveness of healthcare domain and in its impact on healthcare innovativeness and quality [73], as it has supported the emergence of so-called systems medicine [74] and related personalized medicine approaches [75]. Among the evidence on the ongoing change in perspective in healthcare management, the hospitalization-at-home (HaH) process seems to be an interesting issue for ensuring the application of the SES view in the healthcare domain [76], as well as for promoting sustainability principles in healthcare dynamics [77,78]. Therefore, the following assumption can be formulated: Healthcare can be considered a sort of Service EcoSystem rooted in the interaction among multiple actors interested in different and convergent finality, available to collaborate for ensuring a shared satisfaction.

3. Shaping a Sustainability-Based Healthcare Service Ecosystem: A Focus on HaH

3.1. What Is Hospitalization to Home

In Europe, the organization of public healthcare is territorial-based and service centers are managed at hierarchical levels, coordinated by central or regional rules and institutions [72]. In the last few years, studies and contributions rooted in healthcare management have showed an increasing interest in defining new approaches and paths able to increase the alignment between health dynamics and social configurations [1], as well as in the light of the emerging attention toward the sustainability principles [79]. Among the multiple solutions provided, HaH seems to include multiple opportunities, but its dynamics are still not well explained [48,80,81].

In Italy, the HaH clinical activities are managed both at a local (hospitals and districts) and regional level; the activities of diagnosis, treatment, monitoring, and rehabilitation are provided within several constraints in care quality (i.e., waiting time), efficiency (i.e., resource utilization), and costs (i.e., fixed annual savings or budget reduction) [67].

The HaH is approached in the literature with different meanings [76,82], and it can be considered a sort of general umbrella that includes the decrease in the number of ordinary admissions (or, in some cases, of total hospitalizations) to the transition from ordinary admissions to daily hospitalization, and the shift of healthcare activities from hospitals to outpatient context. HaH is based on the implementation of alternative forms for health assistance such as healthcare residences, home care, intermediate care, community mail, and weekend shipments [83].

HaH can be considered as an alternative approach to consolidated health treatments, because it aims at organizing in the patient's home a "care setting" equivalent to the hospital one, helpful for chronic illnesses, able to increase patient and caregiver satisfaction so as to improve patients' quality of life and to reduce the health processes costs. Thanks to this alternative approach to healthcare processes, HaH introduces new forms of responsibility and engagement in the health domain, offering to patients

and their families the opportunity to acquire the knowledge and competencies useful to proactively collaborate with health professionals [84]. Accordingly, through HaH, HSES can re-configure itself and re-organize itself for increasing the capability of the multiple needs of patients [51,83].

From a more general perspective, the main goal of HaH is the reduction in the number of hospitalizations and the related reduction of hospital care costs and clinical risks [85]. To achieve this aim, HaH proposes a redefinition (re-configuration) of the hospital as an advanced place of care, and it underlines the need for specific organizational paths directly so as to identify the procedures for collecting timely and up-to-date data about health services demand and the resources used during the health processes [86].

Adopting the interpretative lens provided by sustainability studies [87–90], it clearly emerges that thanks to HaH practices, HSES can positively impact on patients' quality of life and it can increase efficiency in the use of the available resource for satisfying the collective need for health [83]. Considering the multiple potential contributions provided by HaH for increasing the efficiency and sustainability of HSES, several approaches have been proposed for evaluating its dynamics [91], focusing attention on the decrease in hospitalizations [92,93], on the changes in care settings [94], and on the cost reduction for managing hospital health processes [92,93].

In nutshell, according to Wilson [95], the most relevant advantages provided by HaH practice can be summarized as follows: (i) broad assessments of the effects of home care; (ii) components of interdisciplinary team-based community care as part of integrated care with other sectors; (iii) restorative approaches to care; and (iv) support for caregivers as part of home care.

Recognizing the validity of the above-analyzed contributions, the role of HaH practices for ensuring a sustainability-based management of HSES is clear. Accordingly, several elements can be identified about the positive effect that HaH practices can produce in the light of sustainability principles, as summarized in the Table 1.

Table 1. An overview of hospitalization at home (HaH) practices in defining a sustainability-based healthcare management.

Dimensions of HaH	Brief Description	Reference
The efficiency of healthcare service	Home rehabilitation has a positive impact on community-dwelling elders.	[96]
	Home palliative-care services have a positive impact on reducing symptom burden for patients compared to hospital palliative-care services.	[97]
	Effects of "hospital-in-the-home" (HITH) services are associated with reductions in mortality, readmission rates, and cost, and increases in patient and carer satisfaction, and with no change in caregiver burden.	[98]
	Home-based primary-care (HBPC) interventions reduce the utilization of inpatient care and improve procedures clinically.	[99]
	HaH programs have the potential to reduce readmissions, enhance the quality of life, and reduce the cost of health care.	[100]
	Services for reducing the duration of hospital care for acute stroke patients have effects and costs of early supported discharge (ESD), compared to conventional services that involve in-hospital rehabilitation.	[101]
	Home-care rehabilitation services for maintaining and improving the functional independence of older adults may be more effective than usual.	[102]
	HaH practices improve health outcomes across a variety of clinical dimensions, including a reduction in mortality rates, a decrease in fall risks, and an increased level of independence.	[103]

Table 1. *Cont.*

Effectiveness in resource usage	HaH practices are less expensive than hospitalization.	[104]
	HaH practices acting on patient education and home visits prevent hospital re-admission.	[105]
	Assisted living technologies (ALTs) in HaH practices reduce hospital and nursing home stays for the intervention group.	[106]
	In-hospital and home-care interventions reduce hospital readmissions in the elderly.	[107]
	Interprofessional care teams in HaH practices reduce emergency department visits, hospitalizations, and long-term care admissions.	[108]
	Tele-monitoring, nurse-led clinics, and educational interventions reduce cases of readmission.	[109]
	Crisis resolution home-treatment teams (CRHTTs) for older people with mental health problems reduce the number of admissions to hospitals.	[110]
	Reducing the dependency in activities of daily living (ADL), HaH practices offer the possibility to maximize efficiency through the re-organization of approaches, tasks, and time.	[111]
Patients' satisfaction	Home-based end-of-life care generates high patient satisfaction.	[112]
	Evaluations about in-home end-of-life practices (EOL) generates an improvement of patients' satisfaction, with reference to the quality of life, health care services, performance status, pain management, non-pain symptom management, supporting home deaths, and reductions in healthcare costs.	[113]
	Patients involvement improves satisfaction with health care services.	[114]

Source: authors' elaboration on Wilson 2018.

Summarizing the contributions provided in Table 1, it can then be stated that HaH practices positively influence the management and organization of healthcare processes to support the processes toward a sustainability-based management of healthcare services, as represented in Figure 2.

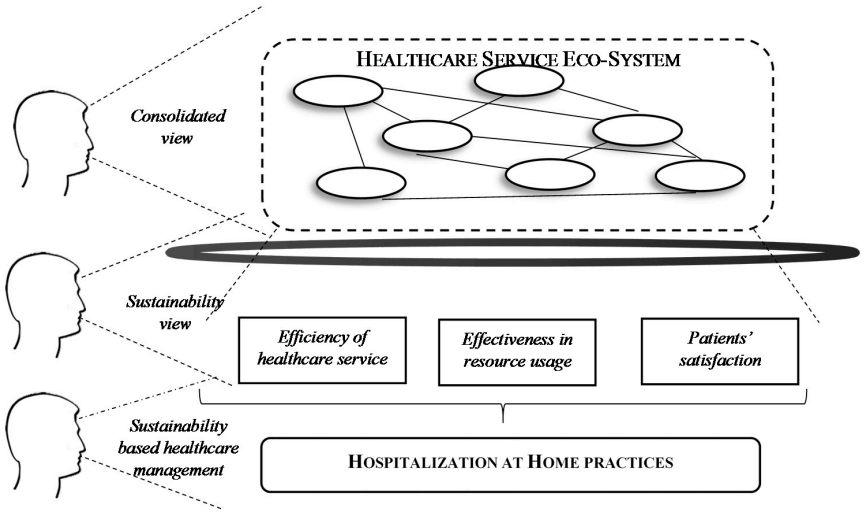

Figure 2. Abstracting sustainably-based healthcare management from HaH practices. Source: authors' elaboration.

3.2. How Does HaH Make the Healthcare SES Sustainable?

HaH introduces new forms of responsibility and active involvement in the care process, so that the patient and their family can acquire the tools to self-managing and collaborating proactively with their doctor, as this is said to be one of the most suitable solutions to achieve the ultimate result of every healthcare system, the protection of health [82]. The need to recover areas of integration and coordination in the management of care, and to introduce systems of active participation of the patient in the care process, while preserving the specialization of professional resources and economic sustainability, has led to the emergence of new models of care, identified with the term "integrated management" and united by being organized, proactive, population-oriented systems that place an informed/educated patient at the center of the whole system, playing an active role in the management of the pathology from which it is affected. The emphasis is therefore on the continuity of care through a greater integration and coordination between the levels of care, and an active involvement of the patient in the path of care.

From a managerial point of view, the HaH change (or shape) proposal could be considered to derive from learning processes that generally depend on the availability of operations and resources and are strongly linked to the supplied value that belongs to a specific organization and that acts on change processes by fostering or reducing them. To survive in the long run, every actor/system in the HSES has to plan, lead, and audit many operations, which affect many elements of its structure [78]; this leads to new governance needs, each time improving the ability to react, manage, and act to the external contingencies [66]. In this regard, aligning with patients' wants is the attitude that constitutes a way of dealing with the need to change and adapt to the solicitations coming from the external healthcare environment. This process fosters the birth and development of a virtuous circle, which, on one hand, ensures a better and more effective satisfaction of all actors' needs and expectations, and, on the other, guarantees reaching a higher-level performances over time in HSES. From these concerns, a sustainably-based management in HSES could be abstracted.

Therefore, the following assumption can be formulated: HaH fosters a performance level in healthcare by contributing in sustainable re-configurations of hospitalization practices and allowing new managerial approach in the healthcare service ecosystem.

From the sustainability point of view, sustainable SES orientation toward the future is then based on a multi-stakeholder alignment [44,45], supporting the identification of those negative and positive externalities that affect sustainability, especially from a social point of view. This is effectively true for HSES, as seen for the HaH practices.

Additionally, the alliances, service policies, and integration among different services leverages the merging of several resources and capabilities [56]. In this direction, from to a user's perspective, sustainability must be coupled with the rational use of resources, with positive interactions between actors synergistically involved, just as mentioned before, concerning the collaborative-orientation. Then, the "strategy" of HaH foster better and stronger relationships between two or more systems, creating better conditions for survival, as the sustainability view does [65].

The process of abstracting sustainably-based management in HSES from HaH practices is in the following picture (see Figure 2).

Figure 2 illustrates the ways by which the three identified dimensions of HaH practices (Table 1) can be intended as drivers for building a sustainability-based approach to healthcare management. Extending the reflections herein with reference to the contributions offered by the studies rooted in sustainability science, it also possible to note the strong relationship between the dimensions of sustainably proposed by the triple bottom line—economy, environment, and society—and the dimensions of HaH practices, useful for abstracting a sustainability-based healthcare management as reported in Table 2.

Emerging links, as shown in the above figure, are expressed by value co-creation processes (economy sphere), actors' multiple contributions (society sphere), and resource sharing (environment sphere). This dynamic aspect of this comparison is explained again by the interactions in healthcare

driven towards sustainability—if actors are successfully engaged and actively contribute to the improvement of the HSES as a whole, it could be possible to achieve the primary common final goals.

The presented relationship is schematized in Figure 3.

Being adaptive and multi-fit reduces the waste of resources, improves the outcomes of care practices, affects operational timing and management costs, and therefore makes the action of the HSES more sustainable.

Table 2. Linking triple bottom line and HaH practices.

Dimensions of Triple Bottom Line	Brief Description	Dimensions of HaH Practices
Economy	The value produced by an organization as a consequence to satisfy the market needs and expectations.	The efficiency of healthcare services
Society	The inclusion of peoples' contributions in defining models and approaches able to promote equality and justice in organizational processes.	Patients' satisfaction
Environment	Balanced use of available natural resources for satisfying actual needs, without reducing the possibility for future generation to satisfy their needs.	Effectiveness in resource usage

Source: authors' elaboration.

The idea of sustainable HSES is based on the ability to deal with changing conditions in a more responsive, adaptive, proactive, and dynamic context [115], by progressively fostering re-configuration, re-asset, and re-organizing practices with a stable equilibrium over time.

The contributions of knowledge, the application of skills, the ability to configure and reconfigure, and the desire to maintain relationships with long-term subjects are considered strategic, and all represent the elements of a systemic way of being adaptive [116].

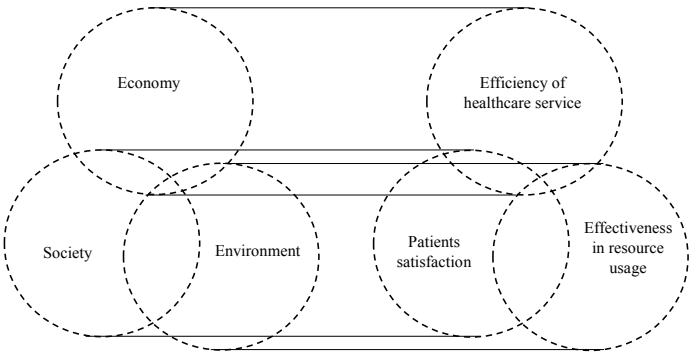

Figure 3. Contextualizing the triple bottom line in the healthcare domain. Source: authors' elaboration.

4. Discussion, Implications, and Preliminary Conclusions

HSES is presented as a challenging topic able to provide useful contributions in an ongoing debate about the need for rethinking managerial approaches in the healthcare sector [45]. Several contributions have been proposed, with reference to the opportunities offered by the application of the SES view in the healthcare domain, in terms of a better performance as a consequence of increasing the interaction and resource sharing among the involved actors [117].

Recognizing the interpretative contributions that the SES view can provide to healthcare management, the paper has tried to identify the way in which the ongoing transformative process for healthcare could be oriented in the light of sustainability principles. Building upon previous managerial contributions, the strong relationships between the SES view and sustainability principles in the healthcare domain have been underlined and the HaH practices have been identified as an example of a sustainability-based management of the healthcare service. By highlighting the advantages coming from the HaH practices, this manuscript provides some evidence about the way

in which healthcare organizations can deal with changing social and economic conditions in a more responsive, adaptive, proactive, and dynamic way [115]. The overview of HaH in practice suggests a number of evidence regarding the positive impacts of integrated activities as home rehabilitation, home palliative-care services, home-based primary-care, home-based end-of-life care, hospital-in-the-home, and in-home end-of-life practices. The same goes for the participation of multiple levels of actors (interprofessional groups and home-treatment teams) in early supported discharge, assisted living technologies, home-care interventions, and tele-monitoring. Acting on the participation of patients in healthcare processes, the HaH practices increase the efficiency of the health service, effectiveness in resource usage, and patients' satisfaction, ensuring healthcare viability as a result of boundaries dissolve, and, consequentially, increasing the ability of healthcare organizations to understand market needs and to provide a more fitting solution [40,116,118].

The assumptions proposed deal with SES, HSES, and HaH. These aspects involve re-configuration, actors' interaction, sharing resources, and managerial approach. The reflections herein underline the need for a radical change in perspective in healthcare management that cannot easily be improved if the nature of healthcare SES as a system of systems without a structure is recognized, and its contribution in explaining the interactive dynamics from the observer point of view is understood [37]. Accordingly, for rethinking healthcare management from the SES point of view as oriented by sustainability principles, it is necessary to not only build managerial models based on quantifiable outcomes (e.g., reduction in costs, hospitalization days, infrastructure value, etc.), but also to be able to consider the relevant role of qualitative dimensions such as patients, satisfaction, equality in health service, accessibility of healthcare treatment, and the impact of health processes on patients' lives, among others. It is a challenging process, but as shown with reference to the HaH practices, it can be faced by adopting a holistic view to support the shift from a transactional to a collaborative and participative view of healthcare [119–122]. The conceptualized comparison between the dimensions of HaH and the triple bottom line model from the point of view of sustainability is aimed at giving a contribution to abstracting a sustainability-based healthcare management.

In such a view, the paper depicts the ways in which the ongoing debate about the role of "sustainably for healthcare", and it depicts the ways in which sustainability can orient a transformative process within the healthcare domain.

Future research is already planned to transfer these theoretical reflections to a practical case study, in order to demonstrate empirically what we mean here; specifically, a special situation should be selected that is geo-localized with the need to re-configure hospitalization practices and the possibility to properly integrate the home-care service as a whole, by following the main described systems' adaptive features.

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