7. Co-creation and Change in Healthcare

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Abstract

Healthcare involves multiple actors. In such a system, the creation of value shifts from being a top-down to an interactive process. This interactive process emphasizes in particular the importance of time and place dimensions and the network relationships of service (eco)systems in determining value. This kind of co-creation is critical to improving healthcare services, enhancing the quality of care, increasing patient and healthcare provider satisfaction, and contributing to primary healthcare reform and change. Traditionally, healthcare offerings have been regarded as the processes through which patients passively receive care from service providers, including for example, clinicians, nurses, and allied healthcare professionals. Currently, however, patients are increasingly seen as active contributors to their health, so it would be desirable that in the creation and design of healthcare offerings, the delivery of the solutions to passive receivers would not be emphasized. Instead, the focus needs to be shifted from an individual-centred and output-based value-creation toward a more interaction-based approach of co-creation. Here, co-creation refers to a process of gathering input from various stakeholders (e.g. patients and families) with the common goal of producing a service, product or process. Co-creation opens the healthcare service designing and development up to a wide range of voices that would normally never be involved. The ultimate goal is to approach issues from a new perspective and come away with better services, products and processes.

Keywords
Healthcare, Co-creation, Interaction, Value, Time, Context, Reform, Change

7.1 Service ecosystem in healthcare

Service ecosystems in healthcare consist of multiple actors, networks and institutional arrangements with such common principles intersecting and overlapping among the micro, meso, and macro levels of social interactions.

Typically, service ecosystems consist of relatively autonomous units operating together with common principles. In general, service ecosystems are dynamic in nature, meaning that each network or actor within the ecosystem can change the nature of the system through resource integration. Within the service ecosystem, different institutions influence the co-creation of value and emphasize the importance of interaction and the social context of the service system as they integrate and recombine resources. Integrating existing resources in a new way by developing new relationships, new services, new processes and new ways of co-creating value enhances innovations and an emergence of new practices[1,2].

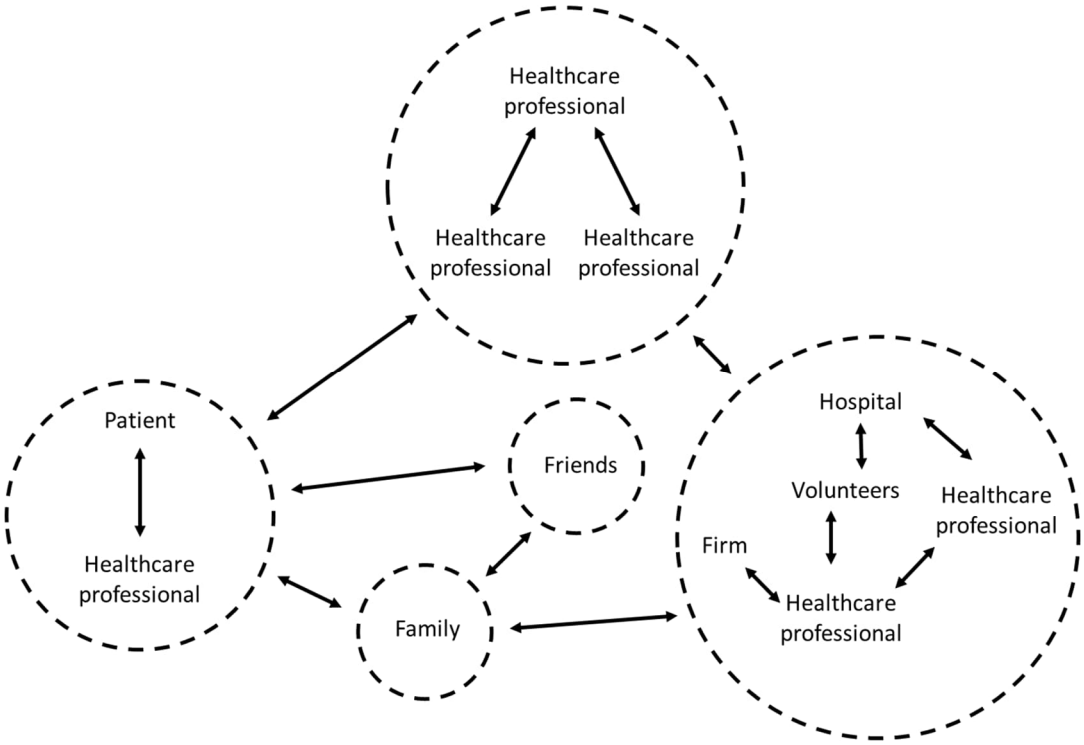

Figure 7.1 Relationships in service ecosystem (exemplary actor networks)

As described and illustrated above, by definition, the service ecosystem consists of actor networks zooming out from the dyadic relationships while integrating resources from many sources, not only from the service provider or the service user, and these networks are linked by dynamic processes[3]. Although it may be relatively easy to identify the actors and networks involved in a service design process, the systemic thinking about the service ecosystem is often challenging, especially in the context of healthcare service design process which often is implemented by actors that have very different operating cultures[4].

Especially, service providers in the healthcare context mostly perceive service systems differently than the service users do. Hence, healthcare systems are traditionally planned with organizational considerations in mind but the resulting systems can appear complex and confusing to the users of the service. For example, users are often forced to navigate a landscape of many separate, uncoordinated services to get the care they need. In some cases, the health care systems tend to insufficiently meet the needs of people with rare or complex health or life situations, who may have to use many disparate services offered by several providers such as health centres, hospitals, rehabilitation providers, home care, pharmacies and social care. Healthcare service providers are often narrowly focused on the treatment of a wellbeing of the healthcare specific illness and, therefore, can fail to consider the overall subjective service user. In health service research, analysing service in terms of interacting systems of actors and applying the idea of the service design process that extends to whole ecosystem has served as a way to solve such problems. (see e.g. Rossi & Tuurnas, 2021[5])

7.2 Co-creation of value in healthcare

Traditionally, healthcare sector has regarded healthcare services as the processes through which people passively receive care from service providers, including for example, clinicians, nurses, and allied healthcare professionals. Currently, however, the relationship between citizens and healthcare sector has evolved and citizens are increasingly seen as active people who contributes to their health

and, therefore, the creation and design of healthcare offerings can no longer emphasize and focus on the delivery of the solutions to passive receivers[6].

This change is reflected in how many healthcare service providers have started to refer to patients as consumers of health. Moreover, the introduction of terminology such as patient engagement[7] and patient-centred care[8] in health service literature is indicating that the role of the service providers is chancing in healthcare.

Despite this change, the healthcare sector and health service literature still largely approach the value as an outcome of certain action which is most often measured in terms of money. This kind of outcome-centred view upholds the idea of a *"goods-dominant logic"* (see e.g. Vargo & Lusch, 2004[9]) in which the healthcare service providers are creating services that have intrinsic value for them, and people are solely buying customers who use the offered services. Thus, prevailing understanding about health services largely perpetuates economic and transactional views on value creation.

Recently, however, perspectives on interactivity have begun to replace unidirectional notions of value creation. The discussion has been moving away from linear value creation perspectives toward the existence of more complex and dynamic interaction systems of actors. These perspectives are related to *service-dominant logic* (SD logic) (see e.g. Vargo & Lusch, 2004[9]; 2017[10]), which highlights that value is not embedded in produced service outputs and cannot be measured sufficiently in monetary terms.

It is clear that SD logic and service design (i.e. design thinking and patient-centeredness) go hand-in-hand as according to SD logic, value is co-created by multiple actors through interactions in an effort to advance the interests of all actors and the whole system. The essence of SD logic is that value does not arise from internal organisation or individual actions. Rather, value arises through the interactions of actors, either directly or through service, in a particular context. Value is co-created reciprocally in interactions among several actors, and new value emerges when resources from various sources are combined in the context of each actor's life.[9,10]

The co-creation of value has led to the understanding that the value emerges in social interactions between people and does not depend on a single person, a single insight or a single act but on on-going, iterative, and continuous interactions extending well beyond dyadic transactions[3]. This idea of the co-creation of value is quite applicable to the healthcare sector, which forms a complex service ecosystem with multiple internal and external network actors and systems and in which strong motivation exists for creating good and seeking beneficial solutions for the people who are the targets of services.

Although the basic idea of the co-creation of value fits well in healthcare sector, incorporating it into the healthcare service design process is challenging as the healthcare sector is still very often focusing on medical expertise, internal processes, and professional autonomy in decision-making rather than on genuinely collaborating with the multi-professional teams or patients. Yet, from a subjective wellbeing perspective or in complex health conditions, the co-creation of value is broader function than the treatment of a single condition. Hence, in the co-creation the value is the result as well as the goal of an interaction and it can be considered as an exchange among the actors involved in specific interaction[3]. This makes the interactions an important factor in the design of healthcare services because the interactions comprise comprehensive activities relating to service user experiences. Furthermore, the activities of service design are effective tools that utilize the service user experiences generated via communication and interaction to accomplish the co-creation of value. When service users engage in an interaction during the healthcare service process, they can exchange information or ideas with medical staff, providing a new perspective on the situation and thus generating innovative ways to improve the quality of healthcare service.[5,11]

7.3 Role of the healthcare user in the co-creation

Currently in healthcare sector and in health service literature various perspectives and practices is emerging that define the role of the healthcare user, (also referred as customer or patient) in the ecosystem, ranging from seeing the service user as a passive recipient of expert medical care to self-managed care where the service user is seen as an active partner in care and service design processes.[4] Accordingly, in healthcare sector the understanding of ecosystems varies across different organisations and within in them it is possible to distinguish three different perspectives to creation of value; either as a system seen from the service provider's viewpoint (a provider-focused ecosystem), a system based on a shared and collective viewpoint (a distributed ecosystem) or a system anchored in a focal user's viewpoint (a user-focused ecosystem). Thus, it is important to note that these three perspectives do not exclude or supplant each other but rather offer complementary starting points for designing service.[12]

The service provider-focused perspective

The provider-focused perspective is a traditional approach to the creation of value and within it the actual service has been understood in terms of interactions between actors who directly takes part of the service process[13]. In practice, many organizations still view the creation of value in this way as they are taking 'a supply-side' approach to the creation of value and largely ignoring 'a demand-side' of the equation.

However, this perspective is not as narrow as before as the understanding of the actors involved in the creation of value in the service process has extended over time from simple provider-user dyads to more complex service systems. Hence, these service systems are understood as the systems of structures and processes that exist within a service organisation. Consequently, the view of service systems upholds a strong intra-organizational focus, mostly concerned with how organisations should manage service processes for service quality. Thus, this perspective entails understanding systems from the provider's viewpoint, focusing on elements and actors within the provider's control. (e.g. Grönroos, 2000[14]; Lim & Tang, 2000[15].)

The distributed ecosystem perspective

The distributed ecosystem perspective has been greatly influenced by the development of SD logic, a flourishing school of thought within marketing and consumer research, that has developed the traditional conceptualization of service further by defining service as systems where all involved actors are to be viewed on equal terms. Consequently, people might be served by not only one service provider but also a whole ecosystem of providers that interact and collaborate to co-create the service provided to the people. A service ecosystem is defined as a *"relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange"*[16].

Thus, the focus is on mutuality and shared institutional arrangements, emphasizing a system that enables a service provision through service-for-service exchange. In healthcare context, similar ideas have earlier been presented in terms of integrated healthcare networks and systems and later in terms of healthcare ecosystems. A person might, for example, need to use several service providers for knee surgery and related physiotherapy or rehabilitation. Thus, the hospital providing the initial surgery and the private physiotherapist supporting the rehabilitation can coordinate as a system for the benefit of the person using the service.[10,16,17]

The development of SD logic has also changed the role of the service user. Within the classic delivery-focused approach to service, the role of the user (or customer) was mainly to receive and consume

the service. Nowadays, however, service providers are increasingly started to view service as a process of co-creation between the provider and user. In this way, all the actors in a service system can, in fact, be understood as actors who are participating into a co-creation of value, rather than simply delivering or consuming a service.[6,18] Thus, the healthcare user can be seen as being involved in a process of interaction and co-creation with a network of other actors: not just receiving healthcare but also actively contributing to it. In this perspective, value is understood as a system-level construct, co-created by several actors. In practice, on the micro level, the nexus of a distributed ecosystem is on a set of focal relationships, such as physician–patient, patient–healthcare team or patient–family member (e.g. parent/spouse/sibling/friend), whereas on the meso and macro levels, the nexus is on the links between different types of health and other organizations. Thus, the main objective of managing a service ecosystem is to facilitate mutual value creation and service-to-service exchange.[4]

The service user-focused perspective

The service user-focused perspective highlights that people use service beyond the control of individual service providers. Thus, in the service user sphere, the service provider has limited influence and the user is actually more in control of the service design process, acting according to their own goals, motives and life themes.[19] (Heinonen et al., 2010.)

This perspective takes its starting point in the users' processes and the user's own subjective understanding of what is valuable and helpful for the individual person who uses the service. Thus, the user's goals for engaging with a set of actors and services that forms an ecosystem is to enable wellbeing for themselves and for other relevant parties. The actual service ecosystem then consists of services, actors, elements and technologies that are identified from the point of view of the user's own value-creating process. Hence, this perspective views service and value from the user's individual and idiosyncratic viewpoint.[20,21] (Heinonen et al., 2013; Heinonen & Strandvik, 2020.)

Crucially, users' value-creating processes often go beyond the scope of touchpoints and interactions in planned service processes. This implies that individual service users join directly and indirectly together as dyads, triads, and complex. These active individuals are also involved in a multitude of co-existing interactions and build situational relations with their social surroundings by interacting with others through practices, rituals, or traditions to create relationships among and identities for themselves.[12,19,22] (Grönroos and Voima, 2013).

Thus, the service users are creating an environment that in the end becomes a social system of individuals in which the recourses are integrated, the new services are accepted and, ultimately, new value is defined and co-created with service providers but also independently from interactions with the service providers. Accordingly, the actual value of the service is determined not only by individual perceptions of value-in-use but also by wider social perceptions. Therefore, the value of the service should be understood as *"value-in-social-context"*[23] (Edvardsson et al., 2011), because an individual's perceptions and experiences of new value depend, at least to some extent, on the individual's relative position within the wider social context.

7.4 Towards an interaction-based approach to healthcare service

Healthcare sector can be characterised as a service ecosystem of multiple actors in which the creation of value has shifted from being a top-down process of a single service provider to an interactive process of many actors. Thus, co-creation opens the healthcare service designing and development up to a wide range of voices that would normally never be involved.

The systemic thinking combined with the understanding of the user-focused perspective promotes an interaction-based approach to healthcare service design process. A well-designed healthcare service

process should recognise that people are not objects of a treatment or some other activity but active co-producers of the service who are actively involved in the co-creation of value.

From a service provider perspective there are two factors that have a particular impact on the service provider's service design process:

1) the user entity; and
2) the value creating activities

The first factor that impacts the service design process is the user entity. The user entity could, for example, be a family or another group of people acting collectively. Thus, a user entity can be as a unified group of people who share goals and directly influence each other in terms of service use, choices and support. For example, a couple, where one has fallen seriously ill, can form a user unit. Both people are involved in treating the disease and are affected by its events and outcomes. The person who has fallen sick sets the initial scope of the service provider by means of their insurance and public and private service providers, for example, while the spouse may bring in additional actors and elements in terms of discussions with associations and peer group activities, as well as family and friends, etc. Thus, the assembly of people in the user entity defines the scope of the actual service ecosystem. Therefore, a successful service design process requires decisions to be made on the user entity at the centre of the service ecosystem.

The second factor, the value-creating activities, refers to what the user entity collectively wants to achieve or do. In healthcare, this could be considered narrowly as the actors or services involved in a linear process to treat a specific disease or condition or, from a wider perspective, as the actors involved a set of everyday events that relate to maintaining or improving a person's health on a more general level. The value-creating activities of an ecosystem can be defined according to the user entity's ultimate goal. Depending on which goal is chosen, a specific set of actors or services will be highlighted and others are excluded. Further, this means that a single user entity may maintain many overlapping ecosystems that relate to different, interrelated user goals. For example, there may be one ecosystem that supports everyday mental health, another supporting general wellbeing and a third for treating a particular disease. These ecosystems are partly overlapping, and all contribute to the general subjective wellbeing of the user entity. Thus, the service user may have multi-touch points and multi-channel (e.g. devices, applications, and face-to-face exchange) encounters in their service journey the co-creation of value can occur through a variety of interactions. Therefore, it is important for the healthcare service provider to consider how different user experiences can be maximized through a healthcare service design process.[3]

7.5 Co-creation as enabler of reform and change in healthcare service

The objective of this chapter is to increase understanding of value co-creation of the services. The ultimate goal is to approach issues from a new perspective that makes it possible to achieve better healthcare services, products and processes. Since the premise of the co-creation of value is that several actors contribute to a collective effort in co-creation, the resulting service, product or process is theoretically valuable for all actors involved.

Recently the health service literature has focused on value co-creation in healthcare services and the importance of engaging patients and other actors in service delivery, and patient participation in the co-creation of value has been shown to improve expected service outcomes. Thus, the increased interaction within the healthcare service design process between service users and service provider are a critical factor for improving care quality and user satisfaction. This is especially evident when service users must frequently engage in interactions with the service provider. Thus, at the beginning of the service design process the healthcare service provider should examine how all actors within the

recognised service ecosystem can interact with service users at various encounters, and how different actors and organisations can provide needed facilities or information to create effective touchpoints, such as medical facilities, websites, devices and applications, that are valuable for service users and enhances the effective use of the healthcare service.

Moreover, the change and transformation of healthcare services and the creation of new healthcare services call for collaboration within the service ecosystem to carefully define the new service design processes and new roles in that process. Thus, this requires high managerial involvement in ensuring that new service design processes can be integrated into the working processes of an organization.

The healthcare ecosystem consists of systems and professionals in various areas of medicine, nursing, therapy, IT, and law, among others. In responding to the challenge digitization sets for the services, the expertise of all actors is needed in order to establish complete and consistent services that also meet the requirements for medical devices set by regulations and legislative norms (e.g. European Committee, 2007[24]). The actor network integrates these resources and relevant information in the development of the system as well as in defining the practices for care or treatment through the service.

The new approach outlined in this chapter can help healthcare professionals and service providers understand the role of the services they are trying to control, in relation to other relevant, hidden services and actors within the service ecosystem in which they operate. However, before any change or new service can be created the service providers need to understand the relevant user unit, which also might be hidden from an external actor's perspective. Only after recognizing the user unit, it is possible to start uncovering the other steps in the service design process. This allows the leaders of the healthcare service design process to discover how their preconceived notions of an ecosystem may differ from the actual service ecosystem. By understanding the role and position of their service from the user-focused perspective, the leaders in the healthcare service design process may better be able to support their users' everyday value creating processes.

Moreover, a service provider may have different roles in different, parallel healthcare service processes, depending on what value-creating function it supports. By understanding the service from the user-focused perspective, service provider can also discover which other actors they might need to collaborate or communicate with. Notably, the healthcare professionals and the leaders in the healthcare service design process can use insights about individual user ecosystems in planning patient-centred care.

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