Chapter 6
Co-production in Healthcare: Moving Patient Engagement Towards a Managerial Approach

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6.1 Introduction

In the European debate on public policies, co-production is suggested as an innovative way to organise and manage services and to develop 'a smart, sustainable and inclusive Europe by 2020' (European Commission 2010).

The healthcare system is one of the most elective co-production domains in the public sector (Department of Health 2006; Voorberg et al. 2014). The application of co-production is believed decisive for the achievement of necessary healthcare service improvement and system sustainability (Dunston et al. 2009).

At present, healthcare managers at different organization levels must cope with increasing and changing demands, while resources to provide them are decreasing. The population is becoming older, with multi-faceted needs and high expectations, and the rates of chronic diseases are growing. This puts the onus on western healthcare systems to contain costs without detracting from the high quality of care. Rising hospitalization costs are pushing healthcare administrators to reduce the length of hospital stays and the readmission rate, making it necessary to build relational models in which the patient feels part of the healthcare team and willing and able to continue self-care after discharge. This is especially the case for chronically ill patients where the relationship is longer term and involves repeated interactions with and between the professional staff (Verschuere et al. 2012).

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Berwick et al. (2008) identified a triple aim for health systems of the future: "improving the individual experience of care; improving the health of populations; and reducing the per capita costs of care". These three goals are interdependent and the challenge is to cultivate a balance among them. Co-production is spurring much interest as a solution to that puzzle. The US Center for Medicare services (McCannon and Berwick 2011), for example, identifies patient co-production as a crucial means to achieve a sustainable health system. A key factor of quality of the Innovative Care for Chronic Conditions (Bodenheimer et al. 2014) model now widely used to address the needs of patients with chronic conditions is the service's ability to encourage patients to play an active and responsible role in the management of their health.

Moreover, the evolution of individual behaviours as a result of the internet society has led to a growing awareness of new types of knowledge. In fact, the user-generated knowledge needed to develop more customized healthcare and social services through the effective participation of the people who use them (Realpe and Wallace 2010). The internet knowledge has challenged the assumption that physicians have sole control of the information (Coulter and Ellins 2006).

If the pressure towards co-produced health services is increasing, the debate is wide open on the nature of co-production, on how healthcare practices change in order to manage effective partnerships between clients and professionals and on the impacts of a co-produced service.

The healthcare literature makes a clear and convincing argument of the many and varied implications of co-production from the perspective of the individual (micro), i.e., the health professional-patient relationship. The in-depth and informed academic work has significantly improved our understanding of the implications on the clinical front. However, the impact of co-production implementation on the service management practices has failed to draw much attention in terms of either reflection or empirical knowledge. The overall contribution of the theoretical and empirical studies that use the lens of the service provider organizations is still underdeveloped. In fact, the actual definition of the concept of co-production is defying the effort to carry out evidence-based research on co-production processes. In turn, this influences its operationalization and confuses any understanding of which initiatives are to be interpreted as authentic co-production services and their outcomes (Oliver et al. 2008).

The chapter argues that the time is ripe for the research to explore "both individual and collective aspects of … changing role for citizens" (Pestoff 2012) *in conjunction* with the organizational production and service delivery setting. Drawing on a qualitative review of the relevant literature in healthcare management and occupational health psychology as well as the authors' personal experience, the chapter explores three main issues:

1. the dominant co-production models discussed in the current healthcare literature debate;
2. the main enabling conditions of co-production in healthcare organizations; and
3. the lessons learned from the healthcare co-production efforts already implemented.

To draw a clearer picture of these issues while also breaking out of the cognitive box mentioned above, the chapter is divided into three parts. Section 6.2 tracks the features of the two main perspectives on co-production in healthcare literature, reconstructing the different ways in which these approaches answer the issues of who the co-producing health authors are; what the domains of co-production are; and how to stimulate and support patients in their role of co-producer. Section 6.3 discusses the organizational enabling conditions under which the co-production options can be better understandable and sustainable from the managerial perspective, also aided by selected case studies. Lastly, Sect. 6.4 develops certain recommendations for the healthcare managers, useful for promoting and sustaining the development of such co-production practices.

6.2 Co-production Models in Healthcare

The co-production approach assumes that service users are not passive recipients of care and recognises that they can be co-authors with professionals in the successful delivery of a practice (Thomas 2013).

In the healthcare debate, the assumption that patients must be actively involved in all decisions concerning their health and treatments is not new. But what does it mean exactly when patients actively participate in the production of a service of value? What does it impose, involve and imply?

The biomedical literature shows how the effort to clarify what it means to build a healthcare system based on the hands-on contribution of the patients has led the academic debate to grow many conceptual roots. In fact, as demonstrated by Menichetti et al. (2014) in their bibliometric analysis of literature in the health field on the role of patients (review period: 2002–2013), an array of key words has been used to indicate the active role of patients, such as involvement, activation, participation, empowerment, engagement. These concepts while generating several streams of studies, however, *were rarely used together in literature.* The bibliometric analysis has demonstrated a time trend in the scientific use of these words where *the concept of patient engagement temporally overtakes other terms*.

Integrating the analysis conducted by Menichetti and colleagues shows that apart from a few isolated contributions in the 1990s (Edgren 1998) the health field has only recently started to open its patient engagement mind-set to an explicit reflection of the concept of co-production (e.g., Sabadosa and Batalden 2014; Cramm and Nieboer 2014; Batalden et al. 2015; Realpe et al. 2015).

A targeted analysis of the healthcare literature highlights two main perspectives with which the co-production concept has been used until now. The first refers to co-production as the contributions of patients to manage their own health and focuses on individual patient engagement and how to stimulate and support patients' engagement in co-production. The second refers to co-production as the contributions of patients to the planning and delivery of healthcare services and focuses on how the production processes change when value is co-produced.

The next section describes how these two perspectives provide different answers to who the co-producing health authors are; what the domains of co-production are; and how to stimulate and support patients in their role of co-producers.

6.2.1 Co-production as Patient Engagement

The first perspective places healthcare co-production in the patient engagement dimension. Following the Osborne and Strokosch (2013) suggestions, we can slot it into the *consumer co-production* category, due to its particular focus on the engagement of the individual patient at the stage of treatment with the aim of engaging them as willing participants.

As Coulter says, "The focus on patient engagement stems from a belief that the actions of health professionals constitute only part of the effort necessary to help people cope with the effects of illness or disability and restore them to the best possible state of health. An equally, if not more, important part is played by patients themselves, their families, and communities as *coproducers of health*" (Coulter 2012, emphasis added).

Generally speaking, patient engagement has been defined as an ongoing process where patients actively participate in managing healthcare (Coulter et al. 2008). The debate on the nature of the engagement and what 'to be engaged' signifies tends to spotlight one lead player: the patient, meant as the user of the health service. Engagement therefore is conceptualized as a way to live the relationship with one's own health and sickness. Graffigna et al. (2015) defined patient engagement as a "process-like and multidimensional experience, resulting from the conjoint cognitive (think), emotional (feel), and conative (act) enactment of individuals towards their health management".

The many contributions that have attempted to underline the nature of patient engagement have focused on exclusively one or another aspect of enactment, which we address here using the most cited works.

Singling out the cognitive aspects of the engagement, Hibbard et al. (2004) identified activation as a dimension of engagement and proposed an operational definition of what it means to be active by examining the skills and beliefs that differentiate the active and the non-active patients. The authors suggest that patients who are activated "*believe* to have important roles to play in self-managing care, collaborating with providers, and maintaining their health; they *know* how to manage their condition and maintain functioning and prevent health declines; and they have the *skills and behavioural repertoire* to manage their condition, collaborate with their health providers, maintain their health functioning, and access appropriate and high-quality care" (Hibbard et al. 2004). Therefore, the active patients are aware of their role and have enough self-confidence to believe in their ability to manage their health.

Focusing on the emotional dimension of engagement, Graffigna et al. (2015) underlines how the engagement enacted by people with chronic illnesses stems

from an emotional elaboration of the disease diagnosis and of its psychosocial effect on their life. Interviews and focus groups with chronic patients (Barello and Graffigna 2014; Graffigna et al. 2015) informed that the engaged patients seem to have accepted their illness and feel that their life can continue to have sense beyond the disease; the sense of their life having continuity regardless of the disease drives the will to manage their health.

In a study of the behavioural aspects of engagement, Gruman et al. (2010) concluded that the operative definition of engagement is "actions individuals must take to obtain the greatest benefit from the healthcare services available to them". The authors evidenced the two ways in which the behaviour of an engaged patient differs from that of a disengaged patient. First, they consider the approach to managing his/her health conditions (for example, monitoring of certain health indicators, managing pain, stress and the emotional effects of the disease, assessing healthcare options, also taking into account their personal needs, desires and possibilities). Second, they analyse how he/she manages the relationship with the healthcare professionals. The active behaviours of the chronically ill patients in their interaction with the healthcare staff include:

- gathering, updating and understanding health information;
- asking for explanations into the benefits and costs of the various treatments; negotiating their own healthcare plan;
- recognizing signs of danger, transparent reporting of their symptoms; and
- giving the healthcare staff appropriate feedback on the effects of the therapy.

In short, the core dimensions of patient engagement regard their attitude towards health and towards the clinical treatment: the main idea is that the patients co-produce when they contribute to the choices related to their health conditions and the relative treatment, that is they share information (expressing their needs and preferences) and share deliberation.

From this behavioural perspective, the aim of the health policies to promote patient engagement is conceptualized as to encourage change in patient attitudes and thus facilitate more responsible behaviour in the individual and reduce healthcare costs for the community. Coulter suggests that the goal of health policies "is to support and strengthen patients' determinations of their healthcare needs and self-care efforts with a view to obtaining maximum value and improved health outcomes" (Coulter 2012). In terms of service delivery, the impact on organizational practices consists mainly in introducing self-management education programmes to strengthen the various dimensions of patient engagement and, therefore, in educating and informing, so as to build knowledge, skills and self-confidence, and to promote the appropriate behaviours to self-manage one's disease.

One example is the Chronic Disease Self-Management Programs (CDSMP), the stated goal of which is "*to enable participants to build self-confidence to take part in maintaining their health and managing their chronic health conditions*" (p. 17). The training revolves around five core abilities: problem-solving, decision-making, resource utilization, formation of a patient-professional partnership, taking action

(National Council on Aging 2015). The process to activate the patient casts the clinician as co-actor, whose role is conceptualized as a support to patient self-management. The clinicians should teach patients how to set healthy goals or to self-monitor their conditions (Hibbard and Cunningham 2008). This translates into the need for clinicians to change their consultation approach (*co-productive consultations*, Realpe et al. 2015). The focus on exclusively the clinical relationship between patients and clinicians is evident also in Hibbard's proposal that the healthcare services introduce at least four levels to measure the patient activation. The author suggests that the clinicians should use sliding scales to measure the patient activation in order to formulate personalized actions aimed at raising their level of engagement, starting with the patient's actual situation (Hibbard and Cunningham 2008). That work method could be useful for reducing healthcare costs. In fact, Hibbard et al. (2013) conducted a longitudinal study (six months) on 33,163 chronically ill patients enrolled in a private non-profit healthcare organization in Minnesota, demonstrating that the per-patient cost of treatment of low-activation level patients was 21 % higher compared with the more active patients on the index of disease risk and independently of socio-demographic variables (age, gender, income).

The self-management education programmes aimed prevalently at patient engagement (Brady et al. 2013) have generated a number of positive results, but also highlight some of the limitations of this perspective, above all those related to questions of equity and temporal continuity. Regarding equity, lower levels of activation have been registered among minority groups (Alegría et al. 2014) and people with lower educational and socio-economic status. The empirical evidence is mixed on the potential of the self-management education programmes to promote engagement and activation in the most gravely ill patients or persons of low socio-economic status or those less informed about healthcare (Alegría et al. 2014). Further, some studies have shown that such programmes promote solely short-term improvements (Wilson et al. 2006; Greenhalgh 2009). Other studies have demonstrated that patient engagement is neither an on/off status nor a linear growth process that stabilizes once it has reached its peak. Rather, it tends to oscillate (Gilardi et al. 2014).

In short, current healthcare research is dominated by this first co-production perspective, which above all focuses on the patients (and their families) and on the clinical relationship between patients and clinicians. However, although the research in this perspective helps highlight the individual dimensions that characterized an engaged patient, it has not yet turned its attention to the organizational and managerial implications of the co-production service.

6.2.2 Co-production as a Managerial Tool

The second perspective shifts its conceptual focus from the patients as managers of their own health to that of co-production in healthcare explicitly in relation to the

service management literature (see for example Edgren 1998; Batalden et al. 2015). The 1990s saw the largest industrialized countries start to question the assumptions underpinning the practices inspired by the principles of New Public Management (NPM), the market approach that they themselves were the first to adopt and a mind-set that the public administrations clung to for at least 20 years. However, the spread of New Public Governance (or NPG) led to the realization that co-production was an alternative model of delivery of services (Needham and Carr 2009; Pollitt and Bouckaert 2011). In line with that shift, Bovaird and Loeffler (2012) defined co-production as "the public sector and citizens making better use *of each other's* assets, resources and contributions to achieve better outcomes or improved efficiency."

Looking through the lens of the NPG logic reveals that the novel element of the co-production health and care-based approaches is not only recognition of the engagement of the patients, but also that taking on board the patient as a new partner in the production process could influence the methods used to organize and manage healthcare. For example, Tholstrup (2013) described a co-production initiative implemented in a gastroenterology department in which chronically ill patients carried out the diagnostic monitoring tests themselves, sent the results to the medical team, then received a phone call from the healthcare staff to confirm the absence of negative signs, eliminating the need to undergo an annual check-up. This reorganization of the service process reduced the waiting lists, increased patient satisfaction and improved the level of appropriateness of the request.

The study shows how co-production in action cannot be understood by merely focusing on the active role of the patients in the healthcare decision-making process. When the patients (and their families) are urged to get involved in the healthcare co-production effort, they do not just express their preferences but rather become service delivery partners, willing and able to independently manage an activity that was previously done by the healthcare professionals (e.g., clinical treatment, medication, self-monitoring of symptoms). Some researchers, studying customer participation in the provision of services, have even defined consumers as "partial employees" of the service providers and have discussed ways of managing such consumers (Bitner et al. 1997). The change in the production process can influence organizational routines and healthcare managerial practices. Recent empirical contributions (Sorrentino et al. 2015; Neri and Bordogna 2015) showed how the lack of engagement by hospital top management and community services networks can negatively impact the effective implementation of the co-production processes designed by the operational unit delivering the service.

Therefore, in this perspective, to define a co-production process it is necessary to clarify who is part of the co-production co-actor network, how the roles and responsibilities change, and which tools to use to manage risk and to coordinate and allocate resources.

Clearly the unit of analysis of a co-produced service cannot be confined to the relationship between the patient and their assigned healthcare team. Rather, it must necessarily adopt a *systemic* perspective that encompasses the patients, their informal caregivers, the organization and the internal staff deputized to deliver the

service, and the other support service providers that act in a network logic (see for example the model suggested by Batalden et al. 2015).

The networked character of co-production is the engagement of a variety of partners for programme delivery and even goals definition (Posner 2004).

This perspective casts far more light also on the patient-partnership ecosystem. The fact that the clinical environment has superseded the logic of mere involvement implies an intense use of the actor-partnership method. As highlighted by Loeffler et al. (2013), the patient co-producer performs several roles: co-designer, co-executer, and co-evaluator of outcomes. It is possible to identify five partnership categories in the co-production system sphere: treatment decisions; service planning; service execution; service evaluation and re-planning; evaluation of health policies.

In addition, the role of the partner in the decisions related to the organization and delivery of the healthcare service can be carried out by both an individual subject (patient or informal caregiver) and a collective subject (patient associations). Some organizations, in fact, have brought in members of patient associations to their hospital boards; others have involved patient associations in the redesign of certain practices (e.g., informed consent, see Casati et al. 2010).

The research is starting to wake up to the limitations of a co-production approach centred exclusively on the activation of the patients during their treatment and on the patient-professional clinical relationship. Going beyond this horizon perforce implies the need to identify and implement the organizational enabling conditions across all system levels.

The point here is that the project design and implementation of a co-produced system needs to be better informed about the organizational and managerial issues related to the governance of such a system. We have found little evidence in healthcare literature attesting to either the analysis of such factors or the identification of potential tools for the design and management of healthcare co-production practices. That is surprising given the far higher number of contributions that address these aspects in other disciplinary fields, for instance, public administration and service management. The next section integrates the healthcare literature with the managerial and public administration studies to analyse the key organizational and managerial hurdles and implications inherent in a healthcare services co-production model.

6.3 Organizational Enabling Conditions

Organizations in healthcare settings generally manage interdependencies by "establishing routines, which help to achieve coordination by specifying the tasks to be performed and the sequence in which to perform them (e.g., clinical pathways); information systems, which facilitate coordination by providing a uniform infrastructure of information to all those participating in a common work process;

meetings …; and boundary spanners, staff members whose primary task is to integrate the work of other people" (Winberg et al. 2007).

The choice of which coordination mechanism to adopt depends on the degree of stability and repetitiveness of the respective situations. Pestoff (2012) identified three types of relationships between professional staff and service recipients in the service production process: interdependence, supplementary, and complementary. *Interdependence* occurs when an organization cannot produce a service without the inputs of the recipients. Healthcare examples range from clinical consultations to programmes of health management training. Patient information is essential to clinical consultations to reach a diagnosis and to define a sustainable treatment. Self-management education programmes would be pointless without patient cooperation. *Supplementary* is when the patient replaces the regular providers in certain core process activities. Such is the case of home therapy, where the patient takes over the actions that are usually carried out by the healthcare staff. *Complementary* is when the medical staff continue to carry out the core service activity while the patients or their informal caregivers carry out certain secondary activities. Examples are the mutual assistance groups managed by patients or family members, or the support experiences offered by patients who offer to act as mentors for other patients. The three types of relationships between the professional staff and the service recipients show clearly the crucial organizational role played by three specific enabling conditions: the ability and availability of the staff; the design of the delivery processes; and the ability to manage organizational complexity.

6.3.1 Getting the Medical Staff on Board

Health professionals have a crucial role in enacting and maintaining patient engagement, above all for patients with chronic diseases (Cramm and Nieboer 2014) or minority patients (Alegría et al. 2014). However, we cannot take for granted that the healthcare staff will take on that job.

One example can help us to reflect on this aspect. Leone et al. (2012) have analysed two departments of a hospital in the United States for patients suffering heart failure. The departmental staff had decided to introduce a co-production model to the care management process with a specific focus on the discharge phase. In fact, the biggest healthcare problem with these patients was that 25 % of them had to be re-admitted to hospital within 30 days. The goal was to reduce the readmissions due to the economic cost to the hospital and to the personal cost to the patient. The practice introduced with the aim of promoting the co-production consisted of some standardized teaching programmes designed by the nurses for the discharge phase. The research analysed if and how the nurses applied the principles of co-production to the discharge teaching. The results showed that the new discharge-teaching project had been configured as a standardized learning relationship where the nurse primarily acted as a trainer and, at most, checked the learning progress of the patient. However, the results produced no evidence of

behaviour aimed at engaging the patient to create a joint plan to manage their life and their health once they had returned home (diet, physical exercise, self-monitoring of symptoms, relationship with general practitioner). In fact, little attention had been paid to the specific needs, abilities, and the availability of the patient and their family network precisely because the practice was standardized. At the same time, the responses of the nurses interviewed showed clearly that they were completely unaware of the gap between the way they managed the training relationship and the stated goal of delivering a co-produced consultation. Indeed, while the nurses believed they were dedicating much time to sustaining the patient partnership, behaviours in this direction were relatively scarce.

This case study demonstrates how teaming the co-production logic with existing practices based solely on the introduction of teaching (discharge training) can lead to changes of little impact. The professionals would often like to involve the patients but have neither the skills nor the tools to put these intentions into practice (Parrado et al. 2013). Other observers note how transforming the way of managing the patient relationship touches on aspects of professional identity, interiorized during the professional training and shared with their own community of practice (Dunston et al. 2009).

An engagement model that involves the patient and their family members disrupts the traditional asymmetry of the traditional power of the healthcare culture, which identifies the professional as the expert armed with specialized knowledge and attributes them with full responsibility for decisions they believe evidence-based. Despite the formal statements, the tacit assumptions of such a system seem to place little value on giving autonomy to the patient in the con- sultation process. As some studies observe (Wilson 2001; Morris and O'Neill 2006), some professionals do not believe in their patients' ability to contribute to their healthcare or to make appropriate decisions. Others perceive the patient's growing decisional autonomy as a threat (Wilson et al. 2006) because it increases the risk to the safety of the patients in question and has legal repercussions on the professionals themselves.

In the face of such a system of beliefs, the healthcare professionals tend to frame the active empowering of the patient exclusively in terms of a more aware adherence to the prescriptions. However, that only means they end up medicalizing the practices of patient engagement to safeguard their power of control without, in fact, changing the service delivery process.

6.3.2 Designing the Co-production Process

Designing a co-productive setting must not only go beyond the bilateral professional staff/patients relationship, but also consider the patient's role of healthcare management in its entirety. Edgren (1998) described an example of a teamwork approach adopted by Diakonhjemmet hospital in Oslo. The author analysed the treatment path of myocardial infarction patients from the intensive unit to discharge.

The professional cardiology team consisted of a cardiologist, a primary infarction nurse, a physiotherapist and a dietician; in turn, these core team members were connected with other professionals (e.g., social workers and occupational therapists) to enable them to optimize the management of the rehabilitation process. As soon as the patients arrived at the intensive care unit they were explicitly invited "*to be an active partner in their rehabilitation*" (see the information leaflet cited by Edgren 1998).

The study shows that to achieve the goal of effective cooperation it was necessary to design and implement a new work process that called for new roles, new activities and new coordination tools from outside of the medical team and between the hospital and the local services. For example, the nurse's role was expanded to include an introductory meeting with the patient to understand his/her needs and thoughts and to build together a nursing plan which *co-ordinated different activities in time regarding information and education*. The nurse was responsible for assessing how well the patient had absorbed the information on which the self-management of their health was based after discharge and organized teaching sessions in the event they realized the patient (or their family) needed more help to understand and use the information. The physician and a hospital pharmacist educated the patients to take the responsibility for dosing their medication. The internal coordination method adopted by the professional team was to hold a weekly meeting to align their actions with each patient's progress. The doctor and the nurse met each day to update on the patient's state of health. The 'Heart School' was introduced to enable the patients to become autonomous by providing support through weekly teaching sessions that brought the entire team together with the patients. These teaching sessions centred on small groups of patients and their relatives and continued also post-discharge in the event of individual patient needs. A new figure, a nurse on the hospital payroll, was appointed to mediate between the healthcare facility and the relevant council offices *to smooth the transition from hospital to home*. The last piece in the puzzle was to arrange for the college hospital to involve patients in teaching activities.

In this case, the professional team and the patients complement their knowledge and resources in the value production process. Moving towards a co-production treatment model led to a redesign of the whole process. In particular, the hospital created a distinct nursing profile by taking the important step of investing in specific continuous training. Unlike the previous case, nurses had a formal role as coordinator of the heart team with clear tasks and responsibility for the whole clinical pathway inside and outside the hospital.

The case study suggests that the implementation of a co-production process requires the integration of different providers (Ewert and Evers 2014). Therefore, the health professionals have to: (a) choose which coordinating mechanisms work best between the actors involved; and (b) plan how to manage enlarged organizational boundaries and inter-organizational operations.

6.3.3 *Managing Organizational Complexity*

Another empirical case shows that a co-produced practice increases both the complexity and the uncertainty of the organizational setting (Sorrentino et al. 2015; Guglielmetti et al. 2012; Gilardi et al. 2014). The case study refers to a collaborative research to assess and redesign a co-produced clinical practice (Outpatient Parental Antibiotic Therapy—OPAT) for patients affected by Cystic Fibrosis. OPAT is considered a co-production practice because patients are asked to self-manage their antibiotic treatment at home and then to deliver parts of the care process. The expected outcome was twofold: on the patient side, an improvement in the quality of life; on that of the hospital, the possibility to reduce admission waiting lists. The bioethics centre of the hospital (the promoter of the research), the healthcare professionals, two academic researchers (the first and second authors of this chapter) and the patient-representatives of the local Expert Patient Association formed the research group.

In terms of service production processes, the results highlighted that OPAT increased the complexity of the delivery process. The nurse was given the additional task of managing the patient's teaching activities. The patient assessment needed to obtain home therapy required a greater effort of coordination between the different professional figures (doctors, nurses, social workers) to inform the physicians about the social conditions of the patient, their resources and the degree of self-management skills developed prior to authorizing the home therapy. A new help desk facility managed by a nurse was set up to provide support to home therapy patients in the event of emergencies or unexpected developments. Outreach procedures were set up with other hospital departments to enable faster access in case of need.

The results evidenced that the co-production initiative sparked a host of uncertainties for both the patients and the professional staff. The patients, while attracted to the idea of a less intrusive home therapy to reduce the disease's impact on their personal and professional activities, also had to contend with the fear of not being up to personally administering the home therapy. The doctors likewise perceived many uncertainties and risks: risk to the patient because at home they may not be equipped to deal with the (albeit rare) possibility of an adverse reaction. Another risk was that without the physicians monitoring the patient might decide to reduce the doses and/or the duration of the therapy.

The doctors and the patients were all clear that a more efficacious management of the risks was dependent on building alliances with the services partly responsible for the patient during their home therapy outside the hospital's direct jurisdiction (e.g., general practitioner, home nursing, and the chemist filling the drugs prescription). To this end, the team decided to lay the foundations for the local institutional protocol agreements by filing for formal approval of the OPAT-designed procedure and its acceptance into the hospital system. However, the request was turned down and this indifference on the part of the institution's management had negative repercussions on maintaining the continuity of care

across the organization's boundaries in the outside world. This inertia led the professional staff to restrict the use of this co-productive practice, which then led to friction in some patient relationships.

The case highlights the importance of the institutional aspects of co-producing. The way in which hospital management responds to the enabling of organizational conditions that support the co-produced processes of healthcare delivery is a critical factor in the implementation of co-production practices. When the idea prevails that the managerial effort concerns solely the interpersonal process between patients and healthcare, co-production is deprived of the protective context that allows the actors to cope with the difficulties and the challenges posed by a co-produced service and runs greater risk of becoming a mere ritual. Crossing organisational boundaries and developing partnerships with other institutions can become very difficult when the institutional level turns its back on the need for consolidated engagement. The lack of awareness of the institutional and inter-organisational implications of co-production can frustrate the willingness of patients, physicians, nurses, psychologists, social workers etc. to co-create a system that goes beyond the binary logic of patient-centred or provider-centred system to promote a higher order integrating practice position (Dunston et al. 2009).

There is no question about the fact that the organizational culture can influence and shape the design of co-productive work processes. The case illustrated by Edgren (1998), for instance, refers to a hospital guided by a system of shared beliefs and values focused on a holistic view of the human being, reflected also in the tools and resources provided by the team to implement the co-production process and in its recruitment policy. Organizational cultures founded on bureaucratic values that target exclusively cost-savings are more likely to resist system-wide change. Indeed, in organizations that perceive co-production as a tactic for specifically cutting costs, the costs of some of the activities do not magically disappear but are actually transferred to the patient. In similar way, the management and design factors that make patient engagement sustainable are dismissed as irrelevant and remain in the dark in organizational cultures where the predominant assumption is that the patient is the only actor who needs to change. Hence, the patients and their relatives are left alone to manage parts of the service themselves. This attitude can seriously undermine the motivation that actually drives patient engagement (Cepiku and Giordano 2014).

6.4 Co-production Recommendations for Healthcare Managers

The debate on how to implement efficacious and sustainable co-production in healthcare has shed light on three interrelated key factors: the professional education system; healthcare system redesign; and service evaluation methodologies.

6.4.1 Investing in the Education of Professionals

A relevant condition for improving healthcare services through the co-production approach is to rethink the health professional training/education models, not just the health education of citizens and patients (Dunston et al. 2009; Batalden et al. 2015). As shown earlier, co-production implies a change in method that calls for a relational exchange between the patients, their relatives and the medical staff. The approach to co-production assumes that all parties act as partners in the delivery of the service. To enable that principle to be put into practice it is necessary to ensure the engagement of both the patients and the healthcare staff. Health professionals have a crucial role in enacting and maintaining patient engagement, above all for patients with chronic diseases (Cramm and Nieboer 2014) or minority patients (Alegría et al. 2014). Co-producing a healthcare service requires that healthcare staff is able, available, and willing to engage in a co-productive consultation. Health professionals are called on to fill new roles and acquire new skills: Boyle et al. (2006) suggest a shift from 'fixers' to 'catalyzers'. This transition requires an improvement of 'soft skills' (such as active listening; summarizing; silence; enquiring about patient's ideas, beliefs, concerns and expectations; problem-solving communication) (Realpe and Wallace 2010). Moreover, a co-production consultation requires ability, strength and conviction to build a dialogical relationship and to manage negotiations with many types of patients (including the less educated, or patients from different ethnic backgrounds). Hence, the clinicians must know how to adapt their participatory style of communication to the specific preference of each patient (Lee and Lin 2010), according to the degree to which a patient wants to be involved in their healthcare decisions.

Nevertheless, the willingness to change the method of patient interaction does not come solely from the providers' learning of new behaviours and skills, but also involves the professional cultures of the health providers (Dunston et al. 2009). Hence, the fact that co-producing requires the medical staff to assume a new professional identity cannot be reduced to a mere question of individual choice and voluntary decision but implies that the entire curriculum and practice of medical and nursing education needs to make a paradigmatic shift.

6.4.2 Redesigning the Healthcare Process

The co-production process calls for both the patient and the medical team to share responsibility for the planning, management and assessment of the options available to optimize the patient's health conditions. To make the partnership effective it is necessary to develop organizational structures, organizational processes and managerial practices that facilitate the relations of the co-actors. Creating a sustainable co-production system therefore means investing resources in organizational redesign and introducing new practices to manage co-production (Cepiku and Giordano 2014).

As suggested by Liberati et al. (2015), "Hospitals might need to redesign and implement new specific organizational devices to engage patients and families at least as privileged informants of the perceived quality of care and of the overall care services and, whenever possible, as active co-producers of their care services". This implies that management must break out of the mechanistic organizing box and rejig its assumption that the patient is just another cog to be added to those of the existing organizational machine. This mechanistic view of co-production sees the patient as just another activity to pile on the provider's workload with no attempt to redefine the work goals and method. Therefore, there is no meaningful transformation of the service production method and the patients risk being left alone to manage their part of the activity with potentially negative consequences on the safety and the efficacy of the medical therapy itself.

According to Kidd et al. (2015) "Co-production needs to be integrated into all aspects of the organizations": the healthcare team must be given the resources and skills to enable them to work with the patient and/or their associations to redesign the work processes that underpin and sustain the co-producing effort. The directional role is far more relevant to, for example, patients with chronic diseases who require the support and assistance of an entire *network* of healthcare services to ensure continuity of care. Building co-production processes that extend beyond the boundaries of the hospital is an indispensable enabling condition for these patients in order to motivate and sustain their engagement.

6.4.3 Implementing a Service Evaluation System

Considering co-production from an organizational perspective implies the adoption of a performance evaluation system. The extant healthcare co-production studies have used mainly clinical indicators of outcomes. Moreover, very little attention is paid to the evaluation of the impact on the healthcare providers or of the long-term effects of this option (Cepiku and Giordano 2014), despite the arguments for sustainable co-production (Dunston et al. 2009) and the ability of co-production to increase organizational efficiency (Edgren 1998). In fact, few examples are yet available on the adoption of systems to assess, for instance, the impacts on the organizational workings or on the use of resources, budgeting and the cost of the procedure (Duffy and Fitzsimmons 2006; Hibbard et al. 2013). These studies have produced mixed results. As indicated in Sect. 6.2.1, above, Hibbard et al. (2013) demonstrated that the per-patient cost of treatment of low-activation level patients was higher than that of the more active patients. Duffy and Fitzsimmons (2006) showed no difference in terms of the efficiency score of service in the co-producer patient and non-co-producer patient.

Regardless of the results, it is important to underline how co-production operationalization in these studies has been based solely on patient activation or patient

engagement indicators. The fact that there is still no agreed set of criteria designed specifically for assessing co-production outcomes is a roadblock to developing assessment tools that go deeper than the general quality checklists about aspects of patient engagement (Staniszewska et al. 2007). That is due to the lack of consensus on the definition of co-production itself. Considering co-production as a managerial tool, a system of performance evaluation has to consider the indicators of process and not just the indicators of the results. Indeed, the two key conditions to achieve the expected results are: (i) implementation of the organizational mechanisms to support a successful co-production; and (ii) the reciprocal engagement of all the different partners of the co-produced system (patients; informal care-givers; healthcare professionals; manager inside hospital; other providers in the external environment). Currently, most of the studies focus on the patients with validated tools available to assess the degree and type of patient engagement. In the future, it will be necessary to have valid systems that enable the assessment of the engagement of all the co-authors of a service delivery process, the potential obstacles, and the resources deployed to increase the system's capacity to design and implement a co-produced service.

6.5 Conclusion

Co-production is gaining wider traction as a potential solution to the current and future challenges of public healthcare. The chapter shows how combining conceptual and empirical contributions from different disciplinary fields can help untangle the complex knots of incorporating co-production into the healthcare system. Changing a provider-centred into a co-produced system has significant cultural and practical implications. In particular, the chapter has presented the two key patient-partnership perspectives currently debated by the biomedical literature. The first focuses on the engagement of the patients in decisions related to their healthcare treatment. This micro or individual approach currently holds sway but is blind to the organizational implications, seeing only the interpersonal level of the patient-clinician relationship.

The second, explicitly connected to the service management literature, emphasizes that taking on board the patient, as a new partner in the production process requires the healthcare system to embrace change at different levels: the patient-clinician relationship, the organizational design, and the governance of the network of healthcare services.

Integrating the healthcare literature with managerial and public administration contributions has highlighted three factors that are high on the list of the organizational plan: the skills and availability of the staff to co-produce parts of the service with the patients; the methods of designing the delivery processes; and the ability of top management to handle organizational complexity. Therefore, to support the implementation of a system-wide endeavour, the hospital administrators need to

invest in the specialized training of staff and in adopting evaluation tools to measure the outcomes of the service on the patient and on the organization.

There is still a great deal to do in terms of analysing the managerial aspects of co-production, which means that both the academic community and the practitioners need to give significant thought to this as yet undeveloped dimension going forward. Further, to make co-production practice a feasible and organizationally 'visible' option in healthcare settings it would be advisable to develop methodologies and tools specifically geared to multidimensional performance evaluation.

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