Enhancing Healthcare Systems: Redefining Strategies and Stakeholder Engagement for Community Care Service Evolution

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Abstract

The optimisation of healthcare systems has become necessary due to the impact of an ageing population and the prevalence of chronic diseases, prompting a fundamental shift in healthcare strategies. This transformation highlights a departure from traditional hospital-centric care towards territorial healthcare delivery models such as primary and community care services. These innovative models aim to broaden service provisions by incorporating preventive measures and diverse services, emphasising community centrality, adaptability, and resilience.

The focus on tailoring services to user needs has encouraged local institutions to engage various stakeholders. This inclusive approach primarily aims to expand research efforts and conduct a thorough analysis of the specific conditions prevailing within a given region. Stakeholders include healthcare organisations, local entities, universities, and other relevant parties. The ultimate goal is to foster a more comprehensive and participatory approach in evaluating and identifying community needs, ensuring diverse and multidisciplinary engagement to address local challenges and demands effectively.

However, while the concept of co-design remains integral during the initial phase of service development, its actual implementation often risks losing significance, potentially undermining shared participation and cooperation among stakeholders. This lapse might lead to a lack of ongoing dialogue essential for adapting services to evolving needs and redistributing responsibilities.

This study, centred around an Italian case, examines this gap and raises pivotal questions: What role does design assume in facilitating autonomous updates of services post the design phase? How can service design actively support stakeholder autonomy in the continuous evolution of services?

Introduction

Over the past two decades, the engagement of patients and citizens in health and social care has gained considerable traction (Gheduzzi et al., 2021). As Osborne et al. (2015) emphasized, among various forms of public involvement, co-production has emerged as a potential solution for numerous organizational challenges, particularly within the health and social care sectors. Co-production entails the collaboration between users and provid-

ers in designing and delivering public services, fostering a partnership to enhance public value creation (Osborne et al., 2016).

Service co-production exhibits distinctive characteristics when applied to healthcare. Firstly, there is no one-size-fits-all approach to health services co-production (Farmer et al., 2018); instead, customized solutions should be devised to address the specific health needs of diverse patient populations (Palumbo & Annarumma, 2018). Additionally, implementing co-production of care services can be challenging in many instances due to either resource constraints or insufficient individual capabilities (Ibid).

The co-production of health services necessitates an empowerment process that fosters patient partnerships with healthcare professionals, moving beyond the traditional recipient-provider model (Palumbo & Annarumma, 2018). Despite its complexity, patient empowerment essentially entails equipping patients with the awareness and tools necessary to maximize the benefits of available healthcare services (Bailo et al., 2019). This heightened awareness of their role within the healthcare system naturally leads to a greater willingness among patients to actively engage in the design and delivery of care (Krist et al., 2017).

Patient empowerment entails acknowledging patients as integral contributors to the healthcare service system, functioning as 'co-producers of health' alongside healthcare professionals (Polese et al., 2016; Minheere et al., 2023). Healthcare providers serve dual functions: as enablers, encouraging patient participation in care provision, and as catalysts, stimulating patient willingness for involvement (Broadhurst & Broadhurst, 2022).

While patient empowerment has faced ambiguity, scholarly literature consistently underscores the advantages of co-producing health services (Palumbo & Annarumma, 2018). However, Plé and Cáceres (2010) offer a word of caution, suggesting that an overly optimistic view of service co-production may overlook the potential for value co-destruction rather than co-creation. Value co-destruction occurs when conflicting perspectives and incongruent inputs from both users and providers lead to the misallocation of resources during service encounters (Lumivalo et al., 2023). This misallocation can happen accidentally or intentionally, presenting significant risks in healthcare, particularly as patients may lack the requisite knowledge and expertise for effective participation (Keeling et al., 2021).

In particular, after the service is designed, co-production may become challenging to maintain and update in response to organisational, regulatory, and health changes, especially when the facilitators of the co-design process are no longer present. This paper aims to reflect on the factors that may influence service co-production both before and after the design phase.

Methodology

This exploratory study, conducted as part of an interdisciplinary Ph.D. research initiative, involves collaboration between the design and management engineering departments at Politecnico di Milano. Ethical approval for this study has been obtained from the Ethics Committee of the ASST Spedali Civili di Brescia. The study seeks to explore the role of informal organizational structures in co-producing and innovating health services while also reflecting on critical aspects emerging from the service delivery phase.

Based on a review of literature on living labs, we conducted semi-structured interviews with key stakeholders involved in or collaborating with a local lab known as Brescia Co-Lab. This qualitative research, part of the Recovery.Net project, explores co-designed and co-produced mental health services within the local community. Brescia Co-Lab serves as a connecting platform between psychiatric services and the community, facilitating collaborative experimentation with users, family members, local actors, and

service providers. The PhD research aims to pinpoint factors that promote successful co-production between formal and informal care, offering design strategies for potential implementation in diverse settings.

This preliminary study aims to address the following research questions:

RQ1: What role does design assume in facilitating autonomous updates of services post the design phase?

RQ2: How can service design actively support stakeholder autonomy in the continuous evolution of services?

The research engaged a diverse array of participants. Initially, the director of Operational Unit No. 23 provided insights during the project's start, shedding light on the unit's structure, CoLab's role within the system, and its overarching vision. Following this, interviews were conducted with professionals such as a social and health educator, a psychologist, and a nurse coordinator from Unit No. 23. These discussions delved into their experiences in mental healthcare, involvement in CoLab's evolution, and their intermediary role with healthcare providers. Additionally, insights were gathered from a psychiatric rehabilitation technician, a psychologist within CoLab, and two Co-Lab Torre Cimabue managers, exploring operational processes, CoLab dynamics, identified gaps, and prospects.

Moreover, the study involved three "experts by experience" who had transitioned from traditional psychiatric services to Recovery within CoLab. Informal interviews aimed to foster open dialogue with these users. Conversely, semi-structured interviews were conducted with healthcare professionals, covering various aspects, including personal experiences, perceptions of CoLab, contributions to its development, involvement of formal and informal actors, and integration within Unit No. 23. The data analysis identified seven organizational dimensions that characterize CoLab's role in facilitating mental healthcare co-production with informal resources. These dimensions were further distilled into seven factors facilitating co-production with informal resources during service delivery. The discussion emphasizes the importance of these factors as a reference point for enhancing service design approaches to co-production.

We also scheduled a workshop and a survey with the clinicians to envision the CoLab within their work and explore ways to strengthen operational activities to enhance collaboration and better integrate synergies. However, despite customizing the data collection to their needs, their participation could have been more positive, as they canceled the event.

Table 1. Role of interviewees and duration

Role	**Duration**
Director of Operational Unit No. 23	60 mins
Co-Lab manager	90 mins
Community manager	90 mins
Social and health educator	70 mins
Psychologist (Unit No. 23)	60 mins
Nurse coordinator	60 mins
Psychiatric rehabilitation technician	60 mins
Psychologist (CoLab)	35 mins
User 1 (female)	60 mins
User 2 (male)	60 mins
User 3 (male)	60 mins

Exploring the function of territorial laboratories in co-production: a study of the Recovery Co-Lab

The Brescia Co-Lab Torre Cimabue in Italy, one of four Recovery Co-Labs in Brescia and Mantova provinces, was created during Recovery-Net (2018-2021) to address mental healthcare challenges. Situated in the socially fragile San Polo district, Recovery Co-Labs aimed to transform mental healthcare towards community-based psychiatry. They stimulate institutional change, support innovation projects, and foster social inclusion for patients. The project identified three lab typologies: innovation labs focusing on service and cultural change (Carstensen & Bason, 2012), living labs emphasizing open innovation and user engagement (Westerlund & Leminen, 2011; Almirall & Wareham, 2008), and community hubs promoting social inclusion and cultural activities. The Recovery Co-Lab incorporates elements from these labs, fostering a recovery-oriented approach through collaborative design with users, caregivers, volunteers, and citizens. It facilitates partnerships between healthcare, social services, and the community, enhancing access to resources and developing awareness initiatives. As inclusive spaces, Recovery Co-Labs serve as hubs for mental health governance. Created through a co-design process facilitated by a design team from Politecnico di Milano (Sangiorgi et al., 2021), they continue to evolve in implementation and service delivery.

1.The co-design process of Co-Lab Torre Cimabue

The Co-Lab Torre Cimabue's design process consisted of four primary stages: a scenario development workshop across diverse territories, contextual research focused on San Polo to inform subsequent design based on identified needs and opportunities, a localized idea generation workshop specific to the Co-Lab in Brescia for selecting and refining the vision for this lab, and a detailed specifications workshop encompassing activities, roles, and spatial layout (Sangiorgi et al., 2021).

The choice of the Cimabue Tower in San Polo as the location for the territorial lab was informed by its diverse inhabitants, including older adults, foreign families with children, individuals supported by social services, and those with mental health concerns managed by a social cooperative. The initial co-design workshop involved various stakeholders, including service providers, patients, project partners, volunteers, and voluntary organizations, envisioning potential scenarios for future territorial laboratories based on research on different types of labs. Four scenarios were developed and visualized through storyboards.

Subsequently, an extensive two-month contextual research phase was conducted in the neighbourhood surrounding the Cimabue Tower to identify challenges and opportunities for incorporation into the co-design process. This involved interviews with local actors and contextual observations. To ensure effective engagement, a two-day training program introduced participants to design methodologies and research methods. The second workshop revisited the scenarios, aligning them with neighbourhood needs and resources. Feedback from community actors was requested, leading to the development of a unified scenario. Ongoing dialogues with local institutions culminated in a proposal to the city council for future management of the Co-Lab space. The third workshop focused on defining how Co-Lab Torre Cimabue's activities could address mental health needs effectively, resulting in a summary document outlining spatial configurations, activities, and roles. Despite challenges with tower access and bureaucratic procedures, efforts were made to design the physical space while consolidating

the governance model, integrating representatives from key stakeholders involved in the project.

2. Analysing the implemented co-production model: shifting from Recovery Co-Lab to Co-Lab Torre Cimabue

After the design phase, local institutions, users, voluntary organisations, and operators expressed interest in continuing the project, prompting the health provider to recognise the potential of the Recovery Co-Lab. Consequently, the initiative evolved into CoLab Torre Cimabue and began the process of integration into services, officially acknowledged by the regional government (Regione Lombardia) as an innovative psychiatry programme. Implemented by the Department of Mental Health and Addiction of ASST Spedali Civili of Brescia, specifically Psychiatry Operating Unit No. 23, CoLab Torre Cimabue serves as a flexible hub offering various services to promote mental health and psychosocial well-being, including counselling, training, and territory mapping initiatives. While some activities have become routine, others are still in early stages, like the mapping of local resources, which holds promise for service enhancement by empowering users and promoting community connections. However, integration with other healthcare services remains a work in progress, requiring adjustments to align with bureaucratic regulations. Despite challenges, CoLab Torre Cimabue has made significant strides in establishing itself within the community, offering educational courses, group activities, and workshops, thereby improving integration with formal and informal care services. Interviews have highlighted factors supporting this collaboration.

Data analysis

The CoLab facilitates a transition from clinical to community perspectives on mental health, integrating resources beyond healthcare into the rehabilitation process, promoting a sense of community and inclusivity. Experimentation with recovery initiatives and engagement with various user groups underscore the importance of adapting services to meet diverse needs. A dedicated physical space and committed social operators foster integration and reduce stigma, while horizontal relationships and inclusive decision-making promote collaboration and mutual respect. Despite challenges, maintaining open communication channels and engaging in urban regeneration efforts enhance community participation and integration.

These dimensions highlight pivotal factors—Time, Value, Participation, Co-design, Scale, Space, and Attitude—crucial for effective co-production, bridging the gap between service design and delivery and fostering transformative impacts in mental healthcare. To address RQ1, we differentiate the various factors into two phases: co-design (occurring during project construction) and co-delivery (occurring during service delivery, post-launch).

Coordination and continuity, pivotal elements of health integration (WHO, 2018), show an imbalance between the co-design and co-delivery phases. Challenges persist during delivery phases when integrating informal co-production into a more cohesive practice. While informal relationships enhance intervention effectiveness, they're difficult to replicate elsewhere. From the health provider's standpoint, organizational structures, workforce, and task management require adjustment to accommodate a dynamic environment with limited regulatory frameworks. Integrating service design into engagement and co-creation processes can alleviate challen-

ges by enhancing communication, maintaining cohesion, and safeguarding against the dehumanizing aspects of formal organizations (Wu et al., 2021). To foster service development within Co-Labs, service design should adopt a dynamic approach that addresses contextual needs, promotes exchange, and facilitates new relationships. This approach has been most effective with volunteers, patients, and social-health professionals during both the design and delivery phases.

Table 2. Factors of co-producing mental healthcare with informal resources during service design and service delivery

Factors	Co-design	Co-delivery
Time	Defined to specific objectives	Flexible and adaptable to the context needs
Value	Convergent with design objectives	Dynamic and constantly changing with respect to the diversity of actors
Participation	Formal design-oriented and mediated by clinicians	Informal and based on an individual engagement and relationship toward equitable relationships
Co-design	Functional programming activity essential for the solution	Integrated in the continuous processes of engagement and co-creation
Scale	Replicable tools based on contextual needs	Subjective to individual motivation and proactivity
Space	Dedicated and flexible spaces in the neighborhood	Fixed and reference space to the clinical services and the community
Attitude	Exploratory toward idea generation and service specifications	Experimental toward recovery oriented and co-produced initiatives

Conclusions

Emerging organizational dimensions and service delivery factors emphasize the need for ongoing, adaptive processes that respond to evolving needs and promote dynamic interactions. Achieving the potential discussed in the paper entails active community engagement and collaboration with formal resources, avoiding stagnation and isolation. While service co-production systematically occurs within the CoLab and involves the local community, extending this involvement to traditional mental health services faces challenges due to hierarchical structures and logistical constraints.

Recognizing territorial labs as integral components of clinical pathways, rather than isolated projects, requires a systemic vision that acknowledges the interconnectedness of individual roles. While contextual and personal factors influence the integration of new approaches, considering these dimensions in co-design and co-delivery integration can facilitate the establishment of territorial workshops for co-production.

However, the main challenge remains the engagement of clinicians. During our study on the service delivery, while it was easy to interact and interview the social care staff, we found a lot of difficulties in interact with clinicians. They declined the opportunity for an interview due to scheduling conflicts. Initially, a co-design workshop was planned during their weekly meeting to facilitate data collection, but it was canceled after the preparation phase in favor of conducting a survey. Despite the submission of the survey, they subsequently canceled the event altogether.

Despite employing personalized search tools and maintaining a high degree of flexibility, encouraging participation in activities aimed at experimenting with new service models remains challenging within stakeholders characterized by clearly defined responsibilities and tasks.

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