

# Co-production in healthcare services: What we know, how we can evaluate it

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## Background

In times of increasing population aging, higher incidence of chronic diseases and higher expectations regarding public service provision, healthcare services are under increasing strain to cut costs while keeping quality. In this context, debates on the importance of promoting systems of co-produced health between stakeholders have gained considerable traction both in the literature and in policy debates of the public sector (Dunston et al., 2009, Voorberg et al. 2015; European Commission 2010). Co-production occurs “when public service organizations partner with external entities, including other public organizations, third sector, or service user, to jointly produce services that they previously produced on their own” (Thomas, 2013, p. 788). In this perspective, co-production is not only a patient involvement tool, but mainly a managerial tool, where partner in the production process could influence the methods used to organise and manage the service delivery (Sorrentino et al., 2015; Brandsen and Honingh, 2015; Gilardi et al., 2016). Despite this widespread acceptance, minimal consensus exists on the mechanisms for evaluating the actual impacts of the co-production in healthcare sector. More specifically, little has been produced on how the results of these changing structures, practices and goals in healthcare management and provision can be monitored and evaluated (Hardyman et al., 2015; Gilardi et al., 2016; Palumbo, 2016).

## Objectives

The study aims at filling this gap by developing a conceptual framework for assessing co-production in healthcare. Specifically, drawing on existing literature on co-production in healthcare, we develop an original analytical evaluation framework with respect to: i) the multidimensional perspectives to be taken into consideration; ii) the dimensions to be analysed; iii) the methods that allow implementing our framework in practice.

## Methodology

First of all, a quantitative bibliometric analysis, using Bibliometrix software (Aria and Cuccurullo, 2017), is carried out. The reference database chosen is WoS and the inclusion criterion is “co-production AND health\* OR coproduction AND health\*” in topic. Moreover, the search is refined by language, i.e. English, and type of publication, i.e. journal academic article. No time limitation is selected. After deleting non-inherent papers, our final sample was made up of 213 papers. As second stage, a qualitative content analysis based on PRISMA protocol is developed, focusing on those papers targeting evaluation issues. Finally, a preliminary co-production evaluation model proposal is proposed and discussed.

## Main results

The study shows an increasing attention on the co-production topic, as highlighted by an annual percentage growth rate of about 26% and the big increase in the last 5 years in number of publications. The countries with a highest number of publications and collaborations are UK (mainly England), Netherlands, Australia and USA. As expected, the most repeated keyword is co-production, however, it is interesting to underline the presence of “mental health” and “public health”, that can be assumed as the main topic of studies analyzed.

Nonetheless, only few studies focus on the evaluation of outcomes. Among them, the content analysis has revealed a predominantly mono-dimensional and mono-stakeholder approach. Specifically, clinical, economic or psychological-social - mainly in terms of patient satisfaction – impacts (i.e. Lwembe et al., 2016; Harvey et al., 2017) are assessed.

The analysis reveals that one of the main challenges of assessing co-production lies in its multi-dimensional nature; thus a multiple perspectives framework has to be adopted.

To contribute filling this gap, we developed a preliminary multidimensional (i.e. performance indicators) and multi-stakeholder (i.e. different actors involved) evaluation model (Figure 1).

Specifically, the framework takes into account the three main outcome domains – *i*) economic, *ii*) managerial/organisational and *iii*) clinical – and three main stakeholders involved – *i*) hospital, *ii*) healthcare professionals, *iii*) patients and their families.

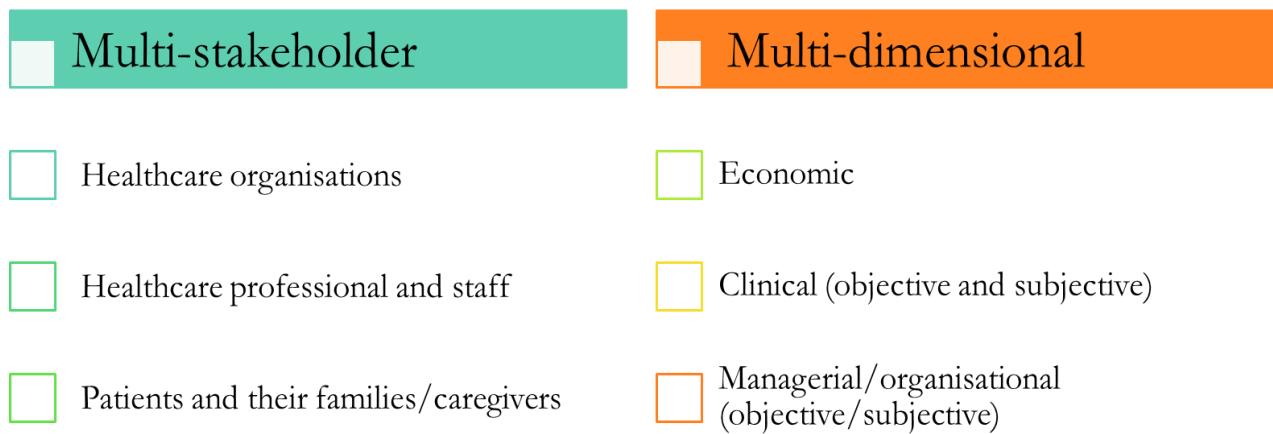
The economic and efficiency measures concerning direct and indirect cost for hospital and patients/family, should be integrated with clinical and managerial measures for each stakeholder:

1. Hospital: administrative efficiency, activating capacity, inclusiveness of decision making, stability/flexibility of rules, conflict resolution and collaboration climate, frequency of interaction.

- 2 Patient (and caregiver or family): objective (i.e. compliance) and subjective (i.e. quality of life, quality of care perception, patient satisfaction) indicators.

3. Healthcare professional and staff: objective (e.g. turnover rate, absences, injuries and work-related ill health) and subjective (e.g. burnout, satisfaction, healthcare professional engagement, occupational health, risk perception) indicators.

Figure 1 – The multi-dimensional and multi-stakeholder evaluation model



The paper contributes to both academic and practice knowledge. For scholarship, it represents the first attempt to developed a systematic analytical framework for the evaluation of co-production of healthcare. As well, it can be test and used for future empirical research aimed at evaluating (ex ante and ex post) specific co-production practice. For practice, it provides policy makers and healthcare managers with a tool that support the assessment of the complex dimension of co-production initiatives.