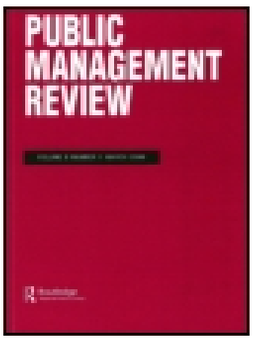

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Managing (through) a network of collaborations: A case study on hospital executives' work in a Dutch urbanized region

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ABSTRACT

Managing inter-organizational networks has been studied extensively, yet little attention has been paid to what it means for organizations and their management to participate in *multiple* networks simultaneously. This study therefore explores from a management-organizational perspective how hospitals in a Dutch urbanized region process and manage a 'network of collaborations'. We analyse the managerial strategies and activities performed to align organizational interests with the emergence of networks. While the network narrative has become dominant in public policy, this study adds empirical insights to the meaning and practice of governing in a networked environment.

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KEYWORDS Inter-organizational networks; network management; healthcare; hospital executives; qualitative research

Introduction

Inter-organizational networks are increasingly touted as suitable for managing wicked problems in public management (Isett et al. 2011; Lecy, Mergel, and Peter Schmitz 2014; Kapucu, Qian, and Khosa 2017). Inter-organizational networks, referred to as 'whole networks' (Provan, Fish, and Sydow 2007), 'goal-directed networks' (Angel and Ospina 2010), or, more recently, 'purpose-oriented networks' (Carboni et al. 2019), are narrowly defined as 'groups of three or more autonomous organizations that work together to achieve not only their own goals but also a collective goal' (Provan and Kenis 2007, 231). Although inter-organizational networks are considered suitable for addressing complex societal problems, managing them, scholars observe, is rather difficult (McGuire 2002). To learn more about how such networks are processed and managed effectively, we need to focus on how tensions are addressed by the involved actors in their respective context (Angel and Ospina 2010; Ospina and Saz-Carranza 2010). The empirical question of how actors work and cope with emerging tensions in

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managing networks, however, has not been extensively explored (Ospina and Saz-Carranza 2010; Berthod and Segato 2019).

Especially in healthcare policy and research, inter-organizational networks (for short, henceforth referred to as 'care networks') are considered suitable for addressing a variety of problems: the fragmentation of services (Ferlie et al. 2011); the negative effects of competition (Westra et al. 2017); stringent paywalls (Provan, Fish, and Sydow 2007); scarcity of workforce resources (Kuhlmann, Batenburg, and Dussault 2018); the increasing demand for integrated care amongst ageing populations (Leijten et al. 2018); the centralization of highly complex care (Postma and Roos 2016); the development of medical research across organizational boundaries (Waring et al. 2020); and, as shown recently, the nationwide distribution of patients in times of COVID-19 (Wallenburg et al. 2021). It is therefore unsurprising that hospitals, for instance, participate in both 'horizontal' (between hospitals) and 'vertical' (between primary and secondary care, and between payers and providers) collaborations (van der Schors et al. 2020). In all, hospital involvement in care networks is broad, ranging from platforms to share information and experiences to more tightly integrated forms of healthcare practice (De Pourcq et al. 2019).

Taking a management-organizational perspective, this study explores how hospitals and, more specifically, hospital executives, process and manage a 'network of collaborations'. Following Provan and Kenis' (2007) definition, a 'network of collaborations' is understood as the set of networks and two-party collaborations an organization is involved in. Analysing the managerial strategies while networking offers fertile ground to explore how hospital executives govern or are governed by networks, and what this means in terms of their role and governing abilities (Hajer and Versteeg 2005; Bevir and Waring 2020). By doing so, we attempt to capture the work of hospitals and their management in governing the multiple nodes with other (healthcare) organizations, and how this affects hospital governability, understood as 'the overall capacity for governance of a hospital' (Scholten et al. 2019, 444). To this end, we pose the following research question: *How do hospital executives experience a network of collaborations, and how do they deal with perceived challenges for governability?*

To answer this, we conducted a case study in an urbanized region in the Netherlands in which nine hospitals are situated. By combining various data sources – heavily drawing on interviews – the analysis reveals that hospitals participate in a diverse set of care networks with different network origins. As a result, hospital executives are experiencing emerging challenges, and in response, develops pragmatic strategies. They work *through* the network of collaborations to prevent the organization experiencing undesired effects related to financial performance, the hospitals' identity, and managerial and professional work intensification. They also question whether and when interference is needed (or not) to align organizational interests with the emergence of care networks. We argue that managerial work – that is, the ongoing management efforts within and between organizations and other parties of interest – is required to manage multiple networks.

The paper proceeds as follows. Informed by the above, we further elaborate on our management-organizational perspective in governing network involvement. Next, after describing the methodology and case study, we present the challenges experienced by hospital executives in managing multiple care networks simultaneously and reflect on how these challenges are handled. Lastly, we end with a discussion on how

our analysis informs both research and networking practice and present management and policy implications.

Managing networks

In the network (Kickert, Klijn, and Koppenjan 1997; Agranoff and McGuire 2003; Koppenjan and Klijn 2004) and collaborative governance literature (Ansell and Gash 2007; Sørensen and Torfing 2011; Emerson, Nabatchi, and Balogh 2011), networks are characterized as patterns of relationships and interactions between diverse actors. The processes of interaction and decision-making are often complex (Klijn et al. 2015) because actors act strategically on the basis of different interests and perceptions of problems and desirable solutions. Networks can thus be seen as 'sites of multiple, shared, and contested meaning' (Bevir and Waring 2020). For the involved actors, networks provide the social infrastructure to share and reinforce their meanings, values and identities (Crossley 2010). Managing a network is considered necessary to connect the different perceptions and strategies (Klijn et al. 2015), and to achieve legitimate outcomes that are supported by actors involved (Klijn, Steijn, and Edelenbos 2010).

Findings from different studies illustrate, however, that network management is cumbersome. For instance, the unequal distributions of power, clashes between organizational cultures, a lack of commitment from involved and diverse actors, possibly reduced accountability, loss of autonomy for individual organizations, a lack of suitable methods to support leadership, and the variety of governance structures available result in management tensions (Provan and Lemaire 2012; O'toole and Meier 1999; Waring and Crompton 2020; O'leary and Vij 2012; Carmine, Nasi, and Rivenbark 2021). Managing networks is a continuous process, full of struggles, and dynamic as positions and network environments may change (Waring and Crompton 2020). Furthermore, literature shows that how networks are managed is influenced by several contingencies. These entail, for instance, the wider regulatory and institutional context, such as competing organizational priorities (Ferlie et al. 2013), the clarity or ambiguity of policy (Klijn and Koppenjan 2012), historical relationships and competition amongst actors (Martin, Currie, and Finn 2008), or network properties, such as goal consensus, resource distribution, and quality of relationships (McGuire 2002). In addition, the many multi-actor collaborations surrounding the organization, led by different organizations, may complicate network management because an organization is only able to manage a *partial* account of the strategic resources required for 'community outcomes' (Osborne 2006; Carmine, Nasi, and Rivenbark 2021). Also, organizations are confronted with the downsides of network functioning in practice, such as passive cooperation among actors or negligible network results – also known as 'collaborative inertia' (Huxham and Vangen 2004). The more organizations are involved, the more time-consuming and resource-intensive networking tends to be (Provan and Kenis 2007). Managing networks could also result in intensive work demands (Hyde et al. 2020), because inter-organizational relations are formed by individuals who represent their organization (Rethemeyer and Deneen 2007). This is especially of risk in healthcare, as a sparse workforce is already burdened with increasing and varied demands from patients (Kroezen, Van Hoegaerden, and Batenburg 2018) and administrative demands from regulatory agencies (van de Bovenkamp et al. 2020). Organizational support and capacity are needed to manage

networks. But these things cannot be easily expected given existing professional and organizational constraints.

For healthcare organizations and their management, the wider institutional context renders network involvement easier said than done. For instance, a recent study conducted in the Belgian hospital sector found that the complex legislative context – which has federal and regional government aspects – complicated collaboration (De Pourcq et al. 2018). In addition, the presence of various participants and institutional agents involved (Lorne et al. 2019), the strong influence of medical professionals (Barretta 2008), regulatory pressure as a result of quality regulations, and complex financial structures (De Pourcq et al. 2018) are identified elsewhere in the literature as complicating factors. These contingencies illustrate that healthcare organizations operate in a 'layered' environment; that they are part of the interplay between local, regional and national agencies, 'coexisting, jostling and forging uneasy alliances' in governing healthcare (Lorne et al. 2019, 2). For healthcare organizations and their management, managing networks thus requires interactions with diverse actors at different organizational and policymaking layers in various overlapping spatial arrangements (Oldenhof, Postma, and Bal 2016; Lorne et al. 2019).

Managerial activities in managing networks

Scholars have distinguished the specific managerial strategies, skills, competences and activities of 'network managers' in the process of managing networks (Klijn, Steijn, and Edelenbos 2010; Klijn et al. 2015; Provan and Kenis 2007; Edelenbos, Van Buuren, and Klijn 2013). McGuire (2002) distinguishes 'activation' (e.g. incorporating actors and resources), 'framing' (e.g. facilitating agreement amongst network partners), 'mobilizing' (e.g. developing commitment and coordinated action) and 'synthesizing' (e.g. enhancing the conditions for interactions amongst network actors) as four distinct managerial activities. In order to nurture and/or steer networks, Klijn, Steijn, and Edelenbos (2010) observe that facilitating the structure of interactions, using process rules to govern those interactions, and activating actors and exploring their perceptions are important in managing networks. In addition, formulating a vision, establishing network roles (Kickert, Klijn, and Koppenjan 1997), leveraging ideas to tackle policy and organizational problems (Klijn and Koppenjan 2012), and developing appropriate leadership (Ospina and Saz-Carranza 2010) play a role in this context. The managerial activities reflect that relational capabilities (i.e. in- and outward work), aimed-for coordination, and processes of meaning making co-exist in network management.

From managing single networks to managing *multiple* networks

Although managing networks has been studied extensively and the necessary managerial activities are well-documented, little attention has been paid to what it means for organizations and their management to participate in multiple networks at the same time. Literature on inter-organizational networks in public management largely focuses on how a single network can be governed or managed (Provan and Kenis 2007), or how network properties lead to desirable outcomes (Provan and Brinton Milward 1995; Provan, Fish, and Sydow 2007). Furthermore, attention has been paid to competing policy networks (Klijn 2002) rather than the perspective of an organization

that has to deal with many different policy and organizational networks at the same time.

The literature tends to picture organizations and their management as being involved in only a few well demarcated networks, and that it is rather easy to get an overview of organizational involvement in networks. However, today organizations increasingly operate within an environment that is full of different networks that possibly interact with one another (Nowell, Clare Hano, and Yang 2019). The consequence is that a neglect of how a network of collaborations – including other organizations who are entangled in peripheral networks, and the environment in which these networks 'exist' (Rethemeyer and Deneen 2007)—affects the role and position of organizations and their management. Organizations' involvement in multiple networks emphasizes the necessity of managing several possible interfering interactions amongst network participants as well as between networks. An understanding of this adds new dimensions to an already well-established literature. This could possibly require other strategies than we now assume as suitable to manage a single network (cf. Klijn 2008; McGuire 2002).

Following our relatively underexplored actor-level perspective in managing multiple networks, we are interested in how hospitals position themselves in a networked field; how they relate to external stakeholders; and, more specifically, which managerial strategies are developed by hospital executives in dealing with emerging challenges of operating in multiple networks at the same time. Based on the identified challenges and strategies, we reflect on how this affects the work and management of hospitals.

Materials and methods

Research context: the Dutch hospital sector

In the Netherlands, a small, densely populated country of 17 million people, there are around 65 general hospitals without training facilities, 26 teaching hospitals, and seven university medical centres. In 2006, a healthcare system of regulated competition was introduced to enhance competition between healthcare providers and insurers in order to stimulate efficiency and quality of care (Helderman et al. 2005). Debates in the last decade about scale, quality of care, and competition have resulted in the distribution of medical services amongst hospitals (Postma and Roos 2016). More recently, emphasis is placed on the organization of care closer to the patient's home, stimulating the network involvement of healthcare organizations within a layered institutional context, with regulated competition (van de Bovenkamp et al. 2016). As a result, hospitals increasingly form one part of an 'integrated' care service. In such settings, hospitals as well as primary and older person care facilities collaborate towards the optimization of care in the region. This intended 'regionalization' is understood as a more cooperative way of organizing care for the population in a specific geographical area (Schuurmans et al. 2021). While healthcare policy increasingly encourages hospitals' involvement in care networks on regional levels, the Dutch healthcare sector functions as an interesting study context to explore hospitals' positions within networked arrangements.

Case selection and description

We employed a case study in an urbanized and heavily populated region in the Netherlands (which we refer to as 'Region X' for anonymity reasons) in which nine

Table 1. Characteristics of hospitals in region X.

Hospital	Type	Bed capacity
A	Academic medical centre	1.320
B	Teaching hospital	600
C	Teaching hospital	750
D	General hospital	360
E	General hospital	332
F	General hospital	190
G	General hospital	40
H	Specialized hospital	12
I	Specialized hospital	116

public hospitals are situated: one academic medical centre, two teaching hospitals, four general, and two specialized hospitals (i.e. focused on specific clinical specialities). These hospitals share the same geographic niche and are clustered in a regional partnership that aims to improve overall hospital care. Case selection was based on the relatively high number of (specialized) hospitals within the region, compared to other urbanized or more remote regions in the Netherlands. This stimulated us to explore hospital network involvement more precisely. The hospitals' characteristics in terms of size in 2020 are overviewed in Table 1.

Data collection

This research draws upon three data sources. Firstly, to get an idea of the number of care networks the hospitals in this case study participate in, we created an overview (primarily developed by the second author in September 2018) in which the involvement of each individual hospital in the network of collaborations is listed. The university medical centre initiated the overview to develop an understanding of hospital network involvement, starting a debate with surrounding hospitals how this can be processed and managed. The overview is originated from a hospital perspective, and therefore predominantly includes ties amongst hospitals, rather than with primary and older person care facilities. Hospital representatives (executives and supporting staff) were asked to digitally fill in a list of the care networks and collaborations their hospital participated in, which was then merged in an Excel overview. This overview consists of the following elements: type of agreement, involved medical specialities, starting and ending date (if applicable) of the agreement, and intended goal(s). We used the overview to analyse the diversity of networks the hospitals in the region participate in. Given the explorative and agenda-setting nature of the overview, general inclusion criteria were applied. Care networks were included if they concern (the organization of) patient care; geographically cover (a part of) Region X; and are operational during the study period. Both formal (e.g. through contractual agreements) and informal (e.g. partly or not formalized through agreements) collaborations were included. Though we were aware that networks cut across the region, we excluded these examples (e.g. international networks and research projects), because the primarily purpose was to explore hospital' network involvement in Region X.

Secondly, to further explore hospital network involvement, we draw on a group discussion with hospital executives and stakeholders in Dutch healthcare, with the aim of discussing how care networks affect the managerial role and changes healthcare (organizations). This group discussion was organized in June 2019 and was chaired by

the third author. This role can be understood as facilitative, setting up an organized discussion of three hours to share networking experiences. In total, 31 hospital executives representing 28 hospitals spread across the Netherlands participated, among whom were the executives of the nine hospitals in this study. Stakeholders included two representatives of health insurers, three from the healthcare inspectorate, and eight employees of Dutch knowledge institutes related to healthcare policy and organization. The first two authors presented the insights from the overview in Region X as a starting point for discussion. They participated in the group discussion and asked if the presented insights were recognizable and representative for other hospital executives and how they overcome (or handle) the challenges that come with managing multiple networks. In addition, three hospital executives in different parts of the country (urban, non-urban and more remote) presented about which network(s) their hospital was involved in; how the networks came about (or not, if failed); and what challenges they experienced in the process. Their experiences led to much recognition amongst attendees and stimulated a lively discussion amongst hospital executives on how to manage hospitals in a networked environment. We took descriptive notes with observations and quotes, resulting in an observational report that was member-checked by presenting attendees. Clarifications were amended in our notes to check the statements and experiences of hospitals executives.

Lastly, central to our study, we conducted in-depth interviews with hospital executives ($n = 8$) and supporting staff ($n = 4$) in Region X to explore their experiences in managing multiple networks in more depth. The hospital executives were selected because they are formally in charge of a (specialized) hospital, and – together with supporting staff – were consulted during the overview creation. All agreed to conduct interviews to explore the managerial role in network involvement more precisely. The interviews were semi-structured, backed by a topic list based on literatures that address network management and inter-organizational networks, as well as data derived from the network overview and group discussion. The following topics were investigated: the different networks their hospital is involved in, challenges faced in managing the hospital in a networked environment, and managerial activities in processing the experienced challenges. We specifically asked for real-life examples to illustrate their managerial work in managing networks. The identified challenges in network involvement have been member checked with interviewees after data analysis. Most interviews with respondents were conducted in person and had a minimum duration of 50 minutes and a maximum of 75 minutes. All interviews were audio-recorded with permission, anonymized, and transcribed verbatim in Dutch (citations were translated into English). Field notes that were made during the interviews complemented the interview transcripts.

Data analysis

Based on the exploratory nature of our study, we analysed our qualitative data using an abductive approach (Timmermans and Tavory 2012). An ongoing iterative process of 'puzzling out' helped us to analyse how multiple networks are processed and managed (Timmermans and Tavory 2012, 167). Inspired by the group discussion – and informed by literatures that address network management and inter-organizational networks – we developed the notion of 'multiple network involvement' in healthcare, defined as the engagement of hospitals with different (and possibly overlapping and

conflicting) care networks *simultaneously*. These preconceived ideas were leading in analysing the observational report, transcripts, and field notes during interviews via Atlas.ti software. Triggered by the expressed challenges for hospital governability, we re-examined our data to explore how hospital executives manage multiple networks in various ways.

First, based on the group discussion, we broadly identified experiences of hospital executives in managing multiple networks as first order codes, leading to three themes: uncertainty about the added value and risks; the degree of managerial interference; and interfering interests of external stakeholders. Second, based on theoretical grounds, we made the clustered experiences more precise by identifying challenges as second order codes. These challenges were sent to interviewees as a basis for the interviews and discussed with the authors for data refinement. These challenges were then discussed in relation to how hospital executives dealt with them, leading to the following managerial strategies that structured the results accordingly: creating a strategic niche to remain distinctive; using network consultations for organizational interests; evaluation and prioritizing of and interference with networks; and developing governance platforms to coordinate network actions. These findings were then discussed against the backdrop of network management theory focused on managing an individual network. Besides careful coding, the quality of analysis was strengthened by iteratively comparing findings of the three data sources as well as extensive discussions between the authors during the research process.

Findings

The categories of network management primarily seem to be focused on managerial efforts to include professionals and other organizations in network actions (e.g. McGuire 2002; Klijn, Steijn, and Edelenbos 2010), implying that managers are the only network initiators. The focus on *a* network manager is reflected in literature on inter-organizational relationships and management that describes 'alliance managers' as central in resource alignment and alliance performance (Das and Teng 2000). Rethemeyer and Deneen (2007) state that network management activities are not bound to an individual network manager, and take place across 'the network system'. We have identified that managers, professionals and external stakeholders can *all* be network instigators. Hence the initiatives to network and the wish to steer them come 'from within' (professional and managerial induced networks) and 'from outside' (policy induced networks). Some actors look through the 'lenses' of organizations for network involvement (i.e. an inside-out view), while others seemingly centralize the needs and demands of the region where organizations are situated with the goal to stimulate the sharing of strategic resources (i.e. an outside-in view) (Bianchi 2021; Carmine, Nasi, and Rivenbark 2021).

Hospital executives networking' takes place within an empirical context of inadequate legislation and financial structures, regulatory pressures, and different procurement strategies of health insurers. They have to navigate through the interests and strategic aims of various professionals, organizations and authorities within the layered healthcare system while networking (van de Bovenkamp et al. 2016). Hence several challenges emerge while managing multiple networks. Organization-centred regulatory frameworks prompt hospital executives to negotiate demands with internal actors (e.g. physicians, supervisory board) and external stakeholders (e.g. network partners,

financers, regulatory bodies) while networking. This sometimes induces a 'defensive' governing attitude to networking to protect the organization from undesired effects, for instance related to the hospital identity, financial performance, and managerial and professional work intensification. Furthermore, the consequences of network actions for the hospital's position are unclear. Also, managers have to negotiate with multiple agents with different interests in many consultations.

Networking can also be a strategic activity of hospitals. The (potential) problems for hospital governability (Scholten et al. 2019) prompt executives to develop pragmatic strategies to align organizational interests with the emergence of networks: creating a strategic niche to remain distinctive; using network consultations for organizational interests; evaluation and prioritizing of and interference with networks; and developing governance platforms to coordinate network actions. Managing multiple networks requires managerial work in several directions and on various tasks, both inward (i.e. negotiating the interests of organizational parties) and outward (i.e. dealing with the interests and pressures of network partners and external stakeholders).

In the following sections, we elaborate on our case study findings in more detail. First, we present the diversity of care networks and collaborations in Region X to understand network involvement from a hospital perspective more precisely. Second, we elaborate on the emerging challenges, and subsequently analyse how these challenges are dealt with.

A network of collaborations

In Region X, individual hospitals participate in a varying number of care networks and collaborations (ranging from 20 up to 141) with other hospitals. These collaborations occur mostly between two hospitals, but also with three or more (healthcare) organizations. The academic medical centre (A) is involved in 141 collaborations, followed respectively by 114 and 63 collaborations for both teaching hospitals (B and C). The four general hospitals (D, E, F and G) participate in 64, 58, 53 and 39 collaborations respectively, and the specialized hospitals (H and I) in respectively 28 and 20 respectively. In total, hospitals in Region X participate in 237 collaborations (see Figure 1).

In the overview, we noticed both variety and overlap in terms of goal-setting, scale, representation of participants, and degree of formalization. Hospitals participate in some cases in the same care networks, but take different positions (i.e. network partner or leading organization). Most hospitals are involved in collaborations to better align ('integrate') health practices between healthcare providers (for example integrated stroke pathways). Hospitals also participate in disease-specific collaborations to optimize triage, consultation, and the development of scientific research (for example oncological care networks). In addition, collaborations are identified aimed at short-term and long-term efficiency improvement (for example sharing workforces, facilities and (digital) services). Other collaborations are innovation-oriented; they aim to foster healthcare entrepreneurship with (non-)governmental advisory bodies, universities, and other knowledge institutes. Lastly, collaborations for specific regional purposes are identified, for instance to attract and train higher qualified personnel. Some integrated care and disease-specific networks have a formal network governance structure, for example with a 'network administrative organization' (Provan and Kenis 2007), while other collaborations are less formalized.

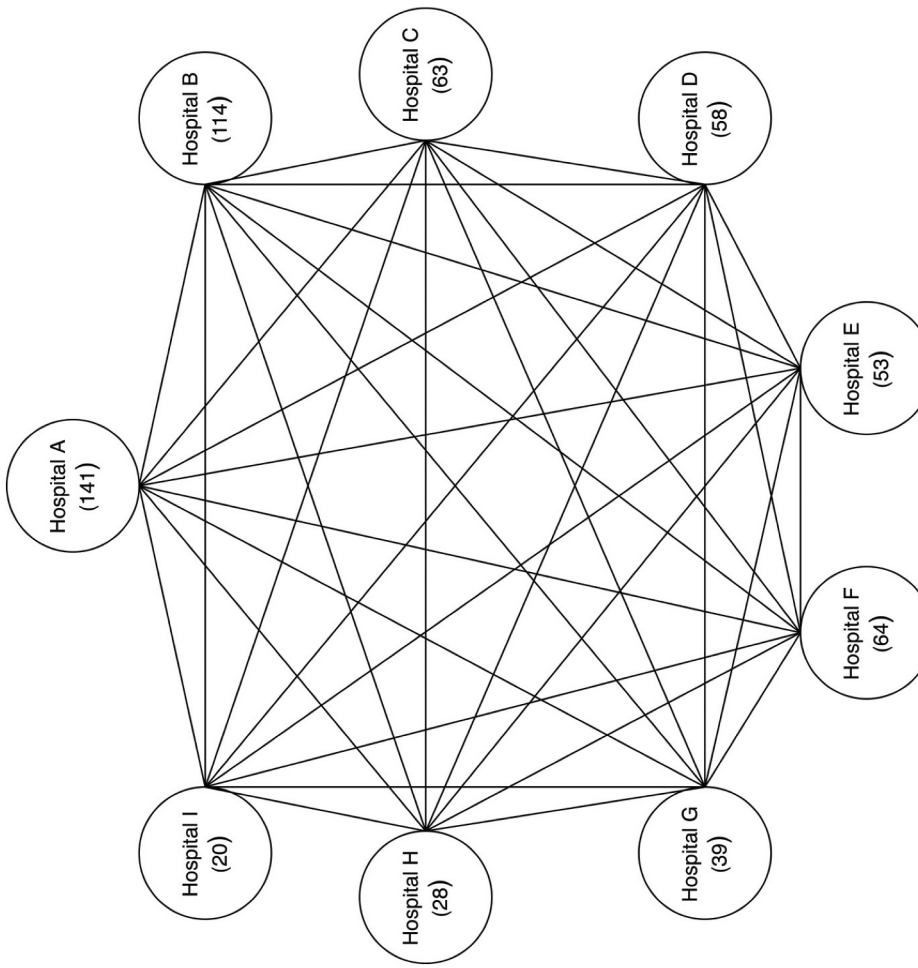

Figure 1. A hospital network of collaborations in Region X.

The care networks entail a mixture of voluntary initiatives between hospitals, but also initiatives that are either imposed or reactions to policy changes. In some cases, hospitals voluntarily reach out to other hospitals to create a network. An example of this is the building of a regional network to attract and train higher qualified personnel. Less-voluntarily initiated networks are a result of pressures from regulatory agencies or professional associations. An example of this are acute care networks to organize sufficient ICU capacity and develop a coherent hospital response in times of crises (see also Wallenburg et al. 2021). Acute care networks are a result of regulations from the Ministry of Health. Professional associations that prescribe volume standards for specific surgical operations to maintain high-quality care moreover urge hospitals to build, for instance, obstetrics and oncological care networks in which services and expertise are clustered. Hospital executives are thus constrained in evaluating in which network to participate as they have to comply with (quality) regulations.

We learn from the overview that hospitals operate in a networked environment, meaning the existence of a diverse set of care networks and collaborations, with different intended goals and governance arrangements. Networks originate at the professional level (e.g. professionals working across organizations to improve care processes), the organizational level (e.g. management searching for ways to improve efficiency and strengthen the organizations' strategic position) and the policy level (e.g. quality regulations that demand a certain volume or scale). While every purpose seems to have a separate network (i.e. creating integrated care pathways, compliance with (quality) regulations, managing scarce medical resources, etc.), this results in multiple network involvement, and possibly conflicts *between* networks.

The challenges of managing a network of collaborations

Organization-centred accountability structures

Managing networks requires attention to the institutional environment in which organizations operate. For instance, stringent regulations and institutional barriers complicate networks to take shape (Klijn and Koppenjan 2012; Ferlie et al. 2013). Hospital executives find it challenging to simultaneously manage their respective organizations and their involvement in networks as they are confronted with different accountability structures that exist side-by-side, initiated by the internal supervisory board, and external stakeholders (e.g. health insurers, banks, the healthcare inspectorate, and other regulatory bodies). While these stakeholders mostly approach the hospital as a 'fixed' entity, responsible for its own functioning, hospital executives view their organization as being more fluid, increasingly tied to and dependent on the efforts of others. Despite the necessity of networks, they are nevertheless still held responsible for the overall functioning of the hospital:

> Although I'm in favour of care networks, it clashes with the responsibility I have for this organization. I have to maintain relations with the supervisory board and show my ratios to banks, otherwise I will not receive finances for new buildings. I will never retain this position if the hospital is not doing well in financial terms as a result of multiple network involvement.
>
> *(Executive of Hospital H, interview)*

When the healthcare practices of the involved healthcare organizations are subject to multiple legal frameworks, this raises questions when something goes wrong within the network, for example during patients' treatment, and especially in the case of informal

networks (e.g. not formalized by a covenant or contract): who can be held accountable? This can instigate the formalization of agreements, which could weaken network relationships that thrive on trust and an informal collaborative atmosphere (Klijn, Edelenbos, and Steijn 2010).

(Unclear) consequences of network actions for the hospital's position

An important part of network formation are autonomous organizations that are willing to network based on trust and reciprocity (Provan and Kenis 2007). Multiple network involvement, however, threatens an organization's existence as networks become superior to the organization, making the existence of autonomous organizations less obvious in network formation. While hospital executives state that networking is of strategic necessity as hospitals cannot do without the medical expertise of other hospitals, and thus need to network to exist, they acknowledge that this entails potential organizational threats. Although every network has a legitimate goal, the overall consequences for the hospital's strategic position are often unclear, or yet to be experienced. Financial consequences, the effect on patient flows and workforce, and potential competition between networks, cannot always be made clear beforehand. While executives have and express a need to obtain insights of networking results, they find it cumbersome to obtain an overview of network involvement as a whole. Hospital executives hence experience uncertainty about the added value of the networks, wondering whether or not organizational goals are being achieved:

> Obviously, I'm hired with a primary assignment to strengthen the hospitals' position. There are situations, however, where this hospital needs help from other hospitals to share physicians and facilities. [. . .] It is my responsibility to ensure a healthy organization, and that involvement in different networks doesn't lead to undesired effects. *(Executive of Hospital E, interview)*

The willingness of executives to cooperate with other hospitals is limited, as the organization still needs to exist, and needs to be made visible ('branding') to protect the hospitals' respective identities (van der Scheer 2007). Although goals can (partly) be aimed at the region (e.g. stimulating overall population health), the primary responsibility of executives is their organization. After all, too much involvement in networks could result in the dissolution of one's own organization, as the executive of Hospital H (interview) remarks: 'You don't want to lose your own brand. As the head of this hospital, no matter what, you do not step into that position and then sell it to someone else'. Executives of small-scale hospitals state especially that protecting their identity is challenging but necessary to maintain their uniqueness and added value as a potential network partner. Hospital executives have to manage different networks' conflicting accountability structures and institutional arrangements, but must also consider the consequences thereof, which could lead to questions concerning their own function and competence.

Balancing different interests

Developing enduring relationships between network partners and with external stakeholders is an important part of network management, reflected in the attention to relational capabilities (Ysa, Sierra, and Esteve 2014; Edelenbos, Van Buuren, and Klijn 2013) and 'soft' forms of steering amongst network managers (Ayres 2019). We observed that hospital executives have to negotiate with different agents – within the healthcare organization, between healthcare organizations, and between healthcare

organizations and their stakeholders – over different goals. This requires many (possibly interfering) consultations, which is experienced a time-consuming responsibility. Hence inter-organizational relationships go beyond management levels, and also include professional objectives that may conflict with organizational interests in network involvement. Network actions within the hospital are moreover scattered across relatively small groups of physicians. Management needs to deal with professionals' expertise, ideas, and ambitions for networking. Hospital executives find it challenging to align their priorities in networking with those of physicians and to establish what actions this would require (and from whom). For instance, the managerial interests in exchanging 'care' in networks do not always align with the financial interests of physicians, rendering this a difficult process. Yet, hospital executives are dependent on physicians' problem-based knowledge while networking. Disease-specific networks, for instance, require the expertise and support of physicians, as they are specialized in medical content, but they also require an evaluation by hospital executives about how this affects the hospitals' strategic positions. Because hospital executives don't have in-depth expertise on specific diseases, they are seemingly inclined to follow the ideas of physicians on how to organize such networks, in which part of the network the hospital participates, and how this may make involvement in other networks redundant. Hence negotiating with physicians is increasingly part of managerial practice, while hospital executives are being held accountable for network involvement *in the end*.

Besides hospitals, physicians, and patients, external stakeholders also have an interest in which care networks the hospital participates in. Hospital network participation could reduce risks for these stakeholders by maintaining revenue and accessibility for individual hospitals with the distribution of medical services and patient flows. However, health insurers fear less competition amongst networked hospitals, while banks fear that strong networks could result in lower revenues for individual hospitals due to the loss of production by distributing medical services:

> Three hospitals created a joint venture for the distribution of oncological medical services to ensure accessibility to oncological care in [Region Z]. Although it was anticipated that this distribution would result in quality improvements, reducing overall costs, and attract professionals, the pre-proposed distribution was complicated because of financial difficulties faced by two involved hospitals. Banks hindered the distribution of oncological services, expecting production loss and consequently insufficient financial resources to pay off loans. As summarized by a hospital executive: 'A vision of care became a vision of distribution'.
>
> *(Excerpt observational report, group discussion)*

The above excerpt illustrates that the shared goal for the region (i.e. accessible oncological care) was hindered by the short-term risk of financial instability in two hospitals, even though in the long term it was expected to diminish costs. This example confirms that external stakeholders act and interfere at the level of the individual organization, thereby also affecting the network. Health insurers, banks, and the healthcare inspectorate weigh the relevance of the network on consequences for the hospital, and for themselves as contract partner (health insurers, banks) or regulator (healthcare inspectorate) with their own remits. These external demands can, however, also be conflicting. For example, in the case of the oncology network in Region Z, whereas the bank saw a financial risk, the healthcare inspectorate was in fact very much in favour of network formation. This was because it allows specific hospitals to have a higher capacity, leading to better care, whereas the competition authority might be wary about the creation of regional monopolies.

Dealing with emerging challenges

Creating a strategic niche to remain distinctive

First, hospital executives' work to manage multiple networks entails strategic (re) orientation, understood as the creation of a strategic niche for the organization to remain distinctive and autonomous while working together (cf. Provan and Kenis 2007). Network involvement is used by hospital executives as a mechanism to coordinate medical care within the organization and to create (new) strategic positions in the networked context. They (re)examine the hospitals' strategic agenda and accordingly prioritize which networks are of added value for the organization. The executive of Hospital B exemplified this by making network involvement explicit in their strategic agenda, describing their hospital as a 'network organization'.

Constructing and communicating a narrative of the hospital's identity and ambition helps to position the hospital vis-à-vis network actors. Illustratively, the executive of Hospital E used the slogan 'from a white bunker to a campus' to communicate a shift from being a medical-oriented hospital to a 'place' in which also youth care and public health expertise are located. Similarly, the executive of Hospital F – situated in a less urbanized part of Region X – negotiated a strategy with physicians to become an all-round hospital that primarily serves its local population. Executives of general hospitals stated that becoming a periphery-oriented hospital that functions locally is feasible as these hospitals heavily depend on the expertise of physicians working in Hospital A to maintain medical care delivery. This illustrates that for these hospitals network involvement is not strictly voluntary as it allows the hospital to exist and function locally. Participating in multiple networks hence serves as a means for the hospitals' strategic agendas and allows hospitals to develop a niche to work from.

Using network consultations for organizational interests

Second and related, hospital executives purposely use soft relational leadership and governance while managing networks for organizational interests (Ayres 2019). Network consultations (and personal connections with network partners) are considered a social infrastructure to share and reinforce the hospital's identity (Crossley 2010). Most consultations take on an informal dynamic, meaning that information (for example, regarding ICU capacity during COVID-19 times) is regularly shared between executives. These consultations are used to explore ways to cooperate with hospitals that face similar challenges, to build trust, and to have access to potentially relevant strategic information from other network partners:

> I managed to position [Hospital I] in several meetings, for example, in [a regional acute care network] and [a regional non-acute care network], so that we could receive valuable information. We are part of many consultations as a result of network involvement and are a kind of spider in the web. *(Executive of Hospital I, interview)*

Similarly, the executive of Hospital H stated that although the hospital has no ICU capacity and almost no medical patients, they attend acute care network consultations for relational purposes. During these meetings, the hospitals' respective identities and ambitions are communicated to others: e.g. providing specialized care in one location, yet open to provide care in other hospitals. Network consultations are used to legitimize the hospitals' existence to (potential) network partners. Hence an externally oriented strategic agenda to network with others stimulates thinking about a hospital's

own identity and visibility, and creates internal unity (i.e. expanding a network logic amongst physicians).

Evaluation and prioritizing of and interference with networks

Besides nurturing and expanding network relations for network management (McGuire 2002), hospital executives also tame further networking to prevent physicians, supporting staff, and executives from becoming overworked. We noticed an ongoing evaluation process in which professional perspectives and their network actions matter to decide in which networks the organization participates. Hospital executives hence prioritize certain networks over others, and set organizational boundaries to networking:

> The municipality asked for involvement in another network. It got as big as though we were going to make world peace. Then we said: no, stop for a moment, enough! I got people [physicians and nurse practitioners] here at my desk who said: 'I'm asked for a care network, but are we really going to do that, and with what effort?' Let's focus on what we have and keep it small. *(Executive of Hospital C, interview)*

This quote shows that the need to prioritize networks is not only expressed by hospital executives, but also by employees (and external stakeholders as we saw earlier). The executive of Hospital C put a hold on networking to prevent professionals' work intensification, but also to develop better 'grip' on network involvement. Hospital executives evaluate what is needed on the one hand to mitigate risks and keep the network in line with strategic hospital interests, and on the other hand to establish what would aid and enhance the performance of the network and thereby prove its added value. As a response to many organizational parties whose networks are decentralized, hospital executives therefore question whether and when interference is needed (or not) to align organizational interests with the emergence of networks. Responding to the outlined network experiences of a hospital executive, the executive of Hospital A says:

> To manage networks, sometimes you need to let a network go, and don't interfere with the further development. Sometimes you need to consciously push into the right direction, facilitate bottom-up initiatives and, if needed, serve as the personification of the network self. [. . .] Managing multiple network involvement requires different forms of managerial involvement. *(Excerpt observational report, group discussion)*

This reaction seems to highlight specific capabilities in managing networks (e.g. knowing what the right direction is), despite uncertainties in dealing with multiple networks. Interference occurs both within the organization, and in networks. For instance, informal relationships amongst physicians raise questions as to what extent formalization is needed, in terms of covenants and contractual agreements, but they also require consultations with other executives in order to coordinate network actions in the broader network environment (Nowell, Clare Hano, and Yang 2019).

Developing governance platforms to coordinate network actions

Third, hospital executives build and further develop existing governance platforms to manage multiple networks. In the literature, collaborative (governance) platforms are considered helpful to facilitate and coordinate 'multiple or ongoing collaborative projects or networks'. (Ansell and Gash 2018, 20) In our case, hospital executives commit their organizations to such platforms for coordinated network actions on

a more comprehensive regional level, to activate networking parties (i.e. organized support and resources for networking physicians), and to develop an overall strategy that prevents further network collision and overlap:

> With all that networking, you have to create a focus together. We therefore asked [the regional hospital platform] to make an overview, and they listed more than 80 initiatives in [Region X]. We are discussing how healthcare will look like in 2030 to align network actions. [. . .] Hospital D and E will also become partners of [the regional hospital platform].
>
> *(Executive of Hospital C, interview)*

The regional hospital platform can be seen as a 'network administrative organization (NAO)' (Provan and Kenis 2007); a separate entity that supports network initiatives amongst physicians, and accommodates hospital executives and physicians' interactions. Though the NAO was primarily established in 2011 to accommodate for quality regulations (i.e. the clustering of care services for specific diseases), the platform has become increasingly relevant for hospital executives to coordinate physicians' network initiatives on a regional level. Illustratively for this shift, several executives framed 'caring for the region' as a new common purpose to develop more regional coherence while networking (i.e. preventing unnecessary overlap), easing professional and managerial working pressures.

Discussion

Previous network management studies predominantly focused on establishing or managing an individual network (Provan and Kenis 2007), or the establishment of policy networks by governments (Klijn 2002; Milward and Provan 2003). This article instead used a management-organizational perspective to analyse how hospitals and their management process and manage *multiple* network involvement. Our study is exploratory and inductive in nature as we considered the application of frameworks that focus on individual networks less suitable (e.g. McGuire 2002; Provan and Kenis 2007). The value of our study is that it relies on empirical findings, adding actor-level experiences to the current body of network management and governance literatures, as we foregrounded the complexities and peculiarities of the practice of governing an organization in a networked environment. In this section, we reflect on how our findings contribute to the ongoing, pragmatic and multi-layered understanding of network management (cf. McGuire 2002; Agranoff and McGuire 2003; Klijn, Steijn, and Edelenbos 2010), and how this affects the work of (healthcare) organizations and their management.

Managing multiple networks entails activities aimed at creating a strategic niche to remain distinctive; using network consultations for organizational interests; evaluation and prioritizing of and interference with networks; and developing governance platforms to coordinate network actions. With our focus on multiple network involvement, we further extend and reconsider previous work on traditional network management activities (see Table 2).

The network management activities of activation, framing, mobilizing, and synthesizing (McGuire 2002) are focused on how to manage *a* network, but take on a different meaning against the background of a highly networked environment, in our case a Dutch hospital region. First, managing multiple networks has no clear end, but requires ongoing managerial efforts. Activation while managing multiple networks not only entails incorporating actors and their resources for *individual* network goals, but also requires managers to build and sustain governance structures like (regional) platforms that house multiple networks

Table 2. Activities of managing multiple networks.

Network management activities (McGuire 2002)	Managing *a* network	Managing *multiple* networks
Activation	Incorporating actors and their resources for network goals	Developing governance platforms to coordinate network actions
Framing	Facilitating agreement amongst network partners	Redefining the organizations' and network managers' identity
Mobilizing	Developing commitment and coordinated action for network goals	Finding institutional support for networking on multi-layers
Synthesizing	Enhancing the conditions for interactions amongst network actors	Determining where to effectively interact between networks

with a *variety* of goals. This may create governing flexibility for actors as they could use the platform for diverging networking purposes and strategies that moreover may change over time. The platforms' administrative support could activate actors as they might feel a necessity to network, but have limited time and expertise to do so. Related to this, deactivation while managing multiple networks not only entails breaking with actors because *a* network functions suboptimal, but also requires managers to interfere in many network formation processes to protect the organizations' governability and professionals work-life balance. The ongoing nature of network management is reflected in the framing activities while managing multiple networks. Framing goes beyond shaping the identity and culture of an individual network, hereby facilitating agreement amongst network partners. Instead, it also involves recurrent identity-making processes to position the organization and the manager as legitimate partner while networking. Several hospital executives, for instance, used slogans and adapted the organizations' strategic plans to reconfigure the organizations' identity in multiple network involvement. Managers must consider such framing techniques as a purposive activity for strategic (re)orientation, and to evaluate in which networks involvement is desirable.

Second, managing multiple networks is multi-layered. Mobilizing while managing multiple networks not only involves developing commitment and coordinated action for network goals, but also involves finding institutional support from internal *and* external stakeholders for network actions. The different network origins urge managers to mobilize actors on organizational, network, and policymaking layers simultaneously. Mobilizing efforts are inwardly and outwardly oriented and moreover ongoing to adapt to (changes in) the regulatory environment with (potential) conflicting accountability structures. Managers must inform external stakeholders on a regular basis about network actions and how this affects organizational performance, as they may block or support network formation. Related to this, synthesizing while managing multiple networks not only involves enhancing the conditions for interactions amongst network actors, but also requires managers to govern processes *between* networks and with external stakeholders within the regulatory environment. Not only the patterns of relations and interactions within the boundaries of an individual network matter (cf. Provan and Kenis 2007; Klijn, Steijn, and Edelenbos 2010), but also how networks possibly overlap or compete with each other. Managers must determine where network interactions converge to effectively interact with multiple agents, possibly breaking with meetings that are considered redundant.

We suggest that adopting a (regional) platforming logic could inspire and help managers to coordinate and steer network actions that are scattered across multiple agents on

managerial, professional, and policymaking layers (Lorne et al. 2019; Schuurmans et al. 2021). This involves the (re)configuration of governance platforms for network coordination (Ansell and Gash 2018) in a more or less defined geographical area, like Region X in our case. Such platforms do not function as a NAO for an individual network (Provan and Kenis 2007), but house multiple networks with different governances (Iedema et al. 2017). As part of 'external networking'—the relationships that managers maintain with external actors (Torenvlied et al. 2012; Hansen and Villadsen 2017)—managers may use platforms to "get things done" in the wider (health) system context, for instance by forming powerful coalitions to address institutional barriers for networking. Hence platforms may offer new governing possibilities for managers' 'relational work' as they facilitate and direct network actions (Feldman and Khademian 2007). Clustering network actions may also help to identify overlap and conflict. Some networks might be considered redundant while negotiating regional purposes, while other (parts of) networks can be tied together because of similar professionals' ambitions. Such 'collaborative enquiry' (Mitterlechner 2018) can serve as valuable input for network management as a neat and clear overview of network involvement cannot be assumed (cf. Provan and Kenis 2007).

Our study offers implications for further network management research. An emerging problematic issue is to *actually* get a grip on the increasing number of networks managers are involved in. We experienced it quite challenging to collect the multiple networks hospitals are involved in as care networks have different origins and overlap in terms of network participants and goals. The case overview of hospital network involvement is probably not all-encompassing, and collaborations are likely missed. Iterative comparison with hospital representatives during data collection helped minimize missing elements, and helped us to understand the diversity of care networks hospitals are involved in, but the qualitative data also shows that hospital executives do not always have a complete overview of networks their hospital participates in.

A second difficulty is how to account for the different policymaking layers involved in managing multiple networks. Although we focused on hospitals, group discussion attendees reflected the multi-level nature of networks as they were more diverse in terms of organizational type (hospital, health insurer, healthcare inspectorate). Ethnographic work into the network actions that cut across work floor, organizational and policymaking layers may help to refine our understanding of how managers (and professionals and policymakers alike) work with *other* actors in managing multiple networks (cf. Bartelings et al. 2017; Waring and Crompton 2020).

A third challenge is to remain sensitive to the adverse and less explored everyday consequences of network involvement for affected actors. Part of treating networks seriously (O'toole 1997) also involves attention to the 'dark sides' of networking as, in our case, networked healthcare is not merely attractive for organizations. We encourage researchers to take the consequences for everyday management as well as power dynamics in network formation (Maron and Benish 2021; Heen 2009) into account while studying network involvement.

A fourth related issue involves how to account for *where* networking takes place, and *how* place affects how networks take shape and are managed (Oldenhof, Postma, and Bal 2016; Pollitt 2011). This entails geographical characteristics, but also sociocultural dynamics. We found that multiple network involvement is not limited to urban regions, but is experienced across the country and forms a new reality for hospitals. Future work might focus on how managerial work in managing multiple networks is performed in different settings – urbanized and more remote – and other

institutional and organizational fields, as well as how networks are built, extended or deteriorate over time in situated settings, which seems desirable to further unravel governance processes across traditional organizational boundaries.

These challenges may provide a basis to further unravel how increasingly networked environments like healthcare affect the work of organizations and their management.

Conclusion

Given the high expectations and prevalence of networks in many public domains, this study has shown how hospital executives manage (through) a network of collaborations. The case overview of hospital network involvement shows that the nine hospitals we examined participate in a large and diverse set of care networks and collaborations (ranging from 20 up to 141), established on different scales and in various governance forms. The qualitative results show that hospital executives create a strategic niche to remain distinctive, use network consultations for organizational interests, prioritize or interfere in certain networks, and develop governance platforms for network coordination. Managing multiple networks is an ongoing process of coordination that professionals at work floors (physicians), managers and staff of healthcare organizations (network partners) and external stakeholders (like banks, insurers and regulators) are all part of. Policymakers should reconsider to what extent encouraging organizations to network also leads to undesirable developments like quality risks and increasing work pressure for management and professionals involved. It moreover may result in winners and losers as large-scale organizations might benefit more from a networked environment as they possess more organizational capacity for networking compared to others. Our case study offers a real-life understanding of how multiple network involvement affects organizations and their management, and is intended to be a first step in providing an empirical grounding for future analysis of what it means for actors to govern within an increasingly networked and layered environment.

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Ethical statement

The data obtained in this paper is in line with Dutch research law and regulations and does not have to be tested. All respondents were asked for consent, and this was received each time. More details about data collection can be found in the method section.

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