A delicate balance: how physicians manage change towards collaborative care within their institutions

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Abstract

Purpose – In response to the COVID-19 pandemic, in 2020–2022, the immutable and fragmented character of our healthcare system changed. Healthcare professionals and their institutional leads proved remarkably agile and managed to change toward collaborative care. The purpose of this paper is to examine experiences with collaborative practice in healthcare during the COVID-19 pandemic in two regions in the Netherlands, to explore and understand the relationship between policy and practice and the potential development of new collaborative care routines.

Design/methodology/approach – Using a methodology informed by theories that have a focus on professional working practice (so called "activity theory") or the institutional decision-makers (discursive institutionalism), respectively, the perspective of physicians on the relationship between policy and practice was explored. Transcripts of meetings with physicians from different institutions and medical specialities about their collaborative COVID-19 care were qualitatively analysed.

Findings – The findings show how change during COVID-19 was primarily initiated from the bottom-up. Cultural-cognitive and normative forces in professional, collaborative working practice triggered the creation of new relationships and sharing of resources and capacity. The importance of top-down regulatory forces from institutional leads was less evident. Yet, both (bottom-up) professional legitimacy and (top-down) institutional support are mentioned as necessary by healthcare professionals to develop and sustain new collaborative routines.

Practical implications – The COVID-19 crisis provided opportunity to build better healthcare infrastructure by learning from the responses to this pandemic. Now is the time to find ways to integrate new ways of working initiated from the bottom-up with those longstanding ones initiated from top-down.

Originality – This paper presents a combination of theories for understanding collaboration in healthcare, which can inform future research into collaborative care initiatives.

Keywords Integrated healthcare, Management of change, Organisational development

Paper type Research paper

Introduction

However devastating the COVID-19 pandemic was, it may also have been a unique learning opportunity for changes in the healthcare system. Over the years, healthcare professionals and their institutions have developed distinctive roles in healthcare; with professionals taking the lead in changing clinical practice, and healthcare institutions directing changes from a governance or financial perspective. These dual roles occur in a complex, immutable

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and fragmented healthcare system, with different levels and sites of care, and with paralyzed collaboration between the key players (Ackroyd, 2016). In response to the COVID-19 pandemic, in 2020–2022, a change appeared. Healthcare professionals and their institutional leads proved remarkably agile and collaborated across the boundaries of medical specialities and institutions to meet the healthcare needs of service users that emerged from the pandemic (Xyrichis and Williams, 2020; Michalec and Lamb, 2020). Yet, despite this demonstration of new collaborative practice, the risk of professionals and institutions taking back their traditional positions once the pandemic is under control is imminent (Ingerslev, 2016). As a consequence, lessons learnt remain disregarded and renewed forms of collaborative care remain poorly adopted.

Considering the immutable character of the healthcare system in non-crisis times, and the societal needs that urge for its transformation, it is important to understand the change that happened during the pandemic. New collaborative patterns and routines were created within traditional structures and relationships (Ackroyd, 2016; Phillips *et al.*, 2000). Of particular interest is how the pandemic impacted the driving forces (i.e. ways of doing things that influence, pressure or force people to behave, interact with others and think in specified ways) (House, 1925) and triggered a rebalance of relationships between front line healthcare professionals and their institutions. In non-crisis times, top-down policy construction often fails because of lacking ownership amongst healthcare professionals on the front line (de Silva, 2015). Even if top-down imposed change has been successful, this can be short lived without underlying change in behaviour amongst healthcare professionals and the results achieved will probably be not sustainable (Day, 2004). On the other side, bottom-up policy legitimation – i.e. professional working practice giving policy its practical meaning – is a slow and inefficient process, and formal adoption of professional initiated change can vary substantially across different practices (Appleby *et al.*, 2011; Kaehne, 2019).

There is increasing recognition that the benefits of bottom-up and top-down approaches must be combined (Ogunlayi and Britton, 2017). Yet, we lack understanding of how to change the driving forces of both professional collaborative practice and their larger institutions. The ease with which the COVID-19 pandemic stimulated integration and collaboration offers opportunities to enlarge this understanding. In this paper, we report experiences with collaborative practice in healthcare during the COVID-19 pandemic in two regions in the Netherlands. Using a methodology informed by theories that have a focus on professional working practice (activity theory) or the larger institution (discursive institutionalism), respectively, we aim to understand how the driving forces in both worlds changed simultaneously. Finally, we propose a model with recommendations for sustainable collaboration in the future.

Theoretical framework for studying collaborative change

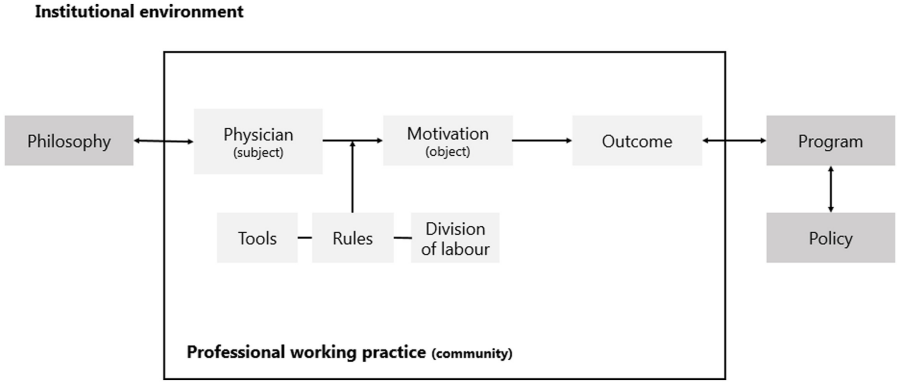
Activity theory (AT) helps conceptualize and explain the driving forces in professional working practice by viewing activity and knowledge as situated in so-called "activity systems" (Engestrom, 2000; Engeström, 2001). An activity system can be described as the context in which any activity, in this case collaboration, occurs. Considering different professional working practices as different activity systems may help to analyse how collaboration within and amongst practices unfolds. Activity systems consist of various components that help to understand this process. These components are the subjects (i.e. the people engaged in the collaborative activity), the objects (i.e. the specific motivations or purposes of collaboration), the tools (e.g. the technological trends), the rules (e.g. the guidelines), the community (e.g. colleagues) and the division of labour (e.g. the routine of who does what) (Engeström, 1999).

Although the third generation AT provides direction for exploring how professional working practice may change institutions, it does not provide specific enough guidance to

allow explorations of how institutions change working practice (Engeström, 2009; Spinuzzi, 2021; Blacker, 2009; Blackler and McDonald, 2000). While it is acknowledged that AT needs to create and implement a unit of analysis that matches the complexity and coalescence of healthcare systems (including a focus on both professional working practice and the larger institution), the development of a fourth generation AT is still fragile (Engeström and Sannino, 2021). Therefore, in this paper, we set aside that specific discussion, and compiled a conceptual analytical lens that integrates AT with a theory from the domain of political science: discursive institutionalism (Figure 1).

Discursive institutionalism (DI) provides a broadened unit of analysis which allows AT's focus on professional working practice to be extended and enhanced to the level of the institution (Schmidt, 2008, 2010, 2012; Friedland, 2012). Where AT focuses on the components that healthcare professionals consider relevant in their own practice, DI involves the broader forces (often called "ideas") that live in their institutions.

DI, moreover, draws attention to the difficult balance between top-down policy construction and bottom-up policy legitimation (Schmidt, 2015). It distinguishes three broad levels of driving forces that live within healthcare institutions: regulative, normative, and cultural-cognitive (Table 1) (Lukes, 2004; Foucault, 2019; Wahlström and Sundberg, 2018; Mersha and van Laerhoven, 2019; Scott *et al.*, 2000). Cultural-cognitive and normative



Note(s): Elements of AT are pictured in light grey: AT helps explaining the activity of how individual physicians (subjects) achieve certain outcomes through pursuing their motivations (objects) with the tools, rules and division of labour provided in their activity systems. Elements of DI are pictured in dark grey: DI separates different levels of ideas or driving forces that live within institutions (philosophies, programs and policies) to explain why and how things change. As a whole, the figure sketches the two-way influence between professional working practice and institutions

Figure 1.
Integration of activity theory (AT) and discursive institutionalism (DI)

Regulative: *policy level ideas*	Laws and contracts which stipulate what *must* happen: *basic prescriptions for action to solve a given problem*
Normative: *programmatic ideas*	Assumptions and expectations about what *should* happen: *defining problems, consider the issues at stake, set goals, and select the methods or instruments to be applied to the problem*
Cultural-cognitive: *philosophies*	Taken-for-granted scripts and mental models about what generally *does* happen: *deeper sets of values, knowledge systems, beliefs, or worldviews*

Table 1.
DI's different levels of driving forces (ideas) within institutions

forces mainly originate in professional working practice and can constrain the regulative forces from institutional management (and vice versa). Implementing and sustaining change in healthcare systems benefits from selecting and combining elements at all three levels (Boswell and Hampshire, 2017).

Although typically being used to theorize macro-level changes in institutional structures, DI will be applied in this study on a more meso-level to support AT in analysing how healthcare professionals achieve institutional change and what institutional forces in turn help or hinder efforts to sustain those changes.

Figure 1 illustrates this process. It depicts the balance between AT's professional working practice and DI's larger institutional environment. The inner part of the rectangle illustrates professional working practices with their components of collaboration. This helps to understand how healthcare professionals achieve certain objects and outcomes through using different tools and rules, or by employing certain routines of who does what. Yet, we anticipate that if we aim to understand the complexity and coalescence of healthcare systems, an expansion of AT's unit of analysis is required. Accordingly, the driving forces of the larger institutional environment that may help or hinder collaboration in professional working practice are illustrated outside the rectangle of Figure 1. In this study, we focus primarily on these driving forces and analyse changes in professional working practice from an institutional perspective, even though we took concepts from activity theory (e.g. division of labour) as sensitizing concepts in our analysis.

Methods

Study design and setting

This study is part of a larger action research project on collaborative care, called ZOUT (a Dutch acronym for "The right care at the right place in Utrecht"). The study entails a qualitative exploratory analysis of how physicians from different medical specialities experienced the relationship between policy and practice in providing healthcare during the COVID-19 pandemic. Halfway the pandemic (end 2020/beginning 2021) online meetings with physicians from different medical specialities and institutions were organized to discuss ongoing and past collaboration in COVID-19 care, and to formulate recommendations for sustainable collaborative care. Policy-makers were not involved in the meetings. In total 24 meetings took place, spread over six evenings and three regions in the Netherlands (Utrecht, Haarlem and Amsterdam). The meetings were designed according to the philosophy of AT in order to reveal how physicians achieved collaborative change during COVID-19. Particularly, the meetings aimed at understanding the factors that may help or hinder to sustain that change. During the analysis, the importance of the larger institute, as counterpart of professional practice, became clear and we chose to involve a second theory: DI. Accordingly, our research aim – to analyse professional working practice from an institutional perspective and explore how DI can support in expanding AT's unit of analysis – emerged as part of the research process, evolving from the data as they were collected (O'Leary *et al.*, 2021; Agee, 2009).

Set up of the professional discussions

The meetings were all led by a facilitator to guide and stimulate the discussion. Their guideline includes questions such as "What additional agreements are required between the various stakeholders involved to enable change?", "What does help you?", and "Where are the difficulties?". The meetings lasted between 50 and 70 min, and were attended by about 200 physicians (a mix of public health physicians, general practitioners and secondary care hospital specialists in the region). The structure of the meetings was as follows: each meeting started with a short round of introduction, after which the facilitator

introduced three possible discussion topics: professional involvement (about the way and quality of working and physical proximity to patients), organization of daily practice during COVID-19 (about the changes in daily practice and promises for the future), and collaboration and coordination of COVID-19 care in the region (about connecting, trusting each other, and promoting continuity of care). One or more topics were discussed, depending on the context that participants preferred to talk about. The discussion about each topic ended up formulating a positive recommendation to share with participants in the other meetings.

In two of the three regions (Utrecht and Haarlem), the meetings (n = 18) were audio-recorded. In Amsterdam, we had no consent to record the meetings. Purposeful sampling was used to select 6 of the 18 meetings that particularly focused on the discussion topic "collaboration and coordination in the region" (Patton, 1990). The audio fragments of these meetings were transcribed verbatim. In total, 56 participants participated in the six meetings that were selected for analysis. The meetings were mixed in composition of physicians, but included general practitioners, internists, surgeons, paediatricians, geriatricians, rheumatologists and public health physicians. The participants were informed about the research project beforehand and all gave their consent for recording and analysis of the results. They were not involved in interpretation of the results. The Medical Ethics Review Committee (METC) of the University Medical Center Utrecht confirmed that this research was not subject to the Dutch Medical Research Involving Human Subjects Act (WMO), and hence waived from the necessity for formal approval.

Data analysis

Anonymized transcripts of the six meetings were uploaded to the qualitative data analysis software NViVo and analysed using an integrated qualitative approach. We used the directed-content analysis method, iteratively informed by conceptually theoretical concepts stemming from the literature on AT and DI to develop a coding scheme (Hsieh and Shannon, 2005). These concepts guided the initial development of the codebook, and were complemented by inductive coding.

The deductive coding scheme included organizational characteristics, people characteristics, relational aspects, available instruments, and the external environment. Subsequently, codes were considered in the perspective of AT to explore underlying routines and forces. For example: using AT's notion of "division of labour" helped to reveal the driving forces behind the code "relational aspects". The literature on collaboration in times of crisis further completed the coding scheme (adding, for example, resilience of the system). Finally, deductive coding was complemented by inductive coding, with changing forces and routines in professional working practice as sensitizing concepts.

Subsequently, we analysed the larger institutional environment in which collaboration took place. The coded fragments were searched for clues on what *does* happen (cultural-cognitive forces), what *should* happen (normative forces), and what *must* happen (regulative forces) in institutions to change collaborative patterns. We explored how the cultural-cognitive, normative and regulative forces changed within institutions and how that influenced professional working practice (and vice versa). Data saturation was considered to have been reached, although saturation is a contested concept in the qualitative research domain (Varpio *et al.*, 2017).

Results

Discussions about the three discussion topics (professional involvement, organization of daily practice during COVID-19, and collaboration and coordination of COVID-19 care in the region) raised several issues and provided insight in the driving forces behind care organization among physicians and within institutions. Accordingly, the first part of the

result section is divided according to the three levels of driving forces that live within healthcare institutions according to DI. Mainly the cultural-cognitive forces and normative forces seemed to play a role in changing collaborative practice.

The driving forces for change

Cultural-cognitive forces: what does change. Perceptions of the contribution of different medical specialities to the care and cure provision ("division of labour") changed significantly during the pandemic. As a result, physicians started to see the added value of collaboration outside their own speciality (Box 1 – excerpt 1):

Box 1. Cultural cognitive forces – excerpt 1

1 *But what I also find important myself is that the cooperation with the other disciplines is, uh, much clearer now*
Yes, and – and I'd also like to involve the, um . . . involve the nursing home doctors, the nursing homes in that, or at least see if we can do something with them, um . . . Because we're lacking some of that information too, as we saw just a moment ago
And what about psychiatry? That too?
Psychiatry. Absolutely, the mental health services. Yes

This in turn initiated a feeling of "doing it together". The divide between "us" and "them" was downplayed to achieve a "we" (Box 2 – excerpt 2), and the willingness to help out others increased (Box 2 – excerpt 3). At the same time, prior scepticism among physicians about new instruments of care delivery such as joint video-consultations changed. More than before, during the pandemic participants felt the need to try the unanticipated or unknown under the pressure of the extreme situation. A renewed appreciation of instruments and tools followed. Where physicians previously tended to use new tools because their institutional leads believed that they were necessary or supportive, physicians now felt it was needed in their professional work. This intrinsic belief is very important for being able to change existing routines (Box 2 – excerpt 4):

Box 2. Cultural cognitive forces – excerpts 2–4

2 *I think there's a bit of idealism that I would like to hang on to from the present Covid period. We care for our patients together, as one medical team, one profession with the same goal: to provide the best possible care for patients and for the population in general. And in pursuing that goal, not compartmentalizing, not thinking "Hey, you belong to this or that practice"*

3 *I think that, um . . . well, you do feel a lot of – a lot of job satisfaction that way. Because if you think, OK, this isn't such a nice chore but we've agreed that it's my chore, then you'll do it with more love than if you think hey, this is someone else's job*

4 *We suddenly learnt how much more is possible . . . for example, when I have a patient on the examination table and the specialist says, just a second, let me see that – that right there – just take another look at those, uh, MCP joints, just take that knee and press down. That way she does a physical examination too. And that's just fantastic*

Normative forces: what should change. First of all, physicians agreed that they should make more time for each other structurally (Box 3 – excerpt 5). Also, they concluded that an important condition for managing change was, to break down professional walls and build bridges between different working practices. Knowing each other, being accessible and

having short lines of communication – hence paying attention to what AT describes as the "subjects" in your "community" – were mentioned frequently as promises for change (Box 3 – excerpt 6).

Box 3. Normative forces – excerpts 5–6

5 *Of course. And . . . Yes, I think it would be very advisable, um . . . if we consulted more beforehand about referrals of any kind, quite apart from Covid . . . So I still think, um . . . that time should be set aside during the specialist's surgery hours for possible consultation with the GP*

6 *Well, the lines of communication have become really short. I know the people who are involved by their first and last names and I can literally call them anytime I need them to ask a question or discuss a problem and they jump straight in to help me find a solution, because they know that if they have a question or a problem they can call me and we'll help them in return. So that sense of, um, equality and that interaction was very spontaneous and I think it's created a lot of opportunities going forward*

During the pandemic top-down coordination of resources and professional capacity sharing was often replaced by coordination from the bottom-up. Professional working practice adapted towards what was needed for continuity in patient care, and discussions about financial management and reimbursement (that previously dominated collaboration) were not dominating but rather took place afterwards (Box 4 – excerpt 7).

This excerpt clearly shows how it was primarily the physician's creative workaround and mutual willingness – and not the formal institutional rules and instructions – that made the system more flexible during this crisis and initiated collaborative change. Yet, despite the absence of clear institutional policy, physicians agreed that institutional support should be present to facilitate clinical capacity and flexibility (Box 4 – excerpt 8):

Box 4. Normative forces – excerpts 7–8

7 *In Nieuwegein we had a severe shortage of flu shots, so we shared them out among ourselves. Tom had ten left over and Dick had ten, so we passed them around and that was that. And the financing will sort itself out afterwards, it's not a big deal*

8 *Another positive development in my view was that, even in an unwieldy building like hospital X, the administrators or management, or some of them, made themselves completely available to the healthcare professionals on the front line . And that was an incredibly pleasant way to work. So, yes, many of their decisions simply revolved around us. I mean, the nursing staff, the cleaning staff, just all the service providers, the physicians. And that was very gratifying . . . Practices that suddenly left you much freer in your work*

And all the things that you used to do a certain way don't have to be done that way anymore. Because suddenly it's possible to do it all differently. And it's all happening so fast. And especially having meetings online, I love it

Regulative forces: what must change. Physicians did not have any formal policy or guideline that dictated what or how they "must" have been doing during the pandemic. They rather exchanged ideas about how they changed their collaborative routines from the bottom-up. Yet, physicians provided some examples of policy changes that are emerging because professional working practice had already shown their beneficial effect, e.g. financing the "listen-in consultation" (Box 5 – excerpt 9):

Box 5. Regulative forces – excerpt 9

9 *Zilveren Kruis health insurer now has a payment entitlement for this very type of question. What, um . . . what we normally do by phone, any medical queries about a patient, you don't get paid anything for those. Which is weird, because you do invest in your expertise and you share it. And, um . . . by promoting this kind of low-threshold consultation a bit more, since it ultimately also helps reduce costs of course, there's now a – a rate available for this as of 2021 and it's called the "listen-in consultation"*

Tensions between pursuing change and tendency to return to traditional practice

Working in times of a pandemic did integrate different perspectives and significantly drove collaboration. Yet, a lack of national (political) or institutional support often hindered physicians to maintain these new collaborative patterns (Box 6 – excerpt 10):

Moreover, the lack of a clear vision or management plan within leading institutions in healthcare is considered a serious barrier for sustaining new routines (Box 6 – excerpt 11). Physicians expressed their worries for not being able "to see the wood for the trees" in the absence of a clear plan from top-down (Box 6 – excerpt 12):

Box 6. Tensions between change and traditional practice – excerpts 10–12

10 *I think that as a professional group, as doctors, our ability to practise our profession in fact depends on a party [health insurer] that won't even involve itself in the discussion*
Look, this is a very tricky problem, nationwide. It's cultural problem and an organizational problem at the health insurance companies. Because at the overarching level they make all sorts of promises and say all sorts of things, but you've probably noticed in GP practices that if you talk to the salespeople, the purchasers, there's a huge gulf and they do their own thing

11 *And what I feel is lacking is that, um . . . I feel that the government is capable of making quick decisions about health care now, but that their thinking is very short term and I'm missing the long-term view*

12 *What was achieved during the initial crisis, we really ought to perpetuate that. And that immediately raises practical questions, like how on Earth can I perform on five different platforms simultaneously? . . . And then, at a certain point, it reaches information overload. So not to be obnoxious or, uh, against cooperation, but at some point it's a question of how, how are we supposed to do that?*

A model for sustainable collaboration

The improvement in collaborative healthcare in times of COVID-19 was driven primarily bottom-up rather than top-down. The model in Figure 2 helps to understand the driving forces and routines in professional, collaborative working practice and the larger institution and provides recommendations for change and sustainable collaboration in the future. The figure illustrates how professional working practice and the larger institutional environment are related when it comes to establishing collaborative change. Our focus on the larger institutional environment helped to understand how and why collaborative change in professional practice unfolds. The previous sections showed how DI's driving forces changed and/or stimulated the subjects in professional working practice to achieve certain objects and outcomes through using different tools, or by employing certain routines of who does what. However, it is especially AT's rules that benefit from a wider, institutional unit of analysis. The previous section showed how AT's rules are less prominent in establishing collaborative change – it is not the institutional rules that should govern how physicians work, but the institutional support.

At the top right of Figure 2 are the cultural-cognitive forces, illustrating how change often starts with changing perceptions, beliefs or deeper sets of values in subjects from the bottom-

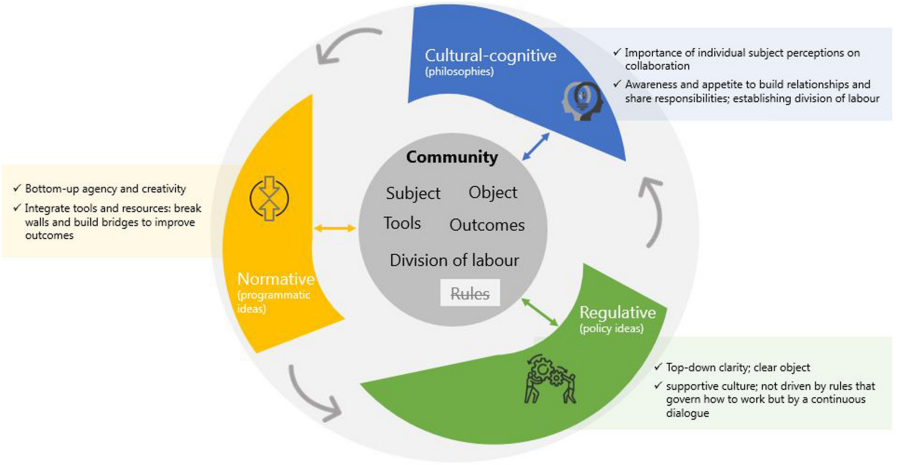


Figure 2.
Model for sustainable collaborative change

up. The results presented in the previous sections show the importance of physicians' intrinsic commitment to build relationships and share responsibilities (dividing labour) within their communities. Commitment in professional working practice helps the larger institution to initiate movement in the organization of care (and not vice versa).

The left side of the model depicts the normative forces. Ideas about what should happen include the integration of tools and resources across practices, including alignment of agendas to find each other (e.g. making reservations through timeslots) (Box 7 – excerpt 13). Yet, normative forces include bottom-up as well as top-down change management. The physicians discussed how top-down clarity should be provided while facilitating bottom-up agency (Box 7 – excerpt 14).

Finally, at the bottom right of the model are the top-down regulative forces. The key to changing routines in collaborative care resides primarily with physicians themselves – and not with their institutional rules. However, the physicians did discuss how it would help to be in conversation with their institutional leads to be provided top-down support for their daily work and decisions (Box 7 – excerpt 15):

Box 7. A model for sustainable collaboration – excerpts 13–15

13 *So personally, I think, um, if you want something to be efficient and fast and, um, effective, then you should perhaps equip the existing platforms to do that even better, don't you think?*

14 *We need firmer national frameworks that get people to the discussion table regionally and also open the door to agreements. And as doctors, we should have a seat at that table*

15 *But that means that, at the national level, we aren't troubled by partitions between organizations, or by different sources of funding. Just give us that space. Facilitate that. And we do work in partnership, we agree on who is going to do what for which patient. In my view, that's not just a question of idealism. I think it's the future*

Discussion

In this study, we explored the driving forces that enabled the development of new collaborative care routines when a pandemic faded the traditional ones. Through a combined lens of AT and DI, we aimed to understand the two-way influence between policy (the

institution) and practice (professional working practice). Changes in the cultural-cognitive and normative forces opened the doors for new relationships and sharing of resources and capacity in professional working practice. In times of the pandemic, regulatory forces were less strong. Yet, both (bottom-up) professional legitimacy and (top-down) institutional support are deemed necessary to develop and sustain new collaborative routines.

The urgency of change during the pandemic tipped the balance in favour of professional legitimacy. This is in sharp contrast to many initiatives for healthcare changes in times before the pandemic. During COVID-19, healthcare professionals acted independent from the policy direction provided by institutional management (Brown, 2015). Yet, we consider our results not to be unique to times of pandemics. One of the fragments cited that physicians felt as if their institutions finally had let go of the established, physical structures for collaboration during the pandemic. However, their institutions had not forbidden online meetings previously, and collaboration has also been their objective. In fact, institutional policy and practice got nearer to one another, and probably even reinforced each other, because legitimacy was now in the eye of the beholder (Beck *et al.*, 2021).

Resonance of professional working practice and the institution benefited greatly from the sense that they no longer had "just" a common objective, but also a common fate. The literature on collective behaviour in times of crises indeed explains how a sense of a common enemy (as COVID-19 was often called) can be the source of an emergent shared identity, which in turn provides the motivation to collaborate (Drury, 2018). Our results, summarized in Figure 2, shed a light on how our healthcare system changed in response to "sharing a common fate". These results may support in sustaining new collaborative routines when the time arrives that "sharing a common fate" changes back in simply "having a common objective". If we would pay more attention to the cultural cognitive forces that were triggered by "sharing a common fate" (e.g. the force of individual perceptions) while finding a delicate balance between the normative and regulative forces (facilitating both top-down clarity and bottom-up agency), new collaborative routines may be sustained or even enhanced.

Figure 2 may also promote understanding of how changing routines occurs at different levels, how these levels are particularly intertwined (though the balance may tip one way or another), and how they are equally important to initiate change. Whereas the normative and regulative forces are generally considered as equally important, the cultural-cognitive forces are more often considered to reside in the background as underlying perceptions that are rarely contested except in times of crisis (Campbell, 2004). Indeed, our results show how the pandemic challenged the existing cultural-cognitive forces and how that changed professional practice. If the cultural-cognitive forces are of such great importance for changing professional practice in times of a pandemic, it is highly unlikely that they play no role in regular times. Indeed, one of the basic beliefs of AT for progressing professional working practice is to make the implicit explicit ("to take the invisible assumptions in your head and articulate them"). Focussing on the continuous interplay between professional working practice and the cultural-cognitive, normative and regulative forces in institutions may help to further restore the balance between "bottom-up" and "top-down" in future, post-pandemic times.

This study has several strengths and limitations. The main strength of this study is the methodology where AT and DI were combined to analyse changes in collaborative routines. We need to be mindful to undertake research that builds on existing knowledge, addresses known gaps, and makes the field advance. Collaborative care has been studied extensively and improved our knowledge on the many factors that facilitate or constrain collaboration. Yet, there is still a gap in understanding the underlying forces that drive these factors (Szymczak, 2018). The combination of two theories, AT and DI, allowed us to reveal those forces. A limitation of the analysed meetings may be that policy-makers or healthcare

professionals other than physicians were not involved, because the pandemic was not over yet and extra tasks therefore not expedient. Future research initiatives may bring together healthcare professionals who aim to influence the policy and actual policy-makers. A second limitation concerns the absence of patients and follow-up meetings to check upon the results. Yet, meetings were organized in different national health care regions in the Netherlands to increase the reliability of our findings.

The current study aimed to understand how the driving forces in professional working practice and the larger institution changed simultaneously during the COVID-19 pandemic, and how our healthcare system can sustain the resulting, positive collaborative changes. We provided insight into the dynamics of two-way change, referring to the bottom-up/top-down balance. The flexibility and input from professional working practice clearly stimulates innovation and brings power of change. Physicians played a dominant role in crisis management. Institutions were a bit more in the background when it came to direct action, but their support and facilitation is just as much needed to provide clarity and uniformity over professional responsibility. Now is the time to consolidate these experiences and integrate new professional-driven ways of working with longstanding policy-driven ones. The COVID-19 experiences are a special opportunity to build better healthcare infrastructure by learning from the responses to this pandemic. Future phases of this pandemic, other pandemics, and our learning healthcare system in general, all could benefit from a close partnership between clinical practice and (organizational) learning theories.

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