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Dynamics of a specialized and complex health care system: Exploring general practitioners' management of multimorbidity

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Abstract

Objective: To explore general practitioners' (GPs') experiences of cooperation with hospital-based physicians regarding multimorbid patients and to identify challenges as well as strategies in managing such challenges.

Study setting: Three medical practices in a provincial town in Denmark.

Study design: A qualitative methodological design was used with explorative data collection among GPs.

Data collection/Extraction methods: Participant observation, qualitative interviews and a focus group interview were conducted. Interpretive description was used as the analytical framework.

Principal findings: The GPs appreciated cooperating with physicians in optimizing treatment of multimorbid patients. However, three main challenges were experienced: insufficient communication and coordination; unclear divisions of roles and responsibilities; and differences in the way of approaching patients. The GPs navigated these challenges and complexities by taking advantage of their personal relationships and by developing creative and patient-centred ad hoc solutions to difficulties in cross-sectorial cooperation. A hospital initiative to support care for multimorbid patients has not been adopted by the GPs as a preferred strategy.

Conclusions: The structures of the health care system severely challenged cooperation regarding multimorbid patients; nevertheless, these GPs were aware of the advantages of cooperation, and their mainstay strategy in this involved personalized solutions and flexibility.

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Introduction

Decades ago, Strauss et al.[1] described a transition within health care services from dealing with acute conditions towards a growing preoccupation with chronic diseases. They advocated a need for health care systems to shift their focus from cure to long-term care with complex and continued treatment courses to follow.[1] Today, these suggestions to shift focus towards chronic conditions should be extended to a focus on multimorbidity defined as the coexistence of two or more chronic conditions in the same individual,[2,3] for example heart disease, hypertension and diabetes. The prevalence of people living with multimorbidity is growing, and recent research has pointed to a disproportion between the complexities of the numerous people living with multiple chronic diseases and the increasing specialization of health care.[4–7] While organizational, medical and technological innovations have continuously improved health care, they also engender increased specialization and centralization. This makes it difficult for patients and health care professionals alike to maintain an overview of disease and treatment courses and to fit into standardized specializations in case of multimorbidity.[8–10] Currently, health care is characterized by a single-disease framework and a discontinuity in care, which disregards viewing the patient's health problems as a whole and poses challenges of fragmentation and dehumanization.[7,8,11–13]

Multimorbidity often requires several forms of specialized care with regard to diagnosis and treatment in outpatient settings and following inpatient care. Therefore, in dealing with multimorbidity, cooperation between health care professionals is particularly important.[14–16] Cooperation is often further extended to the local community responsible for social services and home care. In countries such as Denmark, this includes public hospitals, local community care and private general practitioners (GPs) as service providers. While the need for interdisciplinary cooperation and coherence between sectors of the health care system is increased, the frameworks and conditions for providing it are challenged as outlined above, leading to a 'chronic encumbrance of coordination'[17] (our translation). Patients suffering from multimorbidity experience a treatment burden when they have to visit several clinics and hospitals besides their GP.[4,18–20] They are left with a considerable amount of work to balance different treatment regimens across sectors and handle conflicting information because health care professionals grounded in their own specialties do not often share information and cannot afford to devote much time to the interplay of diseases affecting patients.[14,21–24] The increased demand for coordination across sectors also challenges health professionals. Research shows that patients with multimorbidity make up a substantial part of consultations in general practice: between one-third and more than half.[9,25] Thus, GPs in particular have a demanding task in coordinating care both organizationally and medically.[13] Patients with

multimorbidity entail heavier workloads and greater time consumption than other patients.[14,26,27] In particular, coordination and cooperation between sectors of the health care system has been identified as an area constituting major challenges in GPs' management of multimorbid patients.[14,15] However, while patients' experiences of treatment burdens have been thoroughly investigated, as have GPs' perspectives on management of multimorbidity, the GPs cooperation with hospital-based physicians have not hitherto been well explored in today's complex health care systems.

This article departs from the outlined challenges of contemporary health care systems with a rise in multimorbidity and towards increased specialization and fragmentation. The aims of the article were to explore GPs' experiences of cooperation with hospital-based physicians (hereafter physicians) regarding the care of multimorbid patients, and to identify challenges the GPs meet as well as their strategies to manage such challenges. The article contributes with new insights that could help health care personnel and decision-makers organize future care trajectories to benefit people with multimorbidity.

Methods

A qualitative methodological approach was applied using participant observations, individual interviews, and a focus group interview. This field work was conducted over six weeks. The timeframe was pragmatically defined by an estimation of achievement of diversity and variation in data. Table 1 provides an overview of the data.

Setting and participants

The study was carried out in GP clinics in a provincial town in Denmark. A purposive sampling strategy was employed (single-owned and shared clinics; equal distribution across gender). A local regional GP coordinator assisted in suggesting and contacting clinics with GPs as potential study participants. One of the researchers contacted six clinics by letter and telephone to inform them about the study. Three clinics with a total of 12 GPs agreed to participate: two shared and one singled-owned. In Table 2, the Danish health care system, with focus on the local setting where the study took place, is presented.

Participant observation

Participant observation was used to gain insight into GPs' practices regarding their patients with multimorbidity and coordination with other health care providers. An observational guide based on existing empirical and theoretical knowledge guided the research. One of the researchers spent approximately two weeks in each of the included general practices, participating in a large number of patient consultations (regardless of whether dealing with patients with multimorbidity), including home visits and telephone consultations. The GPs introduced verbally the researcher to the patients and informed them about the study, emphasizing that the focus was the GP, not the patient. Informal interviews with GPs were initiated between patient consultations and during lunch and other breaks. Detailed field notes were written during and after each observation session.

Individual interviews

In addition to participant observation, individual interviews with the GPs (except from the two GPs enrolled in training; see Table 1) served to gain insight into experiences and reflections regarding coordination across sectors. The interviews were semi-structured, and an interview guide

Table 1. Data overview.

	General practice clinic A	General practice clinic B	General practice clinic C
Clinic characteristics	Single-owned clinic; Staff in total: 3	Shared clinic; Staff in total: 10	Shared clinic; Staff in total: 16
Participant observation	• 1 GP: Harry • 1 nurse/secretary	• 4 GPs: John; Elisabeth; Marlin; Kathy • 1 nurse • 1 health assistant • 1 secretary	• 7GPs: Michael; Mattis; Karen; Helen; Christina; Marie (enrolled in training as a GP); Susan (enrolled in training as a GP) • 3 nurses • 2 secretaries
Individual interviews	• 1 GP: Harry	• 4 GPs: John; Elisabeth; Marlin; Kathy	• 5 GPs: Michael; Mattis; Karen; Helen; Christina
Focus group interview	7 GPs: Harry	John; Elisabeth; Marlin	Mattis; Marlin; Helen

based on data from the observation sessions was developed and adjusted according to the individual informant. The interviews, which lasted approximately 1 h, were conducted in the GP clinics after opening hours, and scheduled in continuation of the observations. All interviews were audio recorded and then transcribed verbatim.

Focus group interview

Following the initial analysis of the material, a focus group interview with GPs from the included clinics was conducted. The purpose of the focus group interview was to qualify the analysis by validating the initial analysis of findings from the participant observations and individual interviews and prioritizing the findings with regard to importance. Seven GPs participated: the three contact persons from each of the clinics and additional four GPs selected to meet an equal distribution across gender. A thematic interview guide with open-ended questions based on the initial analysis guided the focus group interview, which lasted 2.5 h. The focus group interview was audio recorded and transcribed verbatim.

Analysis

Analysis followed an inductive process based on interpretive description.[28] It included the following steps: (1) a thorough reading of the transcribed data and initial coding discussions. Codes were developed from data and throughout the coding process, carried out jointly by all authors; a pilot test of two interviews and field notes were performed by two authors; consensus was met by discussion, and the codes were adjusted accordingly (2) thematic coding of all data by two authors' (3) condensation; and (4) critical interpretation and synthesis. NVivo 11.0 QSR software was used to handle the data, which are presented anonymized, using pseudonyms.

Results

Having outlined the increasing necessity for GPs to cooperate with physicians around multimorbid patients in the introductory

Table 2. The Danish health care system.

Five local governing bodies (the regions) run the Danish health care system. Through the national tax system there is free and equal access to primary and secondary care services. GPs practice privately but are reimbursed by the regions. Around half of the GP clinics in the region where the study took place are shared clinics. Most Danes are listed with a specific GP, who takes care of chronic diseases and minor acute ailments and serves as gatekeeper for secondary care referrals. GPs also serve as coordinators and facilitators for treatment and disease courses. Hospitals are non-profit, public institutions with staff employed by the region. Access to the secondary health care requires, as mentioned, a referral from a GP to the local specialized or the regional highly specialized hospital but requires no patient charges.
The GPs participating in the study mainly cooperate with physicians at the local hospital with approximately 1000 employees and has a radiology, medical, orthopaedic and anaesthesiology department. The hospital receives acute medical patients during daytime but is otherwise an elective hospital. Despite from having a number of specialized outpatient clinics, this hospital has also established The Clinic of Multimorbidity to address challenges regarding the treatment of multimorbid patients. The objective of this clinic is to offer services to support GPs in their care for multimorbid patients. GPs can refer patients, who, during a 1-day visit, are attended by relevant physicians with the aim of providing an assessment of each patient's overall health condition and suggesting care and treatment adjustments.

section, we now present an analysis of the challenges of such cooperation. In the first part of the analysis, we, departing in the GP perspectives, focus on the GPs' experiences of cooperation with physicians, suggesting that it is highly complex. Next, we scrutinize how the GPs navigate the experienced complexity, emphasizing the strategies they employ in their attempts to cooperate with physicians, including their experiences with the hospital-implemented strategy targeting multimorbid patients briefly described in Table 2.

Challenges to cooperation

In general, the GPs in our study found cooperation with other health care providers to be an essential part of their work because of the specialized structure of the health care system. When it concerned patients suffering from multiple diseases, this consideration became even more prevalent because of the complexity and variation of the various disease courses. Our data encompass examples of well-functioning cooperation and instances where the cooperation works well. During field work the researchers thus had positive statements from GPs about cooperation, but the main impression was that cooperation was experienced rather complex, and that GPs found it challenging. For instance, the GPs talked about cooperation across sectors as an ideal concept that 'walks with a limp' and 'leaves much to be desired'. The focus of this article is the challenges the GPs meet, for which reason their perceptions and management of such difficulties will be emphasized in the presentation of results. In the following, three main challenges with regard to GPs' cooperation with physicians are outlined: insufficient communication and coordination; unclear division of roles and responsibilities; and differences in the way of approaching patients.

Insufficient communication and coordination

The first challenge to be outlined is related to communication and coordination. According to the GPs in our study, the increasingly specialized health care and number of different health care providers

involved in the treatment of patients ensures not only highly specialized and fast care, but also insufficient communication and coordination. GPs explained that important information about decisions on diagnosis and treatment was not always shared among all involved health professionals, resulting in possible inconsistencies and disregard for the interplay of treatments. This can often be explained by the numbers of health care providers involved in each treatment course, and by the lack of clear communication lines. GP John described this in the following way:

> It varies a lot how much useful information we receive from the hospital. A multimorbid patient might be enlisted in three different outpatient clinics at the same time, and that causes problems. Also, the patient is of course quite stressed about trying to get hold on all that. And the patient might have symptoms that could relate to one or another of the diseases, and which of the outpatient clinics should we then cooperate with? (GP John)

In line with this, other GPs explained:

> Some symptoms overlap. For example, difficulty in breathing could be related to the heart or the lungs. In the old days, you just asked for help to having the symptoms explained, but today the patient is sent back and forth between the heart department, me, the lung department, and back again – 'No, that's not my department,' 'No, it's not my department either.' Then we are back again where we started – nothing is coordinated. (GP Christina)

> Sometimes it just seems like there is no plan – or at least I have not been informed what the plan is. (GP Karen)

According to the GPs, the challenge regarding communication and practical coordination between the GPs and the hospital has intensified because of the increasing numbers of complicated multimorbid patients accompanied by the increasing specialization of the health care system.

Unclear division of roles and responsibilities

Second, GPs found that they and physicians depended on each other to optimize patient treatment, and that this required a clear division of tasks. However, from the perspective of the GPs, the division of professional roles and responsibilities between them and physicians was blurred and not clearly defined in practice. For instance, GPs often experienced that patients were discharged from hospital without being fully treated. While it could be argued that this is rooted in the ongoing reduction in hospital budgets and results from the continuous battle between primary and secondary care on where specific health care services should be placed, in daily clinical practice the GPs experience it as 'task leaking' because tasks they expect to be handled at the hospital are increasingly left to them. Preparing for the next patient, GP Harry stated:

> It is not okay that it is just announced in the discharge medical record that the GP should do a blood test within two days. That is not acceptable! It is the physicians who have initiated the treatment who have legal responsibilities. As a GP, I cannot take that kind of responsibility without having made an agreement with the physicians in charge. Announcing it in the discharge medical record is definitely not good enough. (GP Harry)

The GPs felt that physicians often have implicit and unspoken expectations to what GPs should do with regard to a shared patient. Such expectations might include

work tasks that GPs consider to belong to specialized departments, not in general practice. For instance, GP Kathy said:

> In our job as GPs, we sometimes pass on the task of diagnosing and treating complex patients. But then, some of the patients are quickly sent back to us, still with a lot to be done. In those cases, I could wish for a better way of cooperating, because they [the physicians] never ask if that is suitable for us; we just have to manage. (GP Kathy)

For GPs, the unclear division of responsibilities was challenging because it made it difficult for them to act as facilitators and coordinators. Furthermore, it added to their workload as they had to complete patients' treatment.

Differences in ways of approaching patients

A third challenge experienced by the GPs related to fundamental differences in how they and physicians approach multimorbid patients. As described in detail elsewhere,[29] based on their long-lasting knowledge of their multimorbid patients, GPs employ a holistic approach. This contrasts with physicians, who due to their position in an increasingly specialized secondary care system to a larger extent focus on the specific symptoms the patients present. GP Helen described her experiences this way:

> I would have expected that when a patient is admitted to hospital, they will check everything. It would be very relevant to do so as some health problems relate to each other. Formerly, there was a general medical ward, or the medical specialist would ask for help from other wards. Today, they just say that it is not their job. It is a very disease-specific orientation, whereas at our place, in GP clinics, we consider the individual as a whole. (GP Helen)

The two different approaches could be explained with different logical approaches at GP clinics and specialized hospitals, with GP clinics organized structurally and professionally around general health problems, and hospitals around disease-specific approaches. However, one of the GPs said: 'I think that in hospitals, they are sometimes too specialized. One physician does not at all know what the other one is doing. Accordingly, treatment becomes some kind of zigzagging between clinics' (GP Karen).

The differences in approaches may be rooted in the organization of the health care system which GPs, who in fact did not expect physicians in the current organization of hospitals to be able to have the same knowledge about the individual patient as them, acknowledged. Nevertheless, the differences in approaches challenged the GPs in carrying out their work with multimorbid patients, which raised several issues. First, the GPs often experienced that the treatment suggested by the physicians only solved one of the many problems affecting a multimorbid patient. Further, the GPs often experienced that treatments suggested by specialists were not always appropriate because they could not take into account the overall situation of the multimorbid patient, including their social and personal circumstances. GP Michael explained:

> When a patient comes to me in the clinic, I am aware of the patient as whole person. I mean, there are some basic circumstances in the patient's life that you need to take into account when starting or changing treatment. Family relationships, working conditions, and so on highly influence the extent to which a patient can manage to change their lifestyle. Some have

> the needed resources, and in those cases, I can suggest various initiatives, whereas others might be unstable psychologically, and I have to take smaller steps. At the hospital, there is a disease-specific focus, which does not take into account what I know about the patient. (GP Michael)

Thus, while the differences in approaches may be explained with reference to structures and positions, they still have consequences for the treatment of the individual patient. What this quote points at is thus how the organization of health care impacts the exchange of information and the coordination of treatments and hence the cooperation between professionals.

The three types of challenges described above – Insufficient coordination, Unclear division of roles and responsibilities, and Differences in ways of approaching patients – all affect the abilities of GPs to carry out optimal diagnoses and treatment of multimorbid patients.

Below, we explore how the GPs responded to such challenges in managing cooperation.

Strategies applied to manage the challenges of cooperation

Despite the described challenges, GPs were observed to make persistent efforts in ensuring well-functioning cooperation with the physicians. Followingly, we first outline two strategies that GPs often use to overcome the challenges of cooperation, and then we scrutinize GPs' experiences with a suggested solution implemented by the hospital.

GP-implemented strategies

Our field work provided detailed insight into how the GPs made use of various strategies on a daily basis, whenever possible, to attempt to overcome the challenges of cooperating with physicians, sometimes with success, sometimes not. Below, we take a closer look at two main strategies: patient-centred ad hoc solutions and taking advantage of personal relations.

One strategy applied by the GPs was to devise patient-centred solutions on an ad hoc basis. This is what happens when a GP – as we already have seen in this analysis – decides to carry out blood tests and other patient examinations even though they basically believe that the patient should be fully treated at the hospital instead of being transferred to the GPs with follow-up work still to be done. We also found examples of GPs sometimes deciding not to admit patients because of the risk of complicating or worsening the patients' situation. In another case, one of the GPs sought to prevent the patient from being sent back to the GP clinic without being fully diagnosed and treated by writing a very detailed referral to the hospital. Thus, after the consultation with a patient (Emely), GP Michael explained:

> Well, I know that if I refer Emely to the hospital, the hospital would normally send her back to have blood tests done in our clinic. But since this is an acute case, and I am worried about the patient, I spent more time on writing a detailed referral to avoid sending the patient back and forth between the hospital and us. (GP Michael)

As illustrated, such self-appointed solutions are characterized by being decided ad hoc and with a focus on what would promote cooperation between different health care providers and ultimately be the best solution for each patient. However, the GPs were not always satisfied with this type of solution, as the following quote from GP Michael illustrates:

> I called the psychiatric department to ask if they could help with this patient, but

> they refused – and that makes me rather upset on behalf of the patient. Things like that happen quite often. In this case, we found a temporary solution, but it was precisely temporary and some kind of emergency solution. I am sure we could do much better if there were better conditions for cooperation. (GP Michael)

Another strategy that the GPs used to improve cooperation was to take advantage of their personal relationships with hospital staffs. According to the GPs, they often called staff members at the local hospital who they knew on a personal level, sometimes even using their private telephone number to get direct and quick contact. The GPs knew hospital physicians from previous shared places of employment and/or other activities in the town. As GP Helen explained:

> I used to spend many years working at the [local] hospital, before I started in the clinic, and therefore, I know a lot of the staffs. We have close relationships, and some of them are even patients in our clinic. We have an excellent working relationship. (GP Helen)

Similarly, GP Christina said: 'When you have been in this town for many years, you just know the chief physicians and you know who to ask' (GP Christina).

As Helen's and Christina's statements suggest, the GPs used personal relationships – their social capital – to get access to exactly the specialist knowledge they considered necessary in each case. They controlled this by directly contacting the physicians they knew rather than a random physician assistant, which is what would happen if contacting the hospital through official channels. According to the GPs, personal knowledge of the hospital and staff members was a huge advantage because it saved time and led to more appropriate diagnosis and treatment. Further, it implied that GPs and physicians took advantage of each other's different approaches in specific cases rather than experiencing it as a potentially conflicting or challenging situation.

After scrutinizing the strategies that GPs initiated to manage the challenges, we examine GP's experiences of a hospital-implemented strategy, namely the mentioned Clinic of Multimorbidity (see Table 2).

GPs' experiences of a hospital-implemented strategy

The local hospital's intention with The Clinic of Multimorbidity was to support a closer link between general practice and specialized care regarding the management of multimorbid patients. Despite this, the GPs did not refer patients to the clinic very often, and thus, have not adopted the clinic as a preferred strategy to manage the challenges of cooperation. According to the GPs, several factors contributed to this. First, the GPs experienced that the clinic somehow intensified what they termed 'the disease specific-way of thinking', because each of the physicians attending the patient seemed to aim at optimizing the treatment of each specific disease rather than responding across the various medical specialties. The GPs therefore found that referrals to the clinic did not necessarily result in better coordination, reduction of the number of pharmaceuticals taken by the patient, or optimization of other treatments. Furthermore, the fact that knowledge about the patient's personal conditions and preferences were not available to the physicians due to the impossibility of them having a long-standing contact with the patient implied that the challenges of approaching patients differently were not overcome. Finally, the GPs found it difficult to determine a suitable time for referral. They indicated that there was no need

to refer a patient when the GP was in control of care and treatment, so patients were mostly referred when the GPs felt 'locked' and at risk of losing perspective. Consequently, the patients they did refer belonged to the most complex and ill group of multimorbid patients at a time when it was difficult to change the situation radically. Hence, the demanded 'fresh eyes' of physicians in the dedicated hospital might have relieved the situation a bit, but basically did not change much. On the contrary, the GPs found that they were often left with more work after the referral because specific solutions due to the patient's aggravated condition could seldom be provided, and the GPs remained responsible for realizing the suggested adjustments from the physicians. Thus, from the perspective of the GPs, the clinic did not solve the challenges of the unclear division of work tasks.

Despite the intention of The Clinic of Multimorbidity to support coordination across health care sectors, it seemed to sustain rather than adjust existing structures encouraging specialized and fragmented health care, and hence, increased rather than decreased the challenges of cooperation. Accordingly, the GPs did not choose this as a preferred strategy of cooperating with physicians.

Discussion and conclusions

Cooperation between different health care professionals is particularly important regarding multimorbidity, because the treatment and care of multimorbid patients are complex and imply the involvement of numerous health care professionals. Diagnosing and treating multimorbid patients requires the timely coordination of information, decisions, and other activities, and generates a high level of interdependence among the involved health care professionals to deliver good care. This article has explored GPs' experiences of cooperation with physicians regarding the care of multimorbid patients, and has identified the GPs' strategies to manage the challenges they met.

Analytically, this article follows an understanding of structures and organizational frames as impacting on clinical encounters and health care practices (e.g., Andersen and Vedsted[30]). As argued by Andersen and Vedsted,[30] health care is delivered within particular organizational circumstances, which can constrain the ways in which illnesses are identified, managed and treated. Discussing chronic conditions, Smith-Morris reminds us that 'an illness experience is not a medical fact but a technological, political and economic one'.[31] In line with this, although we do not focus on illness experiences, we have shown that the larger context of the health care system impacts on cooperation across sectors, which are vital elements in caring for multimorbid patients.

Our study identified three main challenges reported by GPs in their cooperation with physicians regarding multimorbid patients: insufficient communication and coordination; unclear division of roles and responsibilities; and differences in ways of approaching patients. Other studies have also found problems of insufficient information and communication between GPs and secondary health care services.[13,26,32,33] Further, as in a systematic review,[13] our study revealed that GPs experienced an intensification of such challenges because of the increased numbers of multimorbid patients and the increasingly specialized health care system. In line with previous research,[13,14,26,32,34] our study has demonstrated how GPs experience difficulties related to increasingly specialized and fragmented health care. Importantly, whereas previous studies have focused on challenges related to complex organizational and clinical situations, our study has revealed how

GPs managed and navigated such complexities in their daily practice of cooperation. We found that GPs appreciated cooperating with other health care providers to optimize the treatment of multimorbid patients, but experienced challenges in doing so. They navigated the challenges they faced through personal engagement and flexibility, which resulted in creative, patient-centred, ad hoc solutions. Also, personal relationships with other health care providers were often deliberately used by GPs to establish or improve cooperation with physicians relevant for diagnosing and treating multimorbid patients. Clearly, the overall structure of the health care system challenged necessary cooperation about multimorbid patients, but nevertheless, the GPs were aware of the advantages of cooperating and made vigorous attempts to succeed in this.

Our study emphasized that GPs – through self-appointed and personalized strategies – to some extent succeeded in cooperating with physicians at the hospital about diagnosing and treating multimorbid patients. However, we will argue that their working together was confined to *cooperation* in the basic meaning of the word, i.e. that shared tasks are completed by dividing the labour between the participants to solve the assigned portion of the problem individually. This is far from the extended version of working together, *collaboration*, understood as a synchronized and coordinated activities in which the participants continuously try to develop and sustain the solution of the problem shared between them. Despite the obvious need for working closely together and with good will, true collaboration was not established, according to the GPs, and seemed difficult to achieve even though the patients were expected to benefit from it. Development towards collaboration requires structural changes that facilitate a coherent health care system, accompanied by political and organizational attention. Accordingly, Doessing and Burau argue that in care coordination it is important to take an explicit stance on complexity and to embrace the complexity.[35]

Our findings from this study contribute to understanding not only the challenges, but also the potentials regarding the management of multimorbid patients. The analysis benefitted from the comprehensive qualitative method, which provided insight into the GPs' perceptions and their practice. It should be noted that the GP clinics included in the study might be 'best case' examples: they had to accept the researcher as part of their workday, allowing insight into what could be perceived as the private sphere. Thus, the clinics that accepted participation might be particularly well-functioning, showing special engagement in patients with multimorbidity. This potential bias was sought to be minimized by asking the GP coordinator who assisted in suggesting study participants to take variation regarding the suggested practices into account. Furthermore, the local hospital with which the GPs participating in the study cooperated has been rewarded for being especially well-functioning. However, despite these potential biases arising from distinct circumstances, our study still found major challenges regarding cooperation across sectors, indicating that these difficulties might be more prevalent in other settings. The study takes the perspective of GPs. Integrating the perspectives of the physicians could have enhanced the insights the study contributes with but was beyond its scope. However, further research focusing on this perspective could enhance the understanding of this field.

Implication for research and clinical practice

This article outlines the necessity of cooperation in health care and therefore adds to

the evidence base on cooperation challenges existing in health care systems, in particular between general practice and hospitals. Specifically, the article contributes with insights into the consequences and into the potential impact if collaboration rather than cooperation took place.

The outline of these challenges has implications for clinical practice. The barrier related to the differences in ways of approaching the patient could be dealt with by establishing a cross-sectorial agreement on what the patient's goal is. This way, the different approaches could be turned into an advantage in obtaining this goal. Furthermore the GP implemented strategy on utilizing one's social capital may be formalized to improve communication between GPs and physicians. This could be done by adding a standard formulation in the discharge summary of who the patient responsible physician is and how (s) he can be contacted, thus facilitating communication and ensuring that the different areas of competencies and responsibilities are put into play. Furthermore, the barrier of when to refer a multimorbid patient which GPs experienced in relation to The Clinic for Multimorbidity could be addressed by optimizing the referral criteria and by adding a follow-up when the patient is out of the most acute phase of his/her diseases. This way the patient will be seen at a point of time when a general optimization of his/her condition is possible.

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Contributorship

The first and last authors, NKN and LO, designed the study, collected and analysed the data and wrote the article; the third author, RA, analysed the data and wrote the article.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

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Guarantor

LO.

Informed consent

The study purpose and management of data were explained to all participants orally and in writing. The participants provided verbal informed consent. The participants have been anonymized.

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