

## General practitioners' perceptions of treatment of chronically ill patients managed in general practice: An interview study

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### KEY MESSAGES

- GPs do not perceive a change in the management of COPD and TD2 patients despite a de facto organisational change.
- The GPs view their role as treatment coordinator for patients with chronic diseases as positively contributing to increased patient safety and compliance due to a long-standing and trusting GP-patient relationship.

### ABSTRACT

**Background:** Patients with chronic conditions pose a major challenge to the Danish healthcare system. Since 2018, disease management programmes for patients with chronic obstructive pulmonary disease (COPD) and type 2 diabetes (T2D) were introduced in Denmark. Treatment in hospitals should be reserved for those patients who require specialised treatment. Hence, more patients with COPD and T2D fall within the general practitioners' (GPs) responsibility.

**Objectives:** This study explores GPs' perceptions of their role as physicians responsible for the disease management programmes on COPD and T2D and their perceptions of the quality of care provided to these patient groups.

**Methods:** Between November 2019 and January 2020, we conducted semi-structured interviews with 14 GPs from the five regions of Denmark. We analysed the interviews using systematic text condensation inspired by Malterud's thematic analysis.

**Results:** The GPs stated that they have been managing the care of COPD and T2D patients for over a decade, and they considered the quality of care to be high. They believed that managing patient treatment pathways in general practice settings contributes to a heightened sense of security for the patient, mainly because of the long-standing and trusting relationship between the patient and GP.

**Conclusion:** According to the GPs, they continue to play an important role as treatment coordinators to ensure coherence and high quality in treating patients with COPD and type 2 diabetes.

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Chronic care; primary care; general practitioners; organisational changes; qualitative studies

## Introduction

Caring for people with chronic disease is a major challenge confronting healthcare delivery [1–3]. Approximately one-third of the Danish population has at least one chronic disease, and 70–80% of the resources in the Danish healthcare system are spent on patients with chronic diseases [4,5]. With an ageing population, the Danish healthcare system must undergo fundamental organisational changes to accommodate this challenge [4]. Disease management programmes based on

primary chronic care have been developed in all regions of Denmark [6], with an explicit goal of reducing hospital activity for patients with chronic diseases. These programmes specifically focus on chronic obstructive pulmonary disease (COPD) and type 2 diabetes (TD2). The prevalence of COPD and TD2 in Denmark has been rapidly increasing in recent decades [4–7]. General practitioners (GPs) play an important role in the management of these diseases. For more than five years, formalised annual control visits for patients have been

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recommended to review patient treatment and promote patient self-management [6,7]. In the recent collective agreement between GPs and the public healthcare system [7], COPD and TD2 were given a special status, and general practice was given the primary responsibility for treating people with these two diseases. Henceforth, treatment in hospitals should be conducted only for specialised treatment, and thus, a larger group of patients with COPD and TD2 falls within GPs' responsibility [7]. An important goal of this reorganisation is to reduce the need to treat patients in the specialised healthcare system (to reduce costs) and strengthen patients' self-care ability by transferring care from the hospital outpatient clinics to general practice [6–9].

Transferring patient treatment from hospital outpatient clinics to general practice was conducted from the end of 2018 until mid-2019. It was estimated that approximately 5,000 patients with COPD and 25,000 patients with TD2 would be managed in a general practice setting owing to this change [7].

This study explores general practitioners' (GPs) perception of their role as responsible for these disease management programmes and their perceptions of the quality of care provided to these patient groups.

## Methods

### Study design

A qualitative study with semi-structured interviews was applied to explore how GPs' perceive managing patients with a chronic disease in general practice. The interviews were conducted throughout November 2019 – January 2020. This study is reported following the Consolidated Criteria for Reporting Qualitative Research (COREQ): a 32-item checklist for interviews [10].

### Informants and recruitment

GPs were recruited through purposive sampling, and informants were selected with a view to capture variation across sex, age, years of experience, practice type (single-handed/partnership) and geographic location. After sampling 14 GPs, the data started to repeat itself, and we did not gain extra insight from

conducting additional interviews. Therefore, we concluded that data saturation had emerged [11].

The first author (MM) contacted 76 GPs in Denmark by email via the unified Danish eHealth Portal, which provides access to and information about all Danish healthcare services ([www.sundhed.dk](http://www.sundhed.dk)). The contacted GPs received a written description of the project by email. GPs who showed an interest in participating (14 GPs) were subsequently contacted by telephone or email to plan the interview.

### Interviews

Three authors (MM, SBT, KL) conducted the interviews. The in-depth individual interviews were semi-structured, and an interview guide was prepared and developed based on a literature search. The interview guide was pilot tested in four interviews, with subsequent minimal revisions. The core questions are presented in Table 1.

The pilot interviews were included in the analysis, having the required quality and focus. Except for three telephone interviews, the interviews took place in the GPs' clinic with only the GP and the researcher present. The interviewers are researchers with diverse experience and knowledge in health sciences, including two specialists in general medicine. Therefore, their pre-conceptions would inevitably influence the process. However, the interview guide with open-ended questions helped to ensure consistency and maintained a focus on the topics of interest to be systematically explored while allowing the informants to answer in their own words and present their personal views, as diversity is paramount in qualitative research. The interviews lasted 20–60 min and were audio-recorded and transcribed verbatim for analysis.

### Analysis

Data was analysed using thematic analysis in four phases, as described by Malterud [12]. The method represents a pragmatic approach, and the procedure consists of the following steps:

1. Possible themes. We established an overview and general impression of the data, looking for

**Table 1.** Core questions in the interview guide.

Themes	Examples of core questions
GP's role and responsibility in the treatment of COPD and TD2 patients	What is your main role in the course of treatment?
GP's treatment of COPD and TD2 PATIENTS	What is your experience with COPD and type 2 diabetes patient pathways?
GP's perception of the quality of care	What is your perception of COPD and type 2 diabetes treatment when managed in general practice?
	What impact does the shift of COPD and TD2 patients from hospital to general practice have on the clinical quality of patient care?

preliminary themes associated with the research question.

2. De-contextualisation. We identified and organised data elements that elucidated the research question as we systematically reviewed the transcripts line by line to identify meaningful units.
3. Condensation – from code to meaning. We reduced the empirical data to a decontextualised selection of meaningful units sorted as thematic code groups across the individual informants.
4. Synthesising – from condensation to descriptions and concepts. We used a stepwise approach that entailed conducting a preliminary analysis after four interviews. The two main themes refer to the aim of the study: to explore GPs' perceptions of their role and responsibility in the treatment of COPD and TD2 patients and explore their perception of the quality of care. The subthemes that emerged were based on Malterud's text condensation.

To ensure rigour, the initial analysis was carried out by two authors (MM, SBT) who independently identified patterns and subthemes and subsequently discussed the findings to reach a consensus with the other co-authors. The initial analysis was again discussed, refined, and further developed. Finally, we reconceptualised the data by developing descriptions and concepts and outlining typical stories that elucidated the research question [12]. Table 2 presents an example of our process.

**Table 2.** The four steps in the thematic analysis.

Step 1 – possible themes	Step 2 – de-contextualisation	Step 3 – condensation	Step 4 – synthesis
Overall impression	From themes to codes	From codes to meaning	From condensation to description and concepts
Responsibility in treatment	'(...) I am responsible for treating a diabetic patient who also has three other diseases. The focus must not only be on the treatment of diabetes (...)' '(...) we know their background, their spouse, their children and their grandchildren (...)'	Important role as treatment coordinators In-deep knowledge of the patient's life	According to the GPs, the needs can vary from patient to patient, particularly because many patients with a chronic disease often have multiple diseases. Therefore, it is very important to these patients that the GPs perform their role as the responsible treatment coordinator The GPs have an important role as a treatment coordinator because they have an overview of the patient's particular course of treatment
Quality of care	'(...) I think patient compliance increases in general practice. I think GPs can more easily help those patients who cannot follow the treatment when they are treated in general practice. I think compliance issues are easier to address in general practice (...)' '(...) We do what we always do – provide high-quality treatment (...)'	GP patient relationship increases compliance High quality care in general practice	The GPs also find that the strong relationship between GP and patient contributes to increasing patient compliance. The GP's knowledge of the patient enables a rapid response when a patient's illness worsens in order to initiate the right treatment Further, GPs emphasise the importance of keeping up to date with the latest knowledge in the field, enabling them to offer their patients the best available treatment. This requires attention to the latest guidelines, as well as ongoing competence development.

## Ethics

The study complied with ethical principles for medical research as described in the Declaration of Helsinki [13]. The study was approved by the Danish Data Protection Agency and the Institutional Review Board (10.791). The GPs were informed of the purpose of the study both verbally and in writing, and verbal and written consent was obtained. The GPs were further informed that the interviews would be audio-recorded and that all identifying information would be anonymised in the transcripts. Interviews were labelled with unique identifiers, and all personal identifiers were removed or disguised during analysis to preclude personal identification. Data are stored per the European General Data Protection Regulation rules [14].

## Results

### Informant characteristics

Of the 14 interviewed GPs, five were women and nine were men. Their ages ranged between 40 and 65 years, with between 2 and 26 years of experience as a GP. Further details of the informants are presented in Table 3.

The findings are presented in relation to the two main themes – i.e. *GPs' responsibility for the treatment and their perception of quality of care* in relation to the organisational change – and are illustrated by quotes. The subthemes that emerged within the first main

**Table 3.** Informant characteristics.

Code	Sex	Age	Years of experience as a GP	Practice type
P1	Male	46	11	Partnership
P2	Female	46	9	Partnership
P3	Female	40	2	Partnership
P4	Female	57	23	Partnership
P5	Male	56	24	Partnership
P6	Male	60	25	Partnership
P7	Female	45	17	Individual
P8	Male	51	13	Partnership
P9	Female	61	11	Individual
P10	Male	57	12	Partnership
P11	Male	49	16	Individual
P12	Male	65	12	Partnership
P13	Male	51	16	Individual
P14	Male	62	26	Partnership

theme were (1) coherent pathways (2) sense of security (3) holistic perspective (4) treatment coordinator and (5) individualised treatment. The subthemes related to the second theme were (1) GP–patient relationship (2) knowledge of the individual and (3) knowledge in the field.

### GPs responsibility for the treatment

In the recent collective agreement (2018), it was expected that a larger number of patients with COPD and TD2 would be transferred from the hospital to general practice. However, none of the interviewed GPs has experienced a significant increase of patients in their practice:

*‘However, nothing new has been established to the agreement, as we have already had these two patient groups for many years’. (P4)*

In line with this, several of the interviewed GPs find that there have been no changes in the management of care of these patient groups. Moreover, they find it surprising that the hospitals do not refer more patients to their practice.

According to the GPs, it is of great importance for patients to know who is primarily responsible for their treatment so that they know who to turn to if they experience a worsening of their disease or if they have questions about their chronic illness or course of treatment. In the GPs’ opinion, this reliability is what they can offer by being responsible for the patient’s treatment pathways.

### Subtheme: Coherent pathways

The GPs believed that the coherence of a patient’s treatment is improved when the patient’s diseases are primarily managed in general practice, mainly because they can offer a higher degree of clarity regarding treatment responsibility. Further, the GPs expressed that when they are responsible for treating patients

with multimorbidity (as is often seen in TD2 and COPD patients), they become the patient’s single and dedicated entry point to the healthcare system. According to the GPs, previously, patients with COPD or TD2 often had many entry points across the healthcare system, which impeded their experience of having a coherent, high-quality, and well-coordinated treatment programme.

### Subtheme: Sense of security

The GPs found it important that the patients meet with the same GP at each appointment, increasing the patient’s sense of security in their course of treatment. The GPs believed that patients are reassured when they know and trust their GP:

*‘First, they meet with the same GP every time. This gives the patients a sense of security. We [GPs] have a holistic perspective of the patient. We know their background, their spouse, their children, and their grandchildren. So, we know everything about the patient. I see that as a major advantage’. (P1)*

The GPs emphasised that they have an essential role as treatment coordinator, since they have an overview of the patient’s different courses of treatment. The GPs pointed out that the advantage of the GP being the responsible treatment coordinator is that the GP can better plan the patient’s course of treatment so that it is customised to the individual patient.

### Subtheme: Holistic perspective

The GPs highlighted the importance of approaching patients from a holistic perspective, as patients with a chronic condition often suffer from multiple diseases. The GPs stated that they could manage the treatment of several diseases simultaneously. Thus, patients can be treated in one dedicated treatment facility rather than in multiple facilities across sectors; the GPs considered this to be of great importance. Furthermore, the GPs stated that due to their in-depth knowledge of the patient, including their background, relatives and medical history, GPs could initiate individual treatment that meets the specific individual’s needs and preferences:

*‘There is continuity in the treatment, and we have a holistic perspective of the patient; if they have heart disease, we treat that as well. For example, the diabetes medication used to be prescribed at the hospital outpatient clinic, while all other medications were prescribed at their GP. So, the fact that they now are primarily managed in general practice is a great advantage for the patient, because all the treatment is in one place. They can have both blood pressure and diabetes treated at the same time’. (P6)*

The GPs believed that treatment continuity was ensured when undertaken by a single GP.

### Subtheme: Treatment coordinator

The GPs stated that it is satisfying and of great importance that they are the treatment coordinator due to the strong relationship between the GP and patient. According to the GPs, this stronger relationship also causes the patient to become more active and responsible for their treatment, because they have become an important part of the course of treatment:

*'The patient becomes more focused on doing things on their own. Kind of like if you sign up for a fitness class and go regularly but then miss two times – when you come the third time the class says, "where have you been the last two times?" It's kind of like being part of a group. The patient's sense of responsibility grows'. (P7)*

According to the GPs, patient needs can vary considerably, particularly because patients with a chronic condition often have multiple diseases. Relatedly, the GPs explained that it is very important to these patients that the GPs fill the role as the responsible treatment coordinator for all their diseases:

*'For example, as a GP, I am responsible for treating a diabetic patient who also has three other diseases. The focus must not only be on the treatment of diabetes. Here, it is important to say to the patient, "Today it is not about diabetes, it's about osteoporosis and metabolism" – so you [the GP] maintain an overview of the treatment of all their diseases'. (P4)*

The GPs pointed out that one diagnosis may appear dominant to the patient; however, the GP must ensure that all the patient's diseases are appropriately prioritised and treated.

### Subtheme: Individualised treatment

Several GPs said that they had adapted their services to the patients most in need, i.e. those who require a more flexible course of treatment and easier access to general practice. One GP specifically emphasised the importance of having a flexible approach to patients:

*'It is important to have a flexible approach to the patients, because we take care of their entire treatment. That is, if they need more frequent appointments – we will arrange it'. (P1)*

The GPs highlighted that they are mainly attentive to following up on the treatment for those patients most in need, e.g. by prioritising home visits for this group. They believed that a flexible and individual approach was essential for these patients to be adequately treated.

### Quality of care

Several GPs found that the quality of treatment had improved when managed in a general practice setting, as it enabled the GPs to ensure continuity during treatment. Furthermore, according to the GPs, the GPs' accessibility was generally considered higher than that of hospitals. Moreover, several GPs stated that continuity was of great importance to patients and increased their treatment satisfaction.

### Subtheme: GP–patient relationship

According to the GPs, they can offer frequent follow-ups and urgent appointments when needed, which they believe is seldom the case at hospital ambulatory care centres, and if an appointment is obtained it is probably not with a doctor who knows the patient. One GP expressed it this way:

*'Yes, it is beneficial that patients only need to have appointments in one location [...] and that they can be followed by the same GP responsible for the entire treatment. Furthermore, they can always get hold of us [...], so it makes it easier. Patients often tell us that they have difficulty getting in touch with the hospital ambulatory centre'. (P5)*

The GPs placed great importance on the patients having the same GP throughout their treatment, as they develop a strong GP–patient relationship, contributing to an increased sense of security for the patients. According to the GPs, the treatment quality is also improved in general practice because their treatment is patient-centred and holistic. In the GPs' opinion, a good patient experience is an intrinsically worthwhile goal, and the GPs increasingly emphasised the patient experience as part of treatment quality. The GPs also found that the strong relationship between GP and patient contributes to increased patient compliance and adherence to treatment.

### Subtheme: Knowledge of the individual

The GPs said that their knowledge of the individual patient allowed for a rapid response if the patient's illness worsened and they had to initiate the immediate and correct treatment. One GP explained that:

*'I think compliance increases in general practice. I think GPs can more easily help those patients who cannot follow the treatment when the treatment is undertaken in general practice. I think compliance issues are easier to address in general practice'. (P2)*

According to the GPs, it is challenging to manage the patients most in need who have complex treatment needs. They emphasised that they must allocate resources to the patients most in need.

### Subtheme: Knowledge in the field

The GPs emphasised the importance of keeping up to date with the latest knowledge in the field, enabling them to offer their patients the best available treatment. According to the GPs, this required attention to the latest guidelines and ongoing competence development. One GP said that:

*'We do what we always do — provide high-quality treatment that we think is appropriate at the time and constantly keep up to date with the latest knowledge of the particular disease'. (P4)*

However, a few GPs found it challenging to keep abreast with the latest guidelines and treatment methods for the various chronic diseases; this was considered very time-consuming.

## Discussion

### Main findings

This study shows that the interviewed GPs prioritised the disease management programmes of COPD and TD2 patients in their daily work. We also found that according to the GPs, treatment coherence is improved when undertaken in general practice. The GPs highlighted the importance of having a holistic approach to the patient, particularly because patients with a chronic disease often have other diseases. The GPs also emphasised that their in-depth knowledge of the patient was essential to initiate individualised treatment that meets the specific needs and preferences of the patient. Furthermore, according to the GPs, the strong relationships between GPs and patients are important and contribute to an increased sense of security for the patients and improve the treatment quality.

### Interpretation

A surprising finding emerged from this study of GPs' perceptions of being responsible for COPD and TD2 disease management programmes in general practice, namely, that GPs do not experience this responsibility to be an organisational shift. In their opinion, they have had this responsibility for years. This is surprising, as the recent collective agreement (OK18) stipulates that a higher proportion of COPD and TD2 patients should be managed by their GP rather than in hospital-based outpatient clinics. More than 30,000 patients were expected to be transferred from the hospital to general practice under this agreement. However, the GPs did not perceive having an increased number of COPD and TD2 patients after the

de facto organisational change. This lack of acknowledgement of a change might be because the GPs' organisation was involved in implementing the organisational change (OK18); thus, the change might have been initiated earlier than anticipated. However, the GPs did consider themselves to play an important role in the management of these diseases. To our knowledge, no studies have explored GPs' perceptions of their role and responsibility in the treatment of COPD and TD2 patients, nor how they perceive the impact this has on the quality of treatment in the realm of organisational changes. However, our results corresponded with previous research in similar fields, where it has also been demonstrated that the relationship between the patient and GP is very important and that it is generally strengthened when the patient is primarily treated in general practice. Arreskov et al. (2019) had similar findings in their study of general practitioners' perspectives on chronic care consultations for patients with cancer [15]. The authors found that the healthcare system needed the GP as a treatment coordinator, especially for patients with complex courses of treatment who were in contact with several healthcare providers (across sectors). Corroborating the findings of Ørtenblad et al. [16], we concluded that three core characteristics were essential for the GP treatment approach: first, a holistic approach in which somatic, psychological, social and personal issues were taken into account in diagnosing and treating the patient's diseases; second, a patient-centred approach, focussing on the individual patient's everyday life; and third, acting as a coordinator for the patient's disease courses. According to Arreskov et al., GPs should be aware that a biomedical-focused approach to chronic care might increase care fragmentation and collide with holistic, patient-centred care. Furthermore, in Arreskov's study, the GPs emphasised the importance of continuous chronic care appointments to maintain contact with the patient and inspire hope and positive expectations regarding the patient's prognosis [15]. The GP has expertise as a treatment coordinator arising from their overview of the patient's illnesses and because a strong – and often personal – relationship is established between the patient and GP [15]. A similar conclusion was found in a qualitative study of relationships between patients and GPs in primary care. In that study, Cocksedge et al. [17] conclude that these relationships are a routine part of general practice and are valued by both GPs and patients. According to Cocksedge et al., most GPs emphasised that establishing a strong GP–patient relationship was an important role for the GP. GPs further

reported that they possessed the necessary skills required to provide patients with holistic care. The GP–patient relationship is important when managing people with chronic and complex health problems and is important for changing patients' health-related behaviours [17]. The interviewed GPs described the core values of their profession as formulated in similar high-income countries, for instance by Wonca Europe in their 'Wonca Tree' [18].

The organisational change towards a more primary care approach, with the potential reduction of hospitalisation and follow-up in outpatient departments, is supported in the literature [19–21]. A similar result was found in a newly published Danish study by Pulleyblank et al. (2020). The authors stated that compared to hospital-based patients, the costs to manage patients with chronic conditions were lower in general practice. Likewise, no significant difference was found in the quality of delivered care when comparing the two sectors [22].

### Strengths and limitations

This study's key strength is that the characteristics of participating GPs varied widely regarding sex, age, and experience.

The study is based on interviews with GPs, which provides us with first-hand knowledge of how GPs handle patients with COPD or TD2. Further, the credibility of the study was high, as we reached data saturation across a wide variety of GPs. Regarding dependability, all the interviews were conducted similarly, with three investigators conducting the interviews using a semi-structured interview guide. The fact that two authors analysed data and jointly discussed the results until consensus was reached is also considered a strength of the study. Moreover, the GPs in the sample represented different perspectives on how GPs experience treating COPD and TD2 patients to the recent organisational change. We, therefore, consider the results of this study to be relevant to countries with similar healthcare organisations.

### Implications

This study indicates that coherence of treatment is improved when it is undertaken in a general practice setting. Furthermore, the GPs perceived this de facto organisational change as having little impact on their daily practice, and they consider that treatment quality for these patients is high but unchanged.

In short, the interviews with the GPs revealed that their recommendations regarding the management of COPD and TD2 patients are not new, indeed their recommendations are well-known and have been described in many official documents and study reports. Thus, our findings reiterate the results of similar studies investigating the management of patients with chronic conditions in general practice. We find it interesting that the Danish healthcare authorities present this as a large organisational change while the GPs, who are responsible for the implementation and management of this change, do not perceive this as having a substantial impact on their daily practice. Nevertheless, further studies are needed to more clearly define how GPs perceive their role in the treatment of COPD and TD2 patients and their perceptions of the quality of care. The GPs' perceptions of the treatment of these two diseases is not the entire truth; patients may have a different experience of their treatment in general practice. Therefore, we recommend that patients' perceptions of treatment should also be investigated in future studies.

### Conclusion

The findings of the study indicate that Danish GPs do not perceive a change in the management of COPD and TD2 patients despite a de facto organisational change. Furthermore, the GPs stated that they continue to work according to the same core values as they have done for a decade. They continue to carry out the important role of treatment coordinator to ensure coherence and high quality in the treatment of these two patient groups.

### Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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