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How healthcare systems shape a purchaser's strategies and actions when managing chronic care

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Research data for this article

Due to the sensitive nature of the questions asked in this study, interviewees were assured that the raw data would remain confidential and would not be shared.

Highlights

- Purchaser engagement strengthens purchasing but can involve high transaction costs
- A purchaser's strategic lens should focus on chain-wide improvement but also on accessibility
- A directive-influencing style enables chain-wide improvement but may create over-interference
- Purchaser competition, purchaser governance and patient choice shape purchaser behaviour

Abstract

Healthcare purchasing organisations in both insurance-based and tax-based healthcare systems struggle to improve chronic care. A key challenge for purchasers is to deal with the chain of multiple providers involved in caring for patients with complex needs. To date, most research has focused on differences between healthcare systems in terms of regulation, tools and the freedom that healthcare purchasers have. However, this does not explain how such different healthcare system characteristics lead to different purchasing strategies and actions.

A better understanding of this link between system characteristics and purchaser behaviour would assist policymakers seeking to improve healthcare purchasing. This multiple case study conducted in England, Sweden and the Netherlands examines the link between the different healthcare systems' characteristics and the purchasers' strategies and actions when managing chronic care chains. Purchasers' strategies and actions varied in terms of the purchaser's engagement, strategic lens and influencing style. Our findings suggest that differences in purchaser competition, purchaser governance and patient choice in healthcare systems are key factors in explaining a purchaser's strategies and actions when pursuing improvements in chronic care. This study contributes to knowledge on what shapes the purchaser's role, and shows how policymakers in both insurance- and tax-based regimes can improve healthcare purchasing.

Keywords: Healthcare purchasing; Managing chronic care chains; Healthcare system characteristics

Introduction

Third-party purchasing and commissioning organisations such as health insurers and governmental bodies (hereafter, 'purchasers') are expected to foster improvements in care provision through their role as contractors of care [1]. However, purchasers in both insurance- and tax-based healthcare systems struggle to drive providers towards improved care delivery [2-4]. Although studies show significant variation between countries in how purchasers fulfil their role, how healthcare system characteristics shape individual purchaser's strategies and actions remains largely unknown. We contribute to this topic through three in-depth case studies of how healthcare purchasers in different countries improve care delivery, and how the different system characteristics affect their strategies and actions.

With an increasing number of patients with chronic and/or complex illnesses, policymakers require purchasers to manage entire 'care chains' in an attempt to control rising healthcare costs, increase access to care and improve care outcomes [5]. To do so, purchasers need to manage care chains as a coordinated, integrated system, and therefore stimulate collaboration between providers [6,7]. Further, patients should experience the service they receive along the chain of referrals from one provider to another as an integrated whole. Current contract negotiations rarely reflect the need for a chain perspective, and are typically between a purchaser and a single provider rather than between a purchaser and the network of providers that make up a care chain. Chain-wide improvements require complex medical and financial negotiations with these providers. In these negotiations, power, dependence, relationality and trust play a role [4,8-11]. What strategies and actions purchasers employ, and how effectively, is likely to be affected by the characteristics of the healthcare system itself. Studying how these characteristics shape purchasers' strategies and actions will help explain how purchasers can develop and deploy their strategic role, and how policymakers can create the right conditions.

This paper therefore addresses the question: *How do characteristics of the healthcare system influence a purchaser's strategies and actions when pursuing chain-wide improvements?* We focus on healthcare system characteristics related to national or regional policies that directly influence the purchasers' strategies and actions. Regarding strategies, we explore the purchasers' goals and plans, and their subsequent intended and emergent actions [12,13]. Using multiple case studies, we explore what drives or enables purchasers to pursue chain-wide improvements in chronic care delivery in regions of England, Sweden and the Netherlands. Each region is a 'vanguard' in the sense that policymakers have given purchasers increased opportunities in an attempt to stimulate new approaches in care delivery. It will be in these areas, if anywhere, that purchasers' use of their freedom to take initiatives will become apparent, providing 'best case' insights into how care coordination policy translates into purchasing strategy.

Background

Improving chronic care delivery

How care chains are organised has a strong influence on the quality and costs of the services provided [14]. Although the organisation of care chains is usually stipulated through national care guidelines and protocols, in practice the actual delivery of care varies considerably [15]. In terms of task division, a multi-provider care pathway [16] should inform providers as to how chronic patients will enter the pathway, what treatment and diagnostics they will receive from which provider, when they will be referred to another provider and when they will be referred back. As such, one requires inter-provider agreements covering expertise, tasks, responsibilities, scheduling and referrals [5-7,17]. On the operational level, structures are required within and between providers to enable the exchange of diagnostic, treatment and referral information (which requires suitable information technologies), regular inter-professional consultations and shared treatment plans for individual patients [5-7]. A prerequisite is that the various care professionals know each other and can reach each other to collaborate in improving patient treatment [5-7].

Purchasers are key stakeholders in care chains as they can improve the task division and collaboration between providers by making agreements on quality and costs [1,2,18,19]. Surprisingly, the way in which healthcare purchasers fulfil this role and how the healthcare system shapes their strategies and actions has not been comprehensively researched.

Healthcare systems and purchasing

In many countries, health ministries have stimulated purchasers to experiment with incentive schemes to improve care coordination. Several European health systems have designated vanguard regions where purchasers are given more freedom than elsewhere to experiment [20-22]. These purchasers can adopt novel incentive schemes such as pay-for-performance, bundled payments, shared savings, prime provider and long-term, population-based contracts [23-25]. It is especially here that ‘purchasers need the tools for strategic purchasing’ [18] and, as such, vanguard regions are valuable in understanding how policy and regulation drive purchasing strategies and actions.

Where the literature does consider this topic, it mainly compares purchasing systems in terms of the rules concerning which services are obligatory in insurance packages, whether service tariffs are freely negotiable or predetermined, and which authorities regulate purchasers [1,2,18,19]. There has been less focus on the care coordination strategies and actions that purchasers develop in practice in response to the healthcare system’s characteristics. Purchasers’ strategies and actions can differ in terms of coercive versus collaborative approaches [4,9,11]. Also, in both insurance- and tax-based healthcare systems, purchasers use a combination of methods to steer providers: through regulation, monitoring, financial incentives, persuasion, support or collaboration [2,4,9,11]. How different health policies lead to different purchaser behaviour in terms of their strategies and actions remains a largely unanswered question.

More specifically, there is an incomplete understanding of how purchasers respond to and/or make use of the different environmental circumstances and opportunities created by the healthcare system, especially in the context of coordinating multiple providers along care

chains for treating patients with chronic health problems. This is the starting point for our multiple case study in which we inductively determine which key healthcare system characteristics shape purchasers' strategies and actions, and how.

Methods

We chose a multiple case study approach which fits with the descriptive and explanatory nature of our research question [26,27]. The aim of our analysis was 1) to describe differences in healthcare system characteristics and purchaser strategies and actions between the studied cases and 2) to search for explanatory patterns of how these characteristics translate into purchasing approaches. With the latter goal we have focused on a health policy contribution, providing understanding of how purchaser strategies and actions develop.

The unit of analysis is the purchaser in a regional health economy, i.e. an area corresponding to a single health region. By focusing on the care of patients with Chronic Obstructive Pulmonary Disease (COPD), we were able to systematically compare different purchasing regimes while holding the type of care group constant. COPD is a good example of a chronic disease where improved task division and collaboration could achieve better care outcomes [28-30]. This study focuses specifically on the extent of the alignment between primary (particularly GP) and specialised hospital care, since this plays an important role in the delivery of COPD care. We focus less on the role of home and social healthcare since these, in the countries studied, are mostly purchased by separate, usually municipal, organisations. The context of COPD care is thus used to understand how purchaser strategies and actions develop in demarcated case studies. Hence we do not aim to provide a health service of health outcome endpoint.

Research setting and case selection

We investigated the coordination of chronic care chains by regional purchasing organisations in three countries with different healthcare system characteristics. In each case, the healthcare purchaser faces a similar problem: increasing numbers of patients with chronic diseases in general and COPD in particular, leading to extensive use of hospital care services and associated costs. To ease this problem, purchasers are attempting to improve collaboration between primary and secondary care providers, and between different primary care providers (such as between the general practitioner (GP) and nursing or therapy services); and to shift tasks such as regular check-ups or lifestyle advice from the hospital to primary care providers (e.g. GPs, community nurses). Especially for patients with a chronic disease such as COPD, this may lead to earlier detection of symptoms and improve patients' capacities to deal with their disease, both of which contribute positively to patient health and reduce clinically unnecessary emergency hospitalisation [28-31].

Adopting a theoretical replication logic to answer our research question, we selected regions that were expected to provide sufficient variation in the type of purchasing system used [27]. We selected cases that differed in purchaser market type: private insurance (competitive) versus a public (monopolistic) purchasing system. Next, we assessed the properties of each case study region and its national healthcare system characteristics. Although each healthcare

purchaser operated in a different system and region, in all countries purchasers are expected to fulfil the task to strategically contract chain-wide care [32-37]. Supplement A provides an overview of each case in terms of the differences in purchasing and payment systems, the care providers directly or indirectly involved in COPD care delivery and which other organisations are involved in paying for, organising and planning care (such as municipalities). Through this, we show, for each country, the boundaries within which the purchaser can operate when seeking to improve the coordination of COPD care. Subsequently, we considered how the purchaser acts within these boundaries. Also, we assessed how and to what extent purchasers tried to steer using tools within the limits of healthcare regulation. Each studied region can be considered a vanguard area where the purchaser has been granted additional freedom to pursue novel approaches to improve chronic care delivery. That is, we took a ‘positive deviance’ sample, selecting sites where, in that health system, a purchaser’s strategies and actions could be expected to have the greatest impact on improving the coordination of chronic care chains [38]. Whether and how a purchaser uses this freedom will provide an understanding of what healthcare system characteristics shape a purchaser’s strategies and actions.

Data collection

We interviewed people involved in contracting and commissioning chronic care services within purchaser and provider organisations (i.e. those who are part of the communication channel between purchaser and provider). On the purchasing side, we interviewed contract managers, medical advisors and higher-level managers. With care providers, we interviewed managers, medical specialists, GPs, nurses and physiotherapists (Table 1). The interview protocol was structured in four parts with the aim of gathering information on: how chronic care in general and COPD care specifically are currently organised, coordinated and delivered; how the purchaser attempts to improve the chronic care chain; what health regulations and policies are in place; and how these enable or constrain the purchaser. In total, we conducted 22 single and group interviews (between 37 and 88 minutes long), involving a total of 26 people. All interviewees gave written consent to participating in this research.

We supplemented our interview data with, and triangulated it against, 878 pages of secondary data from published management reports, care protocols, presentations and reports on regional demographics which helped to explain purchaser’s strategies and actions. We used health system reports and papers to further establish and distinguish the different healthcare system characteristics (see Table 1 and Supplement A).

----- Insert Table 1 here -----

Data analysis

As the first step of analysis, we carried out inductive coding, adhering as far as possible to the terms and language used by our interviewees. In this way, we developed a comprehensive list of first-order codes related to healthcare system characteristics and purchasing strategies and actions. We searched for healthcare system characteristics related to national or regional policy that directly influenced the purchasers’ strategies and actions. Applying Gioia’s

methodology [39], we inductively translated the first-order codes into aggregated second-order codes, doing so in light of known healthcare system characteristics, and purchasers' strategies and actions, gleaned from healthcare policy and purchasing literature. This resulted in the categorisation presented later in the results section, containing those healthcare system characteristics that directly influence the different purchasing strategies and actions. In terms of purchaser strategies and actions, we also searched for goals, plans and intended or emergent actions as defined by Mintzberg [12,13]. We developed case descriptions for each of the studied regions to enhance understanding of how purchasers manage their care chain. Through this coding process and case analysis, and discussions among the authors, we linked the different healthcare system characteristics with the purchasers' strategies and actions.

In each within-case analysis, we discuss how the focal healthcare purchaser coordinates its care chain and what this implies for improving care delivery. We briefly describe the context within which each purchaser does so, giving more detail in Supplement A. The inductive coding process subdivided the purchasers' strategies and actions into seven categories: clinical involvement, support to providers, relationship management, focus of attention, time horizon, power use and chain management approach. Next, we established which characteristics of a healthcare system affect the purchaser's strategies and actions. We found these to be single- vs multi-purchaser system, purchaser's internal governance and the extent of patients' choice for secondary care. Following each case description, we summarise the findings supported by quotes from the interviews (Tables 2-4). We then report a cross-case analysis where we infer patterns to provide an understanding of how each key healthcare system characteristic influences how healthcare purchasers pursue care chain improvement.

Results

Within-case analysis

England

The healthcare system

Most primary and secondary care services in England are purchased by local area Clinical Commissioning Groups (CCGs) which represent GPs. The CCG we studied covers a suburban population of about 300,000 (see Table 1) in the Midlands. For COPD care, the main care providers in the studied region are an NHS Foundation Trust that incorporates 3 hospitals and 12 clinics, and 46 GP practices. The Foundation Trust also has several community nurses providing COPD care. As such, most COPD care is contracted by the CCG itself. In addition, the municipality council commissions home and social care. There is a natural link between the CCG and the municipality (they both serve the same population), but fragmentation between the services they commission remains a problem.

Purchaser strategies and actions

The steering by the CCG has a strongly medical character with GPs, commissioning managers and other CCG employees frequently discussing with care providers how tasks should be divided and how collaboration could be improved. The active involvement of care providers

is reflected in, for example, them initiating projects that lead to better management of chronically ill patients. By setting up multidisciplinary teams involving both primary and secondary care providers, professionals are brought together to discuss individual patients. The purchaser is furthermore aware of provider concerns, such as those of GPs who often lack the capacity to take over hospital tasks. As such, the CCG has a relational and trust-based way of commissioning. This approach seems to be driven by the fact that the CCG is led by GPs, and by their dependence on good relationships with other providers.

In the current system, primary and secondary care are based on very different contracts. General practice contracts are capitation-based with incentives for outcome improvements. Secondary care contracts are activity-based using standard, nationally defined Diagnosis Related Group (DRG)-based prices. The CCG is trying to move from this fragmented, provider-focused approach towards a more chain-wide and long-term approach, which is also supported by regulators such as NHS England. The CCG's expressed goal is to develop a fifteen-year population-based contract, in which primary and secondary care providers participate jointly, that rewards improvements through pay-for-performance schemes. In this way, the purchaser is seeking to align the currently conflicting financial interests of the providers and to financially support a budgetary shift from secondary to primary care. In addition, the CCG also collaborates closely with other local authorities responsible for contracting services for COPD patients.

Although the CCG predominantly expresses its attitude as collaborative, trust-based and professional, we also observed conflicting behaviour, in particular coercion. For example, some care providers are reluctant to sign population-based contracts as these create financial uncertainty. The CCG uses its position as sole purchaser, with the option of competitively re-procuring services, to enforce such a change. Providers expressed the CCG's involvement as going too far, becoming meddlesome or creating an administrative burden.

The CCG that we studied also takes the patients' perspective into consideration and had recently conducted a public consultation to understand current problems and patients' needs. Meetings, supported by medical professionals, are organised where patients can exchange experiences and information.

Finally, patients are constrained in their choice of secondary care because England has a GP gatekeeper system. Moreover, patient demand for secondary care exceeds supply. In practice, and despite official policy, patients often have a limited choice of hospital if they do not want a lengthy wait, and patients often delegate the choice to their GP. This limited patient choice supports the CCG in its efforts to shift services from secondary to primary care.

Consequences

The combination of professional and coercive steering could be called a 'paternalistic' approach to achieving chain-wide improvement. Since the CCG has both professional and financial influence, it is able to initiate several changes in community-based chronic care management. The CCG has established several small- to medium-scale projects aimed at health improvements for COPD patients (and others). Notably, the purchaser aims to support these changes by aligning the financial incentives for all the relevant providers through a long-term, population-based contract. Regional evaluation reports indicate that the CCG's efforts have created a general consensus among providers on the current problems and

challenges in the region. Although the clinical orientation seems a promising one, the ongoing pressure on NHS budgets forces the CCG to balance care quality and access. As elsewhere in England, issues concerning access remain problematic in the studied region.

The implementation of the long-term population-based contract was seen as complex and slow, and was still ongoing at the time of our study. Despite the CCG's strong position in the region, its approach still involved high transaction costs in the form of negotiation, compromise and considerable bureaucracy. Providers indicated that the CCG's approach was sometimes seen as laborious and meddlesome. This suggests that excessive involvement can sometimes be counterproductive.

----- Insert Table 2 here -----

Sweden

The healthcare system

In Sweden, almost all private and public care providers are funded by County Council (CC) budgets. CCs are regional bureaucracies led by closely involved regional politicians. The region studied has an urban population of more than 1 million (see Table 1) and was one of three large regions in Sweden where residents have a free choice to go to primary care, multiple hospitals and outpatient clinics within their region.

Care for patients with COPD is provided by 14 hospitals in the region, including a university hospital and 4 private hospitals (3 of them non-profit). Patients are free to choose between hospitals within the region. Care outside the region is only financed if there are long waiting times. There are about 255 healthcare centres, either GP practices, outpatient clinics or hybrid forms, of which about 60% are publicly owned. Social and mental healthcare is partly organised by primary care centres and funded by CCs. Other social, home and public care is funded and/or provided by the municipal government. At the time of the study, fees were applied of around 200 Krone (€20) per GP visit and 350 Krone (€35) per specialist visit. GP referrals are not required for hospital or outpatient care. Thus, constraints on choosing specialized care providers are considered low.

Purchaser strategies and actions

As a public, politically led organisation, the CC has a clear responsibility for the whole population. Several medical advisors work part-time for the CC and part-time as practitioners. They generally address problems from a professional perspective and have strong networks with care providers. The CC supports several projects aimed at improving care for patients with chronic illnesses, paying particular attention to improving task division and collaboration among the multiple care providers involved. Extensive national and regional guidelines that address the interface between primary and secondary care have been developed in collaboration with professionals and published online to enhance choice. Further, the CC has supported the care delivery system by establishing a new IT system to facilitate information exchange between primary and secondary care providers.

The CC pays close attention to the patient's position within the care chain. This was reflected in CC employees addressing problems from a patient perspective and considering the socioeconomic problems of their population, (e.g. poverty, mental illness, unhealthy

lifestyle). The CC actively guides patients in finding an appropriate provider or in improving how they deal with their disease themselves. This is achieved through helplines staffed by nurses and by websites which advise on treatment possibilities for specific diseases. Although patients have considerable freedom to choose any of the available primary and secondary care providers within their county, the CC encourages them to enrol at a GP practice. Interestingly, this focus on steering the patient seems not only driven by a professional perspective but also as a way of counteracting the CC's limited influence caused by patients' free provider choice.

The CC has developed elaborate quality and outcome indicators and has considerable experience with linking these to performance-based payments and contracts, which are strongly linked to well-developed regional and national quality and outcome monitoring. Nevertheless, the CC had recognised that chain-wide performance measures were still lacking and that balancing a hospital's mix of patients is challenging. Due to the limited effects of steering based on pay-for-performance, and the significant increase in hospital spending, the CC has gone back to a budget approach to funding hospitals.

The purchaser's political accountability and the need to steer patients along the care chain seemed to translate into a regulatory role enacted by setting standards, guidelines and financial incentives. Although this purchaser's attitude can be seen as supportive and taking responsibility for patients and the population, it also has a downside. Care providers commented that the purchaser's regulatory approach does not always align with care delivery in practice, and that this adds an administrative burden.

Consequences

The CC's chain-wide strategy aims to improve chronic care delivery by giving attention to providers, patients, public health issues and the healthcare system infrastructure. However, in practice, the CC's highly regulatory approach appeared to not always be effective, and professionals perceive it as over-regulated. The regulatory approach can at least in part be explained by the CC's limited influence on care delivery given that patients have free provider choice.

Within the CC, there are tensions between employees focused on medical issues and those focused on regulatory/cost aspects. Whilst there is a strong medical advisor involvement, there are also contracting managers focused on containing costs and regulatory responsibilities. The politically led purchaser appears somewhat inflexible and bound by a short-to-medium term time horizon which, in practice, hampers the implementation of promising improvement initiatives.

----- Insert Table 3 here -----

The Netherlands

The healthcare system

In the Netherlands, health insurers are responsible for contracting GP and hospital care. Each insurer's budget depends largely on their income from their policy holders and every citizen is obliged to have medical cover. For specialized care, patients have to pay up to a maximum of €385 per year. The focal health insurer in our study had roughly a 60% market share in the

urban-rural province of about 500,000 inhabitants (see Table 1). The region has five hospitals, including a university medical centre, and about 200 independent GP practices. For chronic diseases such as COPD, diabetes and cardiovascular diseases, most GPs deliver so-called “ketenzorg” (chain-care), which is contracted through a regional cooperative. Evaluations and interviewees indicated that this chain-care was still predominantly GP care, supported by specialized nurses [40]. As such, hospital, physiotherapy, rehabilitation and other services for COPD patients are still contracted separately. Since 2015, home nursing, most personal care and long-term mental healthcare have been contracted by health insurers [41]. Municipalities contract home support care, day care and elements of youth (mental health) care services. Alignment between health insurers and municipalities is developing gradually and is supported and monitored by the Dutch Health Authority (NZA) [40].

Purchaser strategies and actions

The insurer in our study predominantly pursues a rather short-term strategy mainly driven by their goal of keeping insurance premiums low. This limits the purchaser’s willingness to invest in longer-term improvements in chronic care delivery. In making contracts with providers, the insurer aims to control budgets, primarily by including budget ceilings. Despite the purchaser’s intentions to create change, most of their projects remain small-scale and are often initiated by providers. This approach seems to be driven by the insurer’s perception of having little influence on care delivery and costs. As insurers compete for subscribers, who can switch insurer annually, they can usually contract providers for only part of the regional population. Conversely, the fact that providers do not depend on a single purchaser strengthens their bargaining position during budget negotiations. In addition, the low number of employees with a medical background within the insurer seems to contribute to their dominant cost-control strategy.

Nevertheless, health insurers in the Netherlands are increasingly being reminded of their directing role and responsibility for driving improvements in care delivery. Further, there is increasing policy pressure to contain costs by shifting some secondary care to primary care providers, particularly by the National Framework Agreements initiated by the Ministry of Health. These agreements limit the growth of the national healthcare expenditure and encourage a budgetary shift to primary care. By changing regulations, the ministry and NZA furthermore encourage purchasers to sign long-term, population- or outcome-based contracts. In response, the health insurer has signed several long-term covenants with the largest regional hospitals. These covenants provide hospitals with continuity but only very limited flexibility on annual care expenses. The purchaser appears reluctant to sign long-term, population-based contracts based on quality outcomes that could deliver savings to support long-term care chain improvements.

Further, the purchaser aims to gain goodwill from providers and thereby increase their influence on how the care chain is organised. The studied health insurer especially expresses how it values its relationship with the largest primary care cooperative. The purchaser’s dependence on large care organisations explains their investment in relationships with and between care providers. Despite this, the providers consider the clinical and supportive staff turnover at the insurer as high, and as hampering the continuity of projects and building up of relationships. Another reason why the purchaser gives attention to coordinating the chronic

care chain is the role of GPs as care coordinators and gatekeepers to secondary care. These GP roles support the purchaser's attempts to shift patients to primary care since patients must have a GP referral before going on to secondary care.

Consequences

The health insurer understands the importance of working closely with care providers and building good relationships in order to achieve long-term care improvements. In practice, however, the insurer generally behaves as a typical business (albeit not-for-profit) organisation, with only a limited medical focus, because it is highly accountable to its subscribers and has responsibility for cost control. Tensions and conflicts between the insurer and providers are therefore common. As such, it is proving difficult to align the interests of primary and secondary care providers and thereby make structural improvements to the care chains.

----- Insert Table 4 here -----

Cross-case analysis

Above, we showed how healthcare purchasers in each country operate differently within their respective healthcare systems. Figure 1 summarizes to what extent each key characteristic was present in each of the three studied cases. Despite facing very similar challenges in each of the vanguard regions, each purchaser's strategies and actions varied significantly when pursuing chain-wide care delivery improvements. As presented, we see variations in the purchasers' clinical involvement, support to providers, relationship management, focus of attention, time horizon, use of power and chain management approach (see tables 2-4). In the cross-case analysis below, we show how each of the seven categories of purchaser strategies and actions can be combined into three aggregate categories: purchaser engagement, purchaser's strategic lens and purchaser's influencing style.

----- Insert Figure 1 here -----

Purchaser engagement

A purchaser's engagement is expressed by the extent of clinical involvement, support to providers and relationship management. We found relatively high, moderate and low clinical involvement in the regions in England, Sweden and the Netherlands respectively. The Dutch health insurer provides limited clinical substantiation of their contract proposals. Conversely, the GPs who have significant responsibility in the English CCG organization, express clear goals for improving population health. The Swedish CC, with a mix of clinical and non-clinical staff, appears to be between the English and the Dutch regions. With respect to system support, in the English and Swedish cases, the purchaser staff seem able to understand the challenges that providers face in terms of IT systems, quality monitoring and dividing tasks between primary and secondary care. Likewise, the purchaser staff in these cases build long-term relationships with providers. In the Dutch situation, we found a predominantly transactional purchasing approach applied by the health insurer.

The purchaser's strategic lens

Whether purchasers focus on patients or costs, and take a long-term or short-term perspective, can be classified as the purchaser's strategic lens. The CCG in England gave the most attention to preventive care and improved task allocation from the patients' perspective, supported by creating long-term financial perspectives for providers. Conversely, the health insurer in the Netherlands is pressured to focus more on short-term cost control as well as access to care. Again, the CC in the studied Swedish region falls somewhere between the English and Dutch cases. Here, the single purchaser system and significant clinical involvement drives a long-term strategic lens and places the patient at the centre of their purchasing strategy, while political governance also drives short-term cost controls.

The purchaser's influencing style

How purchasers influence task division and collaboration along the care chain is expressed by their use of power and their chain management approach. The CCG in England is able to establish improvement projects and make new financial agreements with providers due to their relatively strong influence as a single purchaser. In the Netherlands, the purchaser mostly follows providers' initiatives, amounting to a degree of provider-influenced purchasing, and only limitedly takes initiatives itself. Furthermore, the Swedish case study, where patients have a wide choice of providers, highlighted the CC's limited ability to reduce the high percentage of patients being treated in hospitals or outpatient clinics. This not only provides limited steering power, but also leads to a somewhat regulatory and fragmented contracting approach towards care providers: 'the money follows the patient'. Supported by a GP gatekeeper system, the purchasers in England and the Netherlands are able to pursue treatment of COPD patients in primary care settings and an integrated care chain.

Table 5 summarizes the above cross-case comparison, combining the purchaser strategies and actions into aggregated categories. Further, we show that each of these aggregated categories are linked to certain healthcare system characteristics. This enables a deeper understanding of how healthcare system characteristics shape purchasers' strategies and actions, which we will discuss further in the next section.

----- Insert Table 5 here -----

Discussion

This study aimed to answer the question '*How do healthcare system characteristics influence a purchaser's strategies and actions when pursuing chain-wide improvements?*' As presented, each of the focal healthcare purchasing organisations demonstrated a variety of strategies and actions in terms of their goals, plans and intended or emergent actions. Our findings link these different strategies and actions to the three observed key healthcare system characteristics (number of purchasers in a region, purchaser's internal governance and extent of patient choice in seeking secondary care), thereby providing a better understanding of what factors constrain and drive a purchaser's strategies and actions. Below, we further discuss the

patterns identified and discuss the advantages and disadvantages of the different approaches that each purchaser has developed.

Purchaser engagement

Looking especially at the English CCG, we observe a highly engaged purchaser, interacting with providers and attending to both clinical and organizational problems. This seems a promising approach, with many initiatives involving a broad range of providers. Indeed, previous research suggests that collaboration between purchasers and providers creates value [4,9,42]. Comparing our three case studies suggests that a strong physician presence in the governance structure increases the clinical orientation in purchasing. When managerial interests dominate, more attention is given to costs and regulatory compliance. Although management and regulatory control is still present in the approaches used in England, this is to a lesser extent than in Sweden and the Netherlands and is more influenced by medical knowledge. Notably, the purchasing managers interviewed in the Netherlands saw the limited number of people with a medical background in their organisation as a shortcoming. Nevertheless, particularly in Sweden and England, it was also mentioned that excessive engagement by the purchaser can lead to an overload of initiatives, information and guidelines, thereby demanding considerable time and effort from both purchaser and provider employees.

In terms of purchaser-provider relationships, having knowledge and an understanding of how providers deliver care seems to contribute to developing trust. Conversely, a more managerial governance structure seems to limit trust and reciprocity. This confirms earlier studies from the Netherlands that reported frequent tension and conflict between insurers and providers [4,43]. Dutch insurers seem reluctant to use innovative contracts with bonuses based purely on future performance improvements as a means of steering providers. This is because they foresee a risk of gaming, and see such contracts as rewarding providers for earlier poor results. Conversely, the English CCG perceived such contracts as an opportunity to reward good behaviour.

Based on these findings, we advance the following proposition:

Proposition 1

A highly engaged purchaser, driven by a system with clinically informed governance, benefits care chain management but this may come with higher transaction costs

The purchaser's strategic lens

In both England and Sweden, a single purchaser takes responsibility for the entire population, fulfilling a public health role, attending to population-level needs, guiding patients towards appropriate providers and taking a long-term view. The ambition of the CCG to implement a long-term population contract reflects this approach. Not only being the single purchaser, but also having the ability to clinically substantiate changing models of delivering chronic care contributes to this purchasing approach. Although multi-year covenants are also becoming more common in the Netherlands, these agreements do not go as far as the long-term population contracts proposed in the English region. In practice the focus is still largely on

annual control of service volumes and costs. In Sweden, the purchaser has reverted from outcome-based funding to budget caps as political pressure to contain costs has increased.

As Stolper et al. [44], we found that a health insurer who, for competitive reasons, needs to keep fees low is concerned that investing in care improvement and care-chain coordination will increase short-term costs without an immediate return on investment. In these circumstances, a purchaser who innovates in care coordination fears the financial risks of doing so. An earlier evaluation of vanguard sites in the Netherlands confirms this view: promising regional initiatives have not been translated into long-term agreements [21]. Purchaser competition however does highlight that care with long waiting times or capacity issues at providers can become a subject of public debate, damaging the insurer's reputation and encouraging patients to switch insurer.

These findings suggest:

Proposition 2

A long-term patient focus, driven by a system with a single purchaser and clinically informed governance, benefits care chain management, but this may come at the cost of short-term access to care

The purchaser's influencing style

In England, the CCG could initiate a long-term, population-based contract and coerce the relocation of tasks from secondary to primary care because it was the dominant, virtually the only, funder in the local health economy. The Dutch health insurer had less influence because care providers do not depend on a single payer and could, if they objected strongly to proposed care-coordination strategies, refuse to sign a contract and seek public support. This occasionally happens in the Netherlands, and insurers fear it will reduce their number of clients. As earlier research [4] also found, this leads to impasses during the annual contract negotiations between purchasers and providers. In the English region, however, commissioners report that the clinical debates can go too far, thereby threatening the autonomy of specialist medical clinicians or causing a clash of visions.

The Swedish purchaser puts much effort into managing the care chain as a whole and directing patients to the right provider. However, this approach is not very effective given that a patient's wide choice of providers limits purchasers' ability to coordinate care. Financial incentives currently reward specialised secondary care providers for maintaining high volumes of activity [45]. This is evidently problematic in Sweden, where there has been an increase in secondary care use, at the cost of primary care capacity. In England and the Netherlands, the desire to shift towards primary care is also present. The GP gatekeeper system in both countries and contributory payments for secondary care in the Netherlands limit patient freedom and this makes it easier for purchasers to steer patients towards primary care.

In principle, patient freedom to choose from a wide range of providers could stimulate providers to improve the quality of care and patient satisfaction as a way to attract more patients. However, in practice, patients have insufficient information and knowledge to choose the best provider, particularly with complex diseases such as COPD, and so usually

leave this decision to their GP [46,47]. Additionally, they do not want to jeopardise their relationship with the doctor [48].

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These findings suggest:

Proposition 3

A directive-influencing style, driven by a system with a single purchaser and limited patient choice, may benefit care-chain management but care providers may see this as unproductive over-interference

Limitations and future research

This study offers new insights into healthcare purchasers' strategies and actions. We identify differences in a purchaser's engagement, strategic lens and influencing style, and observe benefits and disadvantages of their approaches. It appears that three healthcare system characteristics are key in explaining healthcare purchasers' strategies and actions aimed at improving care chains: the number of purchasers in a given region; a substantial clinician, alongside managerial, purchaser governance; and the extent of freedom to choose secondary care. The English CCG studied had several positive examples of strategic purchasing, which potentially benefit care delivered to patients with chronic diseases such as COPD. This may seem counter-intuitive given the quality and capacity issues reported with the English system [33,49]. However, per capita healthcare spending is substantially lower in England than in Sweden and the Netherlands [49,50], so the reported quality and capacity issues may reflect NHS budget constraints rather than a purchaser's inability to improve care chains. In this study, we limited ourselves to the impact of system characteristics on healthcare purchasing behaviour and we did not compare the patient outcomes of healthcare purchasing systems. We did not assume that purchasing is a major determinant of health outcomes in general, a view that has not been empirically validated, but only that purchasing does affect healthcare coordination, for which there is considerable evidence [20,51]. The outcomes could be incorporated in future research. To do so fairly, one would have to invoke the economic 'ceteris paribus' clause: 'all other things being equal'.

We have focused on to what extent a purchaser is able or willing to manage its care chain and how this relates to various healthcare system characteristics. We recognise that providers' actions are also likely to determine how and if purchasers can fulfil their role. For example, studying whether different provider characteristics and responses can be identified, and how purchasers deal with such responses, may provide greater understanding of healthcare purchasing. Addressing the provider's perspective is thus an important area of future study.

Furthermore, our aim was to study healthcare purchasers' attempts to coordinate chronic care, and specifically COPD care chains, that consist predominantly of GPs and hospitals. We have given less attention to the roles of the separate, mainly municipal, organisations that are the main purchasers of care-home, social and mental healthcare in these three regions. To what extent healthcare purchasers align their strategies and actions with other bodies responsible for contracting chronic care for patients with COPD or other diseases remains an important question for future research.

By using a positive deviance sample of vanguard regions, we examined each health system at its strongest in terms of purchaser possibilities to improve coordination. This ensured that our critical comparison of purchasing systems was fair, but one should not forget

that purchasers' coordination of care chains elsewhere in the health systems studied may be weaker than reported here. In line with this, future research may compare multiple healthcare purchasers in the same healthcare system which may answer why purchasers develop certain, possibly different, strategies and actions.

Policy implications

Policymakers and purchasers should regularly consider whether purchasers have sufficient influence, professional knowledge, responsibility and ability to coordinate the care chain and to guide patients through it.

A multi-purchaser system can have benefits such as harnessing the insurer's reputation and providing the possibility for patients to switch insurer. As we see in the Netherlands, such mechanisms may prevent issues with provider capacity and long waiting times for accessing care [49]. However, it can, as we found, hinder improving care chain coordination. The ministry's move to enforce National Framework Agreements, which limit and shift national health budgets, illustrates that the anticipated effects of purchaser competition have not yet appeared. Importantly, purchasing should be a mutual process in which the expertise of providers is heard. A single regional purchaser appears well placed to influence task division and encourage collaboration along care chains. However, an overly engaged purchaser can be experienced by providers as burdensome and meddlesome, with 'micro-commissioning' [11] threatening their professional autonomy. In short, we conclude that multiple purchasers can be too fragmented, whilst single purchasers can become too interventionist.

Collaborative relationships help achieve agreements over chronic care improvements and thereby better long-term care outcomes. This is not to say that purchasers should not also focus on containing costs and providing access to care [11]. Thus, while professional knowledge and responsibility can encourage trusting relationships, managerial responsibility ensures attention to ensuring access to care and controlling costs. Even with a single purchaser, balancing these policy goals is difficult.

Purchasers can take a proactive and sometimes directive approach to managing task division and collaboration along care chains. With too little influence, purchasers may respond in regulatory ways that increase providers' administrative burden. As such, the power balance between purchasers and providers is a delicate issue. When looking for ways to strengthen healthcare purchasing, we would stress that policymakers should critically consider policies related to patient choice and the gatekeeper position of GPs [52].

Conclusion

In conclusion, we have provided fresh perspectives on healthcare purchasing by showing that purchaser strategies vary based on their engagement, strategic lens and influencing style. To achieve strategic purchasing, an important task for policymakers is to consider what is the right balance in their system across three dimensions: single versus multiple purchaser system, purchasers' internal governance, and the breadth of patient choice of providers, especially with secondary care. Irrespective of political preferences for market- or public-based systems, purchasers are expected to strategically contract chain-wide care which requires supportive health policies.

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Declaration of interests

None

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Tax-based		Insurance-based
<i>England</i>	<i>Sweden</i>	<i>The Netherlands</i>
Purchaser competition Low High 	Purchaser competition Low High 	Purchaser competition Low High 
Purchaser Governance Managerial Clinically informed 	Purchaser Governance Managerial Clinically informed 	Purchaser Governance Managerial Clinically informed 
Patient choice Low High 	Patient choice Low High 	Patient choice Low High 

Figure 1. Summary of the key healthcare system characteristics in each case

Table 1. Case details and data collection

Case	Characteristics of the region	Interviewees	Secondary data
England	Suburban population Size: ~300,000, majority low socioeconomic status	Purchaser: five purchaser managers (1 individual, 2 group interviews), purchaser medical advisor Providers: respiratory nurse, pulmonologist (6 interviews in total)	<i>Managerial documents:</i> 12 documents, 365 pages <i>Published documents:</i> [31-36]
Sweden	Urban population Size: >1,000,000, mixture of high and low socioeconomic status	Purchaser: three purchaser managers Providers: GP, pulmonologist, emergency medical specialist, Other: three healthcare consultants (1 individual, 1 group interview) (8 interviews in total)	<i>Managerial documents:</i> 16 documents, 229 pages <i>Published documents:</i> [34,37-42]
The Netherlands	Mixed urban and rural population Size: ~500,000, mixture of high and low socioeconomic status	Purchaser: insurer purchasing manager, insurer medical advisor Providers: pulmonologist, GP, hospital case manager, diagnostic clinic manager, two hospital managers (8 interviews in total)	<i>Managerial documents:</i> 11 documents, 284 pages <i>Published documents:</i> [4,34,43-46]

Table 2. Summary of purchaser strategies and actions (England)

Purchaser strategies and actions		Representative quotes
Category	Observation	
Clinical involvement	Large involvement of GP clinical leads	<i>“What enabled CCGs to make the biggest difference is that we knew about this, because we are led by doctors that are out there in the practices. They would constantly tell us about this problem”</i> (CCG Director of organisational development)
Support to providers	Strong support by clinical leads, commissioners. Data analysts are available and involved in development	<i>“So, I work with one of the CCG commissioners to try and develop the Right Care Project within [region] and some of that is in terms of early diagnosis and some in terms of admission avoidance, or admission strategies, trying to optimise care”</i> (Hospital respiratory consultant)
Relationship management	Moderate-good: mature relationships with providers. Tensions remain	<i>“I have tried to get rid of, what some commissioners would say to the providers: ‘well we say, so you do’. That is not a way of getting people to work together. And the commissioners can have a bad name sometimes, thinking they know better than the experts”</i> (CCG Director of organisational development)
Focus of attention	Patient focus: patient access, outcomes and experience are basis of purchasing strategy	<i>“Once a week at a community centre in [region], there is a peer support network for people who are like-minded with similar conditions. They get value from discussions with others on their coping mechanisms; it’s obviously reducing social isolation and loneliness, with a coordinator who does great things including getting people into talks and doing workshops. And they have nurses and doctors to provide the opportunity to ask any questions about their condition, certainly the evaluation is looking really, really promising”</i> (CCG commissioner)
Time horizon	Long-term: assumption that better health leads to long-term savings and good allocation of resources	<i>“If we look at the issues in the UK, and across your country and everywhere else: aging population, complex problems, obesity...the reactive acute medical model we’ve been running for donkey’s years, we can’t go on with that anymore. This model really isn’t suitable for the majority of our elderly population, who need long-term, chronic care”</i> (CCG director of primary care)
Power use	Moderate: power due to a single purchasing system for GP and hospital care	<i>“To use the Italian expression of the mafia; we gave them an offer they couldn’t refuse. And part of that was, this is where we are going – this is the model of the future. If you really don’t want to join us, then we will commission it from somewhere else. So, it was a little bit forced into their hands”</i> (CCG commissioner)
Chain management approach	Chain-wide approach: managing relationships between providers to achieve integration, managing relationships with other organisations who pay for care	<i>“So we’ve created Teams Without Walls, which are teams of people that are employed by six, seven, eight different organisations. But they work together as one team. And what pulls them together is the shared population they are working for. We haven’t issued a contract yet for this new model of care, but we have already got people working in those teams”</i> (CCG Director of organisational development)

Table 3. Summary of purchaser strategies and actions (Sweden)

Purchaser strategies and actions		Representative quotes
Category	Observation	
Clinical involvement	Moderate involvement of medical advisors who also work part-time as practitioners	<i>“But also the knowledge about healthcare, the medical issues, that is very important. So, there are quite a lot of physicians working as administrators in the purchasing organisation. There are very many nurses working as well”</i> (CC Health economist (retired))
Support to providers	Substantial effort and capacity of medical advisors, data-analysts, economists	<i>“But what we are trying very hard here to do, and you may have heard about that already, is to make the patient records available to everyone, so that if I go to a primary centre, then I can also access the patient record of the hospital and essentially from the different visits that this patient has made. So that will be quite a change”</i> (CC Head of unit for health development)
Relationship management	Moderate: purchaser seen as technocratic, particularly staff with economic and regulatory backgrounds	<i>“By commissioning here, we can tell them [care providers] which IT system to use, rules, regulations of all kinds”</i> (CC strategist and medical advisor)
Focus of attention	Patient focus: the CC puts much effort into channelling patients through providing information	<i>“We try to do that by firstly encouraging people to go to primary care. We have something called a Care Guide. As a patient you can go there, you can enter your condition, and then you can see nearby providers where you can go if you have [for example] a headache. And then we, of course, try to advise people to go to the nearest primary care centre”</i> (CC Head of unit for health development)
Time horizon	Medium-term: in practice hard to implement long-term improvements, in part related to electoral cycle	<i>“And, of course, politicians are elected for only four years, so they need results, they can’t wait for [evaluations], then you will not be re-elected”</i> (CC Health Economist (retired))
Power use	Little: unlimited patient choice limits the CC’s ability to steer	<i>“I would say that the people here [at the CC] think that they influence actual care a lot, much more than is actually true...when we are trying to do less and be less regulating over details, we should just keep our eyes on the big stuff”</i> (CC strategist and medical advisor)
Chain management approach	Aims for chain-wide improvement, but in practice takes a strong administrative role aimed at contracting individual providers	<i>“We have trusted market forces, privatisations, economic thinking very much here, it has gone quite far”</i> (CC strategist and medical advisor)

Table 4. Summary of purchaser strategies and actions (the Netherlands)

Purchaser strategies and actions		Representative quotes
Category	Observation	
Clinical involvement	Low involvement of the small number of medical advisors, whose main task is to judge individual patient cases	<i>"We would like a much greater medical content in the negotiations...Now these are [negotiated by] contract managers who talk with hospital managers. It would be quite helpful if you could just talk together as doctors"</i> (Insurer medical advisor)
Support to providers	Little medical advisory or data analysis capacity. Little time for relationship management	<i>"Look, these people come and go. At the insurers, the purchasers, there is no continuity. The continuity is with us, and every time we have to deal with different puppets. At a given moment, after a couple of years, that whole group that was responsible for it [the situation] had gone"</i> (Hospital pulmonologist)
Relationship management	Poor: arm's length relationships, suspicious stance towards the providers' intentions	<i>"I always find that, personally, with shared savings [contracts], you can only do that with the worst in class, because otherwise there is nothing to save. So, what you actually do is that you reward those who do not perform well for their bad behaviour"</i> (Insurer purchasing manager)
Focus of attention	Main goal is to control costs to keep insurance premiums low	<i>"In our offer, we usually talk about quality and the larger developments and innovations, but actually it comes down to the insurer saying: 'that is all nice and sweet, that you want all that, but we have this [budget]ceiling and the care costs should go down'"</i> (Hospital sales manager)
Time horizon	Mostly short-term: aim is to control costs, reduce patient volumes within a financial year. Some movement to long-term contracts.	<i>"Practice shows that the healthcare costs [of our population] are pretty high. And we would like to bring that to the average level. So there are all sorts of actions to look critically at the tariffs for chronic care, also COPD care. 'Is this still appropriate'?"</i> (Insurer medical advisor)
Power use	Limited: purchaser competition increases dependence of insurers on care providers, especially large ones	<i>"How I experience it, is that it is a balance [of power]. So, we can give some counterweight to the insurer. That has to do with our position [as a university hospital], we can have very strong talks, but we cannot push them"</i> (Hospital sales manager)
Chain management approach	Strong administrative role aimed at ensuring contracts with individual providers	<i>"I am very critical about these new financing models. [People say] 'we need to do something with population contracts', [I think] why? Is the current way of financing not right? Doesn't it suffice? Is there a problem that we need to solve?"</i> (Insurer purchasing manager)

Table 5. Purchaser strategies and actions, aggregated into three categories, explained by main healthcare system drivers.

Purchaser strategies and actions	Aggregate category of purchaser strategies and actions	Main healthcare system drivers
Clinical involvement	Purchaser engagement	Purchaser governance
Support to providers		
Relationship management		
Focus of attention	Purchaser's strategic lens	Purchaser competition and Purchaser governance
Time horizon		
Power use	Purchaser's influencing style	Purchaser competition and Patient choice
Chain management approach		