

INFORMAL ACQUISITION OF ACCOUNTING LITERACY AND  
THE USE OF ACCOUNTING INFORMATION BY CLINICIANS  
AT THE BOARD OF CLINICAL COMMISSIONING GROUP

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A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF  
PHILOSOPHY

DEPARTMENT OF ACCOUNTING

UNIVERSITY OF ESSEX

DATE OF SUBMISSION: 27/10/2022

## ABSTRACT

This thesis discusses how clinicians align their logic with the objective of the organisation that they work for, leading to informal acquisition of accounting literacy and the use of accounting information. The study uses institutional logic theory to explain the transformation that takes place as clinicians work alongside accountants. Data were gathered from document analysis, participant observation and semi-structured interviews with GPs, nurses and pharmacists.

Drawing on institutional logic theory, the study argues that the objectives that clinicians intend to achieve when they join the management team differ from those of the organisation. However, as they learn about the organisation's specificities such as its politics, budgetary process, and public expectations, their perceptions of what is possible align with those of the organisation.

The alignment of these diverse types of logic manifests in the form of trust, minimal conflict and a shared vision, even though the different groups are not necessarily in agreement about the best way to rationalise services. Consequently, the different groups can work together in harmony and allow some actors to direct certain activities while other actors shape different activities but decisions must be justified with sufficient information.

The alignment of logic and teamwork fosters informal learning through three processes: attachment to managers; hearing the same information repeatedly; and participation in goal-driven activities. Interdependency between clinicians and accountants and their shared visions are the two key factors in facilitating the informal learning process. The knowledge acquired is then used in decision-making, to influence behaviour, and for the purposes of education and negotiation.

## DECLARATION

This section certifies that:

- ❖ This thesis is the original work of the author towards the completion of the PhD, except the area indicated in the preface
- ❖ All other material used has been acknowledged in the text

## **PREFACE**

The response to question two was published as a joint project with my supervisor, Professor Pawan Adhikari. It is worth acknowledging that the publication was a collaborative work and therefore it is difficult to draw a clear distinction regarding who did what during the write up. However, I would estimate that over 75% of the work was done by me. I was responsible for the conceptualisation, data collection and write up, while Professor Adhikari helped to strengthen some of the arguments, including ensuring that the theory was applied correctly.

## ACKNOWLEDGEMENT

My sincere and grateful thanks go to my supervisors, Professor Pawan Adhikari and Dr Jacob Agyemang, for their invaluable input, counsel, suggestions, guidance, ideas and words of encouragement throughout this journey. I am also grateful to Professor Kelum Jayasinghe and Dr Daniela Pianezzi for their valuable comments.

Thank you to Juliet Sexton and her team for providing administrative support.

I extend my appreciation to the PhD director and other accounting lecturers at Essex Business School for organising seminars, workshops and annual presentations. The skills I have acquired from these activities have been helpful in my development.

To my friend Dr Frankline Anum Ndi for sharing his experience with me on a regular basis, especially his valuable advice to ‘think of your thesis as a party’.

Most of all, thanks to my wife, children, family and friends for their patience, understanding and encouragement. Even though some of them are not alive to see my dream become a reality, I believe they are there in spirit, especially my parents, Ebenki Emmanuel Ayuk and Elizabeth Joh Ayuk and my beloved brother Mboh Emmanuel Ayuk, who was like a father to me. They taught me to be hardworking, committed, and focus on the goal rather than being distracted by the challenges along the way. These values will forever remain in my memory.

I would also like to express my appreciation to all the GPs, Nurses, Pharmacists and informants who participated in this project. I am grateful to them for giving their time, information and friendliness during our meetings.

I would also like to say thanks to my defence committee, Professor Ileana Steccolini and Professor Mariannunziata Liguori. Their comments, support and the time that they gave to

completing this work have pushed me to improve both the quality and presentation of this study. I would also like to express sincere thanks to Dr Andre Lino for his encouragement and comments during my mock viva.

This version of the thesis has also benefited from the comments and suggestions of some anonymous reviewers and editors of the Journal of Public Money and Management. Their comments helped to improve the discussion about informal acquisition of accounting literacy by clinicians.

Above all, my sincere thanks go to God almighty, for giving me the strength, courage, good health and finance to complete this project.

## ABBREVIATIONS

AI	Accounting Information
AL	Accounting Logic
CCG	Clinical Commissioning Group
CL	Clinical Logic
CQC	Care Quality Commission
GP	General Practitioner
DH	Department of Health
HSCA	Health and Social Care Act
ICS	Integrated Care Service
IL	Institutional Logic
ILT	Institutional Logic Theory
IVF	In Vitro Fertilisation
ML	Management Logic
MOL	Medicine Optimisation Lens
NHS	National Health Service
NHS CB	NHS Commissioning Board
NPM	New Public Management
OTC	Over The Counter
PBC	Practice-Based Commissioning
PCG	Primary Care Group
PCT	Primary Care Trust
PL	Political Logic
PPS	Purchaser-Provider Split

RHA	Regional Health Authority
SHA	Strategic Health Authority
STP	Sustainability and Transformation Partnership



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## Chapter 1. Introduction

### 1.1 Background

Successive UK governments have introduced various reforms and governance structures within healthcare management. These changes are driven by political agendas, which often emphasise modernisation by adopting business-like ideologies (Haslam and Marriott, 2006; Chapman et al., 2014). However, reforms are not only common in the healthcare sector. They have become a widespread phenomenon in other areas of the public sector, promoted by the ideology of New Public Management (NPM) (Christensen and Lægreid, 2001). In the healthcare sector, reforms are driven by the intention to encourage healthcare professionals to adopt a business-like way of thinking and the type of mindset that takes costs into account in their decisions through active participation in management (Vassalou, 2001; Jones and Mellett, 2007).

As a result, various management tools have increasingly come to be used to facilitate the design and management of healthcare services, with accounting being a key one (Jones and Mellett, 2007). These tools are now accepted in the healthcare sector due to the growing cost of providing services. For instance, healthcare expenditures in OECD countries rose from 9.2% to 12.4% of GDP between 1995 and 2014 (Malmlose, 2019). In light of this increase, reforms have been promulgated to enable clinicians to take responsibility for making financial decisions whilst maintaining the quality of care.

Studies have observed that clinicians tend to show limited inclinations towards accounting information (AI) upon which financial decisions rely. Various reasons have been advanced for this attitude, including their educational background, age and experience (Kralewski et al., 2005). Moreover, certain kinds of AI such as budgeting and other financial information mean different things to different groups of professionals. Underlying this is the view that

interpretation involves translating a problem, creating a model of understanding and making sense of it and then taking a course of action based on the insight derived (Daft and Weick, 1984). A good example can be found in the work of Pettersen (2001), who observed a dysfunctional learning experience in Norway whereby clinicians were given budgets to manage but, instead of improving efficiency, they used this position to demand more money in subsequent years. Their interpretation of the reform fuelled a behaviour which involved inflating the number of procedures to demand budget increases. It happened when the Norwegian government introduced a clinical budget that was deemed necessary to control clinical expenditure. Clinicians viewed it as an opportunity to overestimate activities, overspend during a financial year and ask for more money in subsequent years. Therefore, the objectives of any healthcare reforms must be appropriately disseminated to different stakeholders to avoid ambiguity and subjective interpretations.

Nevertheless, studies investigating the way in which clinicians share the vision of the reform by aligning their logic with that of the organisation through informal learning and how the available information is used rationally are limited (van Helden and Reichard, 2019; Oppi et al., 2019). Furthermore, despite considerable attention being devoted to theorising about workplace learning, the latter remains relatively under-researched in the public sector context (Rashman et al., 2009; Visser and Van der Togt, 2016). This thesis addresses these gaps in the literature by employing institutional logic theory as the theoretical basis for the analysis.

## 1.2 **Aim of the thesis**

This thesis aims to enhance knowledge and understanding by exploring how the vision of clinicians merges with that of the organisations for which they work, how they acquire accounting literacy informally and how they apply the acquired knowledge to using AI. In the

context of healthcare commissioning, scholars have observed that the skills of the people who commission services are crucial in enhancing performance (Dickinson, 2015). Such skills include understanding the demands that come with restructuring, quantifying costs, ensuring that services are clinically effective, and strategic planning, among other things (Woodin and Wade, 2007). However, few commissioners seem to possess the knowledge and the kind of skills required for commissioning (Glasby, 2012). Hence, Glasby (2012) emphasises the need for future researchers to investigate how commissioners are trained, especially when most governments are facing financial challenges. This study attempts to address the aforementioned knowledge gap by delineating the alignment of multiple types of logic, including how clinicians are trained to use accounting information and how they use AI to keep costs under control. With few exceptions (Kurunmäki, 2004; Jacobs, 2005), this area, and particularly the acquisition of accounting knowledge by clinicians, is under-researched. Despite the existence of some studies that have discussed clinicians' presence in shaping healthcare services (Reay and Hinings, 2009; Currie et al., 2012), the informal acquisition of accounting literacy and the use of AI by clinicians have been understudied. The present study uses the UK's clinical commissioning groups to explore this gap in the literature.

### 1.3 **Research gap**

While reviewing prior work, several areas were identified in relation to which knowledge appears to be limited. For instance, although the presence of clinicians in leadership positions has been discussed in extant work (Waring and Currie, 2009; Cloutier et al., 2016), there is less focus on how clinicians align their interests with the objectives of an organisation that commissions healthcare services, the CCG being an important example. Some scholars have addressed the subject of how clinicians perform when they take on leadership positions. However, less focus has been directed towards how clinicians align their interests with those

of the organisation's wider objectives. For example, at the CCG, clinicians are given funds and are accountable for spending the money.

Additionally, calls have been made to highlight the challenges faced by the healthcare sector due to limited training and capacity for development opportunities for clinicians (Glasby, 2012). Oppi et al. (2019) emphasise the need to offer managerial training to clinicians and explore how trained clinicians have processed and applied AI. As a result, the author called for studies to explore how clinicians acquire accounting literacy through coaching and other informal means. In addition, literature on the public sector has underscored the limited research on AI, especially the way it is used by a very diverse group of users such as clinicians (van Helden and Reichard, 2019). These gaps are addressed by the three research questions presented below:

How does shared vision help clinicians to align their logic with the overall objective of an organisation, and how does it lead to the subsequent informal acquisition of accounting literacy?

What are the processes involved in acquiring accounting literacy skills informally by clinicians?

How do clinicians use accounting information after gaining some level of accounting literacy?

These three questions are answered using clinicians' own words based on their experience.

#### 1.4 **Theoretical framework**

This thesis uses Institutional Logic theory (ILT) to make sense of the data collected. Institutional logic (IL) has been applied to increase understanding of how clinicians' logic is transformed due to their involvement in management. The concept of IL is used in the research

to focus on the alignment and modification of logic, including how it is applied in relation to AI. Different types of logic are embedded within the broader framework of IL, and these help to enhance the understanding of various societal groups (Friedland and Alford, 1991; Thornton, 2004). To make sense of clinicians' motivation for change and the transformation that occurs once they become commissioners, the IL perspective becomes instrumental (Thornton et al., 2012; Besharov and Smith, 2014). For instance, professional logic, accounting logic (AL), governance logic, and other types of logic have played a role in shaping changes, especially by motivating clinicians to adapt to the new requirements of a commissioner's job.

### **1.5 Research method and methodology**

This study uses the qualitative research method, with data derived from primary and secondary sources collected through interviews, document analysis, and participant observation. Twenty-four semi-structured interviews and participant observations comprised the primary data, while document analysis was used as the secondary data source. The participants who were interviewed were GPs, nurses and pharmacists who work(ed) for the CCG. The interviews were conducted face-to-face, mainly in the CCG offices, and recorded using an audio recording device. In addition, two government documents were used to collect secondary data: the Health and Social Care Act, 2012 and the 2010 White paper entitled 'Equity and excellence; liberating the NHS'. Chapter Five presents a detailed discussion of the method and methodology used in this research.

## **Chapter 2. Theoretical framework: Institutional logic theory**

### **2.1 Introduction**

The theoretical framework used in this thesis is grounded in the concepts of IL (Thornton et al., 2012; Thornton, 2004; Friedland and Alford, 1991). IL theory is used in this study to show how clinicians as members of a professional group are distinct from managers and accountants and how their perceptions are transformed through the transfer of logic in the form of informal learning. These areas of distinction include their education, training, logic, rules, principles, values, norms and ethics that shape the way they carry out their routine activities. In addition, IL theory can enhance understanding of the factors that lead to conflict between the different actors involved in commissioning services.

### **2.2 Institutional theory and its development**

Discussion of neo-institutional theory sought to explain organisational behaviours centred on conformity and homogeneity (DiMaggio and Powell, 1983; Zucker, 1977; Scott, 1987). Scholars such as DiMaggio and Powell (1983) and Meyer and Rowan (1977) claim that an environment can influence organisations to adopt similar structures, based on what they assume to be rational institutional rules - a process that is known as isomorphism. Isomorphism occurs to a higher degree in an institutionalised context (Meyer and Rowan, 1977). The underlying argument is that institutions imitate each other and aim to be similar. DiMaggio and Powell (1983) claim that the production of organisational goods and services is usually guided by what is considered rational in a particular setting. According to Scott (1987), in order to better understand institutional theory, it is essential to look at the organisational structure, its environment, actor modes, interests, and how actor's actions shape institutional patterns and

mechanisms. In other words, organisations subscribe to rational myths about their environment in order to become isomorphic.

What is considered rational within a particular setting comes with expectations about how things should be done. To meet these expectations, actors within organisations tend to do things as expected, by behaving ceremonially and in some cases striving to gain legitimacy from their audience (Oliver, 1991). Such behaviours are adopted in order to increase survival prospects and gain stability (Meyer and Rowan, 1977; Suchman, 1995). Hence, most organisations attempt to operate in particular ways by repeating patterns of behaviours and practices. Although these patterns of behaviour look like normal occurrences, they are influenced by beliefs, norms, and rules that are usually taken for granted. These beliefs, norms and rules become institutionalised over time and when they are normalised, actors used them to resist change (Zucker, 1977). The degree of institutionalisation influences the degree of uniformity and resistance to cultural change.

Underlying the idea of the institutional theory approach is the concept of isomorphism (DiMaggio and Powell, 1983). DiMaggio and Powell argue that forces within an institution will naturally push it to maintain stability and this occurs by complying with institutional norms. These norms can be reinforced through either coercive, memetic or normative processes. The theory holds that institutions tend to maintain a stable way of doing things by repeating behaviours that have led to successful outcomes in the past.

However, this view has drawn criticism. Critics have argued that these assumptions ignored changes and diversity within organisations (Williamson, 1998; Kondra and Hinings, 1998; North, 1990). For example, Kondra and Hinings (1998) assert that changes in organisational and institutional norms can be observed over time. They emphasise the need to identify the



forces that lead to institutional changes. In recent years, ongoing discussions have covered different aspects of institutional theory within the organisation/management literature (Hassan and Mouakket, 2018; Goddard and Mkasiwa, 2016). For instance, Hassan and Mouakket (2018) argue that conformity does occur but must not be reinforced through coercive or mimetic processes. Instead, conformity can be achieved by building trust.

Critics have questioned what could account for any changes that occur in organisations, if they conform to what is happening around them (Sine and David, 2003; Reay and Hinings, 2005). Some scholars have argued that previously held norms, beliefs and rules must be modified, and transformed for changes to occur (Sine and David, 2003). Thus, changes are stimulated by external or internal forces. Changes in IL is considered one of the critical limitations of institutional theory. Another limitation of institutional theory concerns its limited focus on internal dynamics and the role of actors (Dillard et al., 2004; Tolbert and Zucker, 1983). This has led to the expansion of the theory in different forms, of which IL serves as an example.

### **2.3 Understanding institutional logic**

IL theory has gained increasing recognition and has been used by researchers in many fields to make sense of different interpretations of reality within institutions (Christiansen and Lounsbury, 2013). Research on IL has become one of the most rapidly growing intellectual research domains in the theory of organisations (Lok, 2019; Suddaby, 2014) and has been published in several top management and sociology journals such as the American Journal of Sociology, and Administrative Science, (Lounsbury and Boxenbaum, 2013). The theory is also widely used by accounting scholars (Jayasinghe et al., 2020; Grossi et al., 2020). Accounting scholars have drawn from IL theory to explain changes in accounting practice

across organisations, including the role and use of particular accounting practices in organisations.

IL provides a structure by which organisational actors socially define their actions (Friedland and Alford, 1991) as well as elucidating the meanings associated with various institutional activities (Mohr and Duquenne, 1997). It also shapes an organisation's structure, rules, expectations (Haveman and Rao, 1997) and agenda (Ocasio and Joseph, 2005).

IL became widespread after a paper entitled, 'Bringing society back in: Symbols, practices and institutional contradiction' was published by Friedland and Alford (1991). In this paper, the authors argue that aspects of the capitalist West, such as market capitalism, bureaucracy, democracy, family, and religion, shape people's preferences, interests, and behaviour. For Friedland and Alford (1991) institutional factors such as family and religion are contradictory, thereby presenting institutions and individuals with different types of logic depending on the individual's sector. To understand these contradictory relationships in societies, individuals must situate themselves in one or more fields. In the author's view, each field is guided by a set of logic. This implies that each institutional field has its own logic and this logic represents a combination of attributes, beliefs, rules and values embedded in an organisational structure and practices (Dunn and Jones, 2010; McPherson and Sauder, 2013). Therefore, logic plays a key role in understanding ILT.

### **2.3.1 What is logic?**

Logic is a broad word that has no clear definition as it is applied in different fields including philosophy, mathematics, business, politics, computer science, and language, etc. Smith (1901) stated that logic is about the evaluation of arguments, while Tomassi (2013) agreed, claiming that logic is not particularly concerned with the matter of fact, or how things are, it is about

arguments. According to the author, logic is ‘the science of thought, the study of the rationality of thinking’ (p.10). In other words, it is the study of the principles of reasoning, with a focus on the way that people reason and not the way they ought to reason to ensure that the truth of their result is achieved (Smith, 1901). The principles of logic do not guide reasoning towards one specific matter or another but instead guide reasoning in a general sense, as applied to all areas of study.

Logic is not just about valid arguments, it is also about reflection and principles of validation. It will emerge naturally only when there exists a substantial body of argumentative or referential material to hand (Kneale et al., 1962). Valid arguments are guided by logic. It is not a matter of fact or particular cause-and-effect relationships but is concerned with the validity that is independently backed by facts and empirical evidence (Tomassi, 2013). Like many other theories, it depends on some philosophical presuppositions and raises foundational and conceptual questions that can only be usefully addressed by thinkers who apply rigorous philosophical thinking (Gabbay et al., 2006). Consequently, Gabbay et al. (2006) question whether there is only one logic or if there are many different types of logic due to the presence of several modern specialisations:

*‘The most recent extensive growth of symbolic logics makes it harder than ever to sustain the attitude that logicians are in search of a single formalisation that will stand as the logic of all thought and discourse. What is suggested in the spirit of modern specialization is a plethora of different logics, many of which are deductively incompatible with one another, some of which are at most overlapping in their theorems and algorithmic methods or in some of their results and some that are so distant from one another that it is hard to see the sense in which they can all claim to be logic.’ (p.5)*

Therefore, what might be logical in one field can appear to be illogical in others. It has been discussed above that there is no one specific logic. Logic is primarily a means of validating accepted knowledge within a field. Importantly, it is about argument and not just what ought to be.

### 2.3.2 Fields and professions

According to DiMaggio and Powell (1983), organisational fields are, '*those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products*' (p. 148). Different terms such as games, organisational fields, social order, etc., have been used to describe this concept which is about communities or organised groups of actors (Fligstein, 2001). A field is used to explain the regularities of people's actions in a position vis-à-vis others (Martin, 2003). In Martin's view, an institutional field represents a case of interdependency that cuts across groups such as professional groups. Thus, a field structure is created through the interaction between its units, which then become influential bodies that are difficult to reduce, for example, professionals who are brought together by shared views about a particular subject.

However, this does not mean that field actors always agree on everything. Nevertheless, field theory holds that field actors take one another into account when taking actions (Kluttz and Fligstein, 2016). With regard to how things work within a field, Kluttz and Fligstein (2016) explain that fields are stable orders that create the possibility for the continuous reproduction of actors and their social position. The stability of the order makes actors take each other into account when framing actions. It is worth noting that the actions of actors in a field are shaped by a theoretical or empirical social arena. Underlying this argument is the premise that every

explanation of social actions is limited within the context of the field. Actors within a field could be individuals, groups such as professions, organisations, firms, sub-units of organisations and states. The views of various actors within each category are socially constructed and oriented towards a common practice or institutional goal or issue. The key point is that actors within a field have a shared meaning and recognisable rules and norms that guide their interactions.

Field theory has been used to explain different concepts in societies. For instance, it has been applied to explain how logic is transferred to a societal sector such as a professional group. It argues that collective beliefs and shared understanding in a field are developed by individuals who share common interests, but reinforced upon the constituent communities by state agencies and professional bodies through normative and/or coercive means to regulate the activities within a field (Greenwood et al., 2002). It is the application of these rules and regulations that are then spread throughout the system to reproduce the prescribed social reality of that field.

Therefore, logic is transferred from a field to a profession using various means including isomorphism, coercive forces from authorities, normative forces and sanctions from professional associations/experts (Scott, 2013). In the case of a normative process, professionals mimic or copy what others are doing. It is this self-regulatory process that then spreads throughout the system to reproduce the prescribed social reality of that field. Behaviour that deviates from such prescribed ways of doing things must be justified. However, regardless of the method employed to reinforce the shared beliefs and understanding, when they are institutionalised over time, they become rules (Kluttz and Fligstein, 2016). While professionals are guided by rules, professional associations are areas in which social construction takes place.

## 2.4 Organisational fields and multiple institutional logics

The best way to understand individuals and organisational action is to study them within a societal context. Studies have categorised contemporary Western society into six sectors: capitalist market, bureaucratic state, democracy, family, religion/sciences (Friedland and Alford, 1991) and profession (Thornton, 2004). According to Thornton et al. (2012), each type of IL helps researchers to understand the interrelationships operating among situations, individual and organisational actors in multiple social inter-institutional environments.

Societies are classified into different sectors based on the assumption that institutional agents must have a stable interest. In effect, institutional actors must be accustomed to a particular way of doing things also known as routine. Friedland and Alford (1991) summarised this view as follows:

*'it is the content of institutional order that shapes the mechanisms by which organizations are able to conform or deviate from established patterns. These institutional orders and the specific relations between them, delimit types of organisational fields.'* (p.244)

This implies that the way in which things are viewed in each societal sector differs from each other. For example, every society has its own definition of risks, uncertainty and how to measure such concepts.

## 2.5 Dominant institutional logic

Dominant IL can be summarised as the view that each societal sector has a particular way of viewing the world and this is shaped by what is legitimised in that society (Thornton and Ocasio, 1999; Scott, 2008b). The fundamental assumption about a dominant IL perspective is

that each institutional field has its unique material and cultural characteristics (Friedland and Alford, 1991). For instance, in medicine, the central logic is healing the patient.

Dominant logic is experienced in any given environment. The institutional environment is the arena in which dominant ILs are developed, legitimised and supported. Actors in a given setting use the dominant/prevaling IL as a governance system for the idea that they have approved. Dominant ILs are principles within institutional fields that help to shape collective action (Cloutier and Langley, 2013). Such principles are used by field actors to guide their decisions. Routines and definitions of problems are also shaped by the prevailing dominant IL of that field. However, when individuals in that field become accustomed to a particular way of doing things, they become resistant to change (Greenwood and Hinings, 1993). As a result, most organisations stick to their dominant IL to reinforce the notion of stability (Reay and Hinings, 2005). According to Thornton (2004), dominant logic is built on principles that shape actions based on a particular culture whilst taking into account the way things have always been done in that social sector.

Key aspects of dominant IL are their influence on individuals' interpretations, ways of legitimising things and determining appropriate behaviour and decisions (Thornton, 2004). Other important features of dominant ILs are the determination of what constitutes problems, how they can be resolved, the direction of change and how it helps to focus people's attention on particular information while ignoring other information. The different societal sectors identified within modern society are presented below.

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<b>Societal sector</b>	<b>Central logic</b>
Capitalist Market	The key logic of capitalism is the accumulation and the act of treating every human activity as a commodity.
Bureaucratic state	The central logic of the state is rationalisation and the control of human activities using law and bureaucracy.
Democracy	The central logic of democracy is to encourage citizen participation while controlling how they do things.
Family	The logic guiding family is community life and unconditional loyalty to other members while accomplishing the need to reproduce.
Religion or sciences	The logic guiding religion is truth and a special way of constructing the reality of human activities.
Profession	Professional logic is determined by network relationships shaped by professional reputation and expertise. Professional associations legitimise decision-making in this societal sector.

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Table 1 Institutional logic identified in Western societies

Source: adapted from Friedland and Alford, 1991; and Thornton, 2004.

[Table 1](#) displays the various ILs and their definitions. These types of logic are classified using their dominant historical patterns, beliefs, values, and norms that shape the interpretation and the social reality of its members (Thornton, 2004; Friedland and Alford, 1991). With reference to [table 1](#), it is essential to note that each definition contains issues that are symbolic and imbued with historical significance and are defended by members of that category. Drawing from the



information presented in [table 1](#), the various logics help individuals to make sense of events around them even though the senses are materially constrained.

Despite the differences in their definitions, each dominant IL presented above is essential in understanding an institution's power structure, authority, mission, strategy, governance system and how preferences are created (Thornton and Ocasio, 1999; Schmidt, 2008; Thornton and Ocasio, 2008). This list is inexhaustible. Therefore, a logic that is dominant in one particular situation may be subordinate in another. For example, Pettersen and Solstad (2014) demonstrated the presence of different types of logic by showing how different ILs are used to guide different decisions taken by clinicians in Norwegian hospitals.

## **2.6 Various ILs guiding healthcare management**

IL, institutional fields and actions taken by actors' are closely connected. The key to this assertion is that an institutional field is a group of actors held together by a common belief and joint values and their actions are shaped by the dominant form of logic in their field (Scott, 2008a). Therefore, any field IL guides actors' actions through the recognition of suitable goals to be pursued and by describing the best method for achieving those goals (Pache and Santos, 2013). The key influential factors that guide each field's IL are the environment, the governance system and the way in which decisions are legitimised (Scott et al., 2000). Groups such as professional groups use their unique attributes and regulatory systems to exert influence over organisational functioning. In this regard, Currie and Guah (2007) suggested the need for multiple levels of analysis when considering the way in which societal factors influence the prevailing belief system within an organisation.

Different ILs influence the design and delivery of healthcare services. Each of these logics is defined in the next section to clarify the way in which they influence decision-making.

Although the logics that influence the commissioning of healthcare services might not be limited to those identified in this study, the various logics identified include: accounting logic, managerial logic, professional logic, clinical logic and government/political logic.

### **2.6.1 Government logic**

Government logic (GL) or the bureaucratic state is the rationalisation and control of people's activities using law and bureaucracy (Friedland and Alford, 1991). According to Reay and Hinings (2005), government logic has undergone significant changes in recent history and this is signalled by the use of new language published in official documents and associated journals. For instance, between 1945 and the 1980s, the government frequently used the term 'welfare state' to indicate its aim of supplying citizens with their necessities (Osborne et al., 2002). This era was characterised by bureaucracy and hierarchy. According to Osborne et al., governments argued that charitable and private organisations had failed to provide certain services because of duplication and fragmentation. Therefore, the government had to step in to provide these services, such as by creating the National Health Service (NHS) which was stimulated by such motives. An example of a document that highlighted government logic is the National Health Service Act 1946, which established the NHS with the sole responsibility of designing how services should be delivered, under the direction of the Minister of Health.

This changed with the development of a new trend that started in the 1980s known as NPM, whereby the public bureaucratic state underwent significant transformation and restructuring (Mulgan, 2003). Osborne et al. (2002) described this as a plural state which is also known as managerialism or neo-liberalism. During this period, there was a shift in ideology away from the state playing a more dominant role in the economy toward the private sector and market mechanisms. For instance, in the White paper of 1997('The new NHS: modern, dependable'),

the dominant logic was centred on partnership where by local health authorities were encouraged to work together with hospitals with some advice from medical practitioners.

The third era involved the addition of another dimension to the way in which public affairs are managed by putting greater emphasis on accountability and public involvement, a principle known as New Public Governance (Almqvist et al., 2013). Almqvist et al. (2013) highlighted the differences between these two concepts by explaining that '*NPM represents a 'command and control' manner of using performance information, while the function of performance information within networks is mainly to support processes of debate and dialogue among the partners with different competencies, who are dependent on each other but not in a hierarchical sense*' (p. 4). They observed a vertical relationship between actors in the case of NPM while NPG was characterised by a horizontal relationship. For instance, on page four of the 2010 White paper (Equity and Excellence: Liberating the NHS), it was stated that the government aimed to empower professionals and providers whilst making them accountable to patients and the local population. This analysis shows how the management of public services has evolved.

### **2.6.2 Managerial logic**

Managerial logic (ML) '*is the subordination of specialized knowledge under the generalist expertise of managers and their supremacy in creating, and supervising division of labour pursuing administratively established productive goals while minimizing discretion in relation to execution of tasks in order to achieve efficiency*' (Gadolin, 2018, p. 128). Managerial logic is influenced by declarative knowledge, procedural knowledge, decision scripts, and business decision models based on assumptions about valuable opportunities shaped by value drivers based on resources (Mishra, 2017). It also involves selecting a position in relation to the chosen

strategy, including choosing between valuable activities, and understanding unexpected events and challenges. In relation to analysing managerial logic or management logic, Mishra explains that it contains scripts, schemas, beliefs, theories and assumptions that shape activities and management decision-making. That is, it influences an organisation's strategy, resource allocation, opportunities, and competencies, including operational and strategic decisions. In simple terms, managerial logic is a mental model shared by the management team about how business works, including the way in which value is created and how it can appreciate, and this is most often shaped by management theories and assumptions.

### 2.6.3 Professional logic

One area in which IL theory has been employed to explain conflict is professions. According to Gadolin (2018), '*a common premise in distinguishing actors and explaining conflict within organizations is the professional logic and the managerial logic...*' (p. 127). When distinguishing between professional logic (PL) and managerial logic, the author pointed out that professional logic is the control of an individual's work by their occupation whereas managerial logic is the control of work by a manager's bureaucracy.

Generally, each group of professionals differs from one another in terms of how they think, how they approach problems, and how they define issues within their domain. These differences are the primary source of conflict when different professionals work together. To understand this, one first needs to understand what a profession is and what makes one profession different from another. According to Cruess et al. (2004), a profession is '*a vocation in which knowledge of some department of science or learning or the practice of an art founded upon it is used in the service of others*' (p. 75). Meanwhile, Wright (1951) defined it as '*a self-disciplined group of individuals who present themselves to the public as possessing a special*

*skill derived from training or education and who are prepared to exercise that skill primarily in the interests of others. A professional person is a member of such a group' (p. 757).*

The most common attribute shared by professionals is that they belong to the same group who possess special skills acquired through training and education (Wright, 1951). Extant literature especially that which draws upon IL, suggests that different professionals vary in how they work due to differences in their skills (Kavic, 2010; Morrow et al., 2011). Essential factors that shape how different professions operate include training, culture, values, and principles. All these features make one profession different from another. Professionals use these features to maintain boundaries.

The key idea is that every profession has its dominant IL shaped by a particular culture, norms, training, beliefs, experience and principles (Thornton, 2004). These shared features shape the way that individuals within a given profession think and make decisions. Since a single dominant logic controls most professions, actors within those professions are in the best position to hold each other accountable (Schon, 1983). The reason for this is that actors within a particular profession are able to fully understand the actions of one another. According to Parker (1994), actors in the same profession have acquired similar training and skills that are complex for other professionals to understand. This intricate knowledge is usually in the form of shared professional logic. Professionals use this complex knowledge to create jurisdictions or artificial boundaries when serving the public (Cooper, 2012). For example, professionals create boundaries by standardising how tasks are handled (Waring and Currie, 2009).

However, Freidson (1994) argues that although professions have artificial boundaries and professionals make decisions using the dominant logic of their professions, the introduction of NPM brought some changes to the way in which some professionals work. Before NPM,

professionals were well organised, making it difficult for people outside their group to influence their procedures, standards, processes, and expected outcomes (Ackroyd, 1996). They did this by forming associations that guided their professional norms and behaviour. Members of these associations were highly cooperative, and membership was not open to other staff in the internal organisation and the general labour market (Murphy, 1988).

Other professions were prevented from interfering in their activities, which enabled them to enjoy the autonomy of their society. The autonomy enjoyed by professionals included the power to determine the nature of problems within their domain and the procedures to solve them. They were also the competent authority for evaluating professional performance. Another area of power that they enjoyed was exercising control over who could obtain a membership licence and how long training should take (Toren, 1975). For instance, medical professionals have the autonomy to define illness, diagnosis and treatment. Those within the profession also designed their own study program. However, a lot has changed in the aftermath of NPM in some countries. In most European countries, different professionals are now employed to perform duties outside of their routine practice (Noordegraaf, 2007). For instance, clinicians are now taking on managerial responsibilities in most European countries.

### **2.6.3.1 NPM and its influence on professional logic**

Since the advent of NPM, professionals have been accepting roles that were outside their training and responsibilities in the past. This has led to the widening of professional jurisdictions and the broadening of roles and boundaries by making professionals accept responsibilities that were formerly outside their routine practice (Noordegraaf, 2007). Such changes have made it challenging to define professionalism in contemporary society (Hanlon, 1998). However, some scholars have argued that the changes that have been observed in most

professions do not just occur naturally; they are the work of governments attempting to control the activities of professionals by making non-professionals carry out professional activities (Evetts, 2009). As a result, some aspects of professionalism have changed while others are still respected, as can be observed in [table 2](#).

<b>Changes</b>	<b>Continuities</b>
Governance	Authority
Management	Legitimacy
External forms of regulators	Prestige, status, power, dominance
Audit and measurement	Competence knowledge
Targets and performance management indicators	Identity and work culture
Work standardisation and financial control	Discretion to deal with complex cases, respect, trust
Competition, individualism	Collegial relations and jurisdictional competition
Organisational control of the work priorities	Gender differences in careers and strategies
Possible range of solutions/procedures defined by the organisation	Procedures and solutions discussed and agreed within specialist teams

Table 2 Changes and continuities in professionalism as occupational values

Source: Evetts (2009)

[Table 2](#) illustrates that some aspects of professionalism have changed while others remain. For example, professionals are individualistic and the organisation defines the work of a professional rather than professionals shaping their own activities. Aspects that have not yet

changed can be seen in the right-hand column of [table 2](#). The changes and continuities illustrated in the table are mostly centred on two aspects: structural and relationship characteristics. Changes are primarily structural, while relationships tend to continue.

Before the advent of NPM, it had long proved difficult to manage professionals and introduce the desired changes that most governments wanted. However, Evetts (2009) explains that after all their attempts to introduce changes had failed, most governments decided to use professionals to fulfil their agendas such as target setting, performance management, the standardisation of work practices and control.

#### **2.6.4 Clinical logic**

Clinical professional logic is the logic that captures elements of diseases and the chain of care that is related to them (Ketelaars and Wijngaarden, 2009). This definition neatly encapsulates the key component of clinician reasoning that Gruppen (2017) described as including the integration of biomedical and clinical knowledge with the information provided by patients.

Clinical reasoning guides clinicians in making responsible and informed decisions to address their patients' needs. It can also be described as the thinking and decision-making processes connected to clinical practice (Higgs et al., 2018; Norman, 2005). Some scholars have defined clinical reasoning as the process that guides clinicians when designing patient care (Schell and Schell, 2008). It concerns the sequence involved when solving problems and making diagnostics and treatment decisions (Payton, 1985). Clinician reasoning is defined as how clinicians evaluate patients and decide on their treatment plans.

Clinician reasoning is a vital element of every healthcare system because, although there are multiple forces operating in any healthcare system, clinicians' actions and choices determine how most of the system's expenditure is allocated (Barrows and Tamblyn, 1980). When



solving problems, clinicians use intuitive reasoning combined with analytical skills or science (Pelaccia et al., 2011). Studies have shown that clinicians' experience influences their judgement when solving problems (Tanner, 2006). Clinical decisions are influenced by the interactions between the clinician, the patient, the sociocultural environment, and biomedical considerations (Eisenberg, 1979).

Decisions taken by clinicians are shaped by science and representation (Norman, 2005). Science, in this context, means learning about different diseases, while representation is about knowledge acquired through many years of practice and experience. The author argues that it takes many years of practising to work independently. This implies that clinicians typically have an extensive set of representations of diagnosis (based on their experience of the number of patients they have encountered), which they have acquired over a period of many years, from which they draw knowledge to analyse different situations. Clinicians' representational knowledge is triggered when a situation is noticed (Tanner, 2006). At this point, knowledge is drawn from the skills they have acquired over many years to determine a course of action. Science/biomedical theories and experience are used by clinicians to identify solutions to problems.

It is essential to understand the way in which clinicians think when making decisions, especially in the current era when national financial capacity is restricted while healthcare systems are increasing their spending on technology. For example, Kurunmaki et al. (2003) argue that healthcare professionals face difficult ethical decisions about delivering healthcare as medical technology advances, and national financial capacity is being restricted. This argument provides a case for clinicians to start reasoning in quantitative terms when providing services.

Scholars have argued that even if work demands are pushing clinicians to shift their logic, they must subordinate their own interests, be ethical, adhere to moral standards, and respond to their clients' social needs, including evincing core signs of humanism such as being honest, caring, compassionate and maintaining dignity (Swick, 2000). They must also be accountable, committed to excellence, committed to advancing their field, able to deal with uncertainty and complexity, and reflect before acting or making decisions. However, such principles can also be applied to other professions. A substantial body of literature has shown that clinicians solve problems in a unique way which is different from other professions such as accountants.

### **2.6.5 Accounting logic**

Accounting logic (AL) refers to the measurement and communication of economic events guided by economic concerns, shaped by two assumptions: first, the assumption that entities' use of finance must be evaluated with a focus on achieving measurable output that will add value to the entity: second, evaluation is more effectively achieved by accounting for the actual finance received and used (Broadbent, 1998). AL can be employed in different circumstances within an organisation, for instance, it may be used by accounting professionals to reshape the culture and orientation of an organisation by introducing rigorous financial control mechanisms such as a budget (Morgan, 1988). In addition, it provides the rationale for resource allocation and the procedure by which accountability is maintained in an institution (Burchell et al., 1980).

However, scholars such as Wyatt (2004) have shown that the power of accounting professionals in the public sector has plummeted due to the entry of non-accounting trained individuals into the profession. Wyatt (2004) explains that accounting professionals previously had the power to shape accounting practice until the early 1960s when non-accountants were hired to perform accounting functions. The shortage of accountants in the public sector made

it possible for non-accounting graduates to be recruited, trained for six weeks, and employed to perform accounting duties. This move eroded the power of some professional organisations, such as the American Institute of Certified Public Accountants (AICPA). It converted them into the equivalent of trade associations but with less professionalism and ethical behaviour. Nevertheless, it is worth noting that the participants in this study were clinicians, and therefore the next sub-section is designed to highlight clinicians' experience of AL.

## 2.7 Clinicians and accounting logic

Clinicians play an important role in deciding on and executing healthcare expenditures in most countries. Therefore, discussion about clinicians and AL is very important in order to understand how they use AI. Given that AL assumes that entities' use of financial resources must be evaluated and every entity must account for the finance that it receives and uses, one could argue that it does not correspond with CL. One way in which CL and AL differ is in their perception of costs. Studies have suggested that unfortunately clinicians have a poor understanding of the application of AL as a result of their lack of awareness of the costs of prescription, diagnosis and other treatment (Hernu et al., 2015; Hunderfund et al., 2018). It is alleged that clinicians are inattentive or lack cost consciousness.

Cost consciousness is '*defined as the amount of attention paid to cost and an individual's perceived responsibility to keep cost under control*' (Schmitz et al., 2019, p. 246). Studies have shown that clinicians pay no attention to the costs of their activities and this deficiency needs to be addressed as observed by Varkey et al. (2010) based on their review of 40 articles published over a 30 year period. However, medical students recognise the need to be cost-conscious, despite the fact that the importance of costs and other accounting lessons are not generally taught to medical students, as observed among Harvard and the University of Toronto

medical school students (Leon-Carlyle et al., 2019). While medical students have the enthusiasm for learning about costs, both experienced and inexperienced physicians share a resentment toward having to take costs into account (Hunderfund et al., 2018). This implies that inexperienced physicians in their first year of practice have the same perceptions as their more experienced colleagues.

However, it is argued that without an understanding of the economic value of medical care, clinicians cannot engage efficiently in negotiating the management of healthcare systems (Dzik, 2010). Dzik, therefore, called for change based on the following rationale:

*'We must change the way we educate newer generations of healthcare providers, and educators themselves must be prepared to teach new guidelines. Innovation is needed, not just in terms of advanced technologies, research, and newer therapies, but also in the way we teach newer generations about proper business management and instil administrative survival skills. Medical schools and residency programs should leverage their curriculum with partner business schools to address these issues.'* (p. 889)

As part of an effort to control this deficiency, efforts were made by Jerry Avorn, Wayne Ray, and others in the 1970s to engage clinicians in understanding cost-related concepts through different educational approaches (Cooke, 2010). Nevertheless, this problem persists because it is historically, structurally, philosophically and culturally rooted. Therefore, this has become a long-standing obstacle as a result of the training of medical professionals. Much focus has been placed on ensuring that they are clinically sound while ignoring the cost of services. The question that then arises is when are clinicians-managers/leaders trained to understand and deal with costs? Questions can also be asked as to whether clinicians are aware of the cost of their activities when providing treatment.

In previous studies, clinicians have acknowledged the importance of constraining the cost of treatment, prescription and diagnoses. It has been noted that they often believe those costs are less important due to the demanding nature of their schedule (Bovier et al., 2005; Bucheeri et al., 2013). When applying clinical logic, patients' well-being is more important to clinicians than thinking about the cost of treatment. Bucheeri et al. (2013), pointed out that clinicians believe that cost is only important if a patient has to pay for the services from their own pocket, and if this is not the case then there is no need to focus on costs. In the UK, clinicians lack training on cost consciousness while at the same time, they have to deal with ethical issues, which makes the situation more complex as observed by Capuzzo and Rhodes (2015).

Scholars have observed, on a global basis, that clinicians tend to focus on the clinical problems of their patients and take less interest in their associated costs. For instance, Hernu et al. (2015) noticed the lack of application of AL in relation to decisions taken by French intensive care clinicians. In Israel, a similar observation was made regarding a diverse group of clinicians that included family practitioners and gynaecologists (Magnezi et al., 2010). The reason given for this attitude is that considering the financial implications when deciding on a treatment trajectory is damaging to patients' health. Allan and Lexchin (2008) used archival data from 1950 to 2005 to observe the change in clinicians' attitudes toward costs and concluded that doctors have a limited understanding of diagnosis and treatment costs.

Different approaches have been adopted to try to overcome this deficiency. For example, cost-saving measures were forcibly imposed in the Western Balkans to make clinicians more cost-conscious, but things did not work out as planned (Jakovljevic et al., 2016). In this case, healthcare reform was introduced to reshape the mindsets of clinicians to make them more aware of different strategies for cost containment, but it affected clinicians' perceptions of the quality of healthcare. A similar initiative was undertaken in Bahrain, and it only proved

possible to improve the level of cost consciousness for primary care clinicians who saw fewer patients, while no changes were observed for clinicians who consulted many patients (Bucheeri et al., 2013). The aforementioned studies demonstrate that a lack of cost-consciousness among clinicians is a global phenomenon. The relevant body of literature has shown that field logic influences actors' actions and the activities of an organisation.

## 2.8 The influence of logic on actors and organisational action

Organisational fields are often identified as a group whose members have some characteristics in common. Each group member uses their collectiveness to influence the organisation and other actors' actions (Tajfel et al., 1979). Members of a group such as a professional group share some emotional, normative and cognitive attachment as a result of seeing themselves as having common status with other members of their social group (Polletta and Jasper, 2001). According to Tajfel et al. (1979), *'the major characteristic of social behaviour related to this belief system is that, in the relevant intergroup situations, individuals will not interact as individuals on the basis of their individual characteristics or interpersonal relationships, but as a member of their group standing in a certain defined relationship to members of other groups'* (p. 35).

Salancik and Pfeffer (1978) explain this further by highlighting that such groups provide information about how an individual's opinions and attitudes should look while also observing the cues used by individuals to interpret and construct events. Furthermore, groups provide norms and expectations that guide individuals' rationalisation process. The authors summarised the influences of social groups such as professions as follows:

*'(1) It provides a direct construction of meaning through guides to socially acceptable beliefs, attitudes and needs, and acceptable reasons for action; (2) it focuses an individual's attention on certain information, making that*

*information more salient, and provides expectations concerning individual behaviour and the logical consequences of such behaviour' (p. 227).*

Based on these arguments, field-level logic appears to be static, and the presence of any new logic is brought about by the introduction of a new societal sector, or at least this was previously believed to be true. However, recently researchers have started to challenge this notion by arguing that IL is modified when people interact with individuals with different types of logic, especially in a context where multiple logics exist within an organisation (Aalto and Kallio, 2019; Gawer and Phillips, 2013). The notion of multiple ILs has resulted in various arguments such as those claiming that there has been a shift in IL, coexisting logic, competing logics, and many more, which are discussed in the following subsections.

### **2.8.1 Competing institutional logics**

The existence of competing logics within institutions has been acknowledged in different fields, including education, the banking sector, healthcare management, accounting, etc. (Pache and Santos, 2013; Goodrick and Reay, 2011; Golyagina, 2019). Institutional research suggests that competing logics are experienced in different institutional environments. According to Pache and Santos (2010), institutional settings impose conflicting demands on organisations, making compliance difficult because satisfying some demands requires others to be denied. Moreover, these demands are usually different and incompatible (Smets et al., 2015). For example, there is a conflicting demand between meeting the expected standard of care for patients in hospitals and the demand for accountability imposed by funding suppliers (Reay and Hinings, 2005; Kurunmaki et al., 2003). Studies have shown that competition between IL in institutions such as the NHS was further complicated when concepts such as patient choice, public value and national IT programs were introduced (Currie and Guah, 2007).

Often, when organisations put forward an objective, various professions apply different logics suggesting a trajectory for how to achieve the same goal more effectively. Some scholars have described the presence of these different logics as multiple ILs or institutional pluralism (Lee and Lounsbury, 2015; Dunn and Jones, 2010). Despite the usefulness of multiple ILs as a concept, it was largely ignored in the earlier literature. In recent years, however, it has become central to academic debate due to its role in explaining deep-rooted tension within organisations (Pache and Santos, 2013; Kraatz and Block, 2008). The presence of multiple ILs often results in competition which subsequently triggers institutional conflict (Lee and Lounsbury, 2015).

Prior research on IL holds that institutions are resistant to change and therefore must compete to maintain their dominant position. In such cases, resistance occurs when institutional actors mobilise to maintain routine practices (Davis et al., 2005; Wade et al., 1998). A striking example of competing ILs is in the healthcare sector. Dunn and Jones (2010) found that, in the context of healthcare provision, a persistent rivalry has existed between the logic of care and the logic of science regarding jurisdiction over the power to guide the provision of services. As Kraatz and Block (2008) explain:

*'if institutions are broadly understood as the rules of the game that direct and circumscribe organizational behaviour, then the organization confronting institutional pluralism plays in two or more games at the same time. Such an organization is subject to multiple regulatory regimes, embedded within multiple normative orders, and/or constituted by more than one cultural logic.'*  
(p. 2)

Thus, multiple regimes impose competing and conflicting demands on an institution such that to satisfy some of these demands will require ignoring others, thereby creating competition among ILs (Pache and Santos, 2010), as shown by Arman et al.'s (2014) analysis of competing ILs in the context of healthcare management in Sweden. The pre-NPM era was dominated by



medical professional IL. However, the introduction of NPM ideologies changed the dominant logic from medical to managerial logic. In analysing the Swedish medical system, Arman et al. (2014) argued that medical professionals did not welcome such change and fought hard to retain their dominance. However, both forms of logic were maintained in competition with each other, although managerial logic was often favoured in conflicting situations because it was built on accounting numbers and hence the evidence it provided could easily be justified.

Contrary to the Swedish situation, other studies have suggested that conflict between competing ILs can be resolved without a single type of logic being dominant. In the words of Goodrick and Reay (2011, p. 404), *'logics may be competitive but still be jointly reflected in professional work because of segmenting; some aspects of work may be guided by one logic while others are guided by alternative ones..... Competitive relationships characterized by segmenting allow multiple institutional logics to coexist for a lengthy period of time'*.

Additionally, in studies of competing IL, it is argued that competition occurs when one type of logic resists displacement (Arman et al., 2014). Such competition usually happens when a new form of logic replaces an old dominant logic, but the legacy of the old one persists. Furthermore, competing logic can equally arise from a situation whereby an old form of logic is displaced to create two new competing IL (Mullins, 2006; Golyagina, 2019). However, in the case of replacement, the logic being replaced can mount stiff resistance to change (Marquis and Lounsbury, 2007).

In the literature, it has been documented that competition between ILs has led to tension in working relationships with the consequences manifesting themselves in the form of various power structures and different processes of decision-making in organisations (Greenwood et al., 2014). Competing IL is also responsible for shaping service provision and the size of some

organisations (Van de Ven et al., 2013; Donaldson, 2001). Competition between ILs may also result in the modification of an institutional field's ways of doing things by creating some form of hybrid. This suggests that an old form of sense-making can shift to a middle position, prompting actors to draw on some aspects of their old reality in combination with what they have learned (Meyer and Hammerschmid, 2006). A hybrid logic results when two types of logic combine their characteristics to form a new logic.

### **2.8.2 A shift in institutional logic**

IL is built on the assumption that the dominant logic within a field shapes institutional actors' interests, values, and actions. A shift in this logic can only occur through modification or expanding the existing dominant logic (Scott et al., 2000; Lounsbury, 2002). Modification of IL can take the form of total transformation or a complete shift away from an old logic to an emerging logic (Lounsbury, 2002). This movement from one dominant logic to another requires actors who can use their power to make such changes happen (Reay and Hinings, 2005). In other words, the interest and values of the most powerful organisational actors can function *'as precipitators of pressure for changes .... Radical change will occur only if interests become associated with a competitive or reformative pattern of value commitment'* (Greenwood and Hinings, p. 1036).

A study by Kitchener (2002) of the USA healthcare system offers an example of a shift in IL motivated by a political agenda to repress the prevailing medical professional logic. It was found that executive managers in the healthcare system were used to promote a political agenda designed to bring medical professional logic under control so as to reduce the medics' power to block changes. This shows that shifts do not just occur without a trigger. They are the consequences of factors such as crisis, environmental jolts and interactions. Crises make actors

pursue different opportunities with the desire to find a concrete solution (Ansell et al., 2016). In other words, crises stimulate actors to problematise previously held beliefs and logic. Crises can either be internal or the result of exogenous shock prompting change (Glynn and Lounsbury, 2005). In some cases, they can create an opportunity to discover possibilities that would have been unnoticed and ignored under normal circumstances (Williams, 2017).

A shift in IL can also be the result of a switch in position (Scott et al., 2000). It occurs when a previously subordinate logic becomes dominant. At the time when the logic changes, the emerging logic simply replaces the existing dominant logic gradually (Haveman and Rao, 1997). Reay and Hinings (2005) explain this as follows:

*'actors within communities hold different institutional logics, and all fields can be characterized by competing institutional logics to some degree. At the field level, when a dominant institutional logic exists, it is because other logics are subordinate. Thus, the process of moving from one dominant logic to another involves actors using their power to accomplish such shifts' (Reay and Hinings, 2005, p. 352).*

Furthermore, IL changes are also stimulated by learning and interaction (Aalto and Kallio, 2019; Gawer and Phillips, 2013). The aforementioned shift is discussed by Aalto and Kallio (2019) who showed how interaction created a shift in IL during the adoption and implementation of a corporate share service in the provision of accounting and HR services in Finnish municipalities. The municipalities brought together employees who had been trained in different ways to work in a team, thereby creating an enabling environment for the acquisition of new sense-making. The resulting environment allowed team members to challenge routine practice and raise questions about some of the organisation's activities. As a result, changes were introduced into the system.

In the healthcare management literature, Scott et al. (2000) documented a shift in IL within the US healthcare management system. According to them, the dominant logic shaping healthcare management in the US has shifted over time, as represented in [table 3](#) below.

Era	Dominant institutional logics	Description
1945-1965	Professional dominant	The main logic during this period was medical care quality, determined by medical professionals.
1966-1982	Federal involvement	During this period government increased regulation in the way that healthcare was delivered.
1983-present	Managerial control and the market mechanism	The logic dominating healthcare provision during this period was deregulation with a greater reliance on market forces. Healthcare was delivered by large corporate groups aiming to achieve efficiency in providing services.

Table 3 Dominant forms of institutional logic in eras from 1945 onwards

**Source: adapted from Scott et al., (2000) pp. 22-23**

The table shows that healthcare activities were formerly shaped by medical professional logic but the government then intervened and took control. There has since been another shift to the current form of logic that is dominated by managerial control and the market mechanism. However, logic does not simply shift or change from one form to another, as illustrated in the table; instead more than one form of logic may coexist and play a part in shaping activities.

### 2.8.3 Coexisting institutional logics

The idea of coexisting ILs contradicts the argument regarding the concept of a single dominant logic. Scholars have argued that more than one logic can coexist within an organisation for a

long period (Marquis and Lounsbury, 2007; Reay and Hinings, 2009; Reay and Hinings, 2005). In explaining the rivalry between multiple ILs in the Canadian province of Alberta, Reay and Hinings (2009) described how the management of healthcare services was entirely in the hands of medical professionals. However, the process changed when the government decided to introduce a more business-like logic, emphasising cost-effective methods of treatment and the delivery of other services.

During the era dominated by medical professionals, the delivery of services was shaped by clinical logic. According to Reay and Hinings (2009), clinicians were singled out as the major cause of overspending. Thus, they were excluded from holding board positions in the Regional Health Authority (RHA), on the grounds that their management style was unsustainable.

The newly introduced business-like logic challenged the previous dominant logic of medical professionalism. Reay and Hinings (2009) findings show that medical logic and business-like logic were each '*associated with different organizing principles, and each required a different set of behaviours from actors within the field*' (p. 630). Consequently, clinicians resisted the idea of business-like logic, arguing that patient satisfaction should determine patient care. As a result, some clinicians were brought to work together with the government and other professionals. The new structure then created space for both government logic and clinical logic to flourish in terms of shaping activities.

The coexistence of ILs has been observed in shaping activities in different settings. For example, Saz-Carranza and Longo (2012) discussed the coexistence of private and public logic in a public-private joint venture in Manresa, Spain in which the two sectors were driven by two different goals thereby resulting in different strategies. Differences in strategies, organisational form and control resulted in conflict. However, the management decided to encourage the

coexistence of both systems within the joint venture rather than allowing one type of logic to dominate the other. Another example was observed in contemporary public sector performance audit practice where engagement and a cooperative relationship was encouraged to allow different logics to coexist (Parker et al., 2020). The coexistence of ILs in this case was fostered by promoting a consultative attitude in the form of open discussion about better ways to handle different activities. Thus, in the case of coexisting ILs, the two ILs must demonstrate their desire and willingness to understand how the other deals with issues.

Two competing ILs can only coexist when there is a compromise for the benefits of the different schemas to be reaped (Anessi Pessina and Steccolini, 2007; Knardal, 2020). For this to occur, some aspects of an organisation must be shaped by one logic while other aspects are shaped by another type of logic. However, according to Yan et al. (2021), the effectiveness of combining two different logics in a compatible way depends on the legitimacy it attains as a proper solution to the objective that is to be achieved.

## 2.9 IL compatibility

While some researchers argue that two or more logics can be blended in a compatible fashion (Rao et al., 2005; Stark, 1996), others claim that this will create more avenues for incompatibility (Smets et al., 2015) and conflict (Nite et al., 2013; Pache and Santos, 2010). Of relevance to this argument is the presence of different professional fields within organisations and their relationship as they work together. For compatibility to occur, professional groups must be willing to compromise their original beliefs (Jones and Dunn, 2007). Compatibility and centrality are described by Besharov and Smith (2014) as follows:

*'compatibility is the extent to which the instantiations of multiple logics within an organisation imply consistent and reinforcing organizational actions and centrality is the extent to which the logics manifest in core features that are*

*central to organisational functioning.*' (p.365)

According to the aforementioned authors, the outcome of the interactions between multiple institutional logics manifests itself in four different ways: alignment, contestation, estrangement, and dominance, as shown in [table 4](#) below.

<b>Degree of centrality</b>	<b>High</b> Multiple logics are core to organizational functioning	<b>Contested</b> Extensive conflict	<b>Aligned</b> Minimal conflict
	<b>Low</b> One logic is core to organizational functioning; other logics are peripheral	<b>Estranged</b> Moderate conflict	<b>Dominant</b> No conflict
		<b>Low</b> Logics provide contradictory prescriptions for action	<b>High</b> Logics provide compatible prescriptions for action
		<b>Degree of compatibility</b>	

Table 4 Types of Logic Multiplicity within Organizations

**Source: Besharov and Smith (2014)**

The notion of centrality and compatibility requires different stakeholders to focus their energy on the proper functioning of the organisation by directing their efforts toward the overall goal, mission, vision, strategy, identity, core structure and practices of the organisation (Besharov and Smith, 2014). It entails minimising conflict by arriving at a final decision by consensus. IL compatibility is shaped by formal and informal rules. Therefore, the governance structure and

performance management must suit the characteristics of the target policy (Theesfeld et al., 2010).

The concept of the estranged organisation describes a situation of low compatibility and low centrality. By contrast, dominant logic refers to situations in which there is high compatibility and low centrality. A further concept entails conflicts observed in cases of a low level of compatibility and a high degree of centrality.

Ingstrup et al. (2021) further expanded on the notion of the alignment of logic. They claimed that interdependency made three different stakeholders align their logic. The Finnish government needed to make its environmental program sustainable; while a company needed the skills and technical know-how to satisfy the market, and the academic community was required to train people in the necessary skills to accomplish tasks. Therefore, alignment was achieved by focusing on the benefit rather than the area of conflict. However, IL has been used to shed light on other societal issues apart from alignment, especially in the public sector, as explained in the next section.

## **2.10 IL literature on the public sector**

An increasing number of public sector accounting researchers have used IL theory as a framework for analysis (Alsaid and Ambilichu, 2020; Parker et al., 2020; Golyagina, 2020, Yee, 2020; Grossi et al., 2020). For example, Grossi et al. (2020) used IL to analyse the co-existence of competing logic in the management of university education in Poland, where university workers were under pressure to simultaneously comply with government regulations and meet the international professional standards of the academic community. The study concluded that the various logics contributed to the university performance management practices even though they all remained separate and were not thoroughly blended.



Similarly, Conrath-Hargreaves and Wüstemann (2019) discussed how two types of logics co-existed in the accounting practices used by German Higher Education Institutions through a reorganisation. During the planning, forecasting, and monitoring performance stages, both academic and government logics co-existed over a period of time without contradiction. Busco et al. (2017) found that appropriate accounting control practices can help to minimise conflict between satisfying individuals' commercial and healthcare needs in the same organisation. Using an agile-based system, the authors demonstrated how data from two different customer sets could be entered into a system separately, including the recording of performance and measurement of variance.

Rozenfeld and Scapens (2020) used IL to argue that the pursuance of public and private sector objectives within an organisation might appear attractive on the surface, but they are usually merely rhetoric. The authors used the case of the Sub-Saharan African countries' PenFund as an illustration. In theory, the governance structure was transparent, but in practice, the system was very corrupt. Nevertheless, accounting literature suggests that changes can be introduced to improve governance and accountability in such systems (Jayasinghe et al., 2020; Yee, 2020). Jayasinghe et al. (2020) used IL to explain the need for the epistemic community to study and fully understand indigenous accounting systems before modifying them and not to impose exported ideology. In comparison, Yee (2020) used the case of China to argue that change should not necessarily come from epistemic communities. The author used a high-profile accounting scandal to illustrate the adoption of a reform that promoted a high degree of professionalism and ethical standards among Certified Public Accountants and accounting firms. The health sector is another area that is witnessing the increasing application of IL to better understand the interplay between multiple logics in designing and improving the quality of services.

## 2.11 IL as applied in the healthcare sector

Most healthcare organisations have undergone extensive changes in response to public sector reform. Some of these reforms call for increased standardisation, greater efficiency and the adoption of new managerial logic contrary to the traditional professional logic (Kristiansen et al., 2015). Frequently, these new forms of logic challenge the existing medical profession's beliefs and are thus resisted by medical professionals who strive to protect their identity and autonomy. Medical professionals tend to see changes in management style as a challenge to their logic (Gebreiter, 2016). Pettersen and Solstad (2014) pointed out that medical professionals perceive their professional logic as superior based on their exclusive right to shape practices, performance outcomes, and evaluation. Other scholars have argued that despite the evolution of the logic that guides healthcare management, medical logic continues to dominate within the sector. Clinicians are willing to fight to maintain their dominance when it is under threat of being replaced by another logic (Reay and Hinings, 2009).

Scholars have highlighted three different eras in the management of the healthcare sector. The literature has classified these into three periods: the professional IL-dominated period; the government IL-dominated era; and the business-like/managerial IL-dominated era (Scott et al., 2000; Currie and Guah, 2007; Gebreiter, 2016). This is a common characteristic in most developed countries.

Each era has its dominant IL, which is driven by core beliefs and values that shape organisational agents' actions. The logic of each era differs even though they all aim to deliver better healthcare services. Each era also differs in its definition of an optimal outcome. Most studies of IL in healthcare settings have concluded that the logic introduced to improve the management of services has often conflicted or competed with clinical logic (Currie and Guah,

2007; Kantola and Järvinen, 2012; Pettersen and Solstad, 2014; Harris et al., 2014). Although early studies on IL such as that by Friedland and Alford (1991) asserted that each field has only one dominant IL, others have claimed that members still differ in their interpretation of reality even within institutional fields. For example, Currie and Guah (2007, p. 244) found that, *'across our sample NHS organisations, variations existed in the dominant institutional logics and governance systems suggesting a departure from institutional isomorphism'*.

Other scholars have argued that, although medical professional logic seems to be based on a single logic, medical education is in fact shaped by two distinctive logics. For example, Dunn and Jones (2010) used archival sources for an extended period (1910-2005) to study the central IL that dominated the medical profession and identified the logic of care and science as the two main types of logic that persisted over a long period. According to the authors, although other logics compete with medical professional logic in the delivery of care, the logic of science and care compete over jurisdiction, and the influx of more women into the medical profession coupled with the rise of managed care has shifted the power balance toward the logic of care.

The presence of these logics in clinicians' decision-making process manifests itself in their choice of alternative courses of action, which usually precludes prioritising costs (Currie and Guah, 2007). Clinicians were singled out as the leading cause of high expenditure in the Canadian province of Alberta's healthcare system. As a result, they were barred from holding any board positions in the Regional Health Authority (RHA) (Reay and Hinings, 2009). A common characteristic of this era was the growth of a new voice resulting from the government stepping in to overcome the shortage of physicians and increase access to primary care, especially in rural/ communities, while also trying to minimise costs (Dunn and Jones, 2010).

To mitigate the impact of serious financial consequences resulting from running healthcare systems according to medical logic, most governments have re-strategised from investing huge sums in them to campaigning for the adoption of business-like managerial ideologies. The general idea behind this new IL is to manage costs better and improve the method of service delivery by making it more economical, effective, efficient and innovative (Pettersen and Solstad, 2014; Reay and Hinings, 2009; Currie and Guah, 2007). Thus, the logic that guides healthcare management has not remained static.

Another relevant concept that has been discussed in the healthcare management literature in connection with neo-liberal governmentality is the advent of Bio-Politics, whereby individuals are encouraged to manage their healthcare needs (Crawshaw, 2012). Crawshaw described this approach as '*governing at a distance through inculcation of practices which require the construction of an entrepreneurial self*' (p. 206). This approach requires individuals to take responsibility for their own welfare, and compels them to manage their own lives in a way that promotes good health.

Despite the advantages of adopting NPM in practice, Nyland et al. (2020) highlighted that not all the changes associated with it are beneficial to the system. According to the authors, politicians advocated for ambulance services to be outsourced in Norway using neo-liberal thinking. However, when the policy was implemented, it became clear that the costs of outsourcing outweighed those of providing the service in-house and hence board members voted against outsourcing when the policy was reviewed.

Drawing from the literature described above, it is clear that the IL guiding the provision and management of healthcare services has evolved. The cost of providing services has become a central issue within healthcare management. For instance, the work of Nyland et al. (2020),

discussed above, demonstrates that the logic that governs service provision has gone beyond availability to affordability and other concepts of cost-effectiveness.

### 2.12 The motivation for choosing IL theory

Healthcare commissioning is influenced by a wide variety of factors such as the introduction of new legislation, restructuring, NPM ideologies, political ideology, professional groups, pressure from the media, and academic publications, etc. As has been shown in this chapter, relevant literature has highlighted the need to understand how clinicians align their logic with that of managers to foster a good working relationship, thereby facilitating the informal acquisition of accounting skills and the ability to use AI. As previously mentioned, commissioners' duties are wide-ranging, and they are expected to be involved in planning, monitoring services, procurement, and needs assessment etc. However, when discussing IL, this thesis has demonstrated that managers and clinicians differ in many respects.

This position is justified by scholars studying medical leaders who argue that, for clinicians and administrators to work together to improve performance, they must align their goals with the overall goal of the healthcare institution (Baker and Denis, 2011). For Besharov and Smith (2014), multiple fields align their goals by making the overall goal of the organisations central, and thus above the interests of a particular field, a concept that they refer to as centrality. According to Besharov and Smith (2014), centrality means, *'the degree to which multiple logics are each treated as equally valid and relevant to organizational functioning'* (p. 369). Reay and Hinings (2009) pointed out that both groups need to align their logic to avoid the high levels of discord observed between physicians and RHAs because of conflicting logic in their worldviews. However, they were compelled to develop strategies to work together, since *'neither physicians nor the RHA could accomplish their work separately'* (p. 640).

The primary sources of multiple conflicting logics include differences in the way that clinicians and administrators perceive cost (ibid). Guven-Uslu and Seal (2019) further developed this argument by using the cost of two different surgical procedures to shed light on the friction between clinicians and managers. They described clinicians' notion of costs as proactive truth, while managers were working with what they called the pragmatic truth of cost information. These two ways of perceiving cost information caused a lot of friction due to their differences. The study shed light on how different beliefs, values and logic drove clinicians and management to argue over changes. Therefore, by using IL, it is possible to understand the logic that drives the decisions of each group, thereby promoting learning. When an organisation has a common goal to achieve, the accounting department, for example, presents their facts and justifies the AI used to arrive at their conclusion (Nørreklit et al., 2007). However, as discussed above, there can be more than one reality in regard to the same issue: for instance, the management/accounting and clinicians' different realities presented in the study by Guven-Uslu and Seal (2019). IL theory offers insight into the beliefs, rules, norms, and principles that shape each of these groups, making it particularly suitable for this study.

### **2.13 Discussion and conclusion; outline of theoretical gap**

Scholars have examined different logics and their consequences to gain a deeper understanding of complex institutional environments with multiple logics such as the healthcare sector. For example, Besharov and Smith (2014) examined multiple ILs and concluded that centrality is the core to organisational functioning and compatibility. In practice, the blending of conflicting ILs can lead to conflict in terms of both strategy and structure (Pache and Santos, 2010; Thornton and Ocasio, 2008). One area that has attracted considerable research interest recently is the investigation of the challenges that arise when dealing with conflicting logics (Dunn and Jones, 2010; Almandoz, 2012; Almandoz, 2014).

The healthcare sector and accounting literature provide a rich and useful area for developing IL theory. However, more pertinent to the present research is the literature on clinicians' knowledge and usage of AI. Scholars such as Bourn and Ezzamel (1986) have questioned the subjective logic of clinicians analysing cost information in hospitals and argued that AI prompted useful questions, but few answers are provided by examining how the information is used. Researchers in this stream have explored how clinicians' attitudes towards managerial reforms are shaped by clinical autonomy and the idea that care is an unmeasurable activity (Ku and Fisher, 1990; Bourn and Ezzamel, 1986; Gebreiter, 2016). Another strand of studies has explored the way in which clinicians respond to pressure to adopt accounting and managerial practices (Kurunmäki, 2004; Jacobs, 2005). Finally, studies have also investigated clinicians' perceptions of costs and managerial activities and have concluded that clinicians consider managerial activities to be bureaucratic and time-consuming, and believe that the cost of services is of little relevance and not useful to them (Kralewski et al., 2005a; Lapsley, 2007). When these three research streams are combined, it becomes evident that the relevance of AI, its usage, and accounting training is influenced by clinicians' perceptions of its usefulness to their role.

Studies of IL have recently begun exploring the role of clinicians in shaping the logic of healthcare organisations (Dunn and Jones, 2010; Reay and Hinings, 2009). For instance, Reay and Hinings (2009) investigated how competing logics existed for an extended period by focusing on the rivalry between management logic and clinicians' logic in the Canada province of Quebec. In addition, they explained how clinicians swing between different types of logics when carrying out managerial duties in hospitals. However, it is notable that this stream of research does not focus on the way in which clinicians acquire accounting/management skills and how they are used in practice.

Some studies have found a positive association between clinicians' engagement in healthcare management and improved performance (Boaz et al., 2015; Veronesi et al., 2014; Witman et al., 2011). This stream of literature argues that the presence of doctors in healthcare institutions' governance led to better financial and operational performance. Doctors' involvement has been found to drive performance in different areas such as higher bed occupancy (Goldstein and Ward, 2004).

This occurs because doctors become committed to cost containment (Veronesi et al., 2013) by adopting cost-efficient practices, which eventually become unquestioned among their fellow clinicians (Witman et al., 2011). While research on doctors who become managers has offered useful insights into the impact of governance responsibility on clinicians' attitudes toward costs, the question remains of how clinicians align with and acquire the IL needed to read, understand, and use AI to manage costs and improve performance. IL research has shown how professionals shift their views as a result of working together, but it is yet to address the way in which clinicians align their logic and acquire the necessary accounting literacy to use AI to enhance performance.

Literature on IL has explored the effects of conflicting logics working together on organisational performances (Dunn and Jones, 2010; Almandoz, 2014; Lee and Lounsbury, 2015). It has also addressed changes in IL (Ocasio et al., 2015; Purdy and Gray, 2009; Yee, 2020), while several scholars have focused on how IL becomes dominant (Jayasinghe et al., 2020; Reay and Hinings, 2005). Researchers have also looked at the coexistence of multiple ILs (Grossi et al., 2020; Golyagina, 2020; Knardal, 2020). The research on changes in IL has examined field level changes that are permanent or long lasting. Within an organisation, there can be multiple levels of IL and logic can be studied at these different levels, including organisational level, team level, and individual level. However, research on IL has not yet



addressed a case where IL is expected to change within a short period. For example, accounting research has not yet examined a situation whereby interdependency can force different stakeholders to align their logic to the overall logic of an organisation within a short period of time.

Extant literature has identified several gaps. The literature on IL is less focused on showing situations whereby actors' logics are expected to shift within a short period. Accounting literature has not yet identified a situation in which a group of non-managers/accountants are handed funds to manage, as in the case of creating the CCG. For instance, in the case of the CCG, clinicians are given funds to manage and improve the system. However, the literature has not yet addressed how clinicians are expected to learn accounting skills informally within a short time to increase their commitment to AI for decision making. In addition, there is a lack of studies exploring how clinicians apply accounting logic to their managerial duties, even though it has been highlighted that their involvement in management improves performance. Bearing in mind these gaps, this thesis addresses the following question: how do clinicians acquire accounting literacy informally, to enable them to use accounting information and how do they use accounting information?.

The current study addresses this gap by arguing that interdependency has pushed clinicians to align their logic with accounting logic and then learn about AI informally, thus making AI relevant for decision-making. Previous research on the alignment of IL (Ingstrup et al., 2021) has shown that it occurs due to the anticipated benefits of different groups working together. However, Ingstrup et al. (2021) call for future research about the alignment of logic to explore how it can lead to knowledge creation, including studies that involve conducting an in-depth analysis of collaboration and its impact on relationship development. Moreover, the study by Ingstrup et al. (2021) investigated the alignment of IL to achieve a single goal without further

collaboration and changes in IL. In the case of clinicians in particular, Pettersen and Solstad (2014) argue that the dominant logic of clinicians changes when they manage healthcare services. Nonetheless, they do not make decisions based on a balance between clinical efficacy and cost-effectiveness. Petterson and Solstad explain that clinicians' decisions follow a triangle of logics that can be clinical in some cases, financial in others, and political in other cases. After conducting a systematic review of literature on clinicians and accounting, Oppi et al. (2019) called for future research to examine the training that clinicians receive to enable them to apply accounting logic when using accounting information. This dissertation explores the notion that the CCG board of management is composed of different stakeholders with diverse priorities who are commissioned to improve the quality of care within the bounds of the allocated resources.

This study contributes to IL theory by portraying how context, an expansive learning environment, and a shared vision stimulate learning and the use of AI in the public sector.

## **Chapter 3. Informal learning and accounting information**

The previous chapter provided a clear description of the different logics that can influence the working relationships between diverse groups of actors. This chapter explains the role of accounting in the public sector and how it has evolved. It argues that because accounting information is now relevant in shaping activities, it has become useful in influencing the design and delivery of services. Furthermore, it shows that the changes that have been noticed in the public sector not only relate to the use of AI but are also apparent in the way that knowledge is acquired.

### **3.1 Accounting information and NPM**

Among the different logics discussed in the previous chapter, accounting logic has been cited as playing a vital role in determining the allocation and utilisation of resources. This was not the case in the past, until NPM introduced some noticeable changes to the financial and managerial aspects of the public sector in the 1980s (Hood, 1995). These changes included an output and outcome budget, performance measurement and reporting (Ter Bogt, 2008). In effect, accounting has become a crucial element in promoting public reform and shaping activities (Lapsley, 1999) largely due to high profile governmental advocates like Margaret Thatcher in the UK and Ronald Reagan in the US (Lapsley and Wright, 2004). A common phenomenon regarding such changes is the adoption of private sector accounting and management techniques that emphasise defining clear goals, and the planning and development of internal and external systems for measuring performance (Parker and Guthrie, 1993).

According to Parker and Guthrie (1993), accounting and management technologies have become the vehicle widely employed to promote economic rationality and managerial philosophies in the public sector. A good example of an accounting tool being applied in the

public sector is the adoption of public sector accrual accounting due to the alleged benefit associated with the way that information is presented (Adhikari and Mellemvik, 2011; Mbelwa et al., 2019). However, adopting and implementing accrual accounting is advantageous in some respects but also presents challenges, as is extensively discussed in the literature (Adhikari and Gårseth-Nesbakk, 2016). For example, it is claimed that accrual accounting makes it easier to judge whether the entity has accounted for all the resources it controls and whether these resources were well deployed. Mention has also been made that an accrual approach will allow third parties to assess an institution's financial performance whilst giving a clear picture of its cash flows and financial position (IFAC, 2011).

Despite the propagated advantages, accrual implementation has varied across countries due to technical and political reasons, thus making it difficult to compare results (Adhikari and Gårseth-Nesbakk, 2016). For example, some countries started adopting accrual accounting by testing pilot projects, others modified it to satisfy national needs, while others adopted it based on the version promoted by multinational agencies (Adhikari et al., 2012).

On a more positive note, accounting technologies are now essential in shaping practice and the delivery of services in the public sector (Lapsley et al., 2020). Increasingly, public sector activities are being quantified using financial calculations by measuring output in the workplace (Parker and Guthrie, 1993). This has increased the importance of accounting logic in the management of public sector activities (Lapsley and Pallot, 2000; Lapsley, 2001b). Consequently, employees in this sector can now apply accounting logic by thinking in quantitative terms.

Accounting technology has gained in importance; firstly, by promoting the usage of accrual accounting in the public sector and government departments (Parker and Guthrie, 1993).

Secondly, commercial ideologies and marketisation have now become commonplace in the public sector through the promotion of internal and external charging mechanisms. Another key feature is the development of performance measurement systems to measure outputs and outcomes. Furthermore, decentralisation of the budgetary process is promoted through the integration of sound managerial and financial accounting systems in every department across the public sector (Ter Bogt, 2008). In addition, NPM encourages internal and external audits, especially in terms of monitoring and evaluating performance.

However, these advantages cannot be realised without a change in organisational culture (Ter Bogt, 2008). In the public sector, changes in culture have played a vital role in attaining objectives (Hepworth, 2002). Cultural change has resulted in the implementation of different ranges of inspection and regulatory regimes to control professionals' behaviour. For instance, Sharma et al. (2012) used a study in Fiji to show how AL was used to embed a commercial mentality within a workplace by providing workers with the rationale behind most decisions using AI.

Aside from culture, critics have also highlighted that accrual accounting does not faithfully represent information in public institutions like a department of finance would do (Barton, 2004). Reporting profit for a department that obtains its finance from the government is a misapplication of an accounting concept. Moreover, accounting concepts such as accrual are often too complex for public sector managers to grasp (Hyndman and Connolly, 2011). In addition, most changes in public sector accounting are introduced in times of crisis when there is pressure to respond, thereby giving implementers fewer options to reflect on and study the effects of the changes (Hyndman et al., 2019). When changes are implemented in a stable timeframe, however, there is often room to reflect on and question the rationale for such changes.

Given these demerits, some scholars take the view that public sector accrual is promoted by creating high-profile positions to avoid its rejection (Christensen et al., 2019). As a result, the occupants of these positions have exaggerated the benefits, which were often more theoretical rather than evidence-based in practice. This led to the widespread dissemination of planning programs and budgeting systems which were easy to implement in simple contexts but difficult in more complex contexts.

Public sector accrual accounting was also seen as forming part of politicians' agenda to achieve their political objectives (Giacomini et al., 2016; Jorge et al., 2019; van Helden, 2016). In reality, accounting changes should not be influenced by politicians as they have no knowledge of accounting concepts. Accounting changes should be influenced by professionals and academicians who would be in a better position to monitor whether the changes are achieving the intended purpose (Lapsley and Wright, 2004). Promoters of innovation should be able to tell whether the results obtained meet their intended targets.

Moreover, accounting promotes the use of standards that can be used to calculate how far performance deviates from targeted outcomes and this is damaging to service provision (Rostgaard, 2012). Even though standardisation may be useful in terms of improving accountability and political control, individual experience and satisfaction rates have dropped. Standardisation has also improved accountability without considering the underlying psychological and behavioural consequences of such changes (Steccolini, 2019). Steccolini (2019) therefore suggests that there is a need to combine accounting tools and means such as public participation in policy development and monitoring performance. Supporters of this proposal have argued that accountability in the public sector can be improved by other means that do not involve accounting technology (Grubnic and Cooper, 2019). Promoters of this view encourage the use of qualitative data such as commentary to complement AI. Therefore,

multiple methods of accountability should be employed as there are no straightforward answers to the question of what is the best form of accountability? (Christensen and Læg Reid, 2015; Flinders, 2014). By contrast, Krick et al. (2019) argue that relying on public participation is not good enough. Nevertheless, accounting has been established as a working tool within the public sector. For example, healthcare professionals can now make caring and costing decisions simultaneously (Schröder, 2019).

### 3.2 NPM and accounting in the healthcare sector

The influence of accounting in the management of healthcare services since the introduction of NPM is noticeable in relation to the following two key ideas:

- Promoting neoliberal thinking and encouraging healthcare professionals to adopt business-like thinking by holding leadership roles (Jacobs, 1998; Jacobs, 2005; Kurunmäki, 2004).
- Promoting the use of AI and performance management (Malmlose, 2019; Jones and Mellett, 2007; Scott et al., 2003).

The driving force behind these debates is the cost of delivery of care services in most countries (Malmlose, 2019). In the case of the UK, AI had limited use before the creation of the NHS (Gebreiter, 2016; Robson, 2003; Jones and Mellett, 2007). The main role of accounting in the early days of the NHS was a form of control (Gebreiter, 2016). At the time, only heads of departments such as the head of catering, chief engineers etc., were expected to use the accounting system (Tarlow, 1953). Doctors and other clinicians were precluded from being controlled by the accountants. Costing was seen as something that would hinder clinicians' operations and therefore they were given the power to operate with full autonomy without considering the cost implications of their decisions (Robson, 2003).

However, many changes have since been introduced in the management of healthcare funds. The first such change in the UK was triggered by Roy Griffiths' 1983 inquiry that called for the development of standard costs in hospitals to be used for calculating costs. Like most initiatives in the healthcare sector, this move was resisted by medical professionals who argued that their autonomy would be compromised (Day and Klein, 1983). Scholars have highlighted that resistance to accounting change is common within the healthcare sector (Lapsley and Miller, 2019; Broadbent et al., 2001). For example, during the creation of the fundholding scheme, GPs formed a commissioning group to oppose unwanted changes (Broadbent et al., 2001).

Despite the disinclination of clinicians to accept accounting technology, accounting has become pivotal in explaining the allocation and utilisation of resources (Hiebl, 2018; Chapman et al., 2016). Consequently, reforms such as the introduction of the Purchaser-Provider Slip (PPS) have increased the power of accounting and managerial logic in shaping activities and, as Jones (1999) explains: *'The power and influence of clinicians, as represented by the dominance of medical culture, had been progressively eroded prior to the reforms. Creeping managerialism, characterised by essentially top-down budgets and the need for strategic management of diminishing resources, switched power away from clinicians to administrators'* (p. 12).

According to the literature there are three main reasons for such a shift:

- The desire for the government to control the activities of professionals (see Evetts, 2009)
- The desire for better allocation of resources to meet the needs of the growing and ageing population
- The growing cost of new healthcare technologies (see Kelly et al., 2015).



Accounting technology is promoted in this sector to make clinicians responsible for budget implementation and management (Gebreiter, 2016). One way that this has been done is to integrate clinicians into hospital hierarchies and put them in charge of the budget (Jones, 1999). For instance, doctors were put in charge of departmental budgets in Scotland and were expected to work within the budget whilst maintaining the quality of care (Lapsley, 2001a). This trend has also been observed in other European countries (Cooke, 2010; Kurunmäki, 2004). Clinicians in some countries tend to accept accounting concepts willingly (see Kurunmäki, 2004) while others are resistant (see Jacobs, 2005). Although clinicians in Finland willingly accepted accounting concepts, their counterparts in the UK perceived it as a form of subordinate logic guiding the management of healthcare services.

Literature on clinicians and AI has shown that the tendency for clinicians to include costs in their decisions is influenced by their background (De Harlez and Malagueño, 2016; Naranjo-Gil and Hartmann, 2006). This is evident from studies conducted in Belgium (De Harlez and Malagueño, 2016), Spain (Naranjo-Gil and Hartmann, 2006) and other countries. The common reason for this is that when clinicians with experience join the management ranks, they can easily lobby for their peers to accept accounting technology, thereby improving performance. However, it is challenging to convert clinicians from thinking in terms of healing to thinking about costs due to the logic that shapes their subculture. With regard to these challenges, Martinussen and Magnussen (2011) argued that, in reality, *'rather than managerialist values colonising the medical profession through a process of hybridisation, there is heterogeneity within the profession: some physician managers are adopting management values and tools, whereas others remain alienated from them'* (p. 193).

The intention of most governments has been to change clinicians' mindsets so that they can handle both clinical and managerial duties. This idea is promoted through different structural

reforms such as the most recent example which is about medical professionals' involvement in the commissioning of services.

Healthcare commissioning is believed to be influenced by factors such as public and stakeholder expectations, clinical evidence, the health needs of the population, financial constraints, cost data, environmental factors, national health policy and risk analysis (Prowle, 2020). Although the factors listed above all contribute to the effective commissioning of services, Drummond et al. (2015) suggested that there is a need to answer two fundamental questions when commissioning services. Firstly, commissioners should be able to explain whether both the costs and consequences of the alternative methods of delivering services have been examined. Secondly, has there been a comparison of two or more options?

To commission services effectively, commissioners must compare the efficacy or effectiveness of the services with the costs of the services. The activities of a commissioner, as illustrated in the work of Dickinson (2015), demonstrate the interconnection between accounting and healthcare commissioning. The key point is that clinicians involved in commissioning must understand some accounting concepts in order to make informed decisions. Even though clinicians are expected to understand accounting literacy for effective commissioning, they claim that the acquisition of accounting literacy does not form part of their course of study: *'We were taught to go to the hospital before dawn, stay until our patients were stable, focus on the needs of each patient before us, and not worry about costs'* (Lee, 2010, p. 52).

This shows the difficulties involved in reconciling the fact that commissioners must possess the financial understanding to perform well with their education and training. How, then, do they acquire such skills? It is argued that clinicians can cope with making clinical and financial judgments simultaneously, especially in the case of those with managerial responsibilities

(Petsoulas et al., 2014; Lapsley, 2001a). However, none of the relevant studies have explained the processes involved in acquiring the skills necessary for clinicians to read, understand, and use AI, such as aspects of cost, price, budget, and their implications, even though they all share the view that these skills are acquired on the job. Therefore, to understand the processes involved in developing such skills, this study uses existing literature about learning on the job to explain how clinicians acquire accounting skills.

### **3.3 Learning within organisations**

The previous section demonstrated that clinicians who are commissioners are expected to learn how to handle managerial/accounting logic and clinical logic simultaneously. This section elucidates how such knowledge is acquired within organisations and how it is put into perspective. Therefore, the discussion is centred on learning which is defined as the different processes by which individuals or organisations acquire knowledge and skills (Bell, 1984). Scholars have expressed different views on how learning occurs within organisations. Some have argued that it takes place among individuals, groups, organisations and populations of organisations (Miner and Mezias, 1996) whereas others have limited it to the individual, group and organisational level (Crossan et al., 1999).

Different learning processes are linked to each of these levels of learning. For example, at the individual level, learning can occur through trial and error, repetition of a routine, inference and learning from experience. At the group level, learning can occur through interaction, sharing information, informal observation, and experimentation. Learning at the organisational level can take the form of observation and copying best practices, and be used to understand routines, rules and procedures. Finally, organisational learning at the population level involves a process of active searching and creative discovery. However, learning within organisations

begins with individuals (Krachler and Greer, 2015; Arun et al., 2020; Levitt and March, 1988). However, this does not imply that organisational learning is simply the sum of individual learning (Lähteenmäki et al., 2001).

Studies have shown that what individuals learn is shaped by their role expectations and the goal that they are trying to attain (London and Sessa, 2006). When individuals learn, the knowledge acquired is disseminated throughout the system via coaching and other methods so that it becomes common knowledge (Simon, 1991). Individuals can either learn from existing members or from a new member of staff who possesses knowledge that was previously lacking in the organisation. For the knowledge to impact on the system, organisational actors must first discard their previously held traditional views and practices that were less effective to make way for the new knowledge (Arun et al., 2020).

Different factors have been identified as fostering learning in organisations including stakeholders and environmental constraints (Dixon, 1999; Noe et al., 2014). For example, new occurrences within an environment can stimulate learning to prevent reoccurrence or avoid a mistake. In some cases, this can lead to innovation by generating new ideas. However, sometimes people learn without knowing that they are learning. They only become aware that learning is happening when they begin to recognise some patterns or different possibilities and changes in the interpretation of a previously held reality (Crossan et al., 1999). These interpretations are then put into action within the organisation. The organisation's role is to provide a milieu for individuals to experiment with new ways of doing things by presenting opportunities for the learner to observe the outcome of their decisions (Damodaran and Olphert, 2000). Results obtained from experimentation are then used to adjust the organisation's operational strategy and the knowledge is institutionalised to become part of the organisation's routines, rules and procedures (Damodaran and Olphert, 2000; Crossan et al., 1999).

Relatedly, Wang and Ahmed (2003), Yeo (2005), and Mitki and Herstein (2011) argue that learning occurs by expanding individual beliefs and values about the possibilities available regarding how things can work. Organisational factors such as procedures, structures administrative systems and trust can act as precipitators in fostering learning (Fiol and Lyles, 1985). Managers should therefore take these factors into account. Individuals within an organisation may leave/join, and leadership can change but organisational memories will always hold some behaviour, norms, values and mental maps of their members over time. However, despite the large body of knowledge that is available about learning, most researchers have focused on the private sector and little attention has been paid to the specificity of the public sector (Rashman et al., 2009). Therefore, it is necessary to examine sector-specific attributes when discussing organisational learning.

### **3.4 Organisational learning in the public sector**

Considerable differences have been identified in terms of the factors that shape learning in the public and private sectors. The activities of businesses that operate in the private sector are driven by data on market conditions, sales, expenditure and profit. These are straightforward types of information that shape learning whereas factors such as bureaucracy, political rules, regulations, annual budgets, government policies and sudden changes in government, etc., all impose conflicting pressure on learners in the public sector (Visser and Van der Togt, 2016). Moreover, there is much ambiguity in the way that performance is measured in the public sector, leading to additional complexity in terms of understanding concepts (Visser and Van der Togt, 2016; Sheaff and Pilgrim, 2006). Public sector organisations often have several boundaries/hierarchies, and there are usually differences between the cultural barriers and perceptions of stakeholders, which can lead to conflict, thereby hindering learning (Kingsbury, 1999). Consequently, learning is difficult in such an environment because learning to resolve

one problem can lead to a problem in another area (Waldman et al., 2003). Another issue that hinders learning in the public sector is the rise of a new voice that calls for citizen participation in regard to designing and implementing policies (Brodtrick, 1998).

Informed by the findings discussed above, scholars have called for studies in this sector to consider these differences as they have been largely ignored in academic publications (Betts and Holden, 2003; Bergevärm et al., 1995; Sadeghi, 2020). Drawing on the public sector literature, changes have been introduced to foster learning through concepts such as benchmarking, performance management, total quality management and performance budgeting (Nutley and Davies, 2001; Moynihan and Landuyt, 2009). Therefore, learning in this sector has followed different trajectories. For example, at the local government level, actors learn in decision-making forums wherein policies are debated (Onesti et al., 2016). In such circumstances, individuals can judge for themselves the merits and demerits of decisions.

According to Busenberg (2001), learning in public settings begins with understanding the content of new policies in the form of discovering the new ideas, information and targets that are set out in the policy document. For example, several discussion forums were held in Canada to analyse a reform that had been introduced in healthcare management (see Currie and Spyridonidis, 2016). Therefore, by bringing people together, learning can follow different trajectories including sharing best practices, learning from policies that were effective in the past (Rashman and Radnor, 2005), delegating responsibilities, coaching (Cuffa and Steil, 2019), information sharing (Ahsan, 2018), setting performance indicators and monitoring them (Edmondson, 2003), and setting up formal development programs. Consequently, learning in public sector organisations must be situated within a setting where evidence of changes can be observed and the problems that occur are used as opportunities to explore knowledge (Mahler, 2020). Therefore, the environment has its own unique way of influencing learning.

However, several challenges have been identified concerning learning in the public sector. Among them is the presence of many professional boundaries that make dissonance almost irreducible (Nicolini et al., 2008) by hindering the transfer of best practices from one public sector setting to another. Additionally, there is the presence of a blame culture and caution among stakeholders, including differences in interests (Cuffa and Steil, 2019; Vince and Saleem, 2004). Other factors relate to power structures (see Seren and Baykal, 2007), including where policies are designed. In most cases, policies are designed at the national level and implementation takes place at the local level.

By unpacking the various hindrances to learning in the public sector and the different ways in which knowledge is acquired, it becomes clear that there is more than one route involved.

### 3.5 Workplace learning

Recent studies on individual learning in the workplace have summarised learning into three categories: formal, non-formal and informal (Sadeghi, 2020, Colognesi et al., 2020). The distinction between the three methods of learning can be better understood by exploring how they differ. Formal learning is highly structured, classroom-based and institutionally sponsored. In contrast, informal learning is not typically classroom-based, is unstructured, occurs as a by-product, or through trial and error and experimentation, and can occur even if an environment is not highly conducive to learning (Marsick and Watkins, 2015). Non-formal learning, on the other hand, consists of continuous training and development in the workplace through seminars, workshops and other short courses that can last from an hour to a few days (Landini, 2021). The major characteristics of these three learning methods are summarised in [figure 1](#) below.

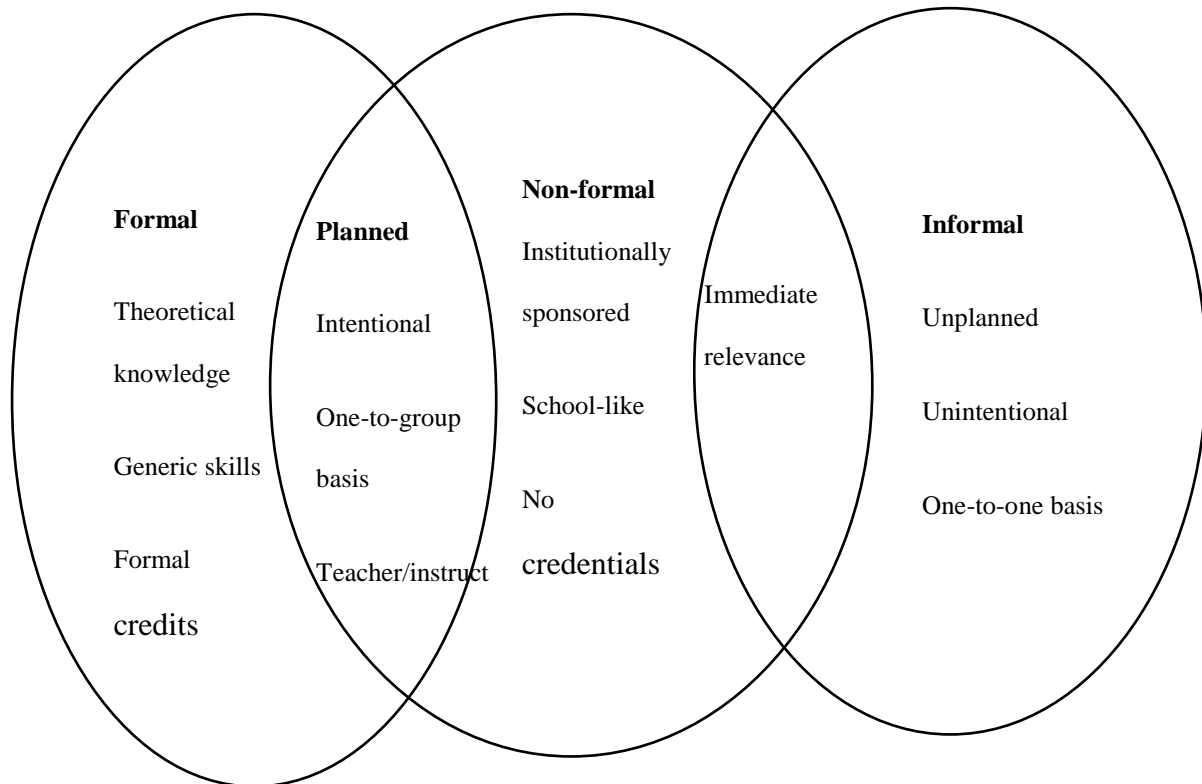


Figure 1 Formal, non-formal and informal learning patterns

Source: Sadeghi (2020)

These three methods of learning have different characteristics, as illustrated in [figure 1](#). From the diagram, it can be seen that formal learning occurs in a formal environment, whereas informal learning is unplanned, unintentional and occurs haphazardly.

Although different methods of learning have been identified in the literature, informal learning is the most common way by which people learn at work (Wolfson et al., 2019) and it is estimated to account for around 75% of learning (Bear et al., 2008). For example, studies have shown that managers' capabilities are generally acquired informally in a work setting (Becker and Bish, 2017). At work, individuals are supported both directly and indirectly (Collin, 2002).



The workplace also allows individuals to engage in activities and interact with other colleagues, thereby influencing formal and informal learning (Tynjälä, 2008). If most of the learning that takes place at work occurs informally, then it is vital to understand informal learning.

### **3.5.1 The process of learning informally at work**

Informal learning can be defined as a kind of learning that is typically integrated into work routines and is characterised as learning from experience (Watkins and Marsick, 1992). Scholars have outlined several characteristics of informal learning, including being non-didactic in nature; embedded in an organisational context within meaningful activities and highly socially collaborative; removed from external assessment; initiated by learners' interests or choices; and enhanced by proactivity, critical reflectivity and creativity (Callanan et al., 2011; Watkins and Marsick, 1992). Informal learning involves participation in work-related tasks. However, it can take different forms, including learning from more experienced and knowledgeable colleagues, managers or other professionals through social interaction, experimentation and reflection (Preenen et al., 2014; Sadeghi, 2020).

Furthermore, it involves engaging in practical activities, not necessarily driven by a learning intention; rather, learning is achieved as a by-product of working (Eraut, 2004). Additionally, participation in work activities fosters learning through collaborative initiatives, such as shadowing, solving problems as a group, coaching, hypothesis testing and mentoring (Colley et al., 2002). Thus, what is learned from this process is determined mainly by the learners' curiosity, self-direction and the work environment. Scholars have conceptualised workplace learning as taking place within two environments: expansive and restrictive learning environments (Fuller et al., 2012). Expansive learning environments encourage the integration of individuals by involving them in different activities that foster learning in the workplace

(Fuller and Unwin, 2004). Expansive learning takes place in an environment that facilitates cross-boundary working activities, problem-solving and dialogue. This results in a new cultural pattern and new forms of work activities (Engeström, 2001). By contrast, environments that restrict participation in multiple communities have the effect of limiting employees' access to training and hindering learning. In addition, the extent to which individuals engage in learning differs and their desire to be involved in learning activities is influenced by their experience, aspirations, personal background, and environment. Understanding the practical process of informal learning and the extent to which an environment can foster learning contributes to the theoretical debate on informal learning in the public sector; for example, the way clinicians learn at work.

### **3.5.2 How clinicians learn to adapt to their roles as clinician-managers**

Extant literature has identified two categories of clinician-managers. Forbes et al. (2004), for example, classified them under the headings of 'investors' and 'reluctants'. Investors enter management to escape clinical pressures and try to change the system. However, as they remain in the role, they become natural leaders by acquiring new skills, whereas reluctant clinician-managers are disinterested in what is happening in the system. According to Forbes et al., both investors and reluctant clinician-managers have little or no prior management experience, and this often results in conflict and tension as they try to deal with managerial responsibilities. Whilst working as managers, investors work hard to learn on the job.

The first step that is often taken by clinicians to help them settle into the role of clinician-manager is to learn and understand their job requirements (Busari, 2012; Mak et al., 2019). Underlying this view is the idea that a clinician's ascension to a managerial post is promoted under the NPM agenda and this usually comes in the form of reform. Each reform has its own

objectives and is designed to promote a specific idea. Therefore, for clinicians to excel in their role, they must understand the goal of the reform. For instance, several repetitive forums were held in the Canadian province of Quebec by clinicians to make sense of a healthcare reform that involved clinicians being put in charge of managing services (Cloutier et al., 2016).

Studies have suggested that when policies are propagated, clinicians engage in social interactions that are converted into learning events (Van Dam and Ford, 2019; Mak et al., 2019; Joffe and MacKenzie-Davey, 2012). For example, Van Dam and Ford (2019) explained that nurse managers learn to lead through social interaction, which does not happen in a specific sequence. According to the authors, the first stage of a nurse manager's learning process in the pursuance of a leadership career is to become aware of themselves and their level of self-awareness grows over time as they continue in the role.

According to Van Dam and Ford (2019), challenges are the main trigger for learning as nurse managers tackle their responsibilities. When nurses are challenged by other staff, they reflect on the situation, which eventually helps them to think differently. In addition, such incidents allow the nurse manager to reflect on different ways of handling a similar situation in the future. Over time, nurse managers learn how to deal with complaints, make decisions, communicate appropriately, and adjust their behaviour by leaving their comfort zone to move into a leadership zone where they become more flexible.

In a study conducted by Mak et al. (2019), it was argued that learning to become an allied health manager involved informal learning in terms of gaining confidence through a trial and error process. It also involved following a role model, seeking feedback, and reducing the number of complaints as they remained in the job. A crucial point mentioned by Cloutier et al. (2016) is the role played by contract negotiation in facilitating informal learning in the

implementation of healthcare reform. According to the authors, organisations reorganise their organisational charts by assigning specific roles to individuals to align their daily tasks with the goal of the reform in question. Through this process of negotiation and re-organisation, front-line dual professionals can see areas of tension between professional demands and organisational objectives (Breit et al., 2018). The aim is to facilitate communication and encourage professionals to handle new challenges, thereby creating new avenues for learning.

Understanding basic accounting is one of the skills acquired by clinicians when learning to become a clinician-manager. For Lapsley (1999), the adoption of NPM offers an opportunity for accounting to play a vital role, as the following statement illustrates: *'NPM development offers the potential of a crucial role for accounting as the means by which measurements are made, achievements are documented, negotiations take place, and the language of accountancy assumes a new significance in the life of public service organisations'* (p. 202). While investigating how clinical budgets were implemented in Scottish hospitals (Lapsley, 2001a) demonstrated how medical doctors succeeded in making a meaningful connection with accounting information in the hospital setting.

However, there is a paucity of research exploring how clinicians use accounting information in their daily routine as they manage healthcare services. The next section explains the ways in which different groups use AI in the public sector. In their study of the process by which organisations learn, DiBella et al. (1996) argue that when new information and knowledge is acquired, it is disseminated within the organisation and then used in various ways to pursue the organisational goal. The authors summarised this as follows: *'there are formal and informal processes and structures in place for the acquisition, sharing, and utilization of knowledge and skills in all of these firms'* (p. 372). Hoe and McShane (2010) explain that

shared vision increases the importance and usage of informal knowledge as represented in [figure 2](#) below.

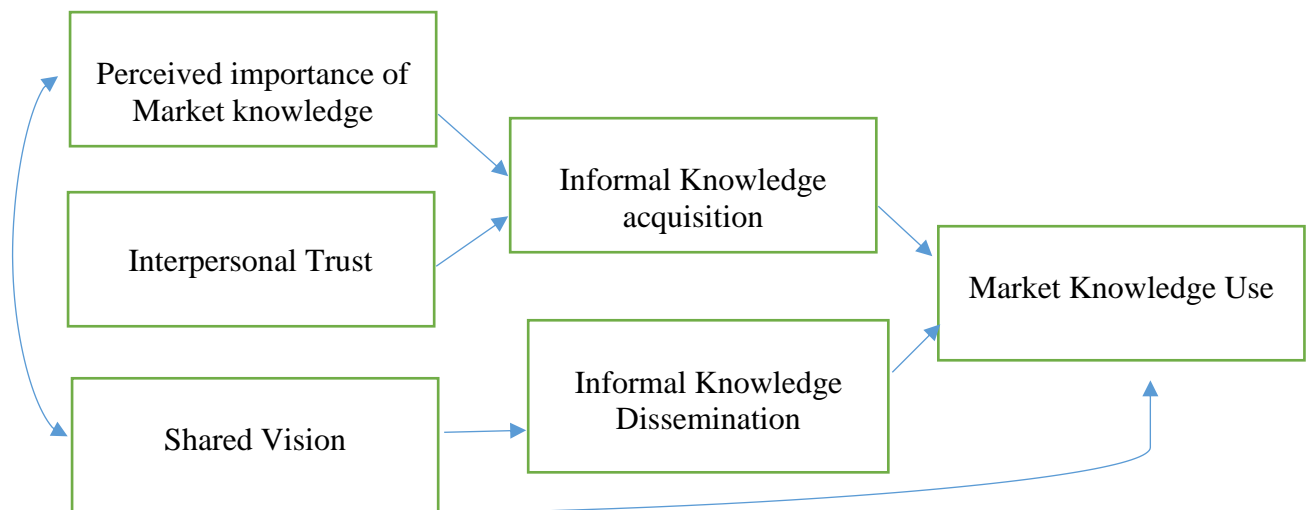


Figure 2 Exploratory informal knowledge model

Source: Hoe and McShane (2010)

[Figure 2](#) shows that three factors promote the acquisition and dissemination of knowledge: perceived importance of knowledge, trust, and shared vision. When knowledge is acquired and disseminated, it must be used. Therefore, the process involves a chain of events that do not occur in isolation. The figure is a simple informal knowledge model, moving from left to right. As illustrated in the figure, when organisational actors perceive the need for new knowledge to enter a new market, they begin to build trust and workgroups through which a single strategy can be developed to incorporate the views of the different groups involved. It is this knowledge that is disseminated throughout the organisation and used to penetrate the market. Therefore, the various stages are interdependent. As demonstrated in the figure, information usage is the last stage of informal learning.

### 3.6 The conceptualisation of the use of accounting information

Financial information is used in the public sector to assess the expected cost of services or accrual-based related issues such as the depreciation of long-term assets and equity-related debt (Van Helden and Hodges, 2015). However, the need for financial/accounting information varies depending on the issues to be resolved as different stakeholders have different interests in public sector institutions' performance. These differences in interests in relation to performance information has attracted scholars' attention to the subject of AI. As a result, it has become a central search term in the public sector literature, especially its usage by politicians (van Helden, 2016; Giacomini et al., 2016; Jorge et al., 2019; Van Dooren et al., 2010).

Despite the presence of a substantial body of work covering the use of AI in the public sector, there is a lack of research exploring its usage by diverse users (van Helden and Reichard, 2019). Clinicians are the subject of this case study because they have different specialisms, although they share some common characteristics centred on patients' needs. This work uses extant literature on the use of AI by politicians and managers in policy formulation and decision-making to conceptualise the use of AI in the healthcare sector. However, there is a lack of research investigating how clinicians use AI. While clinicians are different from politicians, accounting literature suggests that they also lack the skills necessary to read, understand and use AI. Moreover, clinicians operate like politicians and managers who do not depend on general financial reports but can request specific information for their needs (van Helden and Reichard, 2019).

Studies have suggested that the application and usefulness of information must be considered when conceptualising the use of AI by internal users such as politicians and managers (van

Helden et al., 2016; Giacomini et al., 2016). Doing so will help identify the kind of information that can satisfy the users' needs. The choice of such variables should be goal-driven and directed toward serving the intended purpose. However, some users of AI may use it to suit their own interests or to argue to their advantage or give them powers over others (van Helden et al., 2016).

A typical example of how AI can be used to fulfil a need includes its usage to clarify or anticipate an issue. In most cases, people without accounting literacy neglect the importance of AI and ignore it in relation to policy development and decision-making. For example, the complexity of AI and a lack of knowledge about it make it less relevant to politicians in Parliament (Jorge et al., 2019). Jorge et al. explain that the use of AI depends on individual politicians' willingness to do so, and they are generally reluctant. In most cases, it is only used to inform debates. Giacomini et al. (2016) summarised politicians' use of AI in terms of three major roles:

- Providing answers and enhancing understanding for policy development;
- Facilitation of decision-making; and
- Provision of assurance such as legitimising the decision-maker position and decisions.

Other scholars have pointed out that politicians also use budgetary AI for planning, control (Duisenberg, 2016), and influencing public opinion (Guarini, 2016). However, in the hospital setting, budgetary information is inconsistent with the norms and values held by clinicians in hospital management, thereby making it irrelevant in that environment (Nyland and Pettersen, 2004; Pettersen and Solstad, 2014). Furthermore, academic evidence suggests that the dean and other faculty members of universities without training in accounting

do not use AI (Pettersen and Solstad, 2007). Moreover, the use of AI is driven by user needs, and determined mainly by the problem to be resolved and the challenges faced within the organisation (van Helden, 2016).

The most distinctive and important study to inform our understanding of the use of AI was carried out by Liguori and Steccolini (2018). Liguori and Steccolini (2018) investigated how politicians use accounting language in political rhetoric to legitimise public sector reforms. The authors gave an account of the various issues that needed to be handled by Italian parliamentarians that necessitated the use of specific accounting terminologies. Their analysis showed that Italian parliamentarians initially used AI to exercise authority. Subsequently, as democracy evolved, AI was used to explain fairness in the distribution of resources across geographical areas, cuts in expenditure and the way that resources are managed. In simple terms, Liguori and Steccolini (2018) argued that politicians used AI in political speeches for the purpose of control and resource allocation and to defend their rationale for managing resources.

A situation triggers users' needs for information. For instance, Wilson (2006) suggests that users begin their search for information by recognising a need. Once this need arises, the user begins to seek information, and different actions are taken to search for the information that can lead to a solution. The user may seek information through formal or informal means.

The information user can either exploit the organisation's internal data system for relevant information or seek information externally. Usually, the information user chooses the necessary information when resolving a problem (van Helden, 2016).

Therefore, the usage of AI will typically depend on two variables: the context and the desire of the user of the information as conceptualised by van Helden et al. (2016). According to van



Helden et al. (2016), AI can be used in a specific context for conflict resolution, prioritisation, resource allocation or justification.

In summary, the role of AI in practice depends on the goal to be achieved. This goal could be to answer questions, learn, promote ideas, and rationalise the allocation of resources (Burchell et al., 1980). These general forms of usage are applicable to both public and private sector institutions. However, the specific use of the AI depends on the user.

### 3.7 Existing Gaps in accounting literature

Van Helden and Reichard (2019) reviewed the literature on the use of AI in the public sector over the last 15 years and identified some gaps. They highlighted that their review was limited to the last 15 years based on recommendations by recent studies which pointed out that the use of AI in the public sector is an under-researched area, for example Buylen and Christiaens (2016, pp. 455-456) and van Helden (2016, pp. 531-533). Although interest in this theme has been gradually growing over the last 15 years, further research is still needed in this area, as van Helden and Reichard (2019) explain:

*‘Some user groups are particularly under-researched... ‘The link between diverging user groups and their specific needs for AI’ is one of the most promising research routes. In this context, research also should shed some light on the interrelations between user needs and purposes of financial information use (e.g., special information needs with regard to rendering accountability.’ (p. 491)*

Various scholars have also argued that the tendency for clinicians to resist the use of AI is influenced by factors such as clinicians’ education, their background, age, and gender, and this tends to impact on the way that they perform as managers (Fiondella et al., 2016; Kralewski et al., 2005a). After reviewing studies in this stream, Oppi et al. (2019) stated that: *‘the literature investigated suggests that to support clinicians’ use of AISs and thus the success of reforms,*

*the main challenges for HCOs are: (i) provide managerial training to clinicians’* (p. 305).

Therefore, future research should investigate how clinician-managers are trained to use AI systems to understand the cost implications of their activities and contribute to a cost containment strategy (Oppi et al., 2019; Macinati and Rizzo, 2014). Van Helden and Reichard (2019) emphasise the need for further research in this area because: *‘There is not much information available on how to improve the literacy of users, i.e. their ability to read and understand various formats of AI, e.g. via training or coaching support’* (p. 491).

### 3.8 Conclusion

This chapter reviewed the existing literature on the changes that NPM has brought to public sector management. It focused on how it has made accounting an integral part of the management of healthcare services. It has made it necessary for clinicians who are now part of the managing body of healthcare systems to acquire accounting skills informally. The chapter discussed how people learn informally at work and how the informal knowledge gained is used to achieve the organisation's vision. Hoe and McShane (2010) suggest that joint vision stimulates knowledge acquisition informally and promotes the usage of the knowledge acquired. Lapsley (2001b) explains that learning accounting knowledge has made it possible for clinicians to make a meaningful connection to AI. Becoming part of the management board has enabled CCG clinicians to shift their logic or sense-making.

## **Chapter 4. The National Health Services as the learning environment**

### **4.1 Introduction**

The discussion in this chapter is focused on the NHS as a learning environment. It involves elucidating the evolution in the IL that guided the design and delivery of services from the date that the NHS was created until the present day. Firstly, the NHS was created based on political logic with the desire to provide care services to the people of England and Wales for free. However, different reforms have been introduced over a period of several decades which were driven by political ideology. It is explained here that, before the present dispensation, clinicians were used as advisers to the board that commissioned services. Therefore, they were not involved in the management of the funds allocated for the commissioning of services, but this has since changed with the creation of the CCG.

### **4.2 The creation of the NHS and its early years**

The NHS was created in the aftermath of the Second World War. It became operational in 1948 with the core principle of delivering universally free healthcare for all at the access point (Grosios et al., 2010). Its creation was a Labour government initiative. However, the initiative was strongly opposed by the Conservative party and medical professionals. While the Conservative party focused on the costs involved, the medical profession feared the erosion of their professional autonomy (Carrier and Kendall, 2015; Klein, 2010). Despite this opposition, the Labour government argued that a universal healthcare system would overcome the inadequacies of the current healthcare system, which was irrational in terms of quality and coverage.

Before its creation, David Lloyd George's National Health Insurance was the only way to provide compulsory insurance coverage to lower-paid workers and medical professionals (Davis, 2005; Gilbert, 1965; Klein, 2010). The coverage provided by Lloyd George's 1911 legislation was only for general practitioners and lower-paid workers, and did not include their families (Klein, 2010). However, hospitals operated by voluntary entities provided an alternative, cheaper form of treatment, although it was not available to all. According to Klein (2010), after the creation of the NHS, hospitals owned and run by different voluntary organisations and local authorities were nationalised.

Underlying the creation of the NHS was the claim that it would help people to live healthier lives by creating a safe and high-quality healthcare system that was financially sustainable (Department of Health, 2017). However, its management has since undergone many restructuring processes and transformations to ensure its survival and sustainability. Consequently, many reforms have been introduced over several decades by successive UK governments as discussed in extant work (Cooper et al., 2009; Vittal Katikireddi et al., 2014).

The first reform documented in the UK healthcare sector was the 1983 inquiry by Roy Griffiths. Early research on liberal thinking suggests that this inquiry laid the foundation for adopting accounting and management styles similar to those propagated by NPM (Stewart and Walsh, 1992). Griffiths' inquiry suggested appointing a general manager and introducing a clinical budget at departmental levels in the NHS (Day and Klein, 1983). The role of a general manager was to give the leadership needed to stimulate initiatives and direct attention to achieving greater efficiency. According to Lapsley and Miller (2019), most recommendations that have advocated for changes in the management style of the NHS are often challenged by clinicians. Clinicians tended to believe that most changes are introduced without consulting them and that their autonomy is not considered during such processes.

However, things changed when Andrew Lansley, the health secretary from 12th May 2010 until 4th September 2012, recommended a commissioning system that would give clinicians the power to undertake decisions in relation to many vital aspects of the NHS's day-to-day functioning, as Andrew Lansley explained:

*'The Government's reforms will liberate professionals and providers from top-down control. This is the only way to secure the quality, innovation and productivity needed to improve outcomes. We will give responsibility for commissioning and budgets to groups of GP practices, and providers will be freed from government control to shape their services around the needs and choices of patients. Greater autonomy will be matched by increased accountability to patients and democratic legitimacy, with a transparent regime of economic regulation and quality inspection to hold providers to account for the results they deliver.'* (Department of Health, 2010a, p. 27)

In effect, GPs were made responsible for commissioning healthcare services and steering them in the direction they deemed necessary while working with guidelines from NHS England. GPs were the majority group within this structure and had the power to veto any changes perceived to be valueless. In this regard, clinicians are required to manage budgets and make financial and managerial decisions. It is worth noting that the CCG was not created overnight. It formed part of a continuous transformation process that started with the introduction of the quasi-market principle in the NHS through purchaser-provider splits.

#### **4.3 Overview of healthcare commissioning reforms between 1991 and 2012**

To make the system more efficient and cost-effective, the NHS introduced the concept of a quasi-market principle or internal market for improvement. The first quasi-market measure introduced was the purchaser-provider split (PPS). In theory, the PPS is a service

delivery model in which supply is separated from demand (Bailey and Davidson, 1999; Lewis et al., 1996). The activities of providers are managed by contracts. Funds are raised and allocated to purchasers by the fundraisers. The fundraiser decides on the policies, monitoring procedures, and regulations that govern purchaser-provider relationships (Mason and Morgan, 1995). Other functions of the purchaser include identifying the healthcare needs of users and exploring avenues for improvement, including setting priorities and designing the contract. When negotiating contracts, the purchaser has to act in the best interest of service users. The purchaser also evaluates performance and identifies variances based on contractual terms.

The provider must also deliver healthcare and social services of the quality agreed (Tynkkynen et al., 2013). Furthermore, providers are accountable to the purchasers for the services provided. However, the model placed purchasers in a strong position vis-à-vis providers because purchasers determine the quality of the services.

Despite these advantages, the model propagated a level of benefits that was unrealistic, and this disparity was attributed to the fact that it was loosely defined. Every country designed a system to meet its own specific needs (Siverbo, 2004), resulting in several challenges presenting themselves in different countries. For example, providers in Albania experienced a massive increase in their contractual budget to the extent that the government had to step in to cover the excess (Figueras et al., 2005). Figueras et al. (2005) noted that this model did not work in the UK as intended.

#### **4.3.1 PPS in practice as implemented in the NHS**

The debate about the internal market ideology was central in the 1987 UK general election (Maynard and Dixon, 2016). The main point of contestation was the need to resolve the long-term problem of inadequate funding and inequality in accessing healthcare services. During

this period, inefficiency was a common phenomenon in most UK public institutions, as explained by Rhodes (2017): *'the Conservative government revisited old problems. The reform of government structure, improving management in government, strengthening central capability, the gap between central policy objectives and local implementation and the accountability of quangos all have long histories'* (p. 167).

To overcome these historical problems, the Conservative government introduced the PPS in 1991. The aim was to improve the quality of care and control costs (Baines et al., 1997). According to Smith et al. (2004), GPs and local authorities were given money to purchase services. The model made funds available to GPs and local authorities to buy services on behalf of the population (Le Grand, 1999b). Money was allocated to the local authority based on the population's demographic characteristics. The authority then purchased secondary care according to the needs of the district's population.

The second component was known as the GP fundholding scheme. This involved GP practices being given funds based on their referral record in previous years to purchase services on behalf of their patients. GP practices were supposed to buy a limited range of services such as elective surgery. Membership of the scheme was not mandatory. GP practices had the choice to become members or not. Those who volunteered were given budgets based on their past referral activities for specific treatments. Funds given to GP practices were deducted from the funding received by the district health authorities. Excess funds realised from the scheme were left to the GP practice to spend in a way that benefitted their patients.

The model did not achieve the desired outcome despite putting GPs in charge. It was criticised on the grounds that the *'unclear specification of workload structure created incentives for inflating activities by, for example, counting outpatient minor procedures as surgery cases. It*

*took some time to refine contracting mechanisms and incentives to better specify contractual commitments regarding volumes of activity and cost of contract'* (Figueras et al., 2005, p. 203). In terms of primary care, GPs referred patients to hospitals for treatment, but they were often sent back to their GPs because hospitals wanted to avoid some costs.

Le Grand (1999a) argued that the initiative could have produced a better result if it had been implemented as intended, but the idea was never tested before implementation.

On the other hand, Baines et al. (1997) highlighted that the NHS had no evidence regarding the costs and benefits of such changes for patients and GPs. Moreover, the system was designed to encourage public organisations to devote more attention to outcomes and processes, although this did not prove to be the case in reality (Bailey and Davidson, 1999). In practice, most local institutions paid more attention to input and processes than outcomes. In Bailey and Davidson's (1999) view, most British institutions were familiar with the process of contracting, whereby emphasis was placed on every stage of the contract from preselection to monitoring performance. Consequently, the NHS incurred extra costs for monitoring contracts, which led to an increase in the overall administrative costs (Paton et al., 1997). Despite the propagated benefits of separating purchasers from providers in terms of reducing costs, and increasing efficiency and accountability whilst promoting innovation through competition, the NHS ended up facing higher administrative costs (Ellwood, 1997). Moreover, limited attention was directed towards the way in which providers managed their administrative costs (Rosen and Mays, 1998). Thus, the government made changes at the purchaser's end that had little impact on the provider side.

When the Labour government took over in 1997, led by Tony Blair, it amended the PPS. In its manifesto, the Labour party stated that: *'in recent years, GPs have gained power on behalf of*



*their patients in a changed relationship with consultants, and we support this. But the development of GP fundholding has also brought disadvantages. Decision-making has been fragmented. Administrative costs have grown. And a two-tier service has resulted*<sup>1</sup>. The GP fundholding scheme was therefore abolished as a result. The Labour government argued that, in the NHS, a system built on partnership and collaboration was better than the version based on competition that was introduced by the Conservative government (Labour Party manifesto, 1997). A competitive system would hamper quality improvement. Therefore, it was deemed better to work together by comparing services and learning from one another. In effect a new structure emerged known as the primary care group.

#### **4.3.2 NHS reforms from 1997 to 2001 - Primary Care Group (PCG)**

The White paper of December 1997 argued that the internal market introduced by the Conservative government hindered the proper functioning of the healthcare system. According to the Labour government, the quasi-market diverted attention from patients' needs towards competitiveness. The move led to wastage due to higher administrative costs. The Labour government pledged to do things differently by introducing integrated care based on partnership and collaboration. They then replaced the existing system with the PCG while stating their plan for further transformation to Primary Care Trusts (PCT) over time (Department of Health, 2010a). The PCG became the provider, and membership was mandatory for all GPs and other primary care professionals. The Labour government argued that these changes were necessary for the NHS to commit to its principle of equal access to healthcare for all (Department of Health, 1997). The White paper claimed

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<sup>1</sup> The Labour manifesto of 1997 called for the NHS to be saved from the Tory internal market and attend to 100,000 people on the waiting list. Retrieved from <https://www.fes.de/fulltext/ialhi/90057/90057006.htm#LOCE9E6> <27/09/2021>

that it would be in line with the founding principles of the NHS, which involved promoting a one-tier system instead of the two-tier systems encouraged by the Conservative PPS.

This reform brought the budgets for primary care, community healthcare services, drug prescriptions and hospital care under the control of a single organisation (Majeed et al., 2000; Ryan et al., 2000). In total, 481 PCGs were established in England in April 1999, which were supposed to become freestanding PCTs when it became evident that they could manage their budget and services independently (Wilkin and Coleman, 2001; Wilkin et al., 2001).

The introduction of this reform was predicated on the assumption that it would improve accountability as local authorities would have to work together with health professionals (McColl et al., 1998). Healthcare professionals were tasked with advising local authorities. Those who supported the reform applauded it for adding performance management tools to healthcare management, claiming that this was a dimension that had been lacking in previous reforms. These tools were thought to be necessary to improve accountability and facilitate innovation. In addition, promoters of the reform claimed that performance measurement would use the available data (Majeed et al., 1997) on the population's health needs, as assessed by local authorities (Gillam et al., 2001).

However, the reform drew much criticism on the grounds that it threatened medical autonomy and promoted central control (Klein, 1998). In Haslam and Lehman's (2006) view, the reform was built on assumptions that did not consider the complex financial, demographic and clinical environment in which healthcare services are delivered. According to the authors, the reform attempted to reduce uncertainty and boost capacity only by investing additional funds, crucially without mastering the healthcare environment. However, Dent and Haslam (2006) argued that the idea behind the reform was not wrong in its entirety; the major problem was its

implementation. The rhetoric surrounding it was glamorous, but patients in acute hospitals had limited treatment choices.

Despite these criticisms, the plan to implement PCT was not abandoned. According to Wilkin and Coleman (2001), PCG developed over time and through learning from experience. As a result, it was proposed that its operations develop into four levels, as represented in [table 5](#) below.

Level	Description
1	To advise and support health authorities for the commissioning of health services in the right direction (PCG)
2	Taking delegated responsibility for managing healthcare budget as a subcommittee of health authorities (PCG)
3	Becoming independent and free-standing bodies that are accountable to the health authority for commissioning primary and secondary care services (PCT)
4	Becoming a self-standing body with accountability responsibility to the health authority for the commissioning of community healthcare services (PCT).

Table 5 The evolution of the PCG to PCT

Adapted from Wilkin and Coleman (2001)

Wilkin and Coleman (2001) explain that levels 1 and 2 were concerned with the operation of the PCG while levels 3 and 4 were related to the PCTs.

### 4.3.3 Primary Care Trust (PCT)

The Primary Care Trust is an organisation that was created in 2002 and was overseen by the Strategic Health Authority (SHA), formerly the District Health Authority. The SHA was assigned with setting the direction, managing performance, and guiding the implementation of policies developed by the Department of Health (National Audit Office, 2013). PCGs were created with the intention that they would be transformed into PCTs.

PCTs were responsible for providing, commissioning, and improving primary, secondary, and community care services and handed about 80% of the NHS annual budget (Walshe et al., 2004). Each PCT managed its own budget and set priorities in line with the focus of the SHA and the Department of Health. They were given the discretion to commission healthcare services as they considered necessary based on patients' needs and the resources at their disposal (Palmer, 2011). The Department of Health believed that this would result in improved efficiency.

The establishment of the PCT represented the first attempt to bring general practitioner services, hospitals and community services together under a single budget (Wilkin and Coleman, 2001). In addition, it made it possible to move resources between services. The majority of the PCT board were lay members. They oversaw the activities of professional executives, such as GPs, representatives from social services, nurses, and other professionals.

However, when the coalition government took over in 2010, they argued that the administrative costs of running PCTs were too high. As a result, they restructured the system to eliminate waste in terms of administrative costs.

According to the Department of Health, this restructuring was essential in order to reduce administrative costs by up to 45% in the first four years. It was explained in the 2010 White

paper that restructuring was also necessary to improve the delivery of services and reduce mortality rates.

During the days of the PCT, the Labour government argued that clinicians were not very involved in the management and design of services. Thus, they adapted primary care commissioning and introduced Practice-Based Commissioning (PBC) (Karet, 2007). By 2005 practice-based commissioning groups had been formed around England, and their local PCTs gave them a budget to commission certain services (Naylor et al., 2013).

#### **4.3.4 Challenges for the Primary Care Trust/Practice-Based Commissioning partnership**

Despite the introduction of practice-based commissioning which gave doctors influence over the designing of services, the results obtained were not what was expected (Curry et al., 2008). According to Checkland et al. (2009): *'The issues raised were consistent across our sites (lack of time, resources and personnel, and difficult relationships with the PCT), but observation suggested that these issues arose out of very different organizational 'sense making', and as a result, the apparent 'barriers' had different meanings in different organizational contexts'* (p. 20).

The roles and responsibilities of PBCs were loosely defined, which created several problems in terms of meeting targets (Curry et al., 2008). This resulted in the creation of different versions of PBCs across the country. According to Curry et al. (2008), there was tension between GPs and PTC officials in some local areas over control of the agenda. Additionally, there were conflicts of interest on the part of GPs because it was difficult for them to be providers and commissioners at the same time. GPs also lacked the time to engage with PBCs as well as the skills required to manage services. Another issue was that most GP practices

were not interested in managing budgets, an experience similar to the era of fundholding (Smith et al., 2005). A common feature of all the reforms discussed above is that GPs were mostly used as advisers and were not integrated into the system. They were not involved in making decisions and nor were they held accountable for any mistakes by the board.

#### **4.4 The creation of Clinical Commissioning Groups**

CCGs were created by the Health and Social Care Act 2012 to replace Primary Care Trusts (PCT) on 1st April 2013 with the subsequent abolition of the Strategic Health Authority (SHA). The main objective of a CCG is to provide the best possible health services to the local population (Naylor et al., 2013). As outlined in the aforementioned Act, its primary duties included assessing the local population's health needs, ranking them in order of importance, developing strategies, buying services from providers, and monitoring the quality of services delivered. CCGs buy services from hospitals, clinics, community health bodies, voluntary organisations and other private providers.

These bodies took over commissioning from the Secretary of State (see section 1H.2 of the 2010 White paper). The duties taken on by this new body include the continuous promotion of comprehensive healthcare services and redesigning the system to improve the physical and mental health of the UK population. Before these changes, the Secretary of State was responsible for designing primary medical, dental, and ophthalmic services.

A series of factsheets were published alongside the HSCA 2012. These factsheets contained further explanation about the HSCA. The factsheets were classified into A, B, and C, each of which contained sub-categories. For example, according to factsheet A3, the NHS performance would no longer be managed by the SHA but by the Care Quality Commission (CQC). The CQC would oversee healthcare safety, quality, monitoring and the promotion of efficiency and

was also allowed to set prices to guide competition in patients' interests. Although the CQC is responsible for quality control, the duty to commission care rests entirely with the CCG. As stated in factsheet A3, most NHS care would be commissioned by the CCG, thereby putting GPs and other clinicians in charge of healthcare resources to improve the quality of services delivered (Health and Social Care Act, 2012).

The Minister of Health would set objectives for the NHS through the commissioning board, and the goals would be used to evaluate the performance of all the CCGs across the nation. The Department of Health retained the power to intervene in case of emergency or significant failure of the healthcare system. The following subsections discuss the unique features of CCGs, and explain how CCGs were established and their essential functions.

#### **4.4.1 The unique features of CCGs**

A CCG is different from previous healthcare management/commissioning bodies. Its boards are clinician led and GPs form the majority of members on all the boards across the nation. This implies that in a situation that can only be resolved by voting, GPs or clinicians can play a decisive role. Additionally, clinicians are held accountable for any decision taken by the board. Therefore, they are not making decisions just to satisfy fellow clinicians but based on evidence and the funds available to them.

Moreover, clinicians influence the agenda of the CCG; for example, they can veto a decision. Furthermore, clinicians are involved in all the committees of the CCG, making it entirely different from previous bodies. Another distinction between the CCG and its predecessors lies in the way in which clinicians are recruited to be members. In the case of the CCG, GPs are *elected* to be board members, rather than being simply picked or recruited. It is obligatory for all GP practices to be a member of a CCG.

#### 4.4.2 The formation of a CCG

Each CCG is established by a group of doctors, and administrators and other stakeholders are brought in after a CCG has been formed. An application to form a CCG can be submitted by two or more GPs. When submitting an application, they must confirm their willingness to commission primary and secondary care services. According to the white paper factsheet A3, the application package for forming a CCG must include a constitution and provide the name of an accountable officer who must not be a doctor. After the application has been submitted, new members can join or withdraw from a CCG even before the application is approved.

Section 14D of the Health and Social Care Act (2012) states that the CCG application must be accepted if the requirements are met. The CCG constitution takes effect from the day the application is accepted. However, CCGs can apply to change their constitution, including changing catchment areas. Applications for changes can take the form of mergers, whereby two or more CCGs merge by dissolving the existing bodies and applying for a new one. Alternatively, a CCG can apply for dissolution, but the NHS commissioning board has the right to grant or refuse the dissolution.

Instead of merging, one CCG can transfer property or staff to another CCG. This is known as a property-transfer scheme or staff transfer scheme. A property-transfer scheme is designed to transfer property or liabilities from one CCG to another, while a staff-transfer scheme involves the transfer of staff from one CCG to another, including the rights and liabilities in connection to their contract of employment.



Each CCG must have a governing body containing key members such as accountable officers, members of the audit and the remuneration committee and a chair who oversees vital elements of financial management and the audit of the group<sup>2</sup>. The chairperson must be a GP.

#### 4.4.3 Functions of the CCG

The Department of Health specified the functions of CCGs as published in the Health and Social Care Act (2012a). According to Section 14P of the HSCA (2012), the first duty of CCGs is to promote the NHS constitution by making NHS staff and patients aware of its existence. Second, CCGs must discharge their functions effectively, efficiently, and economically by ensuring that the quality of services delivered is improved continuously with regard to the prevention, diagnosis, and treatment of illness. Third, while providing high quality services, the group must consider the effectiveness, safety and quality of the service in terms of experience from the patient's point of view.

The functions listed in the HSCA 2012 White paper can be summarised as: commissioning of care, financial duties, planning, monitoring and governance. The primary tasks performed by each group may be similar, but the NHS CB constitution gives each CCG the power to be flexible in performing their functions. Each CCG uses its discretion to enter a collaborative arrangement. For example, they may collaborate with local authorities to improve services. [Figure 4](#) shows the different structures that have operated within the NHS and the key ways in which they function.

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<sup>2</sup> Key elements of the financial management of a CCG are stated in a policy document that can be found at <<https://www.england.nhs.uk/wp-content/uploads/2012/09/fin-gov-tool.pdf>> <retrieved on 28/09/2021>

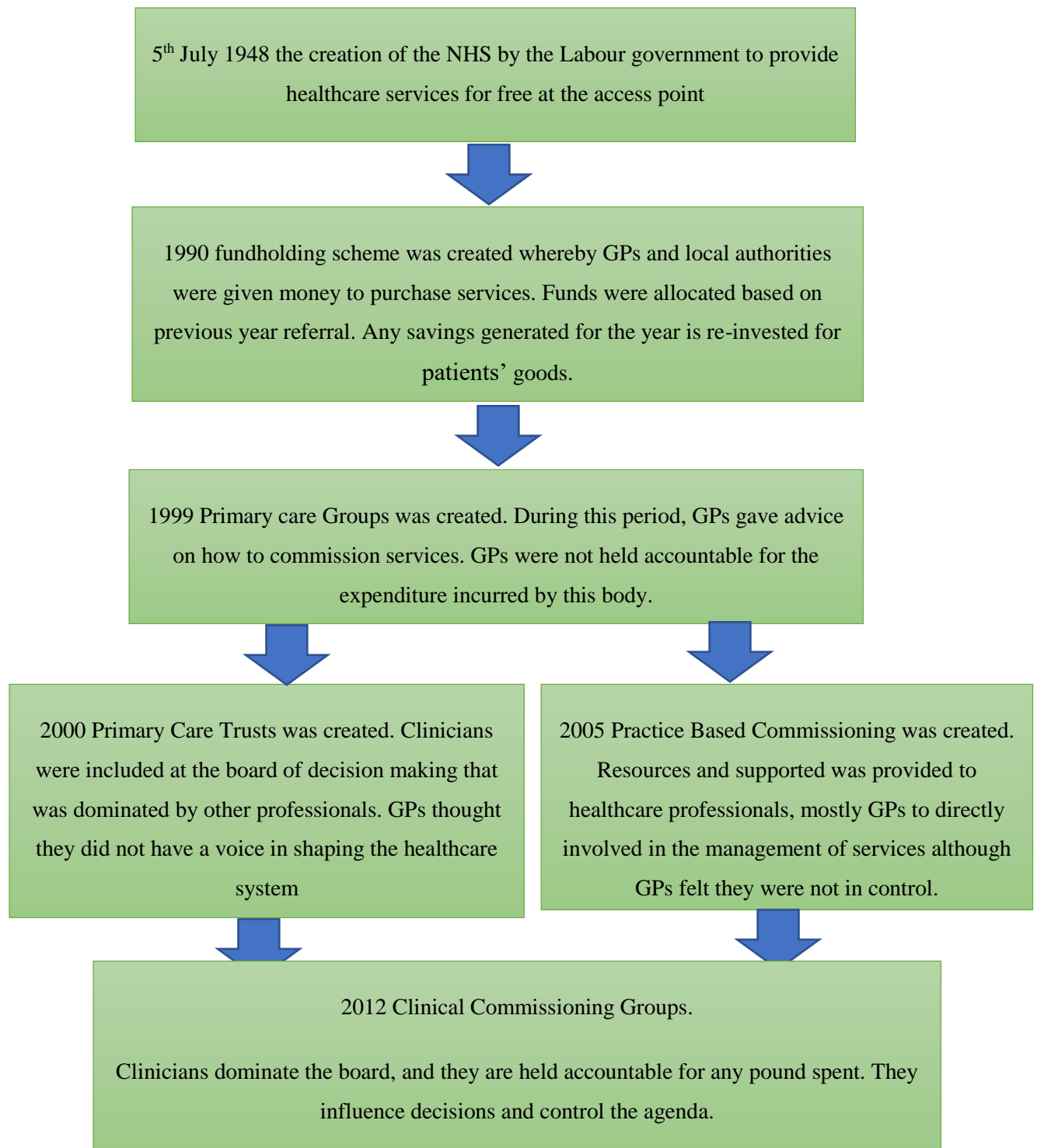


Figure 4 the different structures that have existed in the NHS

Source: author

#### 4.4.4 General duties of the CCG

CCGs are responsible for commissioning healthcare for the needs of patients located within their catchment area (Holder et al., 2015). These patients can either be registered with a GP practice or someone who lives in that geographical area but is not registered with a GP practice. The services provided to patients vary, for instance, they may include emergency care or continuing to receive healthcare services from the NHS outside of the placement area. Commissioning can take different forms. For example, it could take the form of reducing inequalities in the way that patients are treated, reducing inequalities in terms of access to healthcare services, involving patients in the choice of services offered or making payment for services provided to patients by other providers (HSCA, 2012, section 14S-14V). The general duties of the CCG are presented in [appendix A](#). Some of the responsibilities of the CCG include planning, monitoring services, commissioning 111 services, providing emergency care, and community care, etc.

#### 4.5 Conclusion

Various forms of commissioning have been introduced within the NHS by successive governments to improve governance and accountability. It has been argued in this chapter that, despite the introduction of many different reforms, clinicians were primarily used as advisers to those who commission services and were not in charge of making strategic decisions about where to invest the funds. Decisions about the services to be provided were shaped by politicians and managers. However, CCGs have provided a platform for clinicians to make both financial and strategic decisions by deciding how and where money should be spent.

## Chapter 5. Research Methodology

### 5.1 Introduction

This chapter presents the methodology employed in this research. First, it is important to understand that every piece of work is shaped by the ontology and epistemology chosen by the researcher. This study is approached from a social science perspective. Consequently, the approach adopted by this research is focused on answering two fundamental questions: what is the nature of reality (ontology)? And how can we know about it (epistemology)?

Ontology is a philosophical position concerned with the idea of existence and the relationship between individuals, society and the wider world (Eriksson and Kovalainen, 2008; Mattessich, 2013). It makes assumptions and provides answers about social reality, its composition, nature, and the interactions between its components (Blaikie, 2007). It seeks to explain whether or not the world is socially constructed (Bryman and Bell, 2011) by classifying it under the physical, structural, agential, cultural and mental realms (Llewellyn, 2007). Ontological assumptions help the researcher to identify acceptable knowledge, what can be studied and the sense in which things are real (Mattessich, 2013). There is more than one reality. Ontology shapes the researcher's view. It implies that any piece of research captures just a fraction of social reality among infinite possible realities. Precisely what each piece of research captures depends on the assumptions made.

Epistemology, on the other hand, is the accepted knowledge that exists within a discipline (Bryman and Bell, 2011). It defines what constitutes knowledge and how it can be produced following principles and procedures, including the limits of knowledge (Eriksson and Kovalainen, 2008). Epistemology is about beliefs, truth and justification (Ryan et al., 2002). Knowledge generated in any field is always partial and limited (Morgan, 1988). The

epistemological framework applied in this study is used to specify what knowledge is, how to recognise it, including the knowers, how one becomes a knower as well as how competing forms of knowledge are adjudicated and how some knowledge is rejected in favour of others.

## 5.2 Research paradigm and the choice of ontology

A paradigm is the fundamental beliefs, principles, and worldview that direct a piece of research (Guba and Lincoln, 1994). The ontological position assumed by this research is rooted in the interpretivist research paradigm. By taking this position, the study seeks to understand human behaviour. The interpretivist paradigm is by nature subjectivist, and the role of the researcher is to interpret the data collected, which is envisaged as another way of finding facts. Social scientists believe that interpretative ontology is the opposite of positivism (Williams and Vogt, 2011; Hopper and Powell, 1985). Therefore, they believe interpretative ontology is the best method of studying human behaviour.

This research studies reality involving human consciousness, which can be better understood through individuals' actions guided by explanations about common sense and beliefs (Hopper and Powell, 1985). According to Hopper and Powell (1985), people continuously create and modify their social reality through interaction. Therefore, human behaviour can better be understood through interpretation and justification. As a result, it is difficult to measure such changes through experimentation. On the other hand, the mainstream or positivist paradigm assumes that everything can be measured and studied through experimentation and statistical surveys.

The interpretative research paradigm was chosen because it is the best fit for this study. The research searches for meaning and reasons behind human actions and seeks to explore what

happens when people interact and how culture can shape actions (Chowdhury, 2014). As Orlikowski and Baroudi (1991) explain:

*'the aim of all interpretive research is to understand how members of a social group, through their participation in social processes, enact their particular realities and endow them with meaning, and to show how these meanings, beliefs and intentions of the members help to constitute their social action.'* (p. 13)

While positivist research is about explaining concepts and how they conform to specific rules and laws, it is not suitable for applying to human behaviour humanities. However, both schools of thought are necessary for the advancement of society (Morgan, 1983). According to Morgan (1983), each approach offers only a partial truth as the logic it applies is coherent in relation to a possible outcome and offers the possibility to learn from the assumptions made by the researcher. For example, interpretive accounting research may produce findings that could be used to shape organisations and societies including understanding the production of norms, values, and ideologies, unmasking conflict, enforcing control, and regulating organisations (Baker and Bettner, 1997). Therefore, interpretive research is best suited to understanding what is happening within an organisation, as in the case under investigation.

### **5.3 Research method**

CCGs located within the counties of Essex and Suffolk were used as the case studies to answer the questions raised by this research. The choice of case study research was motivated by the questions addressed in this thesis. Yin (2018) explains how the research questions drive the method employed in any piece of research. For instance, a social phenomenon can be more effectively explained using case study research, and a case study is also suitable for addressing questions that begin with 'how', 'why' or 'who' (Yin, 2018; Farquhar, 2012). Case studies are

also used for research that aims to provide a descriptive or in-depth understanding of a contemporary circumstance (Iacono et al., 2011, Yin, 2018). Case study research can involve a single case study or multiple case studies. Most case study research uses qualitative methods and emphasises the contribution made by the research (Iacono et al., 2011). Contributions are usually in the form of enhancing understanding of a context, or building, developing, and testing theories.

The starting point of most case study research is to probe the existing literature to identify a gap, and then address this gap by using an existing theory (Yin, 2014). On this basis, Ridder (2017) classified case studies into four categories: ‘no theory first’, ‘gaps and holes’, ‘social construction of reality’ and ‘anomalies’ (pp. 286-289).

This research uses a case study to explain a situation in which the world is socially constructed, and there is no real-world out-of-human mental activity (Stake, 2005). Like most case study research, this study assumes that meaning comes from shared beliefs. The aim of this research is not to search for patterns using a statistical measurement method but to achieve greater understanding and reach a conclusion by interpreting qualitative data. The interpretation of the data for this research is complemented by providing sufficient information so that the reader can learn from the case and draw their own conclusion.

The study uses qualitative data collected through interviews/dialogue to understand the diverse voices of respondents (Burawoy, 2009). The research questions are approached by looking at the interactions between multiple ILs and how they influence actors’ decisions. The idea behind multiple ILs is built on the assumption that different stakeholders or professionals involved in the commissioning of services at the CCG face different demands that are shaped by professional beliefs, values, and rules that guide the profession. As suggested by prior work,

*‘the researcher draws a sample from a population and attempts to draw inferences about that population by studying the sample’* (Ryan et al., 2002, p. 148). Therefore, the most effective way to approach this research is by using the case study method.

### 5.3.1 Research context

The services commissioned by CCGs include:

- ❖ Urgent care services such as hospital accident and emergency departments, ambulance response services and NHS 111 telephone services
- ❖ Elective care services such as planned operations and interventions care
- ❖ Community services such as community hospitals, the provision of community equipment, community nursing and therapy services
- ❖ Mental health and learning disability services such as those provided in the community and hospitals
- ❖ Domiciliary care such as nursing homes and care for people in their homes
- ❖ Children’s services such as children with NHS care packages and those provided with services by the County Council
- ❖ Primary care such as GP services both in and out of hours.

Although the NHS commissioning board mandates all CCGs to commission the services listed above, there are some differences between them, as shown in [table 6](#). They are different in structure, funding allocation, operation, and how services are commissioned/decommissioned.

[Table 6](#) displays some key statistics relating to the case study.



	Ipswich and East Suffolk CCG	West Suffolk CCG	Mid Essex CCG	North East Essex CCG
Date of creation	1 <sup>st</sup> April 2013	1 <sup>st</sup> April 2013	1 <sup>st</sup> April 2013	1 <sup>st</sup> April 2013
Number of GP practices as members	40	24	40	32
Money from NHS 2019/20	589.8M	252 M	512.4M	554.5M
Number of GPs elected to the board	7 plus 1 hospital doctor	5 plus 1 hospital doctor	4	5
Number of lay members	3	2	3	4
Population covered	410700	230,900	397162	527,819
Voting members	13	10	7	9

Table 6 Key figures for some CCGs in Essex and Suffolk

Source: Annual reports

It shows that the West Suffolk population is 56.2% of the Ipswich and East Suffolk CCG, but their income is only 42.7%, a difference of 13.5%. This gap can be attributed to the number of older people and certain demographic characteristics, including disease rates, within an area. The difference between these figures also demonstrates that every CCG does things differently.

### 5.3.2 Selection of participants and sample size

Participants in this research were both current and former clinicians holding administrative and leadership positions at the CCG. These clinicians play essential roles in influencing decisions on the commissioning/decommissioning of healthcare services. The clinicians who participated in this research comprised medical doctors (mostly GPs), nurses, and pharmacists. These are the healthcare professionals who influence CCG decisions. GPs are elected to the board by members of the GP practices within a CCG, while pharmacists and nurses are recruited as employees. GPs make decisions while nurses and pharmacists advise on clinical issues within their specialist area. Fieldwork was limited to the counties of Essex and Suffolk.

During the initial stage of the data collection, participants were contacted using several approaches such as emails, calling GP surgeries, and driving to CCGs and GP surgeries. A purposive sampling method was used to select interviewees by focusing on those who had held leadership roles at the CCG at various times. When selecting interviewees, it was assumed that those who have been involved in leadership/management must have practical experience of decision-making by combining clinical and accounting logic. Purposive sampling was used to collect in-depth and detailed information from interviewees who were believed to be very knowledgeable about this topic. A similar rationale was applied to selecting case study sites.

As Fusch and Ness (2015) point out, every qualitative case study must have a sample size that is sufficient to explain the phenomenon under investigation. Therefore, the sample size for the research was not predetermined at the start of the data collection process. During the data collection stage, the author realised after conducting 24 interviews that the data collected had reached saturation point, because most of the interviewees were replicating the same information that had already been obtained from previous interviewees. According to Fusch

and Ness (2015): '*Data saturation is reached when there is enough information to replicate the study when the ability to obtain additional new information has been attained, and when further coding is no longer feasible*' (Fusch and Ness, 2015, p. 1408). Therefore, there was no need to collect any further data as the data already collected was sufficient for the purpose of the study.

### **5.3.3 Site selection**

As previously mentioned, this research adopted a purposive sampling approach. At the initial stage of site selection, the researcher's preference was to use a random sampling method for data collection. However, after a preliminary survey, it became clear that CCGs located in Essex and Suffolk would provide sufficient, in-depth information on the topic. There are some CCGs in Essex that work alone like many others in the country. Additionally, other CCGs in Essex and Suffolk work together, although they are independent, which means that they share the same administrators, accountants, managers and accountable officer. They choose to work together in order to minimise administrative costs and share best practices including avoiding duplication. Underlying this initiative was the desire to follow the NHS's drive to reduce administrative costs and cut bureaucracy. Therefore, the case study had the potential to provide high quality and in-depth information on the alignment of logic, informal learning and the use of accounting information from the CCGs' experience of working both independently and collaboratively.

As a result, the author drove to various CCGs to recruit participants. Meetings that were open to the public were also regarded as fruitful places from which to recruit participants. Some participants were recruited during meetings, while most were recruited through snowball sampling or chain referral sampling. The recruitment process was purposefully designed to

facilitate the interviewing of participants who were more knowledgeable about the concepts under investigation. The meetings attended are listed in [table 7](#) below.

CCG	Venue
Mid Essex	Maldon Town Hall, Market Hall, Maldon, Chelmsford
North East Essex	Columbine Centre, Walton on the Naze
West Suffolk	Conference Room west, West Suffolk House, Western Way Bury St Edmunds, Suffolk
Ipswich and East Suffolk	Two Rivers Medical Practice, 30 Woodbridge Road, East Ipswich

Table 7 Meetings attended to recruit participants

Source: author

As well as using purposive sampling, it was also necessary to consider time constraints, clinicians' availability, difficulties in recruiting participants, and the cost of recruiting participants when selecting the case study.

#### 5.3.4 Data collection

Data for this research were collected from semi-structured interviews, observations and document analysis. Semi-structured interviews are best suited to qualitative research, especially in the field of healthcare (Gill et al., 2008). It guides participants regarding what to talk about whilst at the same time allowing them to elaborate on information that is important to the research. It also helps to provide information that the researcher might not have otherwise

been aware of. Semi-structured interviews were used in this qualitative research to capture the actors' values, attitudes, experiences and beliefs (Hammersley, 2017).

Moreover, the interview data were essentially statements about events witnessed by the interviewees. Therefore, as a data collection method, interviews encourage the interviewees to exchange information when interacting with the interviewer and relate their experiences, dreams, fears, hopes and opinions (Kvale and Brinkmann, 2009). In the process, the interviewee tells their story in their own words. During the interviews, open-ended questions were asked, allowing both the interviewer and interviewee to better understand the context through the interviewee's experiences, opinions, and perceptions (Patton, 2002).

As Arsel (2017) expressed it, interview data speak for themselves in interpretive research. However, the researcher must first understand the methodology and theoretical background before carrying out data collection. Collecting data without doing so will result in the generation of noise rather than data. Therefore, the author decided that the process of collecting data through interviews should follow four steps: settle on an epistemological tradition; prepare an Interview Protocol; conduct the interview; and iterate.

Another factor that needs to be taken into account is that interviews are a conversation between an interviewer and an interviewee with a strong tendency for the interviewer to dominate the interview process by directing the discussion toward the information that they are looking for (Kvale, 2006). In this research, this potential pitfall was avoided by ensuring that the interviewer stuck to the interview questions while allowing the interviewees to narrate their experiences and opinions in a way that they felt comfortable doing ([see appendix G](#)). The interview process was guided by the four steps proposed by Arsel (2017) for designing interviews, mentioned above.

## 5.4 Data analysis

The transcribed data were carefully reviewed to check for accuracy by listening to the audio recording while reading the data (Azevedo et al., 2017). The next stage in the data analysis process involved reading the transcribed data repeatedly to gain familiarity with the data, identify repeated patterns and then note them as suggested by Braun and Clarke (2006). According to Braun and Clarke (2006), although there may be variations between researchers in terms of the processes involved in producing a thematic analysis, it is good practice to search the data for repeated patterns. It does not matter whether the data is collected from individuals, a focus group or any other source of qualitative data. Braun and Clarke (2006) suggest that the following six steps should be used in data analysis, as illustrated in [figure 5](#) below:

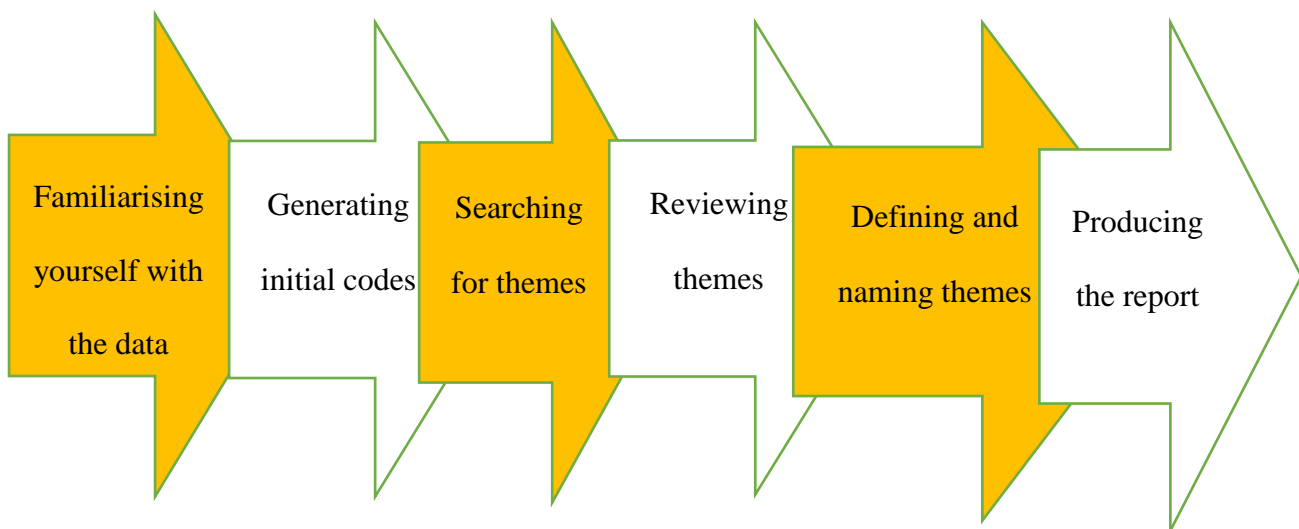


Figure 5 Six steps for analysing qualitative data

Source: adapted from Braun and Clarke (2006)

When reading the data, notes were taken about any topics that were repeatedly mentioned. These themes were then narrowed and classified to help answer the research questions. The data were coded using NVivo. The themes were generated specifically to address the research

questions, which are concerned with the alignment of logic, informal learning, and the use of AI.

The themes that were generated during the initial coding were then reviewed, and some themes merged together. According to Besharov and Smith (2014), organisational actors in multiple institutional settings must align their goals with the organisational goal in order for performance to improve. The research questions were addressed by examining the concept of centrality and the alignment of logic and how it influences the acquisition of skill sets required to read and understand AI, as well as how it helps in the usage of AI. This analysis offered useful insights and assisted in understanding the process used by clinicians to learn about and use AI. As previously mentioned, the six steps proposed by Braun and Clarke (2006) for analysing qualitative data were applied to ensure that the data were used most effectively.

A detailed analysis of the data from the interviews is presented under the relevant subheadings below.

#### **5.4.1 Structural coding**

Coding was driven by the available data, although some aspects of it were shaped by theoretical considerations. When the data were read repeatedly, themes started to emerge and some excerpts were found to align with the experiences described by other clinicians. Firstly, the presence of different logics was identified in the clinicians' statements. For example, the clinicians' statements indicated that their sense-making of accountants was completely different from their sense-making of clinicians, which meant they found AI difficult to understand. Due to differences in their field logic, clinicians often struggle to understand AI:

*'They do understand that GPs generally don't understand financial information.'* (GP12-current board chair)

Although the above statement indicates that there are differences between the two fields in understanding specific information, this was not sufficient to show the logics applied in their daily routine work. Statements from other interviewees helped to identify the influence of different forms of logic in the daily operation of the organisation, for example:

*'How you think as a manager is completely different from how you think about doing things when you are a GP. You have to make that slip for it to work. The two fields work in a completely different way.'* (GP2-current board chair)

Evidence of the presence of different logics stimulated a search for how these shape each group's sense-making. For example, clinicians defined their IL as follows:

*'As scientists we like to prove stuff and so if you can't prove stuff, if it is just a narrative you potentially get less essentially.'* (GP6-current member of mental health committee)

When the various statements associated with clinical logic were coded, the emphasis was on how clinicians think and what shapes their way of thinking. For example:

*'I think medical education has been very much on getting clinically sound appropriately, getting you to a clinical level where you can communicate, you diagnose a problem, you can choose the right drug, do the right operation.'* (GP5-current board member)

Similarly, the discussion of accounting logic was identified within the clinicians' interviews and this was coded accordingly, by identifying some of the specific roles that could only be fulfilled by accountants, as the example below illustrates:



*'if we are looking at the cost of commission or the cost of drugs that GPs are prescribing then we will be given lots of information by the finance team and lots of explanations to help us to make the decision that we might want to make.'* (GP2-current board chair)

After these first two themes had been coded, the question that then arose was whether it was possible for clinicians and accountants to work together without conflict. Extant literature has highlighted that there have been clashes between clinicians and accountants in their working relationships due to differences in organisational sense-making (see Guven-Uslu and Seal, 2019; Checkland et al., 2009). However, in this case, mention was made of the importance of a safe environment in which everybody felt comfortable and they all wanted the same outcome and shared a similar vision:

*'We all feel we work in a really safe environment that actually, somebody can put their hand up and say I really don't understand this can you take me through it.'* (GP6-member of mental health committee)

Despite the importance of trust within these working relationships, it did not emerge as a theme. Instead, clinicians discussed how the different groups of actors wanted the same thing which had to be achieved within the bounds of the available funds. A further theme therefore emerged to the effect that all members wanted the same outcome despite having ideas or following different trajectories regarding how to achieve that outcome, leading to interdependency:

*'We got £400 million to do the job in East Suffolk, so you have to get it right within that £400 million.'* (GP13-current board member)

All the other themes identified were similarly driven by the data. For example, the alignment of logic was evident in clinicians describing how they made decisions:

*'either is the work better sitting at the hospital because that is where it has to sit, is the work sitting at the GP practice or under a community nurse and there is a lot more joint working and to see what kind of saving can be realised.'* (P4-former pharmacist)

Themes such as the process of learning and the use of accounting information were identified using similar means by coding information that appeared repeatedly in the interviews. For instance, when discussing how they learn, most clinicians stated that they pick it up as they go along and the various processes by which they do so were grouped together to constitute a theme. The groups were then presented under the appropriate subsection headings and insights were drawn from IL theory to address the research questions. When the data were grouped into the theme of different types of sense-making by the various professions, some patterns were observed and the behaviours that were guided by particular ILs were then identified and associated with the corresponding IL.

#### **5.4.2 Frequency**

NVivo was used to determine the number of times that various keywords appeared in the transcribed interviews, for example, 'training', 'logic', 'pick it up', 'education', 'accounting information' and 'knowledge'. The frequency with which the keywords appeared was used to determine the similarity of responses. This approach was used to avoid repeating common terms that are also used in other contexts.

#### **5.4.3 Data reduction**

A data reduction technique was used to eliminate data that were not needed to address the research questions. Data reduction is part of the data analysis process whereby the researcher decides which parts of the data chunk to remove and which to code. It involves making a choice

about which story to tell by using this technique to sharpen, focus, discard, sort, and organise the available data so that a reliable conclusion can be drawn and verified (Guest and MacQueen, 2008). The author divided the coded data into different categories to reduce the volume and developed a plan to ensure that the research questions were addressed.

The process was guided by three key issues: the research questions; the theory used to provide insights; and the research paradigm. The data presented was selected based on the researchers' subjective interpretation and understanding of participants' responses as suggested by Thietart (2001). Reay and Jones (2016, p. 441) state that, '*there is an ever-increasing volume of studies investigating institutional logics, and yet qualitative methods for studying this phenomenon are not clear*'. They then identified pattern deducing, pattern matching, and pattern inducing as techniques that can be used to study IL. By patterns, the authors mean '*a set of symbols and beliefs expressed in discourse (verbal, visual, or written), norms seen in behaviours and activities, and material practices that are recognizable and associated with an institutional logic or logics*' (p. 442). According to Reay and Jones (2016), large volumes of qualitative textual data are used by scholars who employ the pattern deducing technique. Data are converted to countable occurrences using computer programs, and an analytical method is used to find patterns that capture logic. In the case of pattern matching, the researcher identifies and explains the characteristics and behaviour related to the ideal type of a particular logic and then compares the available data to determine the extent to which it matches with the ideal type of each logic. Pattern inducing on the other hand is a bottom-up approach that enables logic to be identified by coding and analysing chunks of text so that behaviour or beliefs that are guided by a particular pattern can be identified. In this case, the research shows as much of the raw data as possible, by grouping them into different meaningful subgroups that constitute a set of behaviours or a pattern associated with a particular type of logic.

Induction was utilised to make sense of the data as it was sorted. During the data reduction, the author took note of reoccurring themes. Pattern induction was used to focus on matching data with institutional logic. The data was also sorted based on how it could best fit with institutional logic, especially the way in which clinicians' logic is reshaped by belonging to the board of a CCG, which can be explained by a shift in institutional logic (see Scott et al., 2000), and how different logics are applied by clinician-managers (Pettersen and Solstad, 2014). When the data was reduced by simplifying and shortening it to a reasonable size, different factors were considered, including a shift in perceptions, clinical logic, political influence, collaboration, alignment, business logic and other stakeholders.

#### **5.4.4 Data validation and reliability**

The usability and credibility of case study research are increased by the validity and reliability of the qualitative data collected (Healy and Perry, 2000, Riege, 2003). In qualitative research, validity and reliability are concerned with quality and trustworthiness (Golafshani, 2003). They can be increased through detailed description and explicit documentation of the steps taken to collect the data (Singh, 2014). In addition, validity and reliability help to reduce the chances of researcher bias and increase transparency. In this research, validity and reliability were increased by ensuring that the primary data matched the secondary sources.

#### **5.4.5 Validity**

The validity of qualitative research relates to how well the research findings reflect the accuracy of the data (Noble and Smith, 2015). Issues taken into account when considering validity are the appropriateness of the choice of methodology, the sample size, the approach used to analyse the data and the conclusion (Leung, 2015). Moreover, the validity of qualitative research about

a social phenomenon can be enhanced by asking the right questions, theorising, and justifying the study with relevant data from different sources (Cypress, 2017).

The validity of this study was increased by using data collected from both primary and secondary sources. The primary sources included face-to-face interviews with participants and attending meetings. Documents such as the Health and Social Care Act 2012, agendas, annual reports, websites, minutes of meetings, campaigns<sup>3</sup>, and reports were analysed. The actual responsibilities undertaken by the clinicians, as per the interview data, were compared to those documented in the 2010 White paper and other sources. The aim of comparing the data collected from different sources was to determine whether the secondary data matched with the primary data.

#### **5.4.6 Reliability**

The main criteria for reliability is to determine whether the same findings and conclusion can be obtained when a particular study is repeated following the researcher's procedure and methodology (Lee and Baskerville, 2003; Yin, 2014; Singh, 2014; Yin, 2018). Reliability involves following a stable, reasonable and consistent research method to minimise bias and error in a study (Golafshani, 2003). Yin (2018) claims that, if a qualitative research case study has reliable findings and a conclusion, this will minimise biases and errors if the same research is carried out all over again following the same procedure. That is, the same findings and conclusion can be arrived at not only by replicating the original case study but by carrying out another case study. Yin (2018) highlighted that it is rare to repeat a case study. However, to

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<sup>3</sup> Ipswich and East Suffolk clinicians with accounting knowledge conducted a campaign for the population to help eliminate some of the pressure and costs from the system. The full document is available in the appendix. <<https://ipswichandeastsuffolkccg.nhs.uk/Portals/1/Content/News%20and%20events/Stakeholder%20newsletter/IESCCG%20Engage%20no17%20Winter2017%20online.pdf>>

enhance reliability, the researcher should explicitly document the steps and procedures followed in the qualitative case study to help other researchers if the same research is repeated. In addition, it can also help to reduce suspicion from external reviewers.

The trustworthiness or reliability of this thesis was ensured through a thorough elucidation of the procedures followed and by presenting the work at various PhD presentations and international conferences.

### **5.5 Methodological limitations of the research**

The aim of every qualitative interpretive research is twofold: first, to give a detailed account of how individuals make sense of their experience within a setting; and second, to give a thorough interpretation of the experience narrated by the individual to gain a better understanding (Smith and Shinebourne, 2012). While the current study attempted to achieve these aims, several limitations were encountered.

The first limitation of the study was the study design. The study was designed based on a conscious choice to restrict the group of participants to clinicians. Underlying the choice of participants was the desire to narrow the scope of the study. Although it would have been helpful to seek managers' and accountants' perceptions, doing so would have widened the scope of the study as well as influencing the results. Furthermore, the research was purposefully designed to focus on clinicians who have an influence on decisions made by the CCG rather than including all clinicians who wanted to talk about other aspects of the CCG, such as GP practices who are members of the CCG. The decision to select only interviewees with the power to influence decisions can be regarded as a systematic bias motivated by the intention to understand the transformation that occurs in clinicians' thinking and how their perceptions have evolved over time. However, by restricting the study to a small group of interviewees,

there is a risk of attracting only participants who think they have learned informally by becoming part of the management body of the CCG.

As well as the potential for self-selection bias to influence the results, most of the interviews were conducted in the CCG offices and this could also have affected the interviewees' responses. They might have been more likely to provide biased responses that were favourable to the research questions rather than simply giving their authentic responses (social desirability bias). Efforts were made to schedule interview meetings at venues other than CCG buildings but clinicians claimed that they did not have sufficient time to attend and would prefer to be interviewed at the CCG offices. Despite these shortcomings, the author did try to minimise bias, as highlighted in this section.

## 5.6 Consideration of ethical issues

Liberale and Kovach (2017) argue that ethical approval is used '*to protect the ethical rights and welfare of human subjects from research risks through the initial and continuing review of research protocols, adverse events, amendments, and other issues*' (p. 37). The most important ethical considerations with regard to qualitative research are confidentiality, informed consent, and anonymity (Van den Hoonaard, 2002; Richards and Schwartz, 2002).

Having fulfilled all the requirements of the University of Essex ethical approval committee, ethical approval was obtained on 14<sup>th</sup> October 2019.

## 5.7 Conclusion

Chapter 5 provided an in-depth description of the research philosophy, research method, and the argument behind the research paradigm chosen for this case study. This chapter helped to

understand the method used for data collection and analysis. The next chapter will discuss the refined and reduced data used to answer the research questions.



## Chapter 6. Data analysis

### 6.1 Introduction and background information

This chapter presents the findings gathered from the transcribed data. It starts by highlighting how primary care clinicians differ from hospital clinicians. Clinicians in primary care are more exposed to AI than those working in hospitals. In the hospital setting it is mostly medical directors who are exposed to AI, while other clinicians are not privileged to performance data. GP practices are run like private businesses, and most of them are partnerships. Practices are contractors and the contract is managed by GP partners, whereas hospitals are also contractors but doctors in hospitals are employees. The amount of money that GP partners are able to take home depends on the way they manage costs. GPs are exposed to AI even though it makes little or no sense to them during their training, as the following excerpt illustrates:

*'Each GP practice has a population. For example, mine has a population of nearly 7,000. So, I am the contractor, which means that anything that happens in my practice is my responsibility. In general practice, the approach is different, depending on who you are. The approach of the GP principal or the partners is different from those of GPs who are employed to work for the practice because at the end of the day, the partners or GP practice who own the business are paid depending on the way the practice performs so accounting in general practice is an integral part of the GP practice.'* (GP12-former board member)

This background information is important in terms of understanding why the budget is handed to GP practices. Moreover, it highlights that it should not be argued that GPs are not exposed to AI; the key argument should focus on their ability to use the information that is available. Another point to be noted is that there had previously not been any need for clinicians to look into the available AI before the creation of the CCG.

This background information has set the foundations for answering the research questions. The data presented in this chapter addresses the research questions.

## 6.2 Question one

**How does shared vision help clinicians to align their logic with the overall objective of an organisation, and how does it lead to the subsequent informal acquisition of accounting literacy?**

The various institutional logics identified in the data are discussed in this section before demonstrating where they meet and align. Firstly, clinical logic is discussed in relation to clinicians' reasons for joining the board of management.

### 6.2.1 Clinical logic as shaped by clinicians' professional training

The interviewees explained that their training is different from that of all the other members of the board. According to them, their decisions are influenced by clinical IL which, in turn is shaped by their training. The clinicians explained that in their professional field of practice things are straightforward once they can identify the disease in question. However, this is not the case with other fields. The interviewees' views were captured as presented below.

#### **GPs' views**

According to the GPs, there is an endless chain of negotiation at the management level. The training they receive to become GPs does not prepare them for this and therefore they must take a course to succeed as managers. Medical training does not provide the necessary knowledge and skills to handle managerial responsibilities, as the clinicians emphasised:

*'I think it is interesting. I got involved in management, when I did fundholding 20 or 25 years ago and that is when I started to be interested in it. And I got a*

*lot of training by myself paid for in developing leadership skills. I think that with my training hat on, I think medical education has been very much on getting clinically sound appropriately, getting you to a clinical level where you can communicate, you diagnose a problem, you can chose the right drug, do the right operation, you know whatever level but actually lots of the softer skills of life, like how do I do a PowerPoint presentation, how do I influence somebody, how do I deal with negotiation, how do I deal with an aggressive colleague, those things are actually not taught and that is probable when you talk about young doctors.’ (GP5-current board member)*

The above statement suggests that clinicians’ training is only designed to prepare them to be clinically sound and therefore it makes them think in a particular way by focusing on specific information. The training they receive also shapes their IL:

*‘As scientists we like to prove stuff and so if you can’t prove stuff, if it is just a narrative you potentially get less essentially and I am interested in how you build the machinery to justify how you will improve quality and get what people need as opposed to what you can prove.’ (GP6-current member of mental health committee)*

This statement demonstrates that GPs’ decisions are guided by scientific proof, whereas commissioning requires other kinds of knowledge that cannot be proven. By highlighting this difference, the clinicians emphasised that each professional field is different and that these differences must be taken into account:

*‘when you have a number of clinicians doing what they do best it isn’t always their medical skills that you are talking about, in fact is quite rare that it is their, it is not their doctoring skills that you are asking for, is what they bring to it as a personality and the core skill sets, you know as they say holding people to account because you read the constitution and you remember the details of*

*the constitution.*’ (GP7-current member of prescription committee)

Another GP explained that their training is all about understanding what is clinically right and, therefore, to make commissioning decisions, including choosing between alternative treatments in terms of costs, they have to rely on accountants who have a better understanding of accounting logic:

*‘We are very much spoon fed. They do understand that GPs generally don’t understand financial information. Most of us even if we run practices, we have practice accountants who do the services for us. For example, if we are looking at the cost of commissions or the cost of drugs that GPs are prescribing then we will be given lots of information by the finance team and lots of explanations to help us to make the decision that we might want to make.’* (GP2-current board chair)

### **Nurses’ views**

The nurses’ narratives were similar to those of the GPs and pharmacists. According to them, their professional training courses do not include accounting courses or any sort of training in accounting, as Nurse1 explained:

*‘Accounting training was not part of my nursing program but I have learn a lot by doing this job.’* (Nurse1-chief nurse officer)

### **Pharmacists’ views**

In the pharmacists’ view, the aim of their training is to enable them to understand clinical issues. Accounting knowledge and skills do not form part of their training, as confirmed in the excerpt below:

*‘There isn’t any official accounting training, not part of the pharmacist course.’*

(P4-former pharmacist at the CCG)

Another pharmacist reiterated the point:

*'There is no sort of accounting training, we just learn on the job.'* (P2-current pharmacist)

The clinicians separated their training from accounting logic and emphasised that it does not include the acquisition of accounting literacy. All the interviewees' statements indicated the existence of different types of logic in the environment in which services are commissioned, namely clinicians' logic and accounting logic. The respondents stated that their initial views about how activities should be designed were fundamentally different to accounting logic, thereby making it necessary for accountants to spoon-feed them when they were making financial decisions. The clinicians were guided by their clinical professional logic to reproduce similar judgements (Kluttz and Fligstein, 2016; Martin, 2003). Like many other fields, the clinical field is guided by a particular IL that creates the possibility for stability, including the reproduction of actors with similar world views. The clinicians' statements also indicated the presence of rules and values that guide their decisions about what to do (Jamali et al., 2017). However, even though the clinicians' interview statements clearly indicated a lack of accounting literacy, they showed a willingness to manage a budget by participating in the CCG board. Therefore, the question is to understand their motivation to become board members. The interviewees indicated that their drive to become a commissioner was shaped by the desire to design activities using clinical logic, as discussed in the next section.

### 6.2.2 How clinicians' desires are shaped by clinical logic

The Health and Social Care Act 2012 clearly stated that clinicians would be given the budget to commission services based on the needs of the local population and that they would be held accountable for any decision taken by the board. However, clinicians' interview testimonies revealed that they were not interested in the monetary aspect of commissioning. The main motivation for accepting leadership roles seemed to be to achieve some objectives that are driven by clinical logic, as was evident from the reasons given by some of the GPs, nurses and pharmacists for joining the board of management. According to some of the clinician interviewees, the challenges of handling the budget prevent most clinicians from accepting leadership positions. In their words, those who accept such responsibilities are not typical clinicians as perceived by their colleagues:

*'We are not just pure clinicians because a vast majority of clinicians are not interested in doing this. It is only those that have either a special interest or a special skill that take this on.'* (GP6-member of the mental health committee)

The challenges involved in managing the budget have generally made leadership roles unattractive to most clinicians, especially young doctors:

*'I think there is a general disinterest in what we do and when I speak to a junior doctor or junior colleague or people who have just qualified there is a general perception that we are old-farts talking about stuff that is irrelevant and that will never impact anybody's life.'* (GP7-member of the prescription committee)

Therefore, those who accept such responsibilities are usually motivated by the desire to improve the situation and make things right for their peers.

### **GPs' drive to join the management board**

According to one of the GPs, managers, politicians and accountants were constantly changing the way that services were managed and this was viewed as unwelcome by clinicians. As a result, they felt compelled to join the management team so that they could design things in a way that was more aligned with clinical logic:

*'I decided to see what exactly is motivating these people to then change the role every two, three years. That is why I thought of joining this side. Yes, there is a huge conflict of interest but if you are upfront about the conflict of interest you are fine.'* (GP14-current board member)

Two other GPs explained that the main reason for joining the CCG board was to advocate for patients and to try to ensure that they get the most out of the system:

*'I think there is also a striving to see the problem within the system, how can you bring about change, how can you bring about improvement, how can you see as a GP the pitfalls and problems that patients have.'* (GP10-current board member)

*'What motivated me to join CCG is that when I did a quality improvement course, I understood that a lot of what we were being asked to do is just quick fix and not long-term strategies for the health system. It was making me as a clinician busy doing the wrong thing. I thought if I am not involved in fixing things then it was going to be done for us.'* (GP11-current board member)

These statements indicate that GPs were worried about the changes that were introduced over a period of time and thought that they were not 'rational' in the clinical sense. Therefore, they wanted to be part of the system to be able to better understand the motivation for these changes. As GP11 expressed it, the way that the system is currently working is merely keeping clinicians busy, but not necessarily making the most effective use of their time; the system can only achieve its intended outcome if it is designed and guided by clinicians.

### **Pharmacists' drive to join the CCG**

Pharmacists' views were similar to those of GPs. They were driven by their desire to put their clinical knowledge to effective use, as the following statement illustrates:

*'My main motivation was to ensure that patients are provided with better drugs and those which are efficacious.'* (Pharmacist 3-current pharmacist)

### **Nurses' drive to join the CCG board**

In the following statement, one nurse expressed her desire to provide good quality care that fulfilled patients' expectations:

*'I wanted to provide the kind of care that is good, I wanted people to be happy and satisfied with the kind of services we provide.'* (Nurse2-current chief nursing officer)

Another nurse noted:

*'My role is to ensure that the services we provide are of good quality. For other clinicians such as GPs and consultants, their role is to make sure they use their GP experience and consultant experience to make sure that the right services are provided.'* (Nurse 4-collaborator of chief nursing officer)

The interview statements separated commissioning from clinical logic and indicated the presence of clinical professional logic as shaped by their respective professions. The clinical profession influences clinicians' drive to become board members, as is evident from their statements. It also shapes their views about what is important and the information that is necessary to achieve the desired outcome (Gadolin, 2018). In the context of the CCG, this outcome could only be achieved if the funds at the disposal of the board were unlimited. However, as things currently stand, clinicians have to adopt and commission services within



the limits of the available resources. Therefore, the actual activities of the board may deviate from what clinicians thought they would be doing, as presented in the next section.

### **6.2.3 Clinicians' actual duties when commissioning services**

According to the clinicians' accounts of their experiences, what they are doing when commissioning and decommissioning services does not match with what they intended to do when they aspired to become a commissioner. This observation was made based on GPs', nurses' and pharmacists' explanations of the activities of the board.

#### **GPs' experience**

Exploring the role of clinicians on the CCG board offered a means of discovering whether what clinicians were actually doing was the same as what they intended to do. The doctors, nurses and pharmacists who were interviewed shared similar views about their roles. Various roles were enumerated, including maintaining ethical standards, promoting accountability, ensuring that quality is maintained, designing care to be cost-effective, promoting safety, endorsement of services, overseeing services, ratifying services, involvement in practice-based commissioning, identification of priority areas, planning and monitoring services.

Generally, CCG boards are composed of different groups of actors who combine their expertise to try to do the right thing for the population they are serving. The clinicians interviewed explained that they comprised the majority on the board, and this was a common occurrence throughout Essex and Suffolk.

#### **GPs' perceptions**

Most of the GPs who were interviewed indicated that they were in contact with patients on a daily basis. This current knowledge and experience is needed at the CCG to

drive healthcare commissioning in the direction of where care is most needed. According to the GPs interviewed, their experience with patients is what other members of the CCG such as managers are lacking. This experience is used to inform planning and strategic direction. In their view, they understand what the hospital is doing, and what is going on in primary care, as well as what psychiatrists and community pharmacists are doing because they have all had the same training. This experience is used to drive care in the right direction and ensure accountability. They also use their clinical knowledge to hold other clinicians accountable, as explained in the following statement:

*'We hold clinicians accountable. By holding clinicians to account, we don't talk only about ethics. You have ethics, quality, and cost-effectiveness. For example, suppose I spend a billion dollars to save one life that is ethical because I have one life, but it is not very cost-effective because it means that I cannot use any other part of the billion to save other lives. In that case, it is not just ethics that measures us, it is also cost-effectiveness, quality, and those sorts of things. You won't want the Lyman brothers running the NHS ... This is probably why GPs are the only part of the system that sees the whole system because we use the whole system. By seeing the whole system, I mean, somebody in the hospital will not understand what the psychiatric services are doing, they won't understand what community pharmacists are doing, because on a daily basis we have interaction with all of those systems, we can tell which part of the system is in trouble, which part of the system is working well, etc.'*  
(GP8-member of the prescription committee)

Another GP noted that:

*'The involvement of the clinicians is just to guide where most money should be spent. They help to prioritise the area for spending. For example, the accountant could say we are spending a million pounds on mental health. What does the accountant know about mental health? What area of mental health are we talking about? ...What are we going to use the money for? Are we going to*

*use the money for community-based programs? Are we going to use the money to set up hospitals? So, the role of clinicians, apart from the fact that there is needs analysis, the clinician is going to guide what area to prioritise the spending. For example, we have a youth epidemic of mental health and drug abuse now. Is it best to use that money for adolescent mental health or to recruit key workers who will support those people in the community? That is where the clinicians come in because the accountant is unable by training to do that.'* (GP3-former board member)

A third GP expressed a similar view as follows:

*'Let's say I send somebody who has cancer to the hospital with a red flag and the hospital does not see that person within two weeks, then the hospital is not fulfilling its contract. These are the things that are important to us, patients' safety, cost-effectiveness, efficiency, value for money, priorities, is to do the right thing rather than sending money to the wrong place. There is a lot of discussion going on and on. There are codes of conduct which we must adhere to, such as the code of conduct of public life, say public service, so the NHS is the same and not a business. So, you ask the questions to make sure that the managers are doing the right thing'* (GP5-current board member)

Another GP commented on their role in the CCG compared to that of the previous system:

*'With the previous body, consultation is the method that was used to know what clinicians wanted during planning priority setting and budgeting, but with the CCG, clinicians are actively working with their colleagues of other departments to make this work. Clinicians identify areas of priority, what is necessary for the year and identify what should feature on the budget.'* (GP7-current member of the prescription committee).

Other clinicians, such as nurses, have responsibility for overseeing quality and assurance. They evaluate the services provided and work with other bodies such as the Care Quality Commission (CQC) to ensure that the services provided meet the required standards. At the

same time, pharmacists monitor medication usage both in terms of the quantity used and costs of usage per surgery. The data generated are used to ensure that medication is used appropriately.

### **Nurses' experience in their role**

One nurse described her role and those of her colleagues as follows:

*'My role is to ensure that the services we provide with the available funds are of good quality. For other clinicians such as GPs and consultants, their role is to make sure they use their GP experience and consultant experience to make sure that the right services are provided.'* (Chief nursing officer in charge of quality assurance).

### **Pharmacists' experience**

One pharmacist described his duties and views on cost considerations as follows:

*'I oversee the whole team which is currently 11 people in the medicine management team, focusing on safety, and cost-effective prescribing in GP practices. I also overlap with secondary care. I work closely with the secondary care colleagues, and chief pharmacists at .... just to look at where there might be some system savings as well because a lot of the drugs are started by the hospital. So, if they start with the right drugs then obviously the impact on primary care is less, if they start with the cheaper more cost-effective options, if they start with brand things like that in secondary care it might have an impact on secondary care because that is where they continue long term.'* (P1- Current chief pharmacist)

Another pharmacist explained about the protocols in place to monitor the prescribing and distribution of medication:

*We monitor the medicines that are used, from the financial perspective as well*

*as from the user perspective. We make sure that they are being used effectively, correctly and in accordance with guidelines and procedures and policies. We have various tools to make it work. So, we sort out, this is the medicine here, this is how you should prescribe it, and we make sure that we have a system in place to monitor that. We also provide quite a bit of training and education for our clinicians as well. So, we help support with information on prescription, safety elements,..'* (P5-current pharmacist for the CCG)

From the above excerpts, it is clear that clinicians bring a special perspective and particular logic to the way in which activities are shaped and directed (Thornton and Ocasio, 1999, Scott, 2008b). The clinicians assumed that each group of actors has a unique way of thinking and that they use their special skills to influence the design of services (Friedland and Alford, 1991). From their point of view, the experience obtained during consultations with patients helps them to add value to the services delivered. Despite their influence, most believe that commissioning is more complex than they envisaged. All the statements presented in this section have shown the presence of two main types of logic when commissioning services: accounting logic and clinical logic. The changes that have occurred have shifted clinicians' logic and their original beliefs by modifying their previously held views (Lounsbury, 2002; Greenwood and Hinings, 1996; Kitchener, 2002). Based on clinicians' training, educational background and experience, much attention was focused on the clinical changes that have taken place, with less attention paid to the financial implications of implementing the changes (Salancik and Pfeffer, 1978).

However, this perspective shifted when clinicians became aware that they had to provide and shape services within a given budget. Underlying the clinicians' statements is an emphasis on providing clinical direction within the allocated budget. In other words, clinicians discovered that they wanted the same thing as accountants although they had a different definition of how to arrive at the expected outcome. The key to explaining this is that clinicians cannot effectively

commission services without the help of accountants and accountants equally need clinicians to identify areas of need (Reay and Hinings, 2009). The two groups, therefore, have to manage their professional rivalry by focusing on the common goal of providing quality services within the allocated budget, as discussed in the next section.

#### 6.2.4 Shared visions and where logic meets and aligns

In this section, clinicians explain how their views changed after receiving some training about the politics, budget and societal expectations from managers/accountants when they first joined commissioning. The acquisition of new forms of sense-making helped to narrow the differences in goals between the various actors on the board as well as helping to bring their logics closer together too. The point at which their different types of logic meet is where alignment occurred.

##### GPs' views

One of the GPs explained what he thought the differences were between the leadership and executive roles:

*'We have had quite a lot of training from various quality national training bodies on how to do that. So, it is no good for me to try to write a 5,000-word paper. I haven't got time to do it. But there is someone else who actually is very clever, who can do that for me, and I can then look at it and say I think you have to change that, but the rest is great. So, is the difference between leadership and executive role. I am not an executive. We are just there to guide them.'* (GP6-member of mental health committee)

Another GP explained that the clinicians are the only actors on the board who ask

critical questions that are not related to money. They can ask questions about the fall rate and other aspects that are ignored by other board members:

*'...I think we are useful. In fact, in some cases, we are integrated into a process as the only people who can direct the goal since we can flex the conversation away from money into quality or into how can you sit and be happy with the worst fall figure in the East of England. And that makes people sit up and take notice and if you could do that in a professional way and you can do so with an idea of what needs to happen or what could happen if you spend the money differently, if you take them out of their comfort zone then you get the ability to change things.'* (GP8-member of the prescription committee)

Another GP argued that the different groups must make joint efforts to ensure that they can achieve their targets within the budget that is allocated to the catchment area:

*'Performance within the contracts is more of a managerial role although clinicians may have an input into it. But it is more of a managerial role. Let's say there is an epidemic of flu which means the system has to look into it. We normally need to have reserves. We got £400 million to do the job in East Suffolk, so you have to get it right within that £400 million.'* (GP13-current board member)

Similarly, another GP pointed out that they are not just there to monitor quality or safety, but to consider cost-effectiveness as well:

*'Our job is not only to provide strategic management but also to provide operational management for everybody. So our job is to make sure that people get safe, cost-effective care, and if a provider is failing to do that, then it is all*

*our responsibility to make sure that things are okay. Most of the time, we are critical friends, we can be supportive to an organisation, but we can also be harsh on an organisation to get them to be efficient.* ' (GP9-member of finance committee)

### **Nurses' view**

One nurse explained that they all collaborate when designing and managing projects. According to the nurse, every group is important to make things to work effectively:

*'We have lots of projects ongoing. They will inform us that we need this project, and they will keep sight of how the project is being done, but they don't actually do it. They will see the reports of a project. They will be involved at that strategic level. They will understand the financial management of the project, whether it is overspent or underspent, but they wouldn't do anything. They would sit at an oversight position rather than actually doing it.'* (Nurse3-formal chief nurse)

### **Pharmacists' view**

According to this pharmacist's view, project are designed, and executed in a team. Everyone's view is relevant and there is no hierarchy in terms of influencing decisions:

*'I think it needs to be a team effort. I think having the clinicians involved so people like myself are involved in the finance because what is being prescribed makes more sense to us. We know the drug on the page when the bill comes in. It makes more sense to me. I can say that is being used for that condition. This is being used for this condition, whereas an accountant will just look at that*



*and go with the bills. X amount is okay, whereas I will look at it and say yes is okay because these drugs are being used appropriately. So, we work really closely with finance in the budget setting because it is obvious, that they have to hit their bottom line with the budget setting, but it has to be realistic, and we have got a very good relationship with finance in the CCG to make sure that it is realistic from both points of view.'* (P2-current chief pharmacist)

Another pharmacist explained that based on their experience, their colleagues in primary care and secondary care wanted the same thing. However, the challenge is how to achieve the desired outcome. Therefore, clinicians at the CCG are working with those in practice by sharing ideas about better ways to make the system sustainable. The following statement summarises this view:

*I work closely with my secondary care colleagues, chief pharmacists ..., and hospitals just to look at where there might be some system savings as well because a lot of the drugs are started by the hospital. So, if they start with the right drugs, then obviously, the impact on primary care is less. If they start with the cheaper, more cost-effective options, if they start with brand things like that in secondary care, it might have an impact in secondary care because that is where the drug continues in long term.'* (P5-current pharmacist)

Another pharmacist also noted the benefits of collaborative working in joint decision making:

*'either is the work better sitting at the hospital because that is where it has to sit, is the work sitting at the GP practice or under a community nurse and there is a lot more joint working and to see what kind of saving can be realised.'* (P4-

former pharmacist)

The respondents focused on teamwork by emphasising that even though medical professionals need to provide good care, accountants must equally balance the budget. This indicated a complete change in direction from focusing on what clinicians would have ideally chosen to do given unlimited finances and what they can realistically achieve with the available resources. The interviewees' responses showed that they are trying to get the most benefits for their patients by applying accounting and clinical logic to reap the benefit of both realms (Anessi Pessina and Steccolini, 2007). This involved blending clinical professional logic, which is concerned with communicating patients' healthcare needs rationally, and accounting logic which relates to the measurement, evaluation and utilisation of the funds received. The key indicator of blending, as observed from the clinicians' statements, is their emphasis on the need for teamwork, by making the most of the available knowledge through the alignment of logic. The incentive to align the different types of logic, as indicated by the statements discussed above is for the board to maximise the knowledge and skills they can tap into from the expertise of each group of professionals (Ingstrup et al., 2021; Besharov and Smith, 2014). In this case, the different kinds of logic meet, align and are reflected in the work of the commissioners. However, aligning the logics of these different groups has had different consequences for clinicians, as detailed in the next section.

### **6.2.5 Unintended consequences for clinicians of shared visions in decision making**

The clinicians' statements show a strong link between their participation on the board and changes in their perceptions and the way they handle tasks. The study found signs of internal conflict as well as the advantages of reaping the benefits of both clinical and accounting logic (Anessi Pessina and Steccolini, 2007). However, by working together with accountants,

clinicians acquire some accounting knowledge informally, which has some negative consequences for them.

### 6.2.5.1 Negative consequences

Clinicians expressed the view that they had no problems with their accounting colleagues. The working environment was harmonious and everybody respects each other. However, they find it difficult to explain their activities to fellow clinicians and the public because most people do not understand the demands that come with their role. For example, some clinicians explained how difficult it is to perform both duties on the same day, as the following statement illustrates:

#### GPs' perceptions

*'I work as a manager three days and two days as a GP in a week. You can't run the two things on the same day because how you think as a manager is completely different from how you think about doing things when you are a GP. You have to make that slip for it to work. The two fields work in completely different ways. Having people to phone you up on the day you work as a GP to ask you questions about CCG, you know. In CCG we do the work and reflect on it.'* (GP2-current board chair)

This statement shows that it is challenging for clinicians to handle managerial duties and clinical duties on the same day. The logics that guide each of the two fields are different and this causes tension and conflict when clinicians attempt to carry out both duties on the same day. However, the tension between these two types of logic is further complicated when clinicians talk to fellow clinicians who are not involved in commissioning:

*'Well, I supposed there are two bits of that: I try not to. If I am being a manager, I like to be explicitly put into that position. You know, what is your role in that. If I sit in a meeting, my job is to be a manager for the CCG, and I got that mandate, I try and keep that hat on rather than slipping into a doctor role. So*

*is about using the right leverage in the right room. When you get caught in between them, at least I find it very uncomfortable when I am responsible for something, and I got a doctor's story to go alongside it, that is normally when it gets me crossed.'* (GP1-formal board chair)

Clinicians who are on the CCG board find it difficult to explain their activities to fellow clinicians. The board's activities and clinicians' expectations are completely different, which creates internal tension for clinicians who are involved in management:

*'The most obvious example where I have been caught in between, as a CCG representative. I pull into a discussion about general practice or general practice networks because then it is quite hard not to be a GP and not to be passionate about general practice, but my role is really as a clinician for the CCG and a management leadership role.'* (GP5- current board member)

Most of the tension in healthcare management has tended to focus on clinicians and other groups (Reay and Hinings, 2009). The case illustrated below concerns the internal pressure that clinicians face when trying to explain their activities to their peers. It involves emotional adjustment and having to choose where one's priorities lie. Clinicians understand what individual patients want and the expectations of their colleagues but, as board members, they have to think of how the whole population will benefit from their decisions:

*'I do have conflicts by performing a managerial duty. It is not easy. There are plenty of areas where I had to step away as an individual doctor for my individual patient to what I will want to do as a board member of CCG. For example, knee replacement in patients who are more obese. This is an example of what they used to call service restriction policy, but it now has a different name. Where we say that this patient will not have a good outcome if their joint is replaced because they are very overweight. They are encouraged to lose weight so that when they have the operation, they will have a better outcome. I would have previously referred a patient who has a body mass index of 40 for a knee replacement without having a second thought but now I am working with the CCG, and I see the fact that we got a certain amount of money*

*and we need to target it to patients who will benefit the most.'* (GP4-current board chair)

### **Nurses' perceptions**

A nurse provided the following description of the tension that she faces in her role:

*'It is a difficult situation because you want to provide the kind of care that you want, you want people to be happy and satisfied with the kind of services you provide but you also have to be accountable as you have a financial budget that you have to live with. It is a kind of tension. I think is the same kind of tension that we all have in our personal life. You want your children to have the best, but you can't always pay for it. As a clinician, you do your best. It is a tricky situation. My duty of care is to provide the best care but sometimes as a manager, you have to look at the most cost-effective care. As a nurse I am afraid, I have a professional registration that means I must not do harm to people and all those kinds of things. I will not put my registration at risk, I would rather overspend my budget rather than put my registration at risk which is probably why the NHS is overspending.'* (Nurse1-chief nurse officer)

The focus of the nurses and other clinicians is on doing what is good for the population that they serve even though they have to grapple with the tension of maintaining their professional registration and pleasing fellow clinicians.

### **Pharmacists' view**

Commissioning is guided by what is good for the health of the population and meeting the short-term obligation of working within the budget. Clinicians sometimes want to recommend drugs and other treatments that would save money in the long term, but this is not always possible because decisions have to be made by understanding the political logic that guides the yearly budget, the accounting implications of such decisions and the clinical logic that

influences clinicians' decisions. This results in internal tension when trying to choose the best option from those available:

*'There are various drugs where they have got higher upfront cost, but we think they will save money further down the line with reduced admissions or reduce use of healthcare services. You know if you use it down the line, they are difficult decisions because it is immediate cost pressure that the drug represents this year versus benefits that might happen five, ten or 20 years down the line. I think it has historically been about just worrying about the base line this year.'*

(P2-current pharmacist)

All the clinicians drew a distinction between what they would have done ideally and what they are actually doing. Their actual duties involved applying a combination of logics (Pettersen and Solstad, 2014). These various logics often contradict each other in terms of their world views and notions about how things should be done (Friedland and Alford, 1991, Thornton, 2004). All the clinician-leaders mentioned at least two kind of logic that weigh on them each time they are making decisions or explaining their activities to people who are not on the board. Hence, they are faced with tension when performing their commissioning of services duties (Reay and Hinings, 2009). However, the types of tension that were identified in the clinicians' statements is different from those that have been reported in the extant literature. More commonly, the tension has been between two or more groups of actors. In the case of the CCG, the clinicians' statements indicated the kind of tension that they face is between doing what is good for the population and satisfying their peers. Nevertheless, there can be lots of positive consequences when these groups work together harmoniously.

#### **6.2.5.2 Positive consequences**

The clinicians' statements also indicated that there were many positive consequences as a result of their participation in the board. They could now understand how to work with the available funds as well as accepting suggestions from different participants on the board.

### 6.2.5.2.1 Alignment as a result of exposure to budgetary information

As previously mentioned, a lot has changed in the working relationship between clinicians and other groups at the CCG board. Such changes occur when clinicians begin to understand the importance of budgeting and how they must work with a finite amount of funds. The clinicians redefined their way of thinking when they were exposed to accounting logic. Their statements show that having knowledge of the amount received per year can help clinicians to think differently (Broadbent, 1998). Ambiguity about what is required was resolved when clinicians understood that they had to work within a limited budget:

*We got £400 million to do the job in East Suffolk, so you have to get it right within that £400 million.* (GP2-current board chair)

This statement shows a strong link between understanding the amount of funding available and sharing the vision of the organisation (Besharov and Smith, 2014). Therefore, the centrality of logic becomes more dominant than professional logic (Jones and Mellett, 2007). Consequently, the different logics come to manifest themselves in core features that guide the functioning of the organisation.

### 6.2.5.2.2 Teamwork

Teamwork is connected to the concept of the alignment of logic as the different groups need to work together to achieve the overall organisational goal. Under the previous bodies, medical professionals were not working as part of the team that designed and commissioned services. They were used as advisers which is different from the way the current body works.

#### **GPs view**

Previous bodies that commissioned services before the CCG experienced a huge amount of tension between accountants and clinicians. During that period, managers and accountants were the groups that were held accountable for decisions taken. Now clinicians are in charge of the

budget and therefore have to depend on managers and accountants for their input, as the following statement shows:

*'With the previous body, consultation is the method that was used to know what we wanted during planning and priority setting and budgeting but with CCG we are actively working with our colleagues of other departments to make this work.'* (GP9-current board member part of finance committee)

As commissioners, clinicians expressed the need for collaboration. However, their statements also indicated a lack of diverse teamwork in previous commissioning bodies. The research findings showed an environment in which people feel free to express themselves about what they think are the best alternatives available:

*'As in the CCG we are better placed but in some other organisation no because it is not somebody's domain. It always has to be teamwork. It is democracy and not a kind of monarchy. You have to listen to others; we do say this is more important, then things happen that way. Sometimes it doesn't happen because the financial package is not there so, we say okay let's leave it for now then we look at the other example of the neighbouring CCG how have they done this or that. We always look at neighbouring CCGs.'* (GP10-current board member)

Suggestions from one group are debated and they are judged in relation to the available resources. This way of making decisions encourages teamwork and joint decision-making. At the board, clinicians still give advice but they do so as part of the team. Their role has changed in that they now make decisions and not just suggestions as was the case in the past:

*'You still got the GPs, you still got clinicians advising but as well on more and more decision making. At the board, there will be a patient representative or somebody from a patient organisation who sits there as well. It changes the tone of the conversation; it maintains respect at all times. It means there are people from outside that are to call us to account. You always need people to ask us the difficult question, is challenging but actually very good.'* (GP12-formal board member)

This teamwork even extends to people who are outside the organisation. Members of



different organisations such as the CQC and local councils hold CCG members accountable for their performance. As a result, different methods have been adopted to ensure that every group sticks to the same principles.

### **Nurse's views**

Many examples were given by the interviewees of how teamwork has become very important to the CCG. This method of working might go against the wishes of some members but it is generally advantageous to the system as a whole, as explained below:

*'For clinicians, when you commission the provision of care, you go through a procurement process. It's like you get points on different elements, finance, there are lots of different elements. For me and my GP colleagues, we will look at assessing the quality of the provider before we commission. So, my team will look at their safeguarding policy, their safeguarding processes, all different things like that. To me, my part of commissioning care is to look at the quality. My finance colleague will look at whether they are financially stable, all those sorts of things.'* (Nurse3-Former chief nurse)

Another nurse commented on the rules governing IVF treatment:

*'For example; one dilemma that we had recently is a young lady who lives in Essex and she needed fertility treatment and she needed it urgently because of her condition, .... We have a panel made up of clinicians, lay members, people from finance and others. It went to the panel and the panel said rules were rules so she can't have it. I find that quite difficult but that is why it is not an individual decision. That is why it is good to look at the roles. The argument here was just to abide by the rules and to prevent long-term costs.'* (Nurse1-chief nurse)

These two statements indicate that teamwork is key to achieving the best outcomes for the CCG. The interviewees implied that the team use the skills of the various group members to set selection criteria in order to validate certain decisions. Such selection criteria are shaped by a combination of logics (Pettersen and Solstad, 2014). Some parts of the selection forms are dominated by government logic, others by accounting logic and others by clinical logic. As demonstrated in these two statements, individual actors

sometimes have to subordinate their own feelings and follow the rules agreed by the panel.

### **Pharmacists' views**

The pharmacists who were interviewed made it clear that everybody is ready to help the group to achieve the best outcome. Experienced pharmacists are happy to help their less experienced colleagues. Similarly, professionals from different backgrounds are willing to help other members of the team to understand issues that appear to be complex to them. For example, it was acknowledged that accountants are always available and ready to help clinicians:

*'It's obviously supporting your team to try to understand the figure so they can explain it to the next lot of people. My pharmacists and the pharmacist technician on the team work out with GP practices a reasonable amount, so I need them to be able to understand the figures. If a GP says, why am I overspent so that they can help explain it to them. When I started at the organisation, my predecessor was a pharmacist, so she explained things to me. No pharmacist generally has a background in accounting, but I think our accounting team go through with us when we first started to make sure that we fully understand the numbers. I just ask the accountants any questions when I am not sure because we sit in almost the same place at the CCG'. (P5-current pharmacist of the CCG)*

The interviewees suggested that every group of professionals/actors bring something different to the table and the importance of what they bring should not be underestimated. What the clinicians bring is completely different from what the accountants bring. Therefore, group members are there to complement the knowledge gaps among the other groups. This statement provides clear evidence of the presence of different ILs and the roles they play in satisfying the needs of the population.

### **6.3 Question 2**

**What are the processes involved in acquiring accounting literacy skills informally by clinicians?**

The nurses and pharmacists generally held the view that GPs are more exposed to accounting information due to their involvement in managing various GP practices and felt that they should be more knowledgeable about accounting-related concepts and tools. It has therefore been claimed that GPs are better positioned to acquire accounting skills than other clinicians. Thus, the nurses and pharmacists assumed that GPs should already have an understanding of accounting concepts before joining the CCG. A general misconception about GPs' awareness of the relevant accounting concepts was therefore noted.

### 6.3.1 The process of acquiring accounting literacy informally

#### 6.3.1.1 Learning at the level of GP practices

Some of the GPs who were interviewed acknowledged that they had some level of understanding of accounting concepts prior to joining the CCG, although the majority were unaware of the importance and application of AI. As GP partners, a number of them had acquired basic accounting skills in practice. For instance, commenting on their knowledge of accounting concepts, one GP explained:

#### **GPs' perception**

*'What you have in a GP surgery is that you have legacy and succession planning. If I come into a surgery, say I am a new doctor, there will be a doctor who has been there for 20 years, and he would have done the accounting for 20 years. So, what usually happens is there is a 70-year-old guy who is about to retire and a 30-year-old guy who is about to come in. So, the 30-year-old guy gets taught by the 70-year-old guy, the 50-year-old guy, the 40-year-old guy, how to run a practice.'* (GP7-member of the prescription committee)

This statement implies that accounting skills are acquired through succession and the handing over of knowledge. Senior GPs pass on their accounting skills to junior colleagues through informal means. The clinicians, mainly GPs, made the point that they had picked up basic accounting skills over time. An underlying issue resulting from this is the risk of erroneous and unhelpful practices being handed over from one generation to another. However, the respondents denied that this was the case, claiming instead that bad practices are usually challenged rather than accepted.

### **Nurses' perceptions**

The statements made by nurses indicated a misconception about the level of knowledge that GPs have concerning accounting tools. They believed that because GPs are more exposed to AI, they must have better knowledge about costs and other accounting-related concepts:

*'GPs are quite knowledgeable in finance because they own businesses. Nurses more or less so we are not business owners.'* (Nurse4-collaborator to chief nurse)

This excerpt indicates that GPs are exposed to financial statements, business performance information and other AI when evaluating the performance of their company. Therefore, AI should not be new to them.

### **Pharmacists' perceptions**

Pharmacist on the other hand explained that no clinicians including the GPs do not understand accounting information, and therefore have to be assisted by the finance team:

*'Any meeting where the budget or finance is being discussed we have finance team sitting in with us just for that element of the meeting. They don't stay for clinical discussions unless they need to. But when we are looking through the budget spreadsheet, how the practices are performing and what is our bottom line looking like, how much money are we spending versus what we do, finance*

*is there they will talk us through' (P5-current pharmacist).*

It is notable the pharmacists placed the emphasis in their narratives on explaining how things work at board level. According to them, none of the clinicians including GPs understand AI even though the GPs are exposed to this type of information. In effect, they are all learning as they work alongside accountants on the board. This suggests that each profession has its dominant logic that shapes the way in which information is interpreted (Cloutier and Langley, 2013). Each group works by maintaining their own professional standards and practices, as they have done in the past (Thornton, 2004). Therefore, changes can only be introduced by achieving the right blend of members of different professional groups. In the case of the CCG, the blending of members of these different groups has provided the stimulus for learning informally.

### **6.3.2 Informal learning on the CCG board**

The different sets of clinicians on the CCG boards carry out their duties differently. However, many similarities between them were observed in the way that they acquire accounting literacy. For instance, GPs mentioned their limited accounting skills and their dependency on accountants. They explained that, even though they owned the businesses, their understanding of AI was limited:

#### **GPs' perceptions**

*'They do understand that GPs generally do not understand financial information. Most of us, even if we run practices, we have practice accountants who do the services for us.'* (GP13- former board chair)

It is common practice for accountants to be employed at GP surgeries to render services to clinicians. Consequently, the clinicians saw no need to acquire accounting

skills. A similar situation was observed regarding the CCG board, whereby accounting services are undertaken by accountants. Normally, accountants conduct the analysis and present the information to clinicians, as one of the GPs explained:

*'GPs do not need any accounting training to carry out their day-to-day tasks. They are not provided with training of any form. Understanding accounting as a clinician is called micro-management. Accountants and managers will do analysis and put the decision into scales and what the clinician will do is look at the analysis of service needs that have been done and look rationally, then make decisions. You don't need to have accounting knowledge.'* (GP12-former board member)

Some of the clinicians described the varied routes by which they had learned about CCG duties. Some were given information by their predecessors, whereas others had picked up accounting knowledge when they were on duty:

*'Initially, when we join, we are given a kind of brief training, and then you are attached to a manager to help you on how to read the budget and to understand what the bottom line is, what is positive, what is negative, then as time goes on you pick up a lot of things, and then you ask questions.'* (GP5-current board member)

Another GP noted:

*'We (GPs) all feel we work professionally in a really safe environment that actually somebody can put their hand up and say: 'I really don't understand this. Can you take me through it?'' You could do that in public meetings with your peers without being embarrassed. That is one of the great strengths of this group.'* (GP-current board member part of the prescription committee)

This assertion was supported by another GP:

*'We did talk about giving the governing body and the executive sort of training*

*to help them understand finance, and we did organise some short sessions run by the finance team, although nobody was interested in the training. ... we haven't repeated that for the last two to three years, but it is always on offer'.(GP6-current member of the mental health committee)*

The learning occurs through explanation and the transfer of logic as clinicians are rarely willing to undertake formal accounting training. Accounting training had been offered but GPs and other clinicians did not take up the opportunity. As explained in the second excerpt, members of the different groups trust their counterparts in other professions and have confidence in their explanations. Moreover, the members are usually not afraid to ask questions, even those that are not relevant to the situation. Therefore, accountants are often quite explicit when providing information to clinicians:

*'We are very much spoon feed. They do understand that GPs generally don't understand financial information... for example, if we are looking at the cost of commission or the cost of drugs that GPs are prescribing then we will be given lots of information by the finance team and lots of explanations to help us to make the decision that we might want to make.'* (GP13-former board chair)

Another GP explained:

*'We don't understand accounting information in depth. We are just given information. They don't give us more information in the meeting. But if you are in the board meeting when you have to make decisions the papers are sent before and you are expected to ask questions about that information in the board meeting.'* (GP10-current board member)

Clinicians claimed that their knowledge of accounting was based on the experience they had acquired by carrying out CCG duties over time, reflecting Lave and Wenger's (1991) description of situated learning in the workplace as involving individuals learning by engaging in practical activities.

Because GPs are primarily concerned about delivering effective healthcare, some of

them perceive accounting training as irrelevant. However, managers and accounting departments emphasised the importance of considering whether accounting training sessions were of interest to clinicians before organising them. Many clinicians claimed that each group on the CCG board was meant to complement one another. They took the view that the explanations provided by accountants should therefore be trusted. Consequently, accounting training had little appeal to them.

### **Nurses' views**

The nurses expressed similar views to those of GPs: they also pick AI up as they work with accountants. They listed several factors that facilitated their learning process: repeated exposure to similar information; attachment to managers; trust based on the alignment of logic and belonging to different committees:

*'We pick it up through our carrier, I have done some courses on how to manage budgets. I have sort of picked it up as I go along but consultants, medical staff and GPs in particular are much more knowledgeable about finances than physiotherapists, pharmacists and nurses.'* (Nurse2-chief nursing officer)

In the following statement, another emphasised the importance of interdependency and complementary:

*'I don't think we need it because we got a good relationship with our finance team. If we didn't have finance colleagues, then absolutely my post will need to be having an accounting background as well as having a nursing background. But because the accounting side is being provided by our finance colleagues who are dedicated to quality, so that is one of their specialist areas, so they understand a bit of quality as well, they understand a bit of my world, I understand a bit of their world then together we got enough information that basically helps. So they are hearing, and they learn over the years.'* (Nurse5-



former nurse)

These two statements from nurses give an indication of the differences between the accounting and nursing professions based on their attributes and professional practices. They also show that each professional field is concerned with the regularities of people's actions in a position vis-à-vis others (Martin, 2003). In other words, each group/field is organised (Fligstein, 2001) and they have a stable way of reproducing actors who think in the same way. Therefore, by participating in the CCG board, clinicians are exposed to an environment in which their logic can shift, either through modification or expanding their existing dominant logic (Scott et al., 2000; Lounsbury, 2002). This modification has taken the form of a transformation or shift away from an old form of logic to an emerging logic (Lounsbury, 2002). By listening to the same information repeatedly, clinicians' interpretation starts to shift.

### **Pharmacists' perceptions**

A similar explanation was provided by the pharmacists, who also acquired accounting literacy informally through the same routes as GPs and nurses:

*'I have picked that up, from shadowing people and discussing things with people. I picked that knowledge as I go along. I feel very well equipped within pharmacy. I think if I am provided with a plan, I can execute it.'* (P5-current pharmacist at the CCG)

Their statements indicated that pharmacists' confidence in using AI grows over time. They are equipped with the set information that is usually presented to them. They believed that they could now successfully undertake tasks that had been effectively executed by the group, which illustrates the shift in logic that has taken place. An effective way of getting to this position is by participating in meetings and listening to accountants' explanations:

*'Any meeting where the budget or finance is being discussed we have the finance team sitting in with us just for that element of the meeting. They don't stay for clinical discussions unless they need to. But when we are looking through the budget spreadsheet, how the practices are performing and what is our bottom line looking like, how much money are we spending versus what we got. Finance is there they will talk us through.'* (P3-former CCG pharmacist)

Another pharmacist expanded on the way in which logic is transferred, as follows:

*'Within the organisation there is training so when I started in the CCG, my manager who was doing the role as I am, talked me through the finances so that I understand how the budget was set, why it was set the way it was, how to look at the figures, how to interpret them and I do that with my team to make sure that they understand them. So, there is no official training. It's obviously supporting your team to try to understand the figures so they can explain it to the next lot of people. My pharmacists and the pharmacist technician on the team work out with GP practices a reasonable amount, so I need them to be able to understand the figures. If a GP says why am I overspent so that they can help explain it to them. When I started at the organisation, my predecessor was a pharmacist, so she explained things to me. No pharmacist generally has a background in accounting, but I think our accounting team go through with us when we first started to make sure that we fully understand the numbers. I just ask the accountants any questions when I am not sure because we sit in almost the same place at the CCG.'* (P1-current chief pharmacist)

Another pharmacist explained that this form of informal learning was the result of repeated exposure to similar information during working processes. It occurs within the working process and is the by-product of working (Eraut, 2004). Clinicians are more interested in working than in learning, but learning nonetheless occurs informally during the working process. As one pharmacist explained, they learn as they gain experience from doing the same things repeatedly:

*'We were not provided with any accounting training. I picked it up over time*

*and it comes with experience in terms of dealing with different situations. Sometimes if finance say we can't do something we go there why and when. They provide explanations, we get some learning from there as well. There is no sort of training, we just learn on the job, by recognising similar situations and picking things up over time. We go back frequently to the finance team to understand things more.'* (P5-current pharmacist of the CCG)

Although most of the GPs, nurses and pharmacists claimed that they do not need accounting skills to perform their various roles effectively, they also acknowledged that they have informally acquired some accounting literacy by working alongside accountants. In the process of working, clinicians begin to recognise some patterns and different possible ways of doing things (Crossan et al., 1999). At the same time, their individual beliefs and values about the possibilities that are available expanded (Wang and Ahmed, 2003; Yeo, 2005; Mitki and Herstein, 2011). As the clinicians acknowledged, their interest lies in making the best use of the available skills and resources - both human and financial resources. Even though learning was not the original intention, the interviewees experienced some modifications in their interpretations as a result of working alongside accountants.

#### 6.4 Question three

##### **How do clinicians use accounting information after gaining some level of accounting literacy?**

Figure 6.1 shows that variance is the main type of AI that captures clinicians' attention. Financial variance tends to awaken clinicians' curiosity and suggests the need for further investigation.

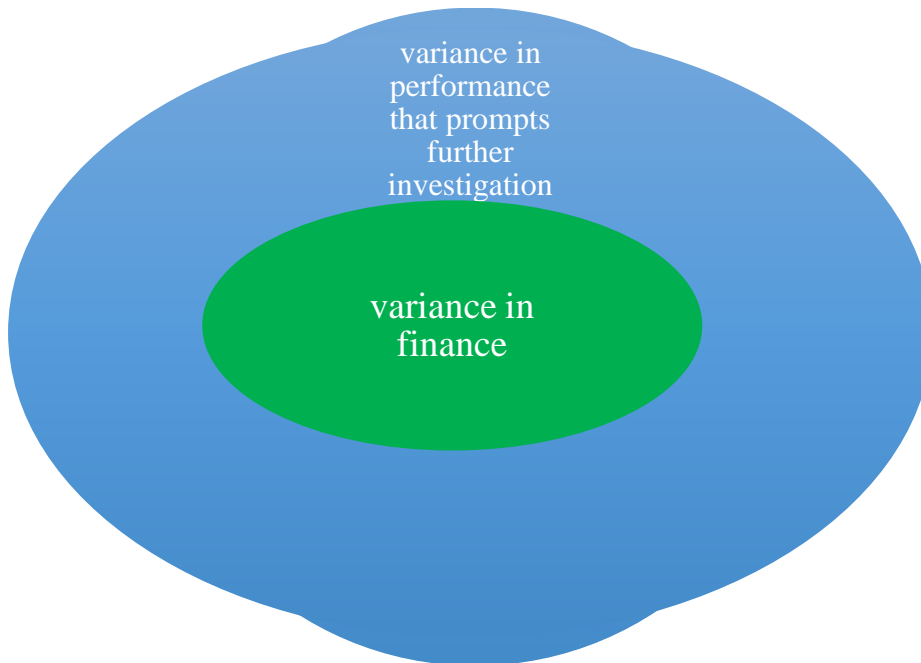


Figure 6 Important numbers for clinicians when making decisions and reviewing reports

Source: Author

Clinicians serving on the board are not involved in the preparation of financial reports and project plans but they do help to direct and advise managers and accountants about where money should be spent. However, they are heavily involved in reviewing reports and investigating the reasons for discrepancies. All the interviewees explained that when there is evidence that things did not go as intended, they look into different issues that could have affected the desired outcome. All the interviewees highlighted variance although different words were often used to describe the same thing.

### **GPs' views about relevant AI**

In the context of commissioning services, the major information that attracts attention from commissioners is data that tells them about the desired outcome, which could be financial or non-financial information. In terms of accounting data, variance is the most

relevant form of data:

*'The report we get is about variance in performance and variance in finance in parallel. So, our financial team say here is our budgetary spend, here is what we are working within this line and through each system and through each area. We are expected to run in between, and we have stepped out, above or below. We then look at quality and investigate it further. We do that in the context of the whole budget, so we have a full view of the total accounting for the system at least through the financial committee that then comes to the governing body in a consolidated form. But what is difficult is when you get a new commissioning line in there because most often the variation lies higher, they often sort of mix out bits of the budget ...'* (GP5-current board member)

The same GP also cited a difficult situation in which variance does not help, namely in the case of services that are being commissioned for the first time. Apart from pure financial data, other numbers such as variance in waiting times are equally important:

*'Providers have lots of KPI ( key performance indicator)that they have to meet which is how patients are satisfied, what complaints they may have had, waiting times are important because they tell us if the service is providing what we wanted to do and if people are waiting for long, we have to know why.'* (GP10-current board member)

Issues such as variance in complaints and other results that deviated from expectations are reported, whether negative or positive. In general, the diversion attracts interest from clinicians.

### **Pharmacists' views**

Variance is only the starting point for probing results. Variance can tell us that something is happening with regard to a particular practice and stimulates further investigations to try to discover exactly what it is:

*'I will look at the numbers of how much did we spend versus how much was our budget for last year. That is, what is our variance? I will look at how underspent*

*or overspent were we, then I will look at individual practices and work out if there is any particular practices that are struggling to hit their budget or very under budget because that can be an indication that something is going on in the very under budget surgery. I will also look at individual practices to know which practices did well and which did not. And then will probably break down the figure to see that the practices that didn't do well why not? What went wrong, did they prescribe a lot of inhalers, or were they overprescribing? Did they prescribe a lot of pain medication or overall did they prescribe a little bit more than their neighbours were doing? We try to do a deep dive when we get that data and we get that data on a monthly basis and each month we go through it on the workstream to work out why are we overspent as a CCG why do practices overspend?' (P1-current chief Pharmacist)*

### **Nurses' view**

Variance tells clinicians about the number of people who are demanding services as well as the quality of the service:

*'We look at waiting time, the number of patients because that tells us about the demand, that will help us to understand about the service conditions and tells us if we need to put in more money. For example, children's mental health services, the demand has increased. That tells us that next year if we do the contract, we need to increase the contract value.'* (Nurse1-chief nurse officer).

It is noted here that as clinicians have a limited understanding of AI, they prefer to use numbers from which it is relatively easy to identify that things have not gone as intended or expected. As mentioned earlier, clinicians receive AI before meetings but they are not always willing to or interested in engaging with it, as they have limited use for AI (Giacomini et al., 2016). Unlike accountants who would read through the whole financial report and analyse performance, clinicians only request specific financial information to satisfy their needs (van Helden and Reichard, 2019). As previously mentioned in the early part of this study, each professional field has its own specific interpretation of societal reality, which makes some types of information

more relevant to them than to others. Consequently, clinicians serving on the CCG board tend to focus on information that could help them to attain their objectives when commissioning services.

#### 6.4.1 The use of AI for decision making

Clinicians working on the board where CCG services are designed and commissioned, took the view that the money allocated to the region was less than they had estimated. Therefore, clinicians' decisions are always made by weighing up the available options to make sure that there is a balance. The two most important factors that are usually considered are finance and quality.

#### GPs' views

[Figure 7](#) illustrates the way that commissioning decisions are made. Commissioners always try to ensure that the money they pay is worth the quality of care received. The figure illustrates a balance scale indicating that commissioning decisions are always weighed up to try to achieve a middle ground by ensuring that, even if they reduce the amount spent on particular services, quality should be maintained. Decisions have to take into account both cost and quality of care:

*'Yes, it influences all my decisions and our job in the CCG is that it doesn't affect the quality of care.'* (GP8-current member of the prescription committee)

*'We decided that we are no longer going to provide glucose-free food. We decided that we will not allow GPs in Mid-Essex to provide glucose-free food for patients with Celiac disease. Now you cannot have this food on prescription, you have to go out and buy them yourself. A lot of people argued that maybe the quality of care for patients with Celiac disease may*

*go down because they might not be able to afford the food, they might not buy the right food but it was costing us so much to prescribe the glucose-free bread or glucose-free pasta and it was becoming widely available in the shops and the cost of it has gone down. That was an ethical dilemma because these are strict diets that some patients have followed their whole life and if they don't follow them, they will become very unwell. But we decided that we are not going to prescribe it anymore or if they want it they must buy it themselves or just have diets that do not include any form of glucose. And we were one of the first CCGs to stop prescribing glucose-free food.'* (GP10-current board member)

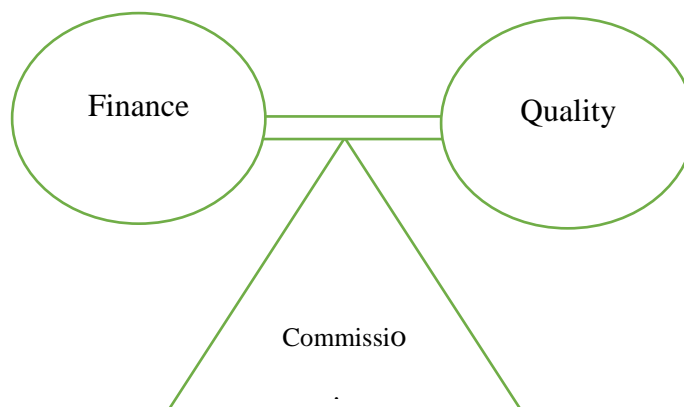


Figure 7 Key factors influencing commissioning decisions

Source: Author

Another GP expressed a similar view:

*'Cost factors influence our decision. We as GPs might not be aware of cost but if there is something that needs to be changed it will definitely come to the board, then cost will be explained to us, and then we will make the decision*



*whether or not it is value for money.*' (GP12-former board member)

A minority of GPs believed that, even though they are aware of costs, it does not affect their decisions about patient care as they practice. It might have an influence on their decisions at board level but not when they are diagnosing and treating patients in their general practice:

*'On a personal level as a GP rarely in direct care, in actual fact even when you got the knowledge of it. Say if you are sitting in front of somebody who needs an emergency, I won't change my behaviour based on whether or not I know to see a consultant, dietician, or geriatric is far less expensive than admission through A&E, if I thought they needed emergency care I wouldn't change it, I might have a different conversation. I might speak to the consultant in geriatrics and say you can save this guy a drip. I don't think in that moment of care, money plays a huge role, certainly not to me anyway. I have an awareness of it, there is tension but ultimately, I will do what is the safest for the patient and best for the patient. It is quite hard to get around that as a clinician. Yeah, you can have an idea of maths but when you are talking to somebody is very difficult to think in terms of a pot of money. The key is making sure that the easy thing to do, the right thing to do is also the cheapest thing to do and that is what we are trying to do with the integrated care system putting money into admission avoidance.'*

(GP11-current board member)

However, others explained that knowledge about costs can only be used in certain cases in general practice, such as advising people who are overweight to lose weight before they can be recommended for a knee operation, but in commissioning, it is a different scenario. For example, GPs across the region used their cost awareness to recommend the decision to stop the prescription of glucose-free food to patients with Celiac disease, on the grounds that it was costing the system too much money. According to the GPs, when the cost implications were explained to them, they decided that instead of prescribing glucose-free food, those who needed it could buy from shops or consume alternative diets. Other GPs explained how knowledge of costs can help them to eliminate wasteful processes within the system:

*'There are lots of ways to provide care. There are efficient ways of doing things and inefficient ways of doing things. There are quite a lot of ways in the NHS. There are several ways of cutting costs and healthcare is getting more and more expensive in most Western countries and our job is to make sure that it doesn't become stupidly expensive. There are several ways of cutting down costs in the NHS. For example, time wasters, process waste, and economic waste. There are lots of waste and you use different techniques in different situations. For example, an ambulance takes somebody who had heart trouble to the hospital and the ambulance waits two hours outside the A and E in trying to hand the patient in, those two hours the ambulance is not being used. Those two paramedics are not being used, care is being delayed which means that the patient's condition deteriorates which means that they become expensive to fix. So, if you are able to just do that one thing of shortening the amount of time that the ambulance has to wait before handing the patient over to A and E then you have cut waste there. And in the CCG you will do things like being able to put different staff in the A and E to be able to take the handover from the ambulance coming in. So, what we do is we look at every aspect of efficiency and then things around the Kaizen model<sup>4</sup> that you go through everything and you say okay, is this wasteful for money, is this wasteful in terms of time, is this wasteful in terms of resources, is there too many layers of bureaucracy, is this not safe and when things are not safe by definition they become inefficient. So, we look at all the standard management frameworks for looking into what is causing inefficiency in the system.'* (GP7-member of the prescription committee)

GPs also have to make decisions about the perceived 'value' of certain procedures:

*'in certain situations, people are saying they want the boob job for cosmetic reasons you have to say no to these people because is low value without any benefit so then you have to say no then you have to make a case for it, in that*

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<sup>4</sup> Kaizen is a term used for continuous improvement. It is a Japanese business philosophy which means 'change for the better'. It identifies problems, analyses them, develops solutions, implements them, and then analyses the results and standardises the solution.

*situation you do feel.*' (GP14-current board member)

Another doctor elucidated how difficult decisions about patient care sometimes have to be made due to financial constraints:

*'We have to cut some services to save the budget. For example, we took away the glucose-free diet, it used to be on prescription. Glucose-free was taken away then we also said no to IVF treatment at that time. We also started putting more difficulties for the CCG for people who smoke, we said you have to stop smoking, for people who are overweight we said you have to lose weight before you can get an operation. So you put more and more sort of conditions. That was a very difficult time because it is not good for the patient and the patient is always in pain, and then they get rejected because of these limitations.'* (GP13-former board chair)

These statements crystallised the role of accounting in highlighting areas of wastage. The above example illustrates a case where AI was used to identify areas of wastage and, by doing so, clinicians can help to make the system more sustainable. These examples illustrated situations in which money could be saved and directed to the areas where investment is needed. Where services are managed using this type of logic, clinicians use AI to explain resource allocation and the reasons behind their decision (Giacomini et al., 2016). The case of ambulance services is used here to illustrate how waiting time and AI can stimulate further investigations.

#### **6.4.2 The use of AI for educational purposes**

In clinical work, AI has had little or no influence as clinicians often do not take it into account in their decisions (Pettersen and Solstad, 2014; De Harlez and Malagueño, 2016; Naranjo-Gil and Hartmann, 2006). Nevertheless, the need to stay within the available budget has increased the importance of AI for clinicians who are involved in service commissioning. This requires

innovative thinking and a change in the way that decisions are made. Consequently, clinicians can now use AI to change the perceptions of both their fellow clinicians and the public.

### **Pharmacists' views**

By using the available data, clinicians can use AI to influence people's decisions through campaigns:

*'We have done some very good campaigns around paracetamol, try to encourage people to buy that themselves. Some of the motivations we did around that was that if you could buy your paracetamol, we can fund this many extra nurses, this many extra doctors and I think that was quite powerful<sup>5</sup>. Sort of why I believe if we could make better use of the NHS, then any money we can save through that could be used for more doctors more nurses, more treatment, better treatment.'* (P1-current chief pharmacist)

Another pharmacist explained that they often work with GP practices and therefore need GPs to understand AI:

*'My pharmacists and the pharmacist technician on the team work out with GP practices a reasonable amount. So, I need them to be able to understand the figures. If a GP says why am I overspent so that they can help explain it to them.'* (P3-former pharmacist of CCG)

### **GPs' perceptions**

Pharmacists use AI to educate GPs and fellow pharmacists about the implications of their decisions. Every GP practice has a system in place to help them prescribe within the budget. However, most GPs do not fully understand how the system works so pharmacists help them to understand it:

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<sup>5</sup> <https://ipswichandeastsuffolkccg.nhs.uk/Newsevents/Featuresandcampaigns/Paracetamol.aspx>

*'There is something called the MOL Scheme (Medicines optimisation lens)<sup>6</sup>, which encourages GPs to prescribe from a Mid-Essex formulary. So, we have guidelines for all our GPs in Mid-Essex as to what the CCG wants them to prescribe. This is done on the basis of cost-effectiveness and what is clinically recommended. We have a good pharmacy team who help us in learning how the process works. This scheme changes on a year-to-year basis, and all GPs are expected to participate in the scheme.'* (GP8-member of the prescription committee)

This explanation was expanded on by another GP:

*'This is called guidance for practice to encourage GPs to prescribe rationally. We then have a medicine management contract, Optimum prescription contract. You sign with the CCG every year. You don't have to, but it comes with money. If you engage, you get paid if you don't engage you don't get paid so it is a carrot and stick. They now set thresholds that you need to reach this level to be paid. For example, if somebody has a cough, I can prescribe Amoxicillin which is the same as Amoxil, which is the same thing as other medicines. Amoxicillin is what is called the generic name and is made by a company. The company that makes amoxicillin will put a premium on it. So, the CCG will say any prescription should be generic. All this is to help to reduce the cost of medication. Different practices have different set ups that help them to do this. Because we want that contract and because we want to get our money. So, through the medicine management committee, the CCG pay you money to do what they want you to be doing. The medicine management committee are run by pharmacists, GPs and other management persons.'* (GP12-former board member)

It has long been realised in the healthcare sector that, despite efforts to make clinicians conscious of the cost implications of their actions, little has been achieved in terms of

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<sup>6</sup> This is a scheme which is guided by pharmacists, pharmacy technicians, dietitians and analytical staff to support GPs and other prescribers in primary care with formulary and prescribing guidelines. They are mostly designed locally.

progression (Cooke, 2010). Attitudes have not really changed. Therefore, clinicians use practical examples to make their peers aware of areas where money can be saved. This includes using alternative cheap medication to educate their peers about costs. Moreover, incentives are presented as a means to motivate clinicians even though the foremost aim is to promote learning and to make the system sustainable. A drive to stimulate changes in behaviour is the main reason why such educational programs are encouraged.

### **6.4.3 The use of AI to influence behaviour**

Despite the efforts made in the past to encourage clinicians to acquire accounting literacy and use AI, their culture appears to have been a major impediment to its usefulness across the clinical profession. This is perhaps unsurprising as it has been observed that medical students perceive AI to be useful, but those who are already practising do not share the same view (Leon-Carlyle et al., 2019). Setting up a system to encourage the use of AI therefore requires more attention to be directed towards changing behaviour. For instance, GPs try to present every change in a positive light, which will help clinicians:

#### **GPs' views**

*'What we try to achieve as a manager and what your workforce is doing is difficult. So, you frame it in a win-win situation. You don't present it as a way of cutting costs. You present it in a way that reduces their workload and then makes them happy. So, as a GP and a manager at the same time, you need to present any change in a way that will make it look like you are not aimed at only cutting costs if not GPs will not be interested. You have to present it in a*

*way that looks like it will benefit them.*' (GP4-current board chair)

Another used the example of knee replacement operations:

*'For example, knee replacement in patients who are more obese. This is an example of what they used to call service restriction policy, but it now has a different name. Where we say that this patient will not have a good outcome if their joint is replaced because they are very overweight. They are encouraged to lose weight so that when they have the operation, they will have a better outcome. I would have previously referred a patient who has a body mass index of 40 for a knee replacement without having a second thought but now I am working with the CCG, and I see the fact that we got a certain amount of money and we need to target it to patients who will benefit the most.'*  
(GP10-current board member)

These two statements show the way in which clinicians use AI to influence behaviour when it comes to spending, in particular, to try to change clinicians' attitudes towards costs. Those currently on the board can now identify decisions that would not result in better outcomes. To disseminate the knowledge, they use different mechanisms such as making offers, and imposing restrictions:

*'As a GP and board member we are here to represent the best outcome for the whole population so, I will simply say to the GP who says why can't I prescribe this inhaler for my patient that is the best thing for that patient. I will simply say it is the best for that individual patient, but it is not the best for the whole population because that inhaler is costing a lot of money. It means other people will not be able to have access to the services they need because much money is going to one or two expensive patients. It is very much about looking at what benefits a whole and not an individual... It is not always easy, and I think is one of the reasons why we don't attract more GPs to work for the CCG. Because it is easier to make decisions for one or two people, but it is very much difficult*

*to balance decisions for everybody.*' (GP13-former board chair)

### **Pharmacists' views**

A pharmacist highlighted how he/she tried to encourage other pharmacists to take financial implications into account:

*'I think as a manager, I try to promote the idea of thinking about finance to other pharmacists. When I am talking to the GPs or pharmacists, I make sure that they know where to look for the costs.'* (P2-current Pharmacist)

Costs have also been influential in fostering collaborative behaviour. Clinicians are encouraged to work together with their colleagues in the community and in hospitals to identify areas of wastage:

*'I work closely with the secondary care colleagues, chief pharmacists at .... just to look at where there might be some system savings as well because a lot of the drugs are started by the hospital.'* (P5-current pharmacist on the CCG)

The following example is illustrative:

*'For example, we had a request come from the hospital in terms of adding a new drug to the formulary. This drug costs significantly more than the existing treatment and there wasn't much-perceived benefit in terms of the evidence available and it was supposed to be used in a very niched way. This drug was used for rapid eye movement sleep disorder. The existing treatment lorazepam has the same efficacy and is very cheap. It has less side effect, we should have supported that but its cost is significantly higher.'* (P3-former pharmacist on the CCG)

These two statements highlight the role played by AI in encouraging collaboration. In some circumstances, it is also used to set rules that govern the behaviour of board



members.

### **Nurses' views**

A nurse gave the following example:

*'Young lady who lives in Essex and she needed fertility treatment and she needed it urgently because of her condition, in a year's time fertility treatment won't work for her, so she lives on the border of Essex and Suffolk. So, because of Essex policy, she couldn't get funded for IVF whereas Suffolk funded IVF so there is a post-code lottery with some of those things. Because of Suffolk funding, she was moving her GP to be a Suffolk GP so she could assess the Suffolk policy but you have to be one year before you can benefit from Suffolk policy. In a year her condition would have deteriorated. So she wrote to us and I felt very sad for her because in a year's time she would be eligible anyway. So we spend a lot of our time in a panel to deliberate on the issue. We have a panel made up of clinicians, lay members, people from finance and others. It went to the panel and the panel said rules were rules so she can't have it.'* (Nurse1-chief nurse)

Another nurse explained the rules relating to the cost of care packages:

*'Continuing healthcare which is a big part of my portfolio, we have a financial governance arrangement whereby if a care package cost less than 2,000 pounds a week then my staff can sign it off, if it is more than 2,000 pounds a week then it has to come to me. And if it is over 5,000 pounds it goes to the high-cost panel which is made up of me, GPs and finance director. So it does influence our decision about commissioning care. Some packages that we provide can be around 12,000 pounds a week for some very complex patients, usually patients who got spinal injuries. They need 24/7 care in their homes. Some of the discussions that we have around such situations are, could they go to a nursing home rather than staying in their own homes? Could cheaper care be delivered rather than them staying in their own home? We have an equity*

*and choice policy which provides guidelines.*' (Nurse2-chief nurse officer)

These two statements from the nurses provide evidence that their behaviour is influenced by AI. There are services that they would have accepted based on clinical reasoning but, on the basis of accounting skills and information, rules are put in place to regulate members' behaviour. In hospitals and at primary care level, clinicians make treatment decisions purely on the basis of the person in front of them. According to the HSCA 2012, clinicians are in charge of the budget at the CCG board, and hence they have to change their colleagues' behaviour. For services to be commissioned effectively, rules are put in place to ensure that the board does not overspend.

#### **6.4.4 The use of AI for negotiation**

##### **Pharmacists' perceptions**

This study has identified that AI is used for negotiation and to bring clarity to confusing situations. Sometimes accountants/managers will refuse to provide services that do not add value or simply because they are too costly. Following the interviewer's conversation with some of the clinicians, when agreement cannot be reached about a particular service, accountants will often provide more information to support their argument. AI is most commonly used to provide clarity during negotiations:

*'... there are times that finance has said no to something and it has not gone well with the clinicians, and then they can come out with some reasons why it should be funded. I think this organisation is quite good about reconsidering and negotiating. They negotiate and they are willing to reconsider, just because they said no, to begin with, if you present them with more information or more evidence to back up your decision or your reason for why you want them to do something, they will reconsider it. Is the same with the clinicians. They are all very reasonable. So, if finance says no, then explain why there isn't any money*

*for whatever thing they wanted to do, it will be accepted within the team.'* (P5-current pharmacist)

Prior to the creation of the CCG, clinicians were not at the forefront of commissioning healthcare services. They were used as advisers to direct where money would be spent, but the commissioning bodies were not obliged to take their recommendations into account. However, according to the 2010 White paper, the performance of the NHS must be measured using clinical outcomes and clinicians are therefore accountable to patients as well as being accountable for financial performance. Doctors and nurses are empowered to use their clinical judgement to improve services. It was observed that, although clinicians thought their presence on the board was intended to bring about improvements in treatment and service in clinical terms, they cannot do this without considering the financial implications of every decision. The system that existed before the creation of the CCG did not provide clinicians with the necessary enabling environment to learn and use accounting knowledge. Since the advent of the CCG, clinicians can now understand the financial implications of their actions, thereby fostering the need to align different types of logic, and to learn during the process of working and put the acquired knowledge into perspective.

## Chapter 7. Discussion

### 7.1 Introduction

This thesis has explored the alignment of logic, the informal acquisition of accounting literacy and the use of AI in the context of the CCG. The main objective has been to present a detailed, contextualised account of the transformation in the institutional logic adhered to by clinicians when they join the management team. It also explored how the accounting knowledge acquired is applied practically. In particular, the thesis has answered the following three questions:

1. How does shared vision help clinicians to align their logic to the overall objective of an organisation, and how does it lead to the subsequent informal acquisition of accounting literacy?
2. What are the processes involved in acquiring accounting literacy informally by clinicians?
3. How do clinicians use AI after gaining some level of accounting literacy?

These three questions were addressed in the previous chapter. The analysis presented in Chapter 6 is further elaborated in this chapter by addressing the research gaps and contribution of this thesis to existing knowledge. This section is structured as follows: first, it discusses how shared vision leads to the alignment of logic and argues that the alignment of logic is the driving force behind clinicians' acquisition of accounting literacy. Secondly, it provides an in-depth explanation of the processes involved in acquiring accounting literacy. Finally, it discusses clinicians' information needs and how they use AI in the context of the CCG.

### 7.2 Shared vision and alignment of logic

The two field logics that dominate the discussion in this work are summarised and presented in [table 8](#) to illustrate the IL of clinicians and accountants, as well as how their logics align

when they work alongside each other in commissioning services. In this thesis, the core ILs of clinicians and accountants were identified and examined. Clinicians aim to commission services by offering patients and the wider population access to the kind of high quality services they demand, whereas accountants seek to provide the optimum services that can be provided within the available resources. These observations, discussed by the clinicians in their interviews, revealed the influence of different ILs in a similar way to the findings of prior studies that acknowledge divergences between accounting IL and clinical IL (Pettersen and Solstad, 2014; Guven-Uslu and Seal, 2019). Despite the large divergences between the ILs of the various professions when they started working alongside each other, convergence was identified when clinicians explained how the organisation operates.

As illustrated when answering question one, clinicians were willing to develop their own knowledge and work together with accountants when they discovered that they were all pursuing the same end goal despite following different trajectories to achieve it. This shows that clinicians buy into the accounting IL of working rationally within the available financial resources to make the system sustainable. The identification of this convergence contributes to the current understanding of IL because it shows how different ILs can converge when actors share common ground in terms of their desired outcomes, contrary to the conventional view that accounting and clinical ILs are always in opposition.

With regard to shared vision and the alignment of logic, this thesis revealed the sources of shared vision and alignment between various actors. It highlighted that shared vision and alignment between multi-actors in a collaborative context can occur both at the system and relationship levels. For instance, in the case of the convergence depicted in [table 8](#), as described by GPs, alignment and shared vision occurred at the system level making collaboration between clinicians and accountants productive. This finding extends existing knowledge about

actors working together with diverse forms of logic in the management of healthcare (Reay and Hinings, 2009; Cloutier et al., 2016) and the alignment of ILs at system and relationship levels (Besharov and Smith, 2014; Ingstrup et al., 2021) to enhance trust at the system level.

		GPs	Nurses	Pharmacists
Divergence of institutional logics	Clinical logic	<ul style="list-style-type: none"> <li>- Clinical training is about diagnosing health problems, choosing the right drug and carrying out operations.</li> <li>-As scientists, we like to prove things so things like negotiation are not part of clinicians' thinking.</li> </ul>	<ul style="list-style-type: none"> <li>-Designing the system with more focus on quality of services.</li> <li>-To provide services such that people are happy and satisfied with the quality of what we provide.</li> </ul>	<ul style="list-style-type: none"> <li>-Patients must be provided with better drugs with high efficacy.</li> </ul>
	Accounting logic	<ul style="list-style-type: none"> <li>-Understanding of accounting information and providing lots of explanation for clinicians to use AI in decision-making.</li> <li>-Performing needs analysis and ranking decisions based on accounting performance for clinicians to choose.</li> </ul>	<ul style="list-style-type: none"> <li>-Managing the budget and making sure we work with the available resources.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>-Understanding figures and the budget, how to look for particular costs and expenditure.</li> <li>-Balance the books by staying within the budget.</li> </ul>
Convergence of institutional logics		<ul style="list-style-type: none"> <li>-Getting everything right within the 400 million pounds allocated to the catchment area.</li> <li>-Directing the goal by leading discussion</li> </ul>	<ul style="list-style-type: none"> <li>-Clinicians and accountants develop a suitable way of handling ongoing projects.</li> </ul>	<ul style="list-style-type: none"> <li>-Deciding together about where a job could be executed, either at a GP surgery,</li> </ul>

		away from financial considerations alone towards financial considerations and quality at the same time.		hospital or in the community.
Alignment through collaboration		Accountants/managers write project then clinicians read it and make recommendations.	Working together to develop rules that can help in making future strategic decisions such as accepting a patient for IVF or not.	Working closely during budget setting by identifying medications that will not be cost effective.

Table 8 Key findings about IL from interviewees' perspective

Source: Author

Furthermore, evidence was found of interdependency in the working relationships between the diverse actors who are involved in designing services. This insight was driven by insights from interviewees belonging to the three different categories of clinicians and it challenges the present understanding of how to frame shared visions and the alignment of IL. The theoretical effect is that it becomes problematic to argue that clinical and accounting logics are rivals in terms of achieving organisational goals. Instead, AL and CL should be seen as opposite ends of a continuum because shared vision and the alignment of logic can emanate from different starting points: goal congruence, practice congruence and cognitive recognition of the important roles played by different actors, for example, the development of a generally accepted rule to evaluate candidates' eligibility for IVF. Other examples are listed in [table 8](#) whereby clinicians and accountants worked together to set rules that were used to make strategic decisions.

However, as well as producing evidence of shared vision and the alignment of logic, the study also uncovered the process by which this happened. It argued that clinicians, and especially GPs had their desired outcomes with regard to how the system should be run and how resources should be allocated. This was shaped by their professional training and expectations about what is and is not possible within their fields (DiMaggio and Powell, 1983; Fligstein, 2001). However, when clinicians joined the board of commissioning, they were exposed to different sets of information that were useful for board members but irrelevant to them when working as clinicians in different environments. Both the CCG as a working environment and the job specification presented them with a new set of demands that altered clinicians' way of thinking and prompted them to seek different ways of doing things (Tanner, 2006). An example of clinicians being presented with new and unfamiliar information is having to satisfy the population's health needs within the constraints of a limited budget. This contrasts with the way that clinicians usually think and make decisions. The clinicians highlighted that their decisions are guided by science and the ability to prove things. They are trained to diagnose diseases, prescribe the right drugs and carry out operations without focusing on the cost implications. This is in accordance with existing knowledge about the way that clinicians work (Schmitz et al., 2019; Leon-Carlyle et al., 2019; Hunderfund et al., 2018). They pay little or no attention to costs.

It is worth noting that the CCG is not the first healthcare body whereby clinicians have been involved in the commissioning of services (see Reay and Hinings, 2009). Consequently, some clinicians have been exposed to AI in the past. However, the situation regarding the CCG is unique in that the funding of service commissioning is the responsibility of clinicians, thus obliging them to reduce bureaucracy and administrative costs, and improve patient experience and satisfaction (Health and Social Care Act, 2012b). Previously, clinicians were mainly used



as advisors and were never held accountable for the decisions taken by the board. Instead, they could blame the government for not listening to their advice. In contrast, clinicians are now blamed for any system failures. From the interview data, various factors were identified that encouraged the convergence of a shared vision between the diverse actors: clinicians being held accountable for any decisions taken by the board; clinicians and accountants' interdependency on each other; identifying that each professional field is distinct in terms of both competence and practice; and finally, the understanding that the diverse actors all want the same end goal even though they may try to achieve it via different routes.

The interviews, document analysis and participant observations offered insight into the fact that clinicians and accountants found it necessary to allow the different groups to maintain their different worldviews within the collaborative relationship. For example, it was observed during meetings that clinicians presented issues related to clinical practice while accountants were concerned with managing finances. However, they were both encouraged to use their group's specialist knowledge for the benefit of the board. As a result, accountants evaluated the cost implications of decisions and advised the board about whether a decision was cost-effective or not, by applying accounting logic (Broadbent, 1998). By contrast, clinicians advised the group about patients' well-being and areas where the money was most needed. These findings are consistent with those of Cloutier et al. (2016) and Reay and Hinings (2009) who evidenced the co-existence of multiple ILs in the commissioning and management of healthcare services. Nevertheless, the findings of this study differ from the aforementioned studies in that the latter presented a situation whereby a diverse group of actors maintained their own identity and professional logic but collaborated on projects, whereas, in this study, the different groups of actors worked as a single entity with a joint vision and the desire to learn and modify their IL.

This thesis also illustrated the dynamic nature of alignment by emphasizing that IL can be modified and changed when professionals are working alongside actors from other fields. For instance, evidence was found that clinicians modified their previously held beliefs about accountants and accounting concepts by working alongside accountants. In the case of alignment through collaboration, as shown in [table 8](#) above, clinicians and accountants exchanged information when formulating rules that govern decisions. The effect of this alignment was the mutual adoption of core goals and rules by actors from different fields. A similar situation was observed with regard to developing and allocating funds for various projects. The outcome of different professions working together manifests in the form of the informal acquisition of new knowledge, which can also be seen as modification and change in IL. These findings support the idea that IL is modified or altered in the course of a working relationship (Purdy and Gray, 2009; Lounsbury, 2002; Scott et al., 2000) and, in this case, this dynamic explains how modification occurs through the informal acquisition of knowledge as a result of working alongside actors from another field.

### **7.3 Informal learning and transfer of IL**

Drawing on the theoretical insights gained from IL, this thesis has also shown how clinicians acquire accounting literacy informally as they work alongside accountants and managers on CCG boards. Following the establishment of CCGs, clinicians found themselves at the forefront of designing and shaping healthcare services in the UK. It was generally expected that clinicians would find it challenging to manage budgets and finance, as their role had formerly been confined to advising executives on previous commissioning bodies (Wilkin and Coleman, 2001). However, placing clinicians centre stage on the CCG meant that they were then obliged to learn how to manage scarce resources and design services efficiently to meet patients' expectations. When working on the CCG, clinicians are situated in a different work

environment to that which they are used to and have to collaborate with managers and non-clinicians in shaping day-to-day commissioning activities (Lave and Wenger, 1991). The new job requirements and responsibilities assigned to clinicians have proved to be central in fostering workplace learning (Coetzer and Perry, 2008). For instance, the target set in the 2010 White paper meant that clinicians were expected to reduce administrative costs by 45% and cut bureaucracy while promoting improvements in quality and accountability (Department of Health, 2010). In this context, clinicians were required to take on tasks that had not previously formed part of their routine activities, thereby allowing them to participate in financial and managerial activities in a situated context (see Lave and Wenger, 1991). Recent studies have shown that clinicians are capable of learning on the job (Van Dam and Ford, 2019; Wolfson et al., 2019), assuming that organisational interdependency triggers the desire to seek new ways of doing things (Billett, 2001). This thesis has provided insights into a situation in which clinicians' proactive views differed from the expectations of the reform, as clinicians were forced to account for the funds allocated to their catchment area. Clinicians were attached to managers who were able to educate them about the politics of and budgeting process involved in commissioning. When working on the CCG, clinicians have to stay within the allocated budget, which is something new to them. The findings of this thesis demonstrate that working in a situated context has increased clinicians' understanding of accounting concepts. This study, therefore, adds to the existing literature (for example, Van Dam and Ford, 2019) by illustrating how clinicians have continued to rely on the accounting explanations provided by accountants and administrators rather than participating in the formal accounting training that would enable them to become accounting literate. However, the study findings also show that clinicians, and GPs in particular, are keen to understand the financial implications of their activities. They serve on committees where decisions are made. Participating in the CCGs has offered clinicians an expansive learning environment, encouraging them to participate in a

range of activities, including promoting interaction, collaboration and involvement in different teams (Cobb and Bowers, 1999). The study therefore argues that factors such as trust and an environment in which clinicians can freely ask questions to other groups and managers, can play a key role in fostering informal learning. In this regard, CCGs have provided clinicians with an environment in which they can learn while communicating with and listening to managers in the course of their day-to-day activities. The new work routine and collaborative environment that the CCG offers have created a context in which the knowledge acquired can be put into perspective and practical use (Brown et al., 1989) and which enables clinicians to learn informally (Callanan et al., 2011; Watkins and Marsick, 1992).

Recent public sector accounting research has shown that collective participation in certain projects can enhance actors' accounting knowledge through the transfer of IL from one group of actors to another (Jorge et al., 2019). However, this is rarely discussed in the context of healthcare. The unique way in which the CCG functions and how this facilitates learning is reflected in this study. Nonetheless, one caveat with regard to the learning process was the discovery that there were certain situations in which the managers and other non-clinicians presenting the information to clinicians might choose to conceal anything that they thought could result in conflict. In particular, the study findings identified three informal learning processes that occur when clinicians work alongside accountants and managers. First, clinicians are often guided or taught by a manager or a predecessor. Second, clinicians felt free to raise questions without fear of being prejudged. Third, they have to listen to the same information repeatedly when participating in committee meetings. For example, when GPs joined a CCG board, they were attached to managers who introduced them to the politics of commissioning, including the importance of budget allocation and service planning, whereas pharmacists and nurses were informed about these matters by their predecessors. This guidance

not only contributed to familiarising clinicians with the politics of the CCG, but also its decision-making procedures, and the expectations of the reforms (Vince and Broussine, 2000). During such discussions, they gained insights into budget development, the planning of activities, and performance evaluation. The informal knowledge and understanding acquired through this process also helped to boost their confidence in terms of processing and applying accounting information. A key contribution of this study concerns generating insights into how clinicians can learn basic accounting concepts by being active in the workplace, for instance by asking questions during meetings, and listening to the explanations provided by accountants and managers. The task of commissioning was regarded as challenging and new to clinicians (Preenen et al., 2014; Billett, 2001). However, clinicians' desire for relevant, necessary information led them to interact, collaborate and build relationships with accountants and managers. These practices were instrumental in promoting informal learning. Learning, therefore, tended to take place within the working environment (Marsick and Volpe, 1999) because the focus was on doing what was considered best for the local populations who use the healthcare services.

The structural characteristics and culture of the CCG have enabled learning to occur as a process of the transfer of IL. For instance, similarly to other groups, clinicians are striving to deliver better healthcare services and improve the well-being of the population. Having similar visions and sharing these with different groups in the workplace is of paramount importance for employee learning (Sinkula et al., 1997). Employee learning is further promoted if it complies with the organisational vision, which in turn increases the likelihood of success and personal development for the employees (Tannenbaum, 1997). In this regard, the application of IL theory has provided important insights into why clinicians serving on the CCG preferred to learn informally by engaging in activities collaboratively and interactively rather than

choosing to undertake formal accounting training. Therefore, co-participation, and the learning context and culture are indispensable in promoting informal learning within a workplace. Together, the culture, the environment and the day-to-day routines trigger the learning process within an organisation by aligning visions and fostering trust between different stakeholders (Fuller and Unwin, 2011); CCGs are a striking example. Learning will then become integrated into the work process, and the knowledge acquired will continue to be spread informally.

#### **7.4 The use of accounting information**

The study also argues that, after acquiring some accounting literacy, clinicians apply the knowledge acquired to make better use of the AI available to board members. Despite the plethora of research describing the use of AI in the public sector, there are a lack of studies describing clinicians' use of AI. This part of the thesis therefore attempts to contextualise clinicians' use of AI. It was found that clinicians use AI for four main purposes: decision-making, education, influencing behaviour and negotiation.

The results showed that clinicians tend to use AI that they can understand. Moreover, they also showed that clinicians' need for AI is limited to variance because it enables them to easily see the difference between what they intended to spend and what they are spending. Furthermore, it shows that when clinicians understand a particular set of AI, they embrace it with enthusiasm, whereas the types of AI that they cannot understand are neglected. These findings contradict the results of earlier studies which have argued that clinicians persistently fail to use cost information and other AI when treating patients (see Hunderfund et al., 2018; Schmitz et al., 2019). The clinicians claimed that they find variance easy to understand, as the differences between the budgeted and the actual expenditure are clearly visible. Nevertheless, it is important to note that clinicians use AI for particular reasons just like politicians (Giacomini

et al., 2016). Following the re-organisation of the body that commissions services, the responsibility for monitoring and managing performance was shaped by multiple ILs. As suggested in the literature (e.g., Ansell et al., 2016; Williams, 2017), the study found that a shift in IL was made possible due to new pressures to do things differently, which meant that AI came to occupy a core position in the commissioning of services. Hence, the organisation has adopted a system of management that is shaped by both accounting and clinical logic in the pursuance of the shared vision of the diverse board. For example, AI has now been legitimised in the making of rules that determine candidate eligibility for certain services such as qualifying for treatments like IVF. However, the shift in IL did not end at the board level; clinicians applied their newly acquired skills to making the system sustainable.

The shift in IL has helped clinicians to incorporate AI into their decision-making when commissioning services. When serving on the board, clinicians are exposed to information that had previously been meaningless to them before joining management, including the budget allocated to their catchment area. Most clinicians had seen the need to commission services without exceeding the allocated budget as an unrealistic demand, but the obligation to deliver the right services within the limited resources available prompted clinicians to do things differently. This created a stimulus for discovering opportunities that would have gone unnoticed under normal circumstances (Williams, 2017), such as accepting AI and taking AI into account in commissioning decisions. AI is used by clinicians as a proactive tool to ensure that the population's health needs are satisfied as well as to make the system sustainable. Even though the use of AI has been examined in public sector accounting literature, it has often been discussed in the context of politicians and public-service managers who lack an understanding of AI (see Liguori et al., 2012; van Helden et al., 2016; Giacomini et al., 2016). However, its usage is discussed here in relation to a context whereby actors' ILs have shifted and AI plays a

central role in shaping activities within the organisation. The findings of this research have shown that clinicians make decisions at board level by using both quantitative and qualitative information with the desire to maximise value for money.

Traditionally, the population's attitudes, culture, behaviour and lack of understanding of government spending demotivated them from pursuing initiatives to minimise waste (Barnes et al., 2022). However, clinicians have taken on the challenge to educate their peers and the public about better ways to avoid wastage. The AL they have acquired is now being disseminated through public campaigns and educational activities, for example, campaigns that promote the idea of buying paracetamol and vitamin D over the counter. The aforementioned campaign encourages citizens to purchase paracetamol over the counter, rather than getting it on prescription, to save money that could be used to hire more nurses. Such campaigns are good examples of the cultural change and shift in IL that has occurred, through clinicians shifting their focus from just the person in front of them to the health needs of the wider population. Public sector reforms in general and in healthcare, in particular, have often yielded unintended results (Adhikari et al., 2021). In some cases, doctors and other clinicians have seen the responsibility of handling the budget as a way of inflating the figures to ask for more money in subsequent years (Pettersen, 2001). By shedding light on the use of AI for educational purposes, this thesis has provided an in-depth explanation of the benefits of working in a diverse team and how a shift in IL can be beneficial to the system as a whole.

In regard to the NHS, the Department of Health has experimented with different methods to make the most of clinical logic when designing service provision. However, this has had little or no impact on clinicians' prescription and treatment costs. Nevertheless, the present structure has the enabling condition for clinicians to use AI to influence their peers' behaviour (Burchell et al., 1980). For instance, it is used to encourage those working in practice to prescribe within



their budget. The process involves providing incentives to change behaviour, such as giving a percentage to practices that save a certain amount of costs. Underlying this strategy for making changes is the argument that clinicians would not want to comply with any changes aimed at cutting costs. Drawing on personal experience, the clinicians explained that they were unwilling to acquiesce to government demands unless their efforts are acknowledged. Therefore, incentives were put in place to motivate clinicians to change their behaviour towards cost considerations. Clinicians are prompted to reap the benefits that come from changing behaviour. The accounting regime of calculations has brought clarity to both clinicians working on the board and those in primary care, as has been observed in other public sector settings (Giacomini et al., 2016). AI helps to show clinicians how much can be saved by changing behaviour, and if they do change their behaviour, they are rewarded accordingly.

AI is also used for the purposes of negotiation and to resolve conflict. A core principle of the 2010 White paper is that the new structure (CCGs) must be rigorous in that the commissioning of healthcare services has to be driven by evidence, effectiveness and efficiency (see Department of Health, 2010a). AI facilitates negotiation in relation to the designing of services. A common challenge often faced in the healthcare sector is to incorporate innovation, not only in terms of new therapies or advancements in technology but also in teaching business skills to clinicians and using these skills for negotiation (Dzik, 2010). However, this thesis has shown that, during disputes between diverse groups of actors, each group seeks further information to justify their claims. While clinicians have tended to justify their arguments with scientific evidence, accountants usually presented their analysis in terms of costs and value for money. For instance, a hospital ran low on funding in the middle of the year and consequently requested more funding. Although the administrators were willing to support the hospital, clinicians vetoed the decision and negotiated using AI to resolve the situation.

## 7.5 Conclusion

This chapter has shed light on various aspects discussed in the previous chapter. First, it has emphasised the role of shared vision in aligning the logic of different groups (Vassalou, 2001). It has shown that accounting literacy and AI play a significant role in clarifying situations. By acquiring accounting literacy and using AI, different groups of actors' expectations were brought into alignment (Besharov and Smith, 2014; Ingstrup et al., 2021). The alignment of logic and goals is facilitated at board level by reducing information asymmetry, which has often been the cause of conflict in the past (Güven-Uslu and Seal, 2019). In effect, AI has become a core part of the CCG. In other public sector institutions, the usage of AI has been limited (Jorge et al., 2019, Giacomini et al., 2016). However, this work has shown that AI is extensively used by the CCGs and demonstrated its role in minimising conflict and changing behaviour.

## **Chapter 8. Conclusion: contributions of the study and suggestions for future research**

### **8.1 Contribution of the research**

This research expands current institutional logic theory on field-level shifts and makes several theoretical contributions to this stream of research. First, the study develops the notion of the alignment of institutional logic by examining a situation in which field-level IL is expected to change within a short period. Second, the research expands our understanding of some circumstances that could lead to alignment between ILs. Third, it highlighted the benefits that result when different professions align their various logics to achieve the overall organisational goal. In terms of theoretical contributions, the key contribution is the research's identification of the unintended consequences of a shift in IL for clinicians.

Furthermore, the research also explains the processes involved in acquiring accounting literacy informally. Finally, it expands our understanding of the use of accounting information in the public sector, particularly by clinicians.

The first part of this study analysed how the two professional groups worked together harmoniously due to a shared vision and the alignment of their different logics. The literature has so far focused on understanding the rivalry between clinical logic and that of other groups when commissioning healthcare services. Most analyses undertaken in the healthcare field have shown how clinical logic has most often conflicted with government logic or accounting logic (Reay and Hinings, 2009). This work has shown that, when different professional groups share the same view about the organisational end goal, their logic will align naturally and the conflict that usually occurs when trying to find solutions will be minimised. This extends previous knowledge, by showing that competing ILs can be managed by developing

collaborative relationships (Reay and Hinings, 2009). The research pointed out that two or more logics can work together without conflict and learn from each other in a context whereby no form of logic is regarded as superior to another. In such a context, there is no hierarchy among institutional groups.

Empirical evidence has shown that conflict often stems from information asymmetry between clinicians and accountants (Güven-Uslu and Seal, 2019), which can be bridged by ensuring that the same information is disclosed to every board member. This conceptualisation of working relationships that emphasises shared knowledge and educating others about organisational goals has helped to demonstrate how to encourage actors from different professional groups to align their logic with the overall logic of an organisation. This allows us to think of more effective ways to integrate new groups into a team.

This study has shown that there are many benefits to be gained when different groups align their logic with the overall logic of the organisation. By highlighting the informal processes of learning and the use of accounting information, this study has unfolded some unintended consequences of different groups working together. These benefits have underlined the importance of team composition and how it can lead to a shift in interpretation.

As a consequence of the alignment of logic and informal acquisition of new sense-making, actors' previously held views shifted. Field actors appear to have stable worldviews linked to their overarching dominant field-level logic. The process of aligning logics and informal learning constructs and reconstructs principles that are embraced by individuals who use them to reshape their interpretation of events. This study has shown that the rivalry between the old logic and the new sense-making does not cease; it is just a matter of time before they reappear. When working in a particular organisational context, the rivalry may not be apparent but it is

always there and will manifest in different contexts. This finding extends previous research on institutional logic which argues that, when managers become hybrid, they tap into all the available realms of knowledge when making decisions (Meyer and Hammerschmid, 2006). It is equally helpful in terms of understanding the challenges faced by actors who have experienced a shift in IL when interacting with individuals in their former field.

Another key contribution of this study concerns generating insights into how clinicians can learn basic accounting concepts by being active in the workplace, for instance by asking questions during meetings, and listening to the explanations provided by accountants and managers. The task of commissioning was regarded as challenging and new to clinicians (Preenen et al.; 2014, Billett, 2001). However, their desire for relevant, necessary information led them to interact, collaborate and build relationships with accountants and managers. These practices were instrumental in promoting informal learning. Learning, therefore, tended to take place in the working environment (Marsick and Volpe, 1999) because the focus was on doing what was best for the local populations who use the healthcare services.

Finally, it was worthwhile exploring how clinicians used accounting information with regard to handling the funds that they manage and the logic they applied in doing so. There are very few empirical descriptions in the existing literature of how clinicians who are involved in healthcare commissioning use accounting information to shape activities and make the system sustainable. The experience gained from this study has contributed to our understanding of the use of accounting information by suggesting that accountants should understand the needs of a particular set of AI users and then supply them with the information that will help them achieve their intended purpose. There is a danger that actors may simply be provided with general financial information that might not be useful to the user. The information supplied should

therefore be able to meet users' needs and should be in a format that they can read and understand.

## 8.2 Limitations of the study and avenues for further research

The study has some limitations. Embarking on the data collection process was challenging, especially recruiting participants. Initially, about 100 emails were sent to various CCGs including their board members, but only one replied. The next step was to visit GP practices, but it proved challenging to gain access to clinicians. All the receptionists at the various surgeries acted as barriers between the GPs and the interviewer.

In most cases, the receptionists recommended that notes be left with them, and the GPs would contact the interviewer if they were interested. Only three out of twenty board members contacted the researcher after reading the message and expressed their willingness to participate in the project. Two out of the three GPs who contacted the author participated in the study, while the other one declined due to time constraints.

Another limitation of the study is the challenges involved in attending various meetings at different locations and talking to participants. In some cases, board members had several meetings in a single day, and the researcher had to wait from about midday to 7 pm to talk to some participants. This was further complicated because participants often rearranged the appointment for a different day in such cases, but in most cases, they declined to participate due to lack of time. Another limitation was the effects of COVID-19 on the number of interviews conducted. Although the data collection process had already reached saturation point before the outbreak of the COVID-19 pandemic, other respondents expressed a willingness to participate in the study but could not do so because of COVID-19.

Other limitations existed in terms of the areas covered by the study, thereby offering avenues for further research to elaborate on our understanding of the alignment of logic, informal acquisition of accounting literacy and the use of AI by clinicians. Future research needs to examine other factors that stimulate the alignment of different logics by explaining the steps taken to arrive at the point where logics meet and align. Additionally, researchers could explore the long-term behavioural patterns of clinicians who are involved in commissioning and how the shift in institutional logic influences their career choices.

Moreover, given that part of this study was limited to explaining how clinicians acquire accounting knowledge informally and did not address the ways in which they may learn consciously, further studies could explore the formal processes of learning, as well as the unintended consequences of acquiring accounting literacy, particularly the tensions that may arise when trying to achieve a balance between clinicians' values and their need to acquire accounting information. Further research is also needed to shed light on how accounting literacy could improve commissioning, and what kind of accounting knowledge is most needed for effective commissioning. It is equally important to investigate the content of what is learned and the purpose of learning, due to the fact that informal learning does not follow any particular pattern or syllabus.

Finally, although the purpose of this thesis is to investigate the alignment of logic, the process by which clinicians acquire accounting skills informally and the use of AI, its findings have clearly demonstrated that accountants need to be more explicit and consistent when communicating accounting information to clinicians, so as to make the informal learning process more effective and the AI useful to clinicians.

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## Appendix A: Functions of a CCG

Duties	Description
Plan	<ul style="list-style-type: none"> <li>✚ CCG must have a plan for a financial year. The plan must propose how the group will discharge its duties.</li> <li>✚ Plans must describe the activities of the CCG, and the CCG must give a copy to each Health and wellbeing board.</li> <li>✚ Plans can be reviewed and published, and a copy submitted to relevant Health and Wellbeing Boards.</li> <li>✚ The CCG must consult relevant Health and Wellbeing Boards for their opinion, and the Health and Wellbeing Board must give their opinion on the changes.</li> </ul>
Finance	<ul style="list-style-type: none"> <li>✚ CCG must ensure that their expenditure does not exceed their allotted amount for a year.</li> <li>✚ The CCG decides the direction of any specific sum.</li> <li>✚ The Clinical Commissioning Board (CCB) can direct the CCG to ensure that their resources are well spent.</li> <li>✚ CCB can make an additional payment to the CCG to improve quality or other outcomes during a financial year.</li> <li>✚ CCG must publish a clear description of how they spent the additional finance.</li> </ul>
Governance	<ul style="list-style-type: none"> <li>✚ The HSCA 2006 demands that the NHS CB be provided with information that enhances its functioning and provides good value for money<sup>10</sup>.</li> </ul>

- ✚ CCG should provide information about their board members, where they work to help in assessing their credibility.
- ✚ CCG should publish year reports for the public to be aware of their activities.

#### Cooperation

- ✚ CCGs must cooperate and partner with local authorities when necessary to improve the wellbeing of children and families in their area of operation.
- ✚ They must also cooperate with the secretary of state to review cases of homicide and assist people suffering from mental health.
- ✚ According to the HSCA 2012 section 14Z13, CCGs must consult everyone to whom it is responsible for being accountable when delivering services.

#### Authority

- ✚ CCG has the power to arrange services or facilities deemed necessary to improve the prevention, diagnosis and treatment of illness related to physical and mental health.
- ✚ CCG has the power to raise additional finance to sponsor health services <sup>11</sup>.
- ✚ Each group has the autonomy to enter into a partnership arrangement and contracts with voluntary organisations, public authorities, NHS, other CCG, and other health bodies.
- ✚ CCG power extends to granting loans to voluntary organisations providing direct payment to providers, raising additional income to improve services, making payments to local authorities, and providing funding to conduct research.

## Appendix B: Four-step iterative guide four interview design






Settle with an Epistemological Tradition	The researcher must first familiarise themselves with the various epistemological that research can take. After this, the researcher should approach the individual actors for their experience.
Prepare an Interview Protocol	Interview protocol is about preparing the interview, listing the key issues, and preparing provisional questions. The protocol should have three parts: introduction, description of the project and an opportunity to welcome questions from the interviewee.
Conduct the Interview	Establish a good rapport with the interviewee to gain participants' trust before switching on the tape. Do this by explaining your expectation to the interviewee. Tell participants a bit about yourself and why you chose the topic. Avoid telling participants about your preconception so that their narrative should not just meet your expectations. Listen carefully to your participants to probes for more information from their answers. Avoid yes or no questions during probing. End the interview by asking if there is anything that you have not asked that the interviewee would like to talk about.
Iterate	After the interview, it is good to think about how it went. For example, did the participant answer your questions as expected, did you need to rephrase the questions, was the participant disinterested in the study, etc.

Source: adapted from Arsel, (2017)

## Appendix C: The result of clinicians acquiring accounting literacy

Please don't request paracetamol on prescription
Ipswich and East Suffolk Clinical Commissioning Group spent £1m on prescribed paracetamol last year

This is the equivalent of:

	39	MORE community nurses or
	270	MORE hip replacements or
	66	MORE drug treatment courses for breast cancer or
	1,000	MORE drug treatment courses for Alzheimer's or
	1,040	MORE cataract operations

## Please don't request paracetamol on prescription

Last year NHS Ipswich and East Suffolk Clinical Commissioning Group spent £1m on prescribed paracetamol.

A box of 32 paracetamol tablets on prescription costs the NHS approximately four times as much as it does to buy the tablets from a pharmacy or supermarket.

Please speak to your pharmacist about other pain management options or contact Suffolk Wellbeing on 0300 123 1781 to find out about relaxation workshops for pain or stress control courses.



## Suffolk Wellbeing

For more information visit:  
[www.readytochange.org.uk](http://www.readytochange.org.uk)

The NHS belongs to you,  
use it responsibly.



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## **Appendix D: Participant Information Sheet**

### **Participant Information Sheet for Research Project: The Use of Accounting Information by clinicians at the board of CCG in managerial work**

Dear participant,

I, John Enombu, am currently carrying out a piece of research entitled “The Use of Accounting Information by clinicians at the board of CCG in managerial work” under the supervision of Dr Pawan Adhikari.

We are investigating how clinicians who are involved at the board of clinical commissioning board use accounting information to enhance efficiency and effectiveness in the delivery of health care services.

This information sheet provides you with information about the study and your rights as a participant.

#### **What does taking part in the research involve?**

The data for this research project will be collected by interview. I appreciate that you are busy, and the interview should take no more than one hour. The interview can be undertaken face-to-face, telephone or skype, whichever is more convenient for you. With your permission, I will record the interview to not be distracted by taking notes.

The questions I will ask during the interview will mainly focus on your experience of accounting information and how it flows within the system. There are no wrong or right answers, rather I am interested in your personal experience and opinions

**Do I have to take part?**

Naturally, there is no obligation to take part in the study. It's entirely up to you. If you decide to take part, you will be given this information sheet to keep and be asked to consent to participate. If publications or reports have already been disseminated, these cannot be withdrawn, however, these will only contain anonymised or aggregated data. If you wish to withdraw from the study at any time, please contact the researcher on the details below.

**Will my taking part in this study be kept confidential?**

All information collected will be kept securely and will only be accessible by me and my supervisor if need arises. However, this research forms part of my studies at the University of Essex and therefore may be subject to scrutiny by other University staff in determining the outcome of my degree.

**What happens if something goes wrong?**

If you are harmed by taking part in this research project, there are no special compensation arrangements. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been treated during the course of this study then you should immediately inform the student and/or their supervisor (details below). If you are not satisfied with the response, you may contact the Essex Business School Research Ethics Officer, Dr Maria Hudson ([mhudson@essex.ac.uk](mailto:mhudson@essex.ac.uk)), or the University of Essex Research Governance and Planning Manager, Sarah Manning-Press ([sarahm@essex.ac.uk](mailto:sarahm@essex.ac.uk)) who will advise you further.

We would be very grateful for your participation in this study. If you need to contact us in future, please contact me [je17459@essex.ac.uk](mailto:je17459@essex.ac.uk) or Dr Pawan Adhikari [padhik@essex.ac.uk](mailto:padhik@essex.ac.uk). You can also contact us in writing at: EBS, University of Essex, Colchester CO4 3SQ.

You are welcome to ask questions at any point.

Yours,

*John Enombu*



## Appendix E: Participant consent form



University of Essex

ESSEX  
BUSINESS  
SCHOOL

**Participant Consent form for Research Project: “The Use of Accounting Information by clinicians at the board of CCG in managerial work”**

Dear participant,

This research is being carried out by John Enombu under the supervision of Dr Pawan Adhikari.

If you agree to participate in this study, you will be interviewed by the researcher.

The answers which you provide will be recorded through audio recording device.

Please see the attached Participant Information Sheet for details about the study and your rights as a participant.

Yours,

*John Enombu*

<u>Statement of Consent</u>	<u>Please initial each box</u>
I agree to participate in the research project, “ <b>The Use of Accounting Information by clinicians at the board of CCG in managerial work</b> ” being carried out by <i>John Enombu</i> .	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• This agreement has been given voluntarily and without coercion.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• I have been given contact details of the researcher(s).</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• I have read and understood the information provided in the Participant Information Sheet</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• I have had the opportunity to ask questions about the research and my participation in it.</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• I agree for this interview to be audio recorded.</li> </ul>	<input type="checkbox"/>

---



---

Participant's signature

Date

## Appendix F: Interview Questions

### Ice breaker questions

1. Please could you tell me about your involvement in the NHS?
2. How do you perceive the changes being introduced to NHS over the years?
3. What is your motivation to be actively involved in the leader of health care delivery?

### Interview questions

4. What is your involvement in the clinical commissioning group?
5. What is the purpose/objective of CCGs?
6. Do you think that the creation of the clinical commissioning group is necessary? If yes, why, if no, why not?
7. What is the role of clinicians in this new structure?
8. Do you think clinicians are better placed or are the best people to handle duties such as priority setting, strategy planning, budget rationing, monitoring performance and other accounting-related tasks? Why or why not?
9. How are important financial/budgetary decisions made? What factors/elements are considered when making such decisions?
10. Which are the numbers that you consider important when making decisions such as planning and reviewing reports on care? In this sense I mean numbers like time per patient, waiting time, cost of prescriptions, cost of cancel appointment, cost of hiring temporal workers etc
11. How is cost identified, calculated and reported? Are there any methods/procedures for this? Who is involved in handling all these cost-related activities? What is the role of clinicians in this process?

12. What is a clinician level of knowledge on cost and other related accounting information? Are you provided with training to enhance your knowledge of accounting relating information?
13. Have you ever experienced any ethical dilemma concerning best treatment vs cost of the treatment?
14. To what extent you are aware of costs in providing care/treatment? Does cost factors influence your decision?
15. How can you perform the role of the manager and the clinician at the same time? Can you give me an example of a situation in which you experienced conflict between your duty of care and your accountability as a manager? What are the challenges?
16. What do you consider the most important factor for clinicians' decisions when commissioning care provision?
17. Do you think you have got new identity and role having involved in CCGs?
18. Could you explain your views when you first joined the commissioning of care and your present position, especially when making decisions? Do you think clinicians and accountants do usually agree in most cases? If yes, who takes the leading position? If no how are such conflicts usually resolved?

#### Conclusive questions

19. Is there any other thing that you would like to share?
20. Do you have any personal contact you think might be interested and willing to give an interview for this research

## Appendix G: List of document reviews

Equity and excellence: Liberating the NHS (*Equity and excellence: Liberating the NHS*, 2010)

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[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213823/dh\\_117794.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213823/dh_117794.pdf)

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<https://midessexccg.nhs.uk/about-us/our-key-documents/annual-reports/annual-report-2019-20/3833-nhs-mid-essex-annual-report-and-accounts-2019-20/file>