

# **The imperative of identifying and dealing with unwarranted variation in health care: an English perspective**

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## Contents

<b>Chapter 1: Introduction .....</b>	<b>1</b>
1.1 BACKGROUND .....	1
1.2 WHY THIS RESEARCH IS IMPORTANT .....	3
1.3 THE TIMING OF THE STUDY .....	4
1.4 WHY I CHOSE TO DO THIS RESEARCH: A PERSONAL PERSPECTIVE .....	4
1.5 STRUCTURE OF THE DOCUMENT .....	5
<b>Chapter 2: Setting the context .....</b>	<b>8</b>
2.1 INTRODUCTION.....	8
2.2 VARIATION – THE PROBLEM AND THE CAUSES.....	9
2.3 DEFINING VARIATION.....	11
2.4 VARIATION – AN INTERNATIONAL PROBLEM .....	12
2.5 VARIATION IN A COMPLEX ADAPTIVE SYSTEM .....	12
2.6 REFORMING THE NHS.....	14
2.7 THE SEPARATION OF COMMISSIONING AND PROVIDING IN THE NHS.....	16
2.8 THE INFLUENCE OF PROFESSIONALISM AND MANAGERIALISM ON VARIATION.....	17
<b>Chapter 3: Developing a conceptual framework .....</b>	<b>20</b>
3.1 A LITERATURE REFRESH.....	20
3.1.1 THE CONCEPT OF UNWARRANTED VARIATION.....	22
3.1.2 DEFINING UNWARRANTED VARIATION.....	22
3.1.3 THE ROLE OF CLINICAL GUIDELINES IN REDUCING UNWARRANTED VARIATION .....	23
3.1.4 THE INTRODUCTION OF MARKET PRINCIPLES AND THE PURCHASER/PROVIDER SPLIT.....	24
3.2 MOVING THE DEBATE FORWARD.....	26
3.3 SUMMARY .....	27
<b>Chapter 4: A summary of the research findings so far .....</b>	<b>28</b>
4.1 INTRODUCTION.....	28
4.2 OVERVIEW OF THE STUDY TO DATE .....	28
4.3 SUMMARY OF DOCUMENT 3 .....	29
4.4 EMERGING THEMES .....	29
4.4.1 KEY THEME – Definition .....	30
4.4.2 KEY THEME – Managerialism/professionalism .....	31
4.4.3 KEY THEME – Training .....	31

4.4.4	KEY THEME – Reform .....	32
4.5	SUMMARY OF DOCUMENT 4 .....	33
4.6	SUMMARY .....	36
<b>Chapter 5:</b>	<b>Research aims and questions .....</b>	<b>37</b>
5.1	THE AIMS OF THE STUDY .....	37
5.2	THE CONCEPTUAL FRAMEWORK.....	37
5.3	AN EVOLVING FRAMEWORK.....	39
FORMING THE RESEARCH QUESTIONS .....	39	
<b>Chapter 6:</b>	<b>Research approach .....</b>	<b>40</b>
6.1	INTRODUCTION.....	40
6.2	RESEARCH PHILOSOPHY .....	40
6.3	ETHICAL CONSIDERATIONS.....	42
6.4	RESEARCH METHODOLOGY .....	43
6.4.1	Applying a mixed methodology.....	44
6.4.2	Research design.....	45
6.4.3	Deciding the sample frame.....	47
6.4.5	Data collection and sample frame.....	48
6.5	SUMMARY .....	49
<b>Chapter 7:</b>	<b>Findings and analysis .....</b>	<b>50</b>
7.1	INTRODUCTION.....	50
7.2	ANALYSIS.....	55
7.3	SUMMARY OF FINDINGS .....	95
<b>Chapter 8:</b>	<b>Conclusion and implications for practice.....</b>	<b>96</b>
8.1	OVERVIEW .....	96
8.2	IMPLICATIONS FOR PRACTICE.....	99
8.3	CONSIDERATION FOR FUTURE RESEARCH .....	101
<b>References.....</b>	<b>103</b>	

## LIST of FIGURES

Figure 1: Key themes .....	8
Figure 2: Mapping causes of variation .....	10
Figure 3: Mind map of key themes .....	21
Figure 4: Which statement describes how the NHS deals with variation? .....	34
Figure 5: Conceptual framework .....	38
Figure 6: The sources of data for the study .....	46
Figure 7: Data triangulation using multiple sources of data .....	47
Figure 8: Description of the sources of evidence .....	51
Figure 9: In which region of NHS England is your organisation located? .....	52
Figure 10: Membership of a Clinical Commissioning Group .....	53
Figure 11: Respondents main area of work.....	54
Figure 12: Is variation an issue the NHS should address? .....	60
Figure 13: Is dealing with variation a part of your role? .....	61
Figure 14: National survey of membership Organisations.....	65
Figure 15: Should CCGs lead the response to reduce unwarranted variation? .....	67
Figure 16: Observed recordings of the term variation or unwarranted variation.....	68
Figure 17: Adaptation of Toulmin’s model argument.....	76
Figure 18: Could Training help mitigate unwarranted variation? .....	78
Figure 19: Could guidelines help mitigate unwarranted variation? .....	80
Figure 20: Does the NHS need a common definition? .....	83
Figure 21: Does the NHS have a preferred classification?.....	85
Figure 22: Perceived barriers to action.....	87
Figure 23: A suggested framework for developing training and development .....	92
Figure 24: A proposed concordat to reduce barriers to action .....	94

## LIST of TABLES

Table 1:	Significant NHS reforms and reorganisations, 1982-2010 .....	15
Table 2:	Characteristics of respondents from provider organisations .....	55
Table 3:	Number of governing body papers available for analysis from sample of CCGs .....	56
Table 4:	Hurst's Effective ways to realise policy reform.....	89
Table 5:	Kotter's Eight steps to change.....	90

## Chapter 1: Introduction

### 1.1 BACKGROUND

Health systems around the world are facing the twin pressures of increasing demand for services, caused largely by the impact of the ageing population and medical science developments, and a lack of resources consequent on economic slowdown in many countries (Lewis et al, 2010). In these circumstances, it should not be surprising that there is an increased focus on the issue of variation in the provision, uptake and costs of health care (Corallo et al, 2013) a focus that anticipates health systems to act to identify and reduce unwarranted variation. Put simply, this means exploring differences in the cost or the way care is organised and provided from one area to another for the same condition or diagnosis, or a difference in the access to care for the same or similar conditions. This is neatly described by Sipkoff (2003) who claimed:

*“When the approach in one town is major surgery and in another, it’s watchful waiting, you know there’s a problem.”*

The concept of variation follows two distinct classifications. It is frequently described as being either “warranted” or “unwarranted” and it is difficult, but necessary, to attempt to distinguish between the two. Warranted variation is described as those differences that reflect patient centred care and clinical responsiveness, founded on the basis of assessed need for a population served (Department of Health [DH], 2010c). It needs to be considered separately from unwarranted variation, which is defined as “variation in the utilisation of health care services that cannot be explained by variation in patient illness or patient preferences” (Wennberg, 2010) and is considered unacceptable as it not only wastes valuable resources but is the hallmark of poor quality of health care (Hannan, 1999).

The conundrum that unwarranted variation poses remains practically and politically ambiguous, as both a concept and in solution (Bojke, 2013), so it is not surprising that it captures the imagination of researchers and policy makers (Tanenbaum, 2013). The prevalence of variation is well documented (Reid et al, 1999; McPherson, 2008; Wennberg, 2010; McBride et al, 2010; Appleby et al, 2011) as is the variation in the productivity of hospitals (Castelli et al, 2014) and the concept remains an issue for patients (Birkmeyer et al, 2013). However, few of these publications move the debate beyond the undemanding observation and recording of variation. It is rare for commentators to define variation and it is uncommon to glean from the reviewed literature what action, if any, could be

taken to identify and reduce unwarranted variation. Indeed, no literature could be found to signpost readers to appreciate what systematic action could be taken or how the NHS in England should respond to investigate, identify and reduce unwarranted variation.

It is acknowledged (Wennberg, 2004) that the continued monitoring and recording of variation remains an important process to maintain a spotlight on the concept of variation but it is no longer sufficient to accept the repeated observation and sporadic remedies as a way of stimulating action to reduce unwarranted variation. More action is necessary if the NHS is to survive the rising demand coupled with improvements in medical science and austerity (Maynard, 2011). In response the NHS has been challenged to do more and “shine a light on variation in care and unacceptable practice” and to share best practice and improve services (DH, 2013). This policy initiative does not specify any detail. For example, there is no clear definition; no indication of how the problem should be addressed and the policy is silent on which organisation(s) within the NHS should lead the search to identify and reduce unwarranted variation. This study will aim to build an evidence base to contribute to a better understanding of those challenges by investigating the following three questions:

- ❖ *What are variations in healthcare and why are they important?*
- ❖ *How should the problem of dealing with unwarranted variation be addressed?*
- ❖ *What are the perceived barriers to the NHS responding to unwarranted variation?*

In order to achieve this objective, the above set of questions will be complemented by a line of inquiry which aims to understand whether the appeal from policy makers to reduce unwarranted variation is accepted by the NHS, whether the NHS perceives that the lack of a clear definition of what constitutes unwarranted variation is a barrier to action being and whether the NHS believes it is their role to take action to reduce unwarranted variation. It is postulated that the expanding evidence of variation in the provision, costs and uptake of health care implies that unwarranted variation remains an issue for the NHS, which is, in part, due to a gap in the level of awareness and understanding of the concept of variation. A further aim, therefore, will be to unearth whether the NHS considers that training should be made available to better prepare the NHS to be in a position to respond to investigate, identify and reduce unwarranted variation.

By exploring these issues, this study will aim to take the debate beyond the powerful, informative and ubiquitous observations and recordings of variation, to provide original insightful knowledge to

be conveyed in such a way that it can enable policy makers and those in practice to appreciate what barriers are preventing action being taken to identify and reduce unwarranted variation.

## **1.2 WHY THIS RESEARCH IS IMPORTANT**

The NHS has been challenged to adapt to evolving demands and improve the quality and safety of care as well as the health of the population (Denis & Forest, 2012). There is concern in the wake of the financial crisis that the quality and productivity of health care may fall since inevitable cuts to health budgets are being made as a means of dealing with the period of austerity and the estimated financial gap (Crump & Adil, 2009). In response, the Department of Health together with the NHS Commissioning Board team set out four key themes on which the NHS should focus to maximise the use of finite resources and to gain better health outcomes. These domains are: quality, innovation, productivity and prevention – referred to as the “QIPP programme”.

The QIPP programme started as a centrally co-ordinated initiative, and is now central to planning and delivery across all sectors of the NHS. It involves both commissioning and provider organisations, with the intention to drive efficiencies across the system by improving service quality and productivity (Smith & Charlesworth, 2011). Identifying and reducing unwarranted variation is one such initiative to achieve that goal (DH, 2010c).

The issue of variation in health care is not a new phenomenon. Indeed, it could be argued that unwarranted variation may have gone unchecked for more than 70 years. Professionals – clinicians and managers alike – frequently dispute the existence and classification of variation, often claiming fault with the data. Berwick (1991) offers a rationalisation to this dismissive response, reminding us that the concept of unwarranted variation is considered provocative, courting polemic views from both clinicians and managers. This position is compounded as many defer to their own interpretation of a national policy initiative (Coleman et al, 2010) by applying their own definition and explanation to justify observed variation, rather than investigate, understand and reduce unwarranted variation. Some of the possible reasons for this inertia and perceived tolerance have been identified in earlier research, as no clear definition, a lack of leadership and the complexity of the challenge (DaSilva, 2012a).

### **1.3 THE TIMING OF THE STUDY**

This study is timely with the renaissance of interest in unwarranted variation (Godlee, 2011) following the publication of the NHS Atlas of Variation (DH, 2010c) the latest reform programme and reorganisation of the NHS and the impact of austerity. This calls on both commissioners and providers to develop new ways of working to meet the increasing demands for health care from an ageing population with changing needs to deliver a high-quality service from tightening budgets.

This study will explore the phenomenon of variation from both the commissioning and provider perspective, seeking to understand the views of these organisations, to appreciate how the problem should be addressed and what are the perceived barriers preventing action to reduce unwarranted variation. In so doing, the study will aim to take the discussion beyond the descriptive observation of variation, to one where new knowledge is created to enable the NHS to respond to the abundant and long-lasting problem of unwarranted variation.

### **1.4 WHY I CHOSE TO DO THIS RESEARCH: A PERSONAL PERSPECTIVE**

There are several threads driving this research study. The first is personal and simple: it gave me a purpose and a framework to investigate and understand the puzzle of variation in health care. My awareness in the subject had been stimulated many years ago, as a clinician, where I sought to understand why there were so many different ways health care was being organised and provided by different clinicians, mainly doctors and the variety of different modes of treatment they applied, with what appeared to be no improvement in outcomes for patients. My curiosity continued whilst in senior management roles in the NHS, where adopting a line of appreciative inquiry I would explore how best practice could be transferred to improve patient care and wondered what barriers were preventing this happening. More latterly, my interest was reignited by the response of the NHS, in particular by many senior players, clinicians and very senior managers. “National gurus and experts” from all parts of the NHS had a reaction, or to be more precise an abreaction, to the publication of the NHS Atlas of Variation series, of which I was a co-author. The response to the publication of the first NHS Atlas of Variation (DH, 2010c) was a significant event. It stirred up an unstoppable inquisitiveness, moving me to find a channel to focus my time and energy to explore the concept of unwarranted variation.

My motivation, and perhaps naïve ambition, was to assemble sufficient knowledge to construct a credible narrative to enable the NHS system to be able to develop a methodology that should enable it to investigate, identify and reduce unwarranted variation. I acknowledge, however, this puzzle to be so complex and multi-faceted that any progress in creating a cogent argument for reducing unwarranted variation may be slow. Nonetheless, what is clear is that progress will be non-existent without a better understanding of why the issue of variation is important, whether the NHS considers it an initiative worth pursuing and what barriers prevent the NHS responding.

This study aspires to make a contribution to that understanding and the implications for practice by gathering the evidence and uncovering some of those key factors that appear to protract the present situation where unwarranted variation continues to be a universal challenge for the NHS in England (DaSilva, 2012b). But first, it is important to reflect and understand why the issue of unwarranted variation stimulated the policy directive (DH, 2013) requiring the NHS to take action to reduce unwarranted variation in health care. This is discussed in Chapter 2, and elaborated further in Chapters 4 and 5, thus guiding readers to the genesis and formulation of the main research question below.

## **1.5 STRUCTURE OF THE DOCUMENT**

This chapter will now outline the structure of the document. The next chapters of this thesis will lay out the context of the study, setting the context of the questions, by reviewing the key themes to emerge throughout this five year study. The first theme is the problem variation presents in the uptake, provision and costs of health care; that is followed by the frequent reforms and adherence to quasi-market principles in the NHS; which saw the separation of commissioning and providing functions within a complex adaptive system with the dynamic relationship between managers and clinicians. The context will begin with a review of the concept of variation, its history and the impact that the diverse terminology appears to have had on protracting unwarranted variation as an unsolved puzzle for more than 75 years. The thesis will present evidence, from the literature and findings from this study that the issue of unwarranted variation in health care is not restricted to the NHS in England. In fact, it is a challenge facing many countries, each struggling to cope with the presence of unwarranted variation and the conundrum of how to reduce it.

## **Chapter 2 – Setting the context**

This chapter will lay out the context of the research study, which is seeking to understand whether the centrally driven policy to identify and reduce unwarranted variation can be successful in its implementation. The chapter will lay- out and discuss key themes that have emerged throughout this study.

## **Chapter 3 – Developing a conceptual framework**

This chapter will offer an overview of the initial literature review (DaSilva, 2012b) to provide readers with an insight into the concept of unwarranted variation and to demonstrate that the study has taken account of the available literature and its relevance to this study. A mind- map will be used to highlight some of the key themes to emerge from the literature, thus justifying the research questions and study.

## **Chapter 4 – A summary of the research findings so far**

The study has been developed over five years, with primary data collected through the period 2010-2012, using different methods and sources of evidence of how the NHS responds to variation in the provision, uptake and cost of health care. Chapter 4 will offer an overview of the earlier findings, including the methods of data collection, and outline the previous investigations, sharing the findings that contributed to shaping the research questions and findings for this thesis.

## **Chapter 5 – Research aims and questions**

Once the context and literature have been shared, the study will reveal the conceptual framework assembled from the literature and early findings to test the aims of the research, reminding readers of the main research questions and those supplementary questions considered necessary to drawing sufficient data to analyse in order to answer the main questions.

## **Chapter 6 – Research approach**

This chapter will offer an insight into the methodology, including a justification for using a mixed methodology. This will be supported by the declaration of the theoretical position and disclosure of the ethical issues considered, and adhered to, throughout this study. This will be followed by clarification of the research design, approach and methods of data collection.

## **Chapter 7 – Findings and analysis**

Chapter 7 will share the finding and analysis, displayed for ease by following the three main questions. This chapter will present the findings, using tables and figures to support the text which will offer a discussion of the interpretation of the findings and a brief summary at the end of the chapter.

## **Chapter 8 – Discussion and implications for practice**

This chapter will draw all the previous work together in a broad discussion using the findings to guide suggestions for future research and the implications for practice.

## Chapter 2: Setting the context

### 2.1 INTRODUCTION

This chapter will lay out the context of the research study, which is seeking to understand whether the centrally driven policy to identify and reduce unwarranted variation (DH, 2013) can be successful in its implementation. The policy initiative does not offer clarity on “how” or “who” and is equally shy in defining which organisation(s) should lead the search for and reduction of unwarranted variation, a position that stimulated the research questions above.

The study will draw on the literature and findings from earlier research (DaSilva, 2012b; 2012c; 2013), which have become focused on the four following key themes.

**Figure 1 – Key themes**



## 2.2 VARIATION – THE PROBLEM

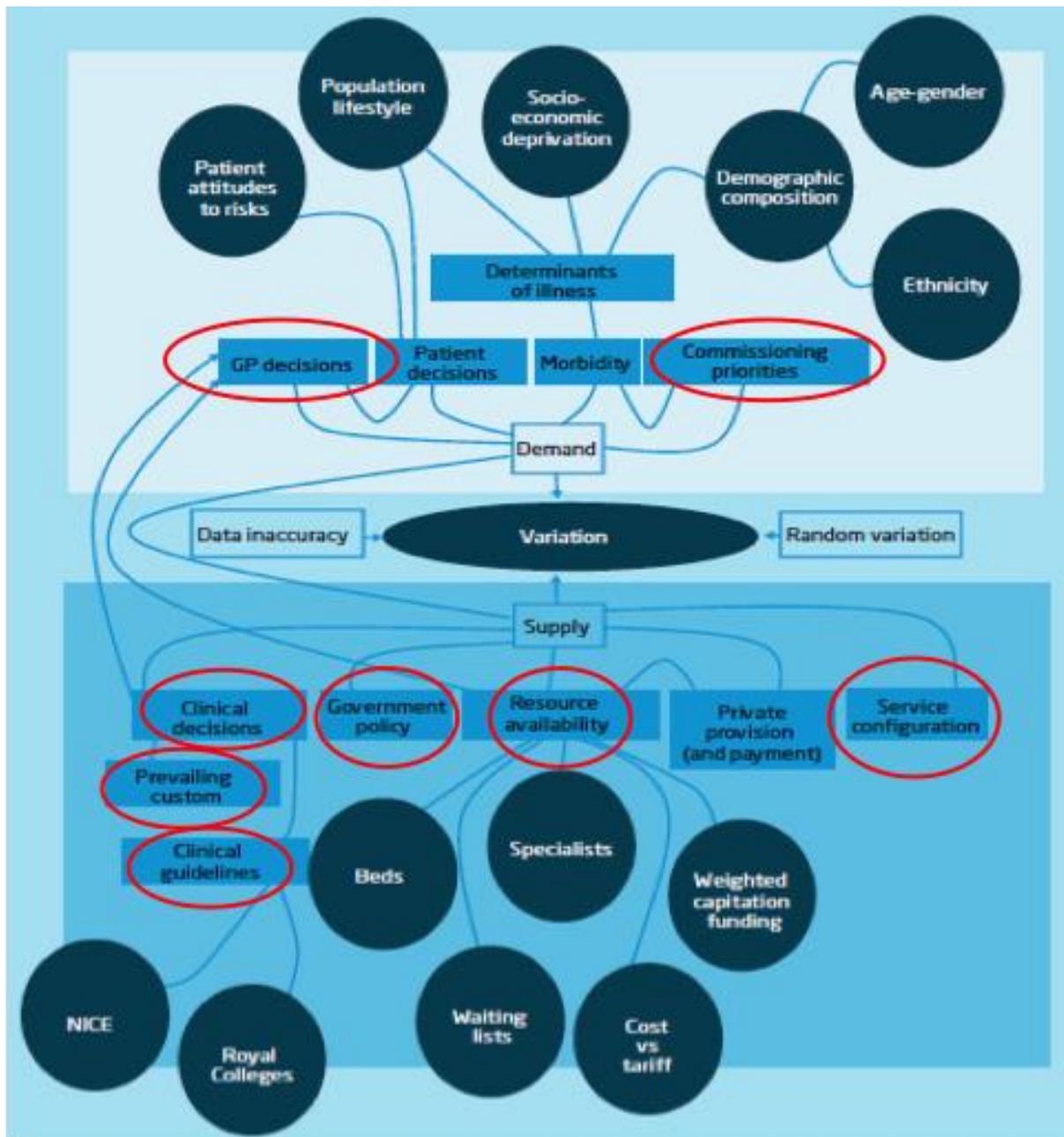
The start of the journey can be traced to Glover (1938), whose concern was that there was an inexplicable eightfold variation in the rates of tonsillectomies amongst school children with what appeared to be no real health gain. Perhaps of more concern to Glover was that these operations were being performed as a “routine prophylactic ritual, with no particular reason”. Glover’s paper offered clues that at the time of publication it was possible to take some action to reduce those variation rates in those operations:

*“On a larger scale was the courageous reduction in Derbyshire initiated in 1932 by Dr. Ash. In this county area the operations in 1931 were 2,626, or 3.9% of all the 68,079 children in average attendance. In 1929 the number had been 2,240, and in 1930, 2,316. Dr. Ash reduced the numbers to 1,187 in 1932; 523 in 1933; 156 in 1934; 178 in 1935; 193 in 1936; 164 in 1937. If the 1931 rate had been maintained, some 15,700 further children would have been tonsillectomised since the reduction began.”*

However, Glover (1938) does not offer any reason why this reduction was possible although he does infer that it may have been in response to the strong medical leadership of the time, which is considered essential today if action is to be taken (Ileri et al, 2011), particularly as there is the suggestion that the cause of most variation can be laid at the feet of doctors (Wennberg, 2010).

The following mind map (Appleby et al, 2011) reveals the complexity of the problem variation presents and is perhaps one of the reasons why the topic remains an unsolved puzzle for the NHS. Central to this mind map is the phenomenon of variation, which needs to be considered with the appreciation that clinicians, managers and patients all respond to variation to meet their own aims (Neuhauser et al, 2011) and may, therefore, interpret this mind map differently. Some of the key themes, drawn from the earlier literature review and findings of earlier research (DaSilva, 2012b; 2012c; 2013), are highlighted to signpost readers to the genesis of the research questions and how they have been formulated from recurring key themes.

Figure 2 – Mapping causes of variation



Source: Appleby, J., et al. (2011). *Variations in Health Care: The Good, the Bad and the Inexplicable*. London: King's Fund.

### 2.2.1 Defining variation

As explained in Section 1.1, the concept of variation is frequently separated into either warranted or unwarranted variation. It is important to acknowledge that there is no single definition for either and these classifications should, therefore, act only as the stimulus for a deeper exploration of the topic, particularly as a value judgement is often attached branding variation as being either good or bad. Noticeably, McPherson et al (2013) warn against this simple assumption by raising two important issues. The first is that it is not right to use data alone to determine which rate is “right” and the second is the suggestion that the presence of variation is a sign of health service delivery problems. We should also remember that not all variation is bad – if it were, it would be easier to take action (Mulley, 2009) – and that some variation will become ever more likely as professionals perform above the mean (Thomson, 2002), the implication being that some variation is inevitable, as well as random, and perhaps an outcome of innovation and improvement, which are essential pillars of a modern health care system.

It is disappointing, however, that much of the literature does fail to offer a clear definition when referring to the two classifications, rendering those studies incomplete (Mercuri & Gafni, 2011). Of equal concern are the many interchangeable descriptions, for example: unintended variation (Berwick, 1991), inappropriate variation (Cabana et al, 1999), warranted variation (Mulley, 2009), unexplained variation (Richards, 2009) and unwarranted variation (Wennberg, 2010). Bojakowski (2010) believes that the creation of a definition should be a democratic or consensus building process and goes on to offer a simple and pragmatic definition of unwarranted variation, by broadly adopting Wennberg’s description, claiming that unwarranted variation is the differences in care which cannot be explained by public health needs or medical needs.

For clarity and completeness, a definition for this study has been adopted from Wennberg (2010), who claims that “unwarranted variation is where there is a variation in the utilisation of health care services that cannot be explained by differences in patient illness or need or choice”. Adopting this definition is considered reasonable; after all, it offers clarity, is simplistic and it is not over-clouded in myth or professional jargon.

### 2.2.2 An International Problem

It is acknowledged that it is difficult to make objective comparisons of international health care systems without paying attention to some of the fundamental differences, for example the model of care and the ways in which health care is accessed, funded or provided. What is clear, however, is that the literature reveals that variation remains a puzzle, both internationally and intra-nationally, for many health systems (McPherson et al, 2013). This further supports the importance of this study, obliging a deeper examination of this complex area of health care policy.

### 2.3 VARIATION IN A COMPLEX ADAPTIVE SYSTEM

The concern about variation creeping into the NHS was as alive at its birth as it is today, demonstrated in the statement of the architect of the NHS, Aneurin Bevan, who claimed that “we have got to achieve as nearly possible a uniform standard service for all – only with a national service can the state ensure that an equally good service is available everywhere” (Allsop, 1984).

The NHS was born on July 5th 1948 and delivered with the principles of fairness, free at the point of delivery and available for those in need (McBride et al, 2010) with, at the time of its conception, an open ended commitment to meet those needs, with no specific resource allocation policies (Allsop, 1984). Since 1948 to the present day, the NHS has remained a centralist establishment and any fragmentation would seem a paradox to anyone who still thinks of it as a unitary governmental system (Garber, 2011) despite the many claims of decentralisation. The “centre” does remain responsible for making policy, resource allocation, albeit on the basis of nous and intuition during periods of austerity (Fisher, 2007) and performance monitoring whilst the service side is responsible for front line delivery of care. The relationship between the “service side” and the “centre” is a chequered one, compounded by the frequent claims and attempts to decentralise, as described by Allsop (1984), in the very first NHS circular [HC/RHB (47) 01] sent from the Minister of Health, Aneurin Bevan, to regional hospital boards. Bevan claimed that the service side should:

*“feel from the outset a sense of independent responsibility”.*

However, it is important to remember that the NHS is not the monolithic organisation it was in 1948; it is now more akin to a complex adaptive system (Plsek, 2000) where controls are diffuse, actions are unpredictable and the interaction between system agents is flexible, enabling organisations to

self-manage change (Kernick & Sweeney, 2001), making a centrally driven policy to identify and reduce unwarranted variation more of a challenge. There are many claims, fuelled by hope and rhetoric to devolve and decentralise power, which is often presented as the magic bullet to address problems within the health system (Saltman et al, 2006) and is an aspiration that has dogged the NHS as it attempts to shift from a centralist, hierarchical and bureaucratic organisation towards a network (Exworthy & Frosini, 2008) or a market (Lewis & Dixon, 2005). The ceaseless centralisation of power, however, maintains the NHS as a dynamic political environment leaving it open to frequent reform and change (Klein, 2010), demonstrated by the most recent reorganisation in April 2013, described in detail in the white paper “Equity and Excellence: Liberating the NHS” (DH, 2010a). This white paper laid out a reform programme that was specifically designed to deliver a fresh perspective to improve the commissioning (or purchasing) side of the NHS, through a significant reorganisation of commissioning organisations, a change which, more or less, left the provider, monitoring and regulatory structures unchanged; an issue which will surface again later in Chapter 7 as the findings from this study are revealed.

It is worth pausing here to consider the centralisation of the NHS, the many attempts to decentralise and the public perception of the NHS. Regardless of the attempts to devolve power demonstrated by the many self-governing organisations within the system it is not inconceivable that the public perception of the NHS continues to be that of a single monolithic body – one national organisation with direct control over all aspects of care. This perception may be justifiable, built on the premise that the notion of belonging to and working for the NHS has implied some kind of solidarity, referred to as “a family” (Checkland, 2012) with a commonality of purpose and experience and a sense of national pride, positioning the NHS as the closest thing to a religion (Delamothe, 2008). However, the reality is quite different; the NHS today is a multifarious set of organisations, all of which maintain an irresistible trend to bureaucratise (Woods, 2010), many with their own governance arrangements and accountability to different national regulatory jurisdictions, with ultimate accountability to central government through the Secretary of State for Health.

That complexity makes the identification and reduction of unwarranted variation a bigger challenge for the NHS. Nonetheless, the important call has been made, via the instrument of policy, that the NHS should reduce unwarranted variation. For that initiative to be successful, clinicians and policy makers must find the competence, curiosity and courage to confront variation (Mulley, 2009), and this study is seeking to make a small contribution to understanding that challenge.

## 2.4 REFORMING THE NHS

The previous section has demonstrated that the NHS is far from a monolithic organisation. Instead, it is more a system – a description that is becoming more common – albeit a complex adaptive system that hides the organisational arrangement of cultures, sub-cultures and networks (Plsek, 2000). This complexity is compounded by frequent upheavals through constant reorganisations (Klein, 2010) and reforms, of which the unforeseen consequences and dysfunctional effects (Edwards, 2010) are considered to outweigh any benefits (Dunbar, 2011). These programmes of reform may be designed to cultivate a managerial rather than political agenda, as characterised in the latest reforms outlined in “Equity and Excellence: Liberating the NHS” (DH, 2010a), which again cushioned a reorganisation by the claim that it was planned to decentralise power (Millar et al, 2011).

This may be a case of history repeating itself. There was a similar proclamation of the reform programme of the 1980’s, with the acknowledgement that, at that time, there were wide variations in the cost of treatment, waiting times, prescription and referral, and a programme of reform was crafted as a way of dealing with those pressures. The proposal, at that time, was to raise performance, improve management and delegate responsibility (Greener et al, 2011), which marked two major reform initiatives, one at either end of that decade. The 1980’s saw the start of many management reforms and reorganisations as illustrated in Table 1. One of the significant reforms was outlined in the Griffiths report (Department of Health and Social Security [DHSS], 1983), which introduced the notion of managerialism. These reforms were a direct challenge to the dominant role of the professionals and the way they organise themselves (NHS Institute, 2008). The second set of reforms at the end of that decade saw the introduction of the purchaser (later referred to as commissioner) and provider split (DH, 1989). Relative to this study, both these initiatives were characterised as a drive towards increased efficiency and are important in setting the context for this study as they introduced the purchaser/provider split and the issue of managerialism and professionalism, which are discussed later.

**Table 1 – Significant NHS reforms and reorganisations, 1982-2010**

Year	Legislation/documentation	Implications to NHS
1982	Reorganisation	Abolition of area health authorities; reconfiguration of regions and 192 district health authorities; 90 family practitioner committees remained unchanged
1990	NHS and Community Care Act	Reconfiguration of NHS; health authorities established to oversee NHS trusts and general practitioner (GP) fundholding introduced, overseen by family health service authorities (FHSAs); introduction of purchaser/provider split
1994	The NHS: A Service with Ambitions – Primary Care Delivering the Future	Health authorities reconfigured to 8 and FHSAs dissolved with responsibilities transferred to new health authorities
1997	The New NHS: Modern, Dependable NHS Primary Care Act	GP fundholding abolished; new models of primary care provision and choice established
2000	The NHS Plan	Abolition of NHS Executive; Department of Health and Social Care (DHSC) established
2002	Shifting the Balance of Power within the NHS	DHSC dissolved and 96 health authorities abolished with the creation of 28 strategic health authorities (SHAs); 303 primary care trusts (PCTs) established
2004	The NHS Improvement Plan Commissioning a Patient Led NHS Practice Based Commissioning: Engaging Practices in Commissioning	First 10 foundation trust (FTs) established; plans to widen practice-based commissioning
2006	Our Health, Our Care, Our Say	SHAs reduced from 28 to 10 and PCTs merged from 303 to 151
2008	Our NHS, Our Future	Reorganisation dismissed as an option for improvement but PCTs directed to separate purchasing and provision arms
2010	Equity and Excellence: Liberating the NHS	Significant reorganisation of NHS structures; abolition of SHAs and PCTs, and creation of the NHS Commissioning Board, Public Health England, NHS Trust Development Authority and 303 clinical commissioning groups

#### **2.4.1 The separation of commissioning and providing in the NHS**

The white paper “Working for Patients” (DH, 1989), separated the NHS into two congregations: purchasing and providing. The driver of that policy was to introduce market principles into the NHS, jolting the NHS into a new paradigm (Enthoven, 1990) where competition would play a key part in the planning and delivery of care and where purchasers would tender out contracts for provider organisations to secure. The ambition was that market principles would lead to greater efficiency by rewarding efficient providers, who could then increase their revenue from an increase in activity by gaining more contracts (Day & Klein, 1991). The introduction of the market, however, has not been welcomed by all. Some claim that the formation of the purchaser/provider split has had a dysfunctional and disruptive impact on health care services (Ferlie, 2010) claiming that the introduction of market principles heralded the end of the NHS, with its death fixed with some precision at the publication date of the 1990 white paper (Klein, 2010). The structure of the purchaser/provider split has rarely been stable due to the frequency with which the NHS is reorganised (Hunter, 2012). These constant upheavals, or “re-forming and deforming” (Paton, 2013), are not always popular and bring with them unintended consequences, such as ruptures in long-term relationships (Chambers et al, 2013), which may breed the inertia around taking any action to reduce unwarranted of variation.

In 1997 the new Labour administration wanted to distance itself from the notion of market principles within the NHS, referring to collaboration rather than competition (Knapp et al, 2001) and the unambiguous claim that there were no serious purchasers in the NHS (Light, 1998). The purchaser/provider split was, however, retained with purchasing being reframed as commissioning, which has become something of an obsession (Smith et al, 2013). Sharing ground in the same quasi-market as providers, commissioning organisations continue to hold responsibility for some provision of services and are also expected to embrace a proactive strategic role in planning, designing and implementing a range of services required for a designated population (Woodin, 2006). These arrangements and the declared weakness of commissioning led to a further complexity within the NHS. This was distorted by the power retained by the main provider organisations, some of them giants of the NHS, which made the practice of commissioning immensely difficult (Jones & Wood, 2010) – more so, as it remains a largely neglected and under-developed process (Wade, 2011).

One of the obsessions of commissioning in the NHS has been to place clinicians at the heart of that process. Indeed, the current policy initiative (DH, 2010a) places GPs and clinicians at the head of the

commissioning table (Reynolds & McKee, 2012), a practice that draws a warning that it can only be achieved by extending the gate keeper and role of healer of GPs to encompass the role of commissioner with full budgetary control (Smith & Mays, 2012). This obsession is not new (Gridley, 2012), we are reminded that indicative budgets were offered to entice GPs to volunteer to participate in commissioning under the policy of fundholding (Neal, 2005). This policy turned out to be one of the most controversial parts of the internal market reforms (Dusheiko et al, 2008) and the return of clinicians to the forefront of commissioning could suggest that policy makers do not seem to have learnt the lessons from fundholding (Roland & Rosen, 2010) where many clinicians generally avoided assuming roles that appear to be politically orientated and dominated by managers. This is a concern that has been crystallised since the introduction of managerialism, which retains a division of labour between managers and the powerful and influential professionals.

## **2.5 THE INFLUENCE OF PROFESSIONALISM AND MANAGERIALISM ON VARIATION**

The dynamic relationship of managers and professionals has led to tension for many years as doctors have rarely seen eye to eye on what a health service should provide and how it should be managed (Winyard, 2003), with both parties wrestling for control as the medical profession exerts control and usurps illegitimate power (Illich, 1988). Freidson (1994) would claim that by usurping this power, doctors send a signal that the medical profession would rather serve themselves than the interests of the patient as they try to preserve their professional power and boundaries. This is a controversy that the Thatcher government attempted to address through the Griffiths report (DHSS, 1983).

Public bureaucracies sustain a fine balance of decision making between professionals and managers (Cardinalaels & Soderstrom, 2013). This is particularly true in medicine, where the norm of medical practice is so loosely defined that it allows too much ambiguity (Wennberg, 1984). Professionals have a distinctive and special way of controlling organisations, their work and the workers (Evetts, 2011) to promote and control the cultural (Michalec & Hafferty, 2014). The Griffiths review of NHS management (DHSS, 1983) was commissioned to address this perceived grip of medical dominance and the perceived lack of management accountability, performance measurement and NHS responsiveness. The review was an attempt to de-stabilise the power that the medical profession held (Day & Klein, 1991) and a means to penetrate medical “tribalism” (Hunter, 1996) by honing in on the “holy grail” of clinical freedom by asking who was responsible for clinical effectiveness.

Prior to the implementation of the Griffiths report in 1983, the NHS was run by the medical profession who were supported by administrators. The introduction of managerialism, however, did little to break down the power held by the professions; consultants retained their autonomy and power by being able to set the standards of performance against which they could be measured, as well as the means by which they were held to account for them, leading to claims that although Griffiths' diagnosis was right – declaring that the NHS required a better grip of management to manage the dominance of the professionals – there are suggestions that his treatment was too vague because the policy initiative lacked any bite (Day & Klein, 1983). The consequence of Griffiths' review was little change; managers were unable to become more proactive and strategic because of their lack of control over clinicians as doctors rejected new managerialism as a programme to impose controls (Som, 2005) and to turn the attention of clinicians onto managerial issues, rather than clinical matters (Freeth et al, 2008). Spence (2010) confirms this notion, suggesting that the freedom of professionals and the power they retained has changed little since the Griffiths review; managers continue to attempt to control costs and measure activity, a behaviour that only draws condemnation from the medical profession.

There have been other efforts, some more covert than others, to wrestle control away from the professionals. One such attempt was the introduction of market principles (Flynn, 2012) applying a covert set of behaviours using tools and processes, for example, performance management, audit and regulation to act as a shield of bureaucracy to constrain medical dominance, (Mannion, 2009). More recent efforts have been attempted through a new democracy of health care that introduces patient choice and consumerism. However, as Kelleher et al (2013) note, each time these attempts have been made, they are easily brushed aside by clinicians. Brody (2010) believes it because they enjoy too much freedom to dominate health care. This reluctance to take account of variation in clinical practice removes it from the day-to-day concerns of clinical staff, making it a management driven exercise (Degeling et al, 2004). However, the idea that clinicians' behaviour is a contributing factor to causing and sustaining unwarranted variation is fiercely disputed by medics as they defend their practice, possibly through fear and a lack of understanding (Berwick, 1999).

In summary, it is suggested that any action to identify and reduce unwarranted variation will need to gain both clinical and managerial interest as well as harness support from both groups to align the required technical, political and regulatory solutions (Knickman, 2004). This will not be an easy undertaking; it will need to be handled sensitively, acknowledging that clinicians continue to hold a dominant position in the NHS, regardless of the attempts by politicians and others to bring a

balanced and more democratic distribution of that power. This position remains one of the fundamental themes of this study as demonstrated in the following literature review, which will focus on the common themes emerging out of this study.

## Chapter 3: Developing a conceptual framework

### 3.1 A LITERATURE REFRESH

A literature review, submitted in part fulfilment of the doctorate, explored the concept of variation in health care in detail (DaSilva, 2012b). This chapter will re-establish some of the knowledge gleaned from that review with attention paid to those key themes that have not been refreshed in the previous chapter. It will also introduce the findings to emerge during the course of this study (DaSilva, 2012c; 2013).

The literature confirmed that variation remains endemic (Dodgion & Greenberg, 2009) with many articles published (McPherson et al, 1986; Ham, 1988; Berwick, 1991; Casparie, 1996; Wennberg & Wennberg, 2003; Appleby et al, 2011; Castelli et al, 2014) since the seminal paper (Glover, 1938) identifying the presence of variation in health care across demographic groups, geographic areas, institutions and even within individual health care providers. The examination of the literature also identified variation between GPs and practices, in areas such as the frequency of contacts, diagnostic test ordering, referrals, prescription rates and follow-up appointments (de Jong et al, 2006).

Much of the literature has focused on specific clinical conditions or interventions (McPherson, 2008; McPherson et al, 2013) whilst others have researched for any association between health care system resources and utilisation rates (Appleby et al, 2011). A handful of studies suggest that some progress may have been made in addressing variation, using variation as an indicator for quality improvement and in patient safety (Leggat et al, 2011). However, the majority of the literature reviewed confirms that the past 40 years have seen health care research in this area largely focused on the identification and measurement, rather than the management or reduction, of unwarranted variation in health care.

It is, therefore, perhaps not surprising that no new literature could be found to describe, or give any indications regarding, how the NHS should respond to the problem of variation or what barriers prevent the NHS taking action to reduce unwarranted variation, endorsing the importance of this study. Indeed, the literature frequently fails to offer a clearly articulated rationale, or argument, as to why dealing with variation is considered important although we are reminded that it is, after all, the hallmark of poor quality (Hannan, 1999), leading to waste and duplication (Wennberg, 2010, DH,

2010c; 2011). This study will aim to close that knowledge gap, using findings from previous research and the recent literature review, which established the key themes discussed earlier, and the recent literature review other themes were identified as illustrated in the mind-map below.

**Figure 3 – Mind map of key themes**



### **3.1.1 The concept of unwarranted variation**

The literature review established that the concept of variation is perplexing and confusing (DaSilva, 2012b). This is compounded by the lack of a clear definition to describe those variations considered unwarranted and any rational case for the NHS to take action. Thomson (2002) invites us to reflect on the call to action, asking what the problem is with variation, reminding us that if a policy is not to become lost in translation, a case of need and supporting actions will have to be explained in clear terms. DaSilva, (2012b) cited Toulmin's theory (2003) of creating the right argument as a way of helping us to shape that claim and create the right narrative to act.

Toulmin's framework was proposed as a way forward as the failure to act may be due to failure to explain why it is important for the NHS to take action to reduce unwarranted variation. The suggestion was that the creation of a clear narrative needed urgent consideration and that Toulmin's framework offered a well-ordered way to deconstruct the phenomenon of variation and present the case for why the NHS should reduce unwarranted variation. However, the support for Toulmin's framework did not come without the caveat that the model is not a linear description of a problem but a dynamic and functional process to frame and re-frame the narrative to create and maintain a persuasive argument to galvanise professionals into action with a shared goal to unite the interest and activities which is critical to any success, (Porter, 2010).

Thus far, the literature has implied that it is rare for commentators to examine the breadth and depth of the issue (de Jong et al, 2006), conveying an air of inertia rather than a curiosity to act, as encouraged by Mulley (2009). It has been suggested that the right argument has not been constructed to galvanise the NHS to take action. One part of that process will be to offer a clear definition.

### **3.1.2 Defining unwarranted variation**

The simple declaration of the existence of variation, combined with the interchangeable descriptions, has been highlighted throughout the review of the literature which does not offer much assistance in resolving the challenge to understand what action should be taken and what barriers prevent that action. As a reminder, this study adopted Wennberg's (2010) definition of unwarranted variation, as that which cannot be explained on the basis of illness, medical evidence or

patient preference. However, it is important to appraise the faithful acceptability of his work; if only to be assured that we are not blinded by the claims made by those supporters of Wennberg.

The influence that Wennberg and colleagues has made should not be underestimated, nor should it go unchallenged. White (2011) acknowledges the great work of Wennberg but raises a challenge with a claim that Wennberg's work is only half of the story. The literature offers a definition (Wennberg 2010) but fails to offer any compelling policy ideas on what to do about those variations, implying it is because those decisions may be unpalatable. This study will pick up on the challenge laid by White (2011) and seek to nudge the debate forward to use the findings of this study to consider the implications for practice and to propose a way forward, palatable or not.

### **3.1.3 The role of clinical guidelines in reducing unwarranted variation**

The literature reveals that guidelines have been developed for many years (Grol, 1992) as a process to increase efficiency (Conroy & Shannon, 1995), assist clinicians make appropriate decisions (Siriwardena, 1995), improve quality (Lugtenberg et al, 2011), decrease inappropriate variation (Cabana et al, 1999) and as a potential tool to decrease unjustified variation in treatments (Cluzeau & Littlejohns, 1999). The uptake of guidelines is acknowledged as being an effective tool for reducing variation in health care and costs by improving the quality of patient care (Grimshaw et al, 2004; Rashidian et al, 2008), and they are considered the most common initiative to reduce unwarranted variation in clinical practice (Kennedy et al, 2010). However, they do carry their own health warning with reminders that physicians are not always keen to follow guidelines (de Jong et al, 2010; Carlsen & Bringedal, 2011).

Clinical guidelines can be defined as being systematically designed accounts that translate the findings of research into best practice, in order to assist clinicians find the most appropriate care for reducing variation in health care (Spyridonidis & Calnan, 2011). The effectiveness of implementation is challenged (Gundersen, 2000) and with an eye to the earlier warning that doctors and hospitals resist guidelines as "cookbook medicine", which threatens the art and autonomy of medical practice (Berwick, 1991), it is unsurprising that guidelines cause such emotional discord. One reason for this distrust of guidelines is that clinicians frequently question the evidence base, which in turn becomes a barrier to implementation (Spallek et al, 2010). As many are connected to the drug industry (Tanne, 2005), there is also concern that guidelines create perverse incentives, which is likely to increase variation rather than reduce it. Nonetheless, that concern needs to be balanced with the

awareness that guideline development has been successful in challenging unjustified variation in clinical practice by shifting the locus of clinical decision-making towards high-quality care (Sheldon, 2005). This was proposed as a method of keeping physicians up to date and reducing unwarranted variation (Enthoven, 2009).

Lugtenberg et al (2011) suggest that barriers to adherence of guidelines lie not only with the clinician but also with the patient as well as the organisational context and the culture of the system. This is a sentiment not lost on Berwick (1991), who warns of the potential of misuse, with good reason as guidelines may become politicised and impractical, leading to concerns about the uniqueness of an individual patient (Carlsen et al, 2007).

#### **3.1.4 The introduction of market principles and the purchaser/provider split**

This topic was introduced in Chapter 2, but a fresh review of the literature regarding the purchaser/provider split is presented here. Gubb and Meller-Herbert (2009) argued for keeping health care away from market conditions, claiming that health care is central to humankind and also has high upfront costs. This claim is reinforced by Allen (2013) who claimed that it is not possible to construct a market conforming to classical economic principles in respect of health care. Regardless of these warnings, the policy for a market within the NHS has been maintained by successive governments and the conundrum here is whether variation in health care has gone unchecked for so long, with precedence given to the formation and maintenance of a quasi-market and many re-organisations.

The literature reveals that the development of an internal market has offered benefits, for example opening up new information and data sources, creating a database capable of generating the necessary information required to operate the new system (Day & Klein, 1991). This is considered one of the essential steps necessary to address unwarranted variation (Sipkoff, 2003; DaSilva, 2013). However, Klein (2010) challenges this, suggesting that the introduction of market conditions has highlighted an asymmetry in the information available to purchasers (commissioners) and providers, with it favouring the latter, where information is power.

That perceived preferential position for providers goes beyond data and information; the structure of the provider side of the NHS has remained fairly static over recent years, unlike the commissioning side, which has been constantly reconfigured. Reforms of the provider side have

been around the policy changes to increase diversity of providers and increase the notion of competition (Allen, 2009), where providers have been encouraged to develop a semi-autonomous function of self-governance, frequently denounced as privatisation by another name (Day & Klein, 1991). This policy has received a bad reaction from both professionals and the public (O'Dowd, 2011) as it forces provider organisations to compete with each other for contracts, This is considered a barrier for any provider to seek out unwarranted variation as the priority is on gaining contracts and increasing activity. This is an unforeseen consequence that increases variation (Wennberg et al, 2008) as more resources are made available on the supply side; a point illustrated by their reflection on practice in areas where there are more cardiovascular surgeons, more cardiovascular surgery is performed, regardless of need.

However, evidence about the supply side in the English NHS shows that there has not been a large amount of competition between suppliers (Propper et al, 2008) although there has been a marked evolution of the provider sector, which is constructed to survive in market conditions. This is exhibited no better than through the introduction of the foundation trust movement and the policy designed to extend patient choice and increase of supply through the independent sector treatment centres. In 2007 the NHS saw funds directed to the use these facilities, with SHAs judged by the impact their PCTs had on setting contracts with private providers (DH, 2007). Pollock & Godden (2008) remind us that the DH failed to collect or provide any useful data to evaluate that policy suffice to say it reduce any opportunity to manage supply. Allen (2009) concludes that the policy of competition is too optimistic about the benefits and does not show enough concern about the undesirable consequences.

Furthermore, there is a suggestion that commissioning organisations are considered weak in relation to providers (Abbott et al, 2009) and do not “fit” into the structures and process of the NHS (Checkland, 2012). This creates a tension between the provider side and purchasing/commissioning side of the NHS, which has become a long-established encounter, with considerable critical comment aimed at the process of commissioning (Black, 2010). Commissioning, however, has also been described as behaviour, not a process (DaSilva, 2012a), exhibited through a multiplicity of relationships within a complex system that needs to be considered separately from the traditional image of purchasing. The current focus for commissioning is directed towards engaging GPs, under the headline of “clinical commissioning”. This is a worrying trend as an earlier evaluation of GPs and commissioning (Smith & Mays, 2012) suggested that GPs were as likely to focus on structures and process, and there is little to suspect that this might change. Whilst it may be simplistic and more

comfortable for GPs to focus on structures again, that will not achieve the ambition of the government to improve clinical commissioning (Ellwood, 1997; Abbott et al, 2009).

### **3.2 MOVING THE DEBATE FORWARD**

The literature reveals that it is rare for commentators to offer a solution to the persistence of variation. One of the few papers to propose a way forward was published more than a decade ago (Sipkoff, 2003). This suggested there were nine steps necessary to a health system reducing unwarranted variation. Although this paper refers to the American health system, the steps do translate to the NHS in England. The important link to this current study is that Sipkoff's publication appeared at a time that saw the implementation of the "NHS Plan", which launched a target driven culture within the NHS by laying down definitions and measurement processes for a list of targets where the results of achievement would be made public. This was considered a high-octane mechanism for altering provider organisation and clinician behaviour (Stevens, 2004). Interestingly, of all the targets developed, the literature does not reveal any assistance in identifying those that were specifically aimed at identifying or reducing unwarranted variation. That intention was more covert and process orientated, ironically leading to variation of implementation (Drennan et al, 2011). Furthermore, Gravelle et al (2007) concluded that the interpretation of such a target orientated process introduced an additional range of services into primary care without an associated reduction in hospital admissions, perhaps an unforeseen consequence of the policy – an increase in variation.

The symmetry from the period of Sipkoff (2003) and present day is that confusion remains amongst NHS leaders about whether to create a definition for unwarranted variation or whether guidelines would help to reduce unwarranted variation. These are two concepts that have become common themes throughout this study and warrant further exploration alongside another key theme: reorganisation. It is of concern that at the time of the publication of Sipkoff's paper in 2003, the NHS was undergoing a significant reorganisation, scrapping district health authorities and replacing them with new organisations to be responsible for commissioning services for a defined population. It is of more concern that the NHS has since reorganised again, not once but twice, in the same decade, perhaps protracting the inertia the NHS exhibits about the concept of variation. This refreshed literature review will now begin to focus on those key themes uncovered from the findings of the research so far (DaSilva, 2012c; 2013), which have assisted in shaping the research questions.

### **3.3 SUMMARY**

The ambition for the NHS to identify and reduce unwarranted variation, set against the backdrop of the historical tensions brought about by the conflicting priorities of the purchaser/provider split is challenging. This literature review has demonstrated that the any potential solutions go well beyond the constant structural change and reforms, confirming the claim that until recently policy makers and managers have concentrated on only a part of the problem presented by variation (Wennberg, 2010).

Several key themes have surfaced throughout this study, drawing the conclusion that there is no doubting that variation in health care is a problem as much today as it has been since before the introduction of the NHS, with variation observed in many procedures and across many sectors of health care. Of more concern, however, is that few commentators explore what to do about variation and how to move beyond the identification of unwarranted variation to taking action to reduce it, as required through the NHS Mandate (DH, 2013). These key themes offer a focus for this study, which is aiming to attain new knowledge and shed light on the puzzle presented by unwarranted variation. Each of the themes remains a separate piece of the jigsaw, each with its own issues and challenges, but progress needs to be made to create the right argument to why and how the NHS can piece that puzzle together, where each of the themes can complement the others and where the dynamics of the complex system can function cohesively to identify and reduce unwarranted variation. This study aims to make a contribution to solving that puzzle by exploring why variation is a problem, how the NHS should address that problem and what barriers are preventing action being taken to reduce unwarranted variation.

## **Chapter 4: A summary of the research findings so far**

### **4.1 INTRODUCTION**

The research study has been developed over five years, with primary data collected through the period 2010-2012, to provide fresh insight on how the NHS responds to variation in the provision, uptake and cost of health care. This chapter will share the methods and findings of earlier research that contributed to shaping the research questions for this thesis.

### **4.2 OVERVIEW OF THE STUDY TO DATE**

This study has applied both qualitative and quantitative methods to explore the concept of unwarranted variation. It has established that the concept of variation remains an unsolved puzzle, with no clarity of the action required, by which discipline or organisation, to identify and reduce unwarranted variation. This is a position that deserves further exploration and investigation. By way of background it is considered beneficial to provide a summary of the methods and findings from earlier research (DaSilva, 2012b; 2012c; 2013) starting with a piece of qualitative research, introduced by a review of the perception of qualitative research in the NHS.

Qualitative research is often dismissed as not being the traditional method in the NHS (Silverman, 2010) as it is not considered as robust as quantitative research. Accordingly, the position of qualitative research was evaluated to offer assurance that the findings from the study could be reasonably interpreted and offered as useful, thus mitigating any challenge to the findings through a simplistic recourse to challenge the methodology (DaSilva, 2012c). In summary, that evaluation concluded that qualitative research is of equal importance – and indeed complements quantitative research (Grol et al, 1992; Grypdonck, 2006) – and that researchers should strive to prevent methodological separatism and supremacy (Malterud, 2001). Furthermore, the benefits of qualitative research are finding favour as a method of supplementing quantitative research, for clinical, organisational and policy decision makers, particularly when studying a complex phenomenon (DaSilva, 2012b).

### **4.3 SUMMARY OF DOCUMENT 3**

This study adopted purposive sampling, sometimes referred to as non-probabilistic sampling, justified as a sound technique to study required special or unique cases. It is employed when the individual case itself, or a specific group of cases, is a major focus of the investigation (Teddlie & Yu, 2007). The access to special cases in this study was by interviewing a number of executive members of the NHS Commissioning Board and a number of leading GPs in the forming CCGs.

The literature review had established the main themes, which were used to outline the structure of a set of semi-structured interviews. Care was taken to ensure the interviews were carried out according to high ethical standards, offering confidence to the subjects and ensuring that they were fully aware of the purpose and methods of the research. Subjects were reminded that they could withdraw at any point. An outline of the areas to probe was constructed to ensure that questions flowed and that each of the topics was covered.

### **4.4 EMERGING THEMES**

One of the early findings from this study was the sensitivity around the formation of a definition and a sharp, sometimes abrupt discord amongst members of the executive board of NHS England when probed about their understanding of unwarranted variation and how the NHS should respond. That discord uncovered a sense of tension and an air of reluctance to even discuss the issue of variation, including at commissioning board level; although their comments offered a tacit expectation that this was a role for commissioners, using existing management and contracting processes. There appeared to be little cohesion amongst members to inspire any confidence that identifying and reducing unwarranted variation was an issue that they would address, with some even stating that the undertaking was “just too difficult”. This was a marked contrast to the response, during an informal conversation, with a very senior government official, who not only believed that the NHS should address unwarranted variation but that he expected the NHS to respond accordingly.

A further set of semi-structured interviews was conducted to capture the views of a sample of key clinical members of the forming CCGs. The views expressed by those leading clinicians, when asked whether or not the NHS should address unwarranted variation, were remarkably different to those from the executive members of the NHS Commissioning Board. Most of the senior clinicians believed that the NHS should respond to this phenomenon and commented that they anticipated stronger

leadership, which included a definition of unwarranted variation from the Commissioning Board. It was interesting to note that some of the leading clinicians associated this phenomenon with the way the management of the NHS had behaved previously, creating a target culture, and claimed that the NHS Commissioning Board had no difficulty in telling them [GPs] what other targets to deliver and how to deliver them, for example waiting times or access to see a GP, for which a definition for measurement was created. It was therefore with puzzlement that the clinicians asked: why can't they do it for unwarranted variation?

The text below draws out the key themes established from the literature and interviews, which illustrate a yawning gap between members of the NHS Commissioning Board and the leading GPs on this issue:

#### **4.4.1 Key Theme – Definition**

*"I think there should be a commonly-used definition of what warranted and unwarranted variation is. I think it's quite difficult to do but I think it must be possible... I've put no effort into actually doing that but I do think it needs to be done."* [Executive member, NHS Commissioning Board]

*"I am opposed to the concept of defining variation... as there are different degrees for legitimate variations in different processes and outcomes..."* [Executive member, NHS Commissioning Board]

Those working in the service at the CCG offered a different view:

*"It would be very useful to have greater clarity on it... I find as I go round talking to people about variation, different people have very different understandings of what it is and which problems it's going to solve and how it's going to solve them, and what those solutions will look like."* [GP]

*"To use variation as a tool... is a valuable tool, it's a really good prompt and I don't know of any GP or clinician that does not respond to being an outlier when you look at variation."*  
[GP]

The dissent in the executive group echoes the literature where Thompson (2002) asks what the problem is with variation as it is inevitable a point reinforced by Neuhauser et al (2011) claiming that some variation is random and cannot be eliminated.

#### **4.4.2 Key Theme – Managerialism/professionalism**

The views of the GPs were less pointed when probed more deeply about the identification and measurement of unwarranted variation, rousing some animated discussions amongst the clinicians. These were related to the use of poor data to measure improvement, as demonstrated by the passages below:

*“We [GPs] have had some dreadful data used to measure our performance...” [GP]*

*“It does depend who [provides the data] and how those data are provided...it’s an issue of trust and then ownership... one of the first reactions is that the data is not right; it’s a defence of our clinical practice.” [GP]*

*“If you put performance data up, doctors being doctors will say the data’s faulty or my patients are different. Doctors will always try and justify that.” [GP]*

These remarks reiterate discoveries from the literature. Berwick (1991) warned of the need for sensitivity when using performance data with clinicians. Dawson et al (2010) confirms this point, claiming that the use of performance data did not contribute to the better management of variation. This is a view endorsed by Hibbard et al (2005), who claimed that the public reporting of the hospital “star-rating system” would actually fail to reduce variation, perhaps due to the manipulation of data to achieve targets (Bevan & Hood, 2006).

#### **4.4.3 Key Theme – Training**

One theme that captured a sense of harmony amongst all respondents was that the NHS needs to do more to understand the concept of variation better and that the NHS may need to review training at all levels to incorporate the concept of unwarranted variation within core professional development programmes.

*“Where doctors are trained I think makes a difference. I think the people who have been responsible for supervising them and training them make a difference.” [Executive member, NHS Commissioning Board]*

*“I think you should go right back to the start of training to be quite honest. I think it’s medical training and for GPs it’s vocational training and specialist training for others.” [GP]*

*“I think the profession has, at times, been incredibly arrogant in the past and still is to a fairly significant extent, in a way that actually doesn’t serve our patients well... clinicians think they’re doing the right thing... and therefore clinical variation is always somebody else’s fault or somebody else’s problem.” [GP]*

#### **4.4.4 Key Theme – Reform**

The theme that captured most cohesion and energy and verbosity was the issue of reform and constant reorganisation, considered as being unnecessary changes, deflecting attention from those issues that really matter: patient care. The topic that was discussed the most was a perceived need to reform primary care, particularly as the implementation of the current reforms directed the majority of NHS funds through the new CCGs, with GPs sitting on the governing body.

*“The NHS has a long history of structuring itself and convening itself in a way that’s suitable to the people that work in the NHS rather than for the people receiving care.” [Executive member, NHS Commissioning Board]*

*“I think it’s [the GP contract] a huge problem, I think it’s an absolutely huge problem because it goes from the sublime to the ridiculous... which kind of says ‘put your brass plate up and open your doors and you’ll get all this much money’... it needs reforming.” [Executive member, NHS Commissioning Board]*

*“It’s the way that general practice has been funded and organised over the years, over many, many years... is rather on a bid culture basis, so inequalities and variations have arisen within practices.” [GP]*

The themes above draw on the literature again, which confirms frequent reform (Klein, 2010; Hunter, 2012) and that clinical practice is one of the causes of unwarranted variation (Wennberg, 2010) balanced with the knowledge that engaging professionals is considered an essential step to successful reform (Hurst, 2010).

These themes captured in document 3 became constant and, supported by the literature, were conveyed into the next part of the study, a quantitative piece of research that helped to refine the conceptual framework.

In summary, fresh material was elicited, which confirmed the themes and formed the research questions:

- Does the NHS have a clear definition and classification of variation?
- Is variation an issue for the NHS?
- Is there a consensus on who should search for and address unwarranted variation?
- Do individuals believe it is their role to reduce unwarranted variation?
- Has training on the subject been made available and, if so, has it been of benefit?

#### **4.5 SUMMARY OF DOCUMENT 4**

Document 4, a quantitative study, is where the themes and concepts began to crystallise and where material and theories became more settled. Acknowledging that it would have been difficult and unmanageable given the size, complexity and nature of the NHS to seek a random sample of respondents from the 211 CCGs and 27 local area teams covering the English NHS, a strategy of convenience and judgemental sampling was adopted. This was justified as the cohort identified was restricted to those CCGs and area teams in the East Midlands, an area that represents approximately 10% of the NHS, thus creating a representative sample from which inferences could be made about the NHS as a whole.

The period of data collection was November 2012 to December 2012 and the instrument for the survey was an anonymised postal questionnaire, a method frequently adopted in health service research (Cook et al, 2009). Convenience sampling was used to identify subjects working in the newly formed CCG and area team within the geographical foot-print of the East Midlands. These new organisations were identified as being of meaningful importance and the natural next stage of

this study to capture wider and deeper contributions from the “field” in an attempt to improve representativeness and validity. The findings offered fresh discoveries that shaped the conceptual framework and are shared below, thus reiterating the key themes.

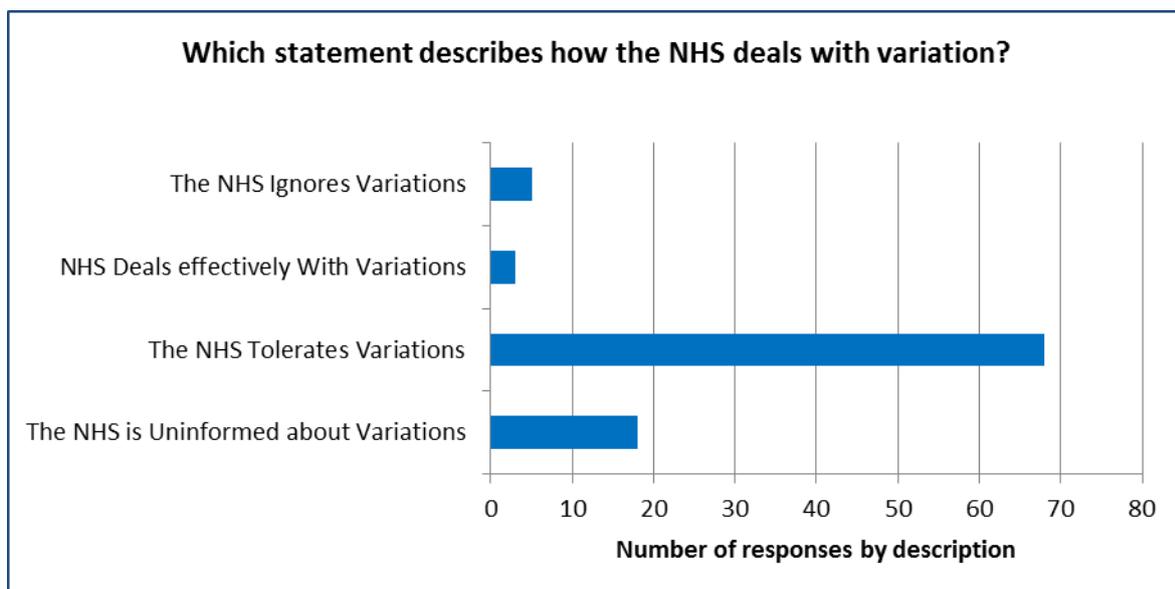
#### 4.5.1 Key Theme – Definition

The classification or definition of variation has become another key theme. The majority of respondents from the small, geographical study responded that the NHS should investigate variation and also that the NHS should have a common definition. Interestingly, 52% of respondents claimed to already have their own working definition whilst others sought clarity by the provision of a definition. Of note, the contrary view, similar to that from the qualitative piece, is that some respondents believe that endorsing a definition would be unhelpful, judging that it may set parameters that constrain clinical practice. This was a concern of many when describing clinical guidelines, which became a key concept following this piece, supported by the literature.

#### 4.5.2 Key Theme – Dealing with variation

The literature has confirmed that variation has been a conundrum for the NHS throughout its existence. The repeated exposure of variation led the researcher to identify how the NHS considered that it currently deals with variation. Subjects were given the choice of four statements to describe how they perceived the NHS currently does this, with the majority view being that the NHS tolerates variation.

**Figure 4**



#### **4.5.3 Key theme – Which organisation should identify variation?**

The response to this question from the limited geographical non-probabilistic sample frame began to crystallise the development of the main research question and sample frame. There was an overwhelming response to suggest that reducing variation was the role of the new commissioning organisations in the NHS, reiterating the inferred view of the executive members of the NHS Commissioning Board.

The forming view is that the NHS perceives that tackling variation is too difficult, leaving the phenomenon to be unchallenged. What remains unclear is which organisation should lead this investigation and action and what are the views of commissioning and provider organisations. This deserved further exploration and formed the key line of inquiry for the main research question.

Acknowledging that the study has introduced limitations by adopting non-probabilistic sampling, the next phase is to test these lines of inquiry across a wider geography. First, to understand the perspective of the providers, through semi structured interviews and second to understand whether commissioning organisations are doing anything about reducing variation and for that a data source will be artefact analysis of commissioning organisation governing body papers, to confirm or deny that they are dealing with this issue.

#### **4.6 SUMMARY**

In summary, the analysis of the previous research (DaSilva, 2012b; 2013) established some common themes. These were mirrored by the literature and confirmed that the themes of study are like disconnected jigsaw pieces, illustrated below, with each piece holding a small part of the potential solution to resolve the problem of unwarranted variation. Blending the findings and literature as pieces of the puzzle has helped to shape the questions and conceptual framework for this study. For example, the qualitative piece offered markedly different views, some polarised at the extreme, about the need for a definition. This is an issue that remains unresolved alongside the appreciation of any preferred classification. Other evidence outlined the implicit expectation that it is the role of commissioning organisations to identify and reduce unwarranted variation; again this requires deeper investigation to understand the perception of provider organisations. The next step is to seek to answer those new questions which will follow the next chapter.

- ✓ There is no clear definition (Bojakowski, 2010; Mercuri et al, 2011)



- ✓ The NHS is frequently reorganised (Klein, 2010)



- ✓ There is modest knowledge of the subject (Ham, 1988; Wennberg, 2010; Mulley 2010)



- ✓ Guidelines offer a way of reducing variation (Schwalm & Yusuf, 2011)

- ✓ The NHS is a complex adaptive system (Plsek, 2000)



## **Chapter 5: Research aims and questions**

### **5.1 THE AIMS OF THE STUDY**

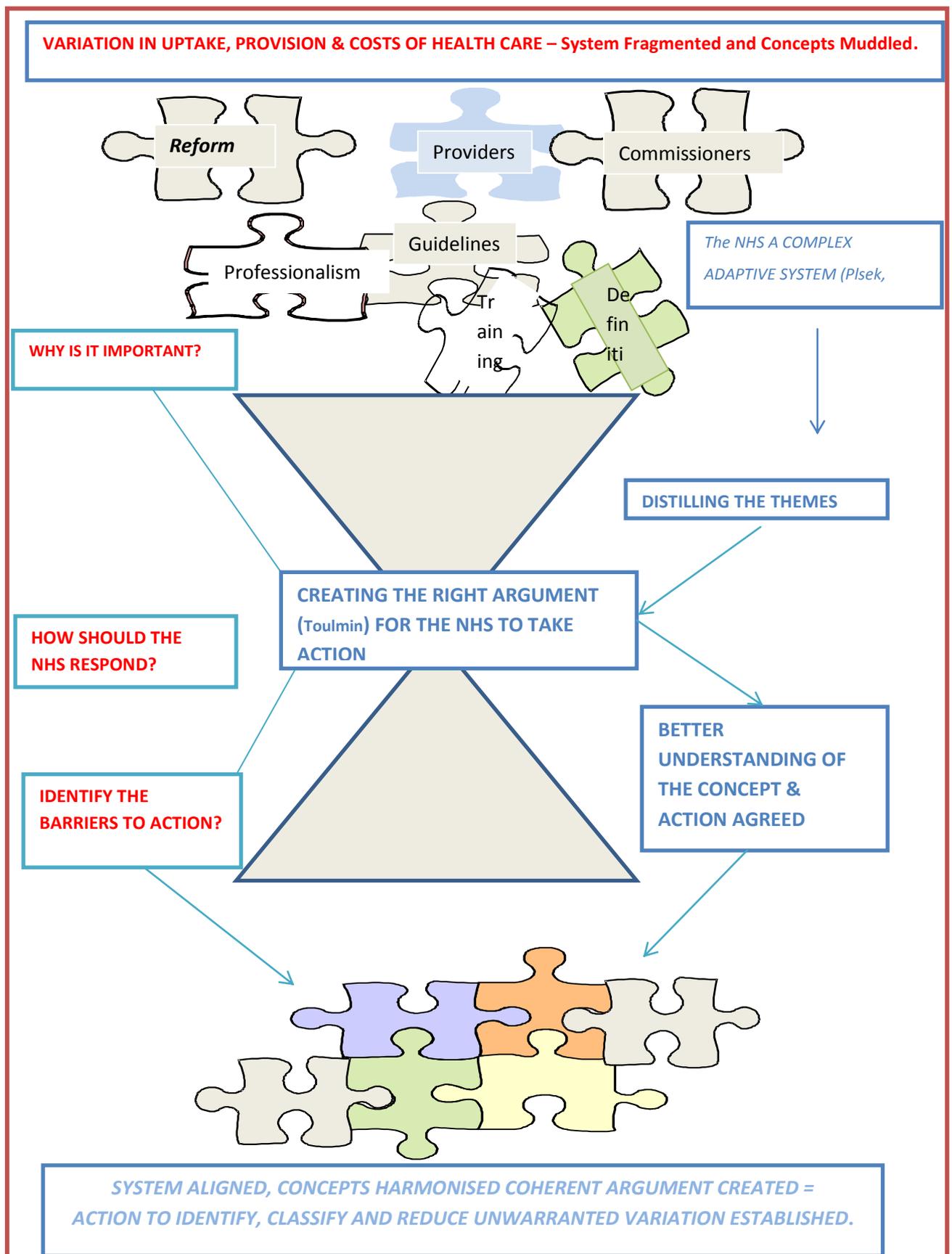
Thus far, the majority of the literature holds its focus on the identification and recording of variation (McPherson, 2008; Appleby et al, 2011; Mercuri & Gafni, 2011) and this thesis will reflect on that contribution. This study will, however, aim to take that important contribution one step further to understand what, if anything, can be done about reducing the observed variation by investigating some of the key themes, outlined in the previous chapter, with the main objective of establishing which organisation(s) should lead the search for and reduction of unwarranted variation.

This thesis will build on previous research (DaSilva, 2012b; 2012c; 2013) and use the analysis of primary data to describe the implications for practice. To achieve this, the thesis needs to revisit the common themes and create a conceptual framework to help refine the line of inquiry and establish the questions to test.

### **5.2 THE CONCEPTUAL FRAMEWORK**

The conceptual framework has developed through stages of thinking and reflection, evolving as the study progressed. It has set a framework for the study as an orderly arrangement of key themes and concepts to shape and simplify the research (Fisher, 2010), channelling the findings into a discussion (Miles & Huberman, 1994). It is acknowledged that, at the beginning of the study, the conceptual framework was, at best, embryonic and constructed as a simple collection and grouping of complex issues and topics (DaSilva, 2012b). It has evolved through reflective practice, extensive reading and discussion with peers. The conceptual framework has also been enhanced through the findings from earlier work (DaSilva, 2012c; 2013), to a puzzle, within a fragmented system where concepts are muddled and themes disarranged, moving to a more sophisticated alignment of concepts.

Figure 5 Conceptual Framework



### 5.3 AN EVOLVING FRAMEWORK

The concept of variation in health care continues to puzzle commentators, many quickly flashing a light over the subject without fully exploring the topic (de Jong, 2012). This piece of research endeavoured to investigate the concept of variation using different lenses by applying qualitative and quantitative methods (DaSilva, 2012c; 2013) with the aim of understanding why it is an important issue for the NHS, how it can be addressed and what barriers are preventing action to reduce unwarranted variation.

The research developed around a broad conceptual framework, incorporating two key theories. The first was built from the principles of creating the right argument (Toulmin, 2003), which offered a platform to articulate why the NHS should respond to reducing unwarranted variation. The second theory is the NHS as a complex adaptive system (Plsek, 2000), which gracefully balanced the emerging themes drawn from the literature (DaSilva, 2012b; 2013) offering a perspective why little or no action was taking place.

The emerging themes which included the classification and lack of a clear definition of unwarranted variation, the unending programme of reform and reorganisation of the NHS with its implications and consequences (Fulop et al, 2005) built on the notion of market principles and the implications of the purchaser/provider split, the impact of clinical guidelines and the training needs of staff to be confident to search and identify unwarranted variation.

### 5.4 FORMING THE RESEARCH QUESTIONS

The earlier research (DaSilva, 2012b; 2012c; 2013) explored the topic of variation in health care using different methods and by filtering and distilling those findings, some meaningful themes have remained consistent. These have shaped the following research questions:

- *What are variations in healthcare and why are they important?*
- *How should the problem of dealing with unwarranted variation be addressed?*
- *What are the perceived barriers to the NHS responding to unwarranted variation?*

## **Chapter 6: Research approach**

### **6.1 INTRODUCTION**

This chapter will reveal the methods and instruments for data collection. It will justify why rejecting the single use of either a quantitative or qualitative method was made and why a mixed methodology was identified as the most appropriate way of gaining robust data for analysis to answer the research question. With the context and motives for this study declared in Chapter 2, this chapter will assert the philosophical stance, being careful not to waste too much time on the declaration and defence of a theoretical position at the expense of the study itself (Sandelowski, 2000).

### **6.2 RESEARCH PHILOSOPHY**

The genesis of the study was postulating that there may be a single answer to explain why unwarranted variation persists in the NHS. It had been considered that such an answer may be created by a better alignment of existing practices – for example, clinical training or management processes in the planning or contracting activities of the NHS.

The starting point was from an assumed position of a realist, a perspective of positivism (Fisher, 2010) where knowledge can – and can only – be gained by objective observation and measurement (Cameron & Price, 2009). This approach would generally consider using scientific methods, which would conform to using quantitative research methods. However, following periods of contemplation and on reflection it was considered that adopting a quantitative method alone may not answer the research questions. The same conclusion was drawn when considering a qualitative method only too, which is why a mixed methods approach was adopted; representing a marked development in scholarship and a new confidence in research methodology.

The level of confidence was recognised as my own philosophical position began to form, built on the comfort that all measurement is fallible and through interpretation can be justified (Goldkuhl, 2012). This was, in part, triggered by an epiphany realising that all data and facts are like pebbles on a beach, waiting to be picked up and collected, looked at from time to time and measured to create knowledge (Arah et al, 2003). A second philosophical movement was the recognition that the study

may make a small, but nonetheless important, contribution to the topic under scrutiny; it was, after all, not going to be providing a single answer or a solution.

This sophistication led to a declared ontological position as a realist acknowledging that adopting this stance, recognising that truths can be established in a social reality, introduces inherent dangers of ignoring bias by illuminating one's own assumptions and describing what the researcher wants to see from the data and evidence, (Orb et al, 2000) rather than explaining what is actually being observed (Fisher, 2010). Furthermore, in declaring an ontological position as a realist it is a reminder that researcher's need to be aware not proceed arbitrarily to consent to accept data and facts as presented, but to adopt a research methodology which will not abandon all objectivity and measurement (Cameron & Price, 2009).

This maturity and personal growth provides sound evidence of a transformation and increasing comfort in reflective practice and to review material through different lenses, to seek and discover new knowledge. Indeed, the behaviour and response from leading clinicians, described in section 1.4, was one of the reasons this study was conceived and undertaking the study has stimulated an greater appreciation of their reaction, although not their behaviour. This transformation in thinking was not a single event. It has occurred many times throughout this study; I have even stopped to ask myself whether variations really exist and whether the study is focused on the right topic!

Furthermore, in declaring ones philosophical stance, it is important to retain an awareness of other paradigms and not to rely wholly on looking through the realist lens, but to constantly reflect and consider the ontological position and the position of other commentators and subjects participating in this study. This reflection is important when applying a mixed methodology, recalling that answers and concepts will have been constructed from the responding subjects' own understanding of reality and their experience and understanding of the concept in question – in this case - variations in health care.

In summary, the declaration of one's own is philosophical position is important to appreciate and to reflect upon. I have made the bold assertion that I seek more comfort in adopting a stance of realism. My personal declaration should not, however, determine the whole study. This is a point made by Trochim (2006), who declares that researchers should check in on the philosophical debate from time to time and think about the assumptions we make about the world when we conduct

research. Nonetheless, in the meantime, we cannot wait for the philosophers to settle the matter. After all, we do have our own work to do!

### **6.3 ETHICAL CONSIDERATIONS**

Ethical considerations are woven throughout any research and can be intimidating (Orb et al, 2000; Guillemin & Gillam, 2004). Although the ethical principles governing qualitative and quantitative research are essentially the same (Richards & Schwartz, 2002), there are a number of special ethical issues that arise in relation to research in health care (Merriam, 1998; Orb et al, 2000; Yin, 2009). It is vital, therefore, that researchers navigate an unsoiled course through their research study (O’Leary, 2009), remembering that those pieces of research that do not meet the high standards of ethics cannot be referred to as good research (Bowling, 2009).

This warning necessitates that researchers remain alert at all times, remembering that the research study must be conducted with integrity, do no harm and adhere strictly to the ethical codes (Bryman & Bell, 2007). In this case, the ethical codes include those of Nottingham Trent University, the NHS Managers Code of Conduct and those of the professional body for nurses, the Nursing and Midwifery Council (NMC). It is important to remain alert to these codes as they may be updated and amended on occasion and could assist researchers by including a fast track or automatic approval process (Cameron & Price, 2009) when studies require the researcher to seek ethical approval (Moule & Hek, 2011).

The NHS in England has a long history of producing and preserving ethical guidelines, overseen by local research committees (LREC). Research guidelines have mainly been in the area of clinical trials and medical research but are also there as governance for all other types of research. Whilst there to protect researchers and participants of research, particularly vulnerable groups, this governance system has been criticised as being too onerous and inconsistent (McDonach et al, 2009), with some offering solutions to speed up the process (Tod et al, 2002) and others suggesting that some research could be overseen by other research governance structures (Ashcroft et al, 2005).

This research study found favour in obtaining approval through the National Research Ethics Service (NRES) and the Integrated Research Application System (IRAS). Regulations for research were amended in the NHS in April 2009 although some still say that those changes did not go far enough (Thompson & France, 2010). However, as the proposed study involved survey and interviewing staff

and reviewing public documents and no identifiable patient information from health records was to be used, confirmation was received that the study did not require full LREC approval. Therefore, the research study could proceed once university ethical approval had also been received. This was sought and granted at each stage of data collection with final approval granted in August 2013. However, the streamlining of research application process through the National Research Ethics Service (NRES) and the Integrated Research Application System (IRAS) was helpful but not an escape from retaining an awareness of the principles of good ethical research. The principles of good research were applied at each and every stage. To ensure and maintain high ethical standards, a clear process to collect the data was designed to assure the participants of their position in the study. For example, they had opportunities to withhold any information or withdraw from the study at any time. To illuminate this important point, the first set of data was to be collected through questionnaires for subjects identified using non-probabilistic sampling. A letter was forwarded to each individual to explain the context of the study and the expectations of their contribution.

The same process was adopted for the collection of qualitative data, through semi-structured interviews. Each subject was copied a letter of invitation to join the study and offered an opportunity to ask any questions, prior to, during and following the interview. Each subject was also invited to sign a form, prior to any questions, to indicate that they understood the purpose of the interview, that it was a part of a research study, that they had received the briefing details to explain the research and that they could withdraw at any time of the study. The participants were also made explicitly aware that their signature gave permission for the interviews to be recorded, for transcribing at a later date and that they could be used in whole for the study. Again, they were reminded that at any time of their choosing the tape could be turned off and the contents destroyed. At the closure of each interview, each subject was invited to offer any additional information beyond the structured interview if they wished, before de-brief of the interview was completed, ensuring the participant was comfortable with all proceedings.

#### **6.4 RESEARCH METHODOLOGY**

This study is seeking to understand how the NHS can respond to the problem of variation and what barriers prevent action to reduce unwarranted variation. This is an issue that is becoming increasingly important during a period of austerity and rising demand and as the NHS seeks to reduce duplication and minimise waste, to release funding to invest in higher value care (Porter & Teisberg, 2006; Cheung & Gray, 2012).

It was not possible to engage the entire NHS and, acknowledging that selecting either of the two traditional methods may not yield the data necessary to answer the research question, a mixed methodology was identified as the best option. It is recognised that any data collection was unlikely to obtain a true representative “sample”, thus introducing limitations by fixing a magnetic block to the compass of scientific generalisability (Bryman & Bell, 2007) and transferability (Guba & Lincoln, 1994). As a means of mitigation, the study would triangulate multiple sources of data to increase the reliability and validity (Van de Ven, 2007). These limitations are declared and placed up front to assist the reader balance the strengths of this study, which is seeking to understand a multifaceted phenomenon (variation in health care) within a complex organisation (the NHS in England).

#### **6.4.1 Applying a mixed methodology**

Clough & Nutbrown (2012) make the point that it is important to declare and justify the methodology, the steps to be taken and the methods to assure readers that the methodology can answer the research questions. The methodology selected was a “mixed methods” approach, which has come of age (Creswell, 2011) with recognition that research moves along a continuum (Creswell, 2003) and that the choice between quantitative and qualitative research methods should be determined by nothing more than the research question (Marshall, 1996).

A mixed methodology is further justified recalling that qualitative methods are concerned with the systematic collection, ordering, description and interpretation of textual data generated from talk, observation or documentation (Kitto et al, 2008; Gorman & Clayton, 2004; Yin, 2009). It is considered a more flexible method than quantitative research in that it emphasises discovering novel or unanticipated findings (Bryman, 1984). On the other hand, the deliberation was whether to adopt a quantitative method. This was not wholly rejected but was considered a weak method as it may offer narrow answers that may not yield adequate data to answer the questions.

A principle was made which was not to dismiss or reject the importance of either of the two traditional methods as quantitative research needs to be complemented with observational and qualitative studies, which can gather preliminary data to inform the design of quantitative research in creative ways to answer research questions (Teddlie & Yu, 2007). Malterud (2001) agrees, we need to prevent methodological separatism and supremacy if the field of medical knowledge and the benefits of a qualitative approach to health care research are becoming increasingly recognised by both academics and clinicians. Grypdonck (2006) helps us further to appreciate that qualitative

research is important for providing the understanding that is necessary to apply findings from quantitative research properly and safely.

Therefore, the justification is revealed for selecting a mixed methodology as it is considered fruitful in bringing the benefit of not restricting the study to a set paradigm and way of thinking (Plowright, 2012). The adoption of the methodology is considered constructive and beneficial to this study, and is further justified on the following three points:

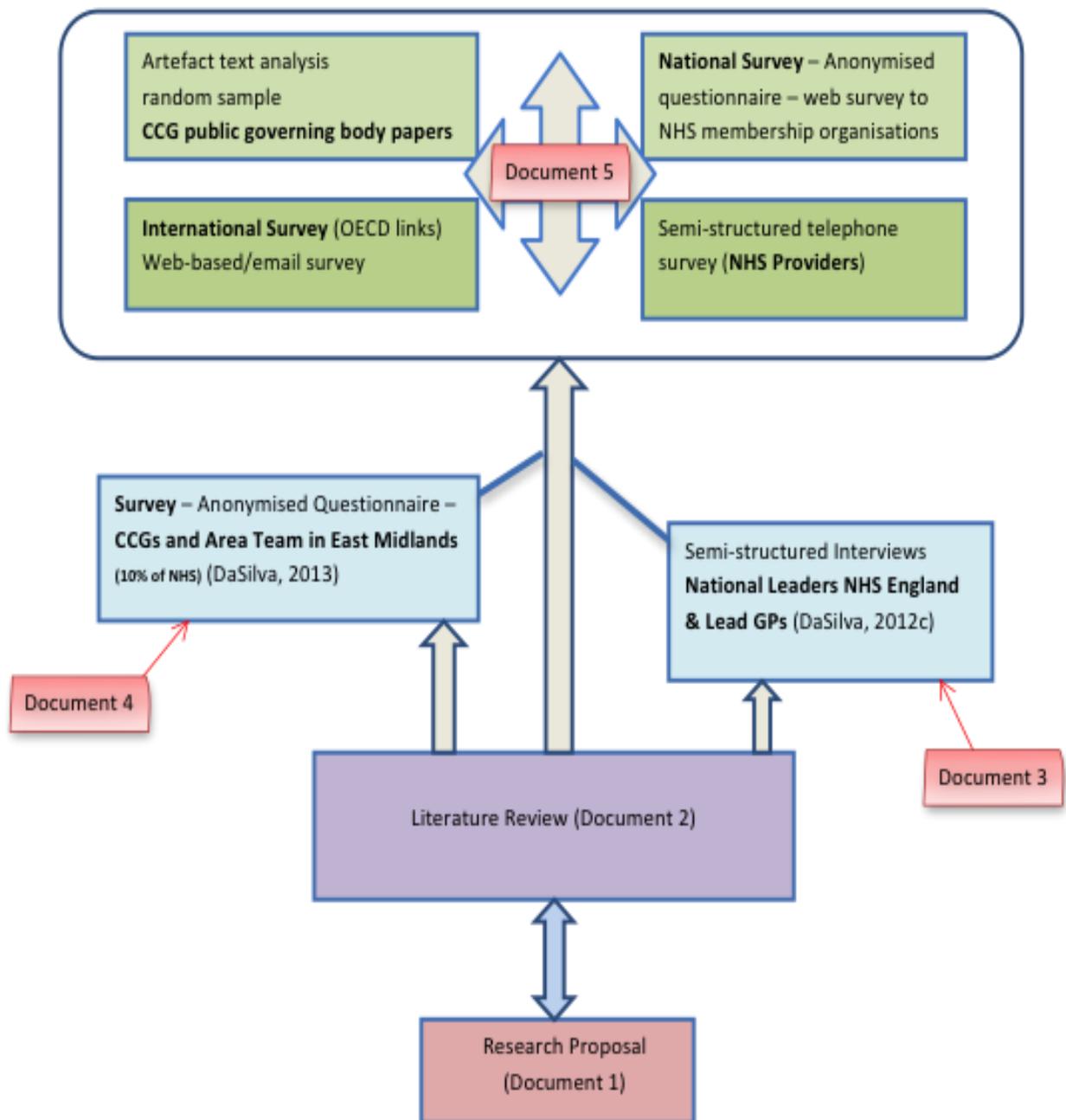
- The first was that the study was undertaken over a relatively short period of time, with the researcher operating within the requirements of a supervised and formal course. Whilst this compressed any scope of designing an in-depth study using either the qualitative or quantitative method, the benefit is that the requirements of the course offered a greater insight and proficiency into the existing research methods, presenting greater enlightenment, opportunity and personal development.
- Second, adopting a mixed methods approach does not dictate that the researcher holds a particular fixed philosophical position prior to beginning the research study (Plowright, 2012). Instead, the researcher retains an open mind to finding a solution to an important issue – in this case which organisation(s) should lead the response to reduce unwarranted variation.
- The third point was based on the profound epiphany that the study was not likely to reveal a single answer, as postulated at the outset, nor was there to be any kind of set picture; it had to be an iterative process. This position required heightened reflexivity and an open mind to construct a methodology that was capable of capturing the evidence to be able to answer the research question. Furthermore, the selection of a mixed methodology, comprising data collection through sets of semi-structured interviews and a review of artefacts and text analysis, supplemented with quantitative data collected through surveys, offered greater scope for deeper triangulation and greater validity (Bryman & Bell, 2007).

#### **6.4.2 Research design**

This study was conducted over a five-year period, with all data collected from August 2010 to December 2013, with the final set of data collected following ethical approval in August 2013 and

concluded in December 2013. The illustration below reveals the process for data collection to build the evidence base to answer the research questions. A brief résumé of the study will be offered to demonstrate how it has been assembled, using the findings from Documents 3 and 4, shared in more detail in Chapter 4, to build the research question and methodology for this final piece of the study. The illustration below clarifies the sources of data collection for the whole study, culminating in Document 5, the thesis.

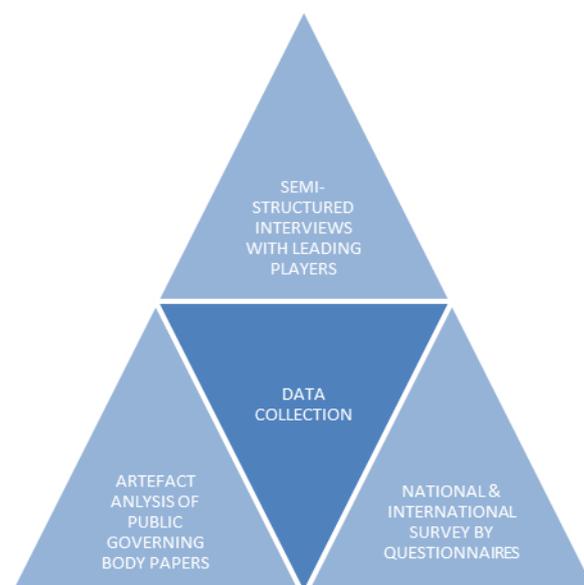
**Figure 6 – The sources of data for the study**



### 6.4.3 Deciding the sample frame

One of the eternal criticisms of research is that the sample size is often considered too small, with frequent disputes around the number of subjects required to allow a piece of research to be considered valid. Guest et al (2006) claim that having undertaken a comprehensive review of the literature, there is neither a fixed number, nor are there any fixed guidelines for determining sample sizes; it is a matter of judgement (Sandelowski, 2000). Maxwell (2008) describes the dilemma that whenever you have a choice about when and where to observe, whom to talk to or what information sources to focus on, you are faced with a sampling decision as, clearly, you cannot seek to interview everybody (Miles & Huberman, 1994) and may, therefore, need to go for convenience sampling (Buglear, 2005). Acknowledging those challenges and faced with the task of presenting this study as representative, a mixed method approach and convenience sampling (Marshall, 1996; Sandelowski, 2000; Bryman & Bell, 2007) was adopted to offer both breadth and depth to the study, complemented by triangulation of multiple sources of evidence. The data analysis triangulation applied in this study used multiple sets of data to illuminate and offer depth and density to the data (Price, 2006). It demonstrates construct validity (Yin, 2009) and increases reliability and validity (Van de Ven, 2007) as the diagram below illustrates:

**Figure 7 – Data triangulation using multiple sources of data**



#### 6.4.5 Data collection and sample frame

The data collection process, for the final part of this five year study, embraced three proven techniques: they are surveys using anonymised questionnaires, which provide a quick method of collecting data to provide insights into individual and organisational practices (Baruch & Holtom, 2008), a set of semi-structured interviews, widely used and practical (Cameron & Price, 2009), and a review of artefact text analysis, which offers precise and unobtrusive evidence (Yin, 2009).

Acknowledging the small sample sizes throughout this study, it was important to use multiple sets of data to increase validity and to strengthen the study (Bryman, 2001; Bryman & Bell, 2007; Fisher, 2010). Therefore, four sets of data were collected to offer ecological validity. The sample frame would be broadened to a national sample and three other sources of data collection:

1. A national survey used a web-based tool (SurveyMonkey) to disseminate an anonymised questionnaire to the full membership of two national NHS organisations representing both commissioning and provider organisations of the NHS. The questionnaire was posted on two separate occasions, a month apart, with an email to the membership to invite them to participate at two weekly intervals.
2. A random sample group of CCGs, for artefact analysis, was identified using the national list of the 211 authorised CCGs on the NHS England website and inviting a colleague to select 21 random numbers between 1 and 211. Each number selected was then cross-referenced to the national list to identify that CCG.
3. A sample of senior executives, working at board level positions, in an NHS provider organisation. Convenience sampling was used to ensure representation from a mixture of foundation trusts and non-foundation trusts as well as acute, mental health and community organisations.
4. The final sample was a group of international “experts” working on the same topic (the investigation into unwarranted variation) in their own country. This group was identified through the membership list of the expert panel for the Organisation for Economic Co-operation and Development (OECD) working group on medical practice variation and the Wennberg Collaborative (an international group of researchers studying this phenomenon).

Thus, four sets of data have been collected for this final piece to complement the data collected from previous research, the obligatory stages of the DBA (DaSilva, 2012b; 2012c; 2013), and the interpretation and review of each has played its part to fashion sources of evidence.

## **6.5 SUMMARY**

This chapter has positioned how the research was planned and executed, including the sources of data, how those sources were carefully selected and the process for analysis. The study triangulated multiple sources of data to declare construct validity, offering a greater depth and breadth to the study. The data for this study has been prepared in the visual form of tabulation, formed from pivot tables where appropriate, to enable the reader to see results without distracting them with fanciful schemata. The presentation of other data will use the form of free text and quotations from the transcription of the interviews. The next chapter will present the findings and analysis.

## **Chapter 7: Findings and Analysis**

### **7.1 INTRODUCTION**

This chapter discloses the findings from the primary data collected from the four sources and will reveal how these findings are strengthened by the supporting literature and the combination of the findings from earlier research (DaSilva, 2012c; 2013) to build a robust evidence base to support the conclusions and recommendations for practice in Chapter 8. This chapter will share the findings from the analysis by following the questions (Section 1.1) as a line of inquiry.

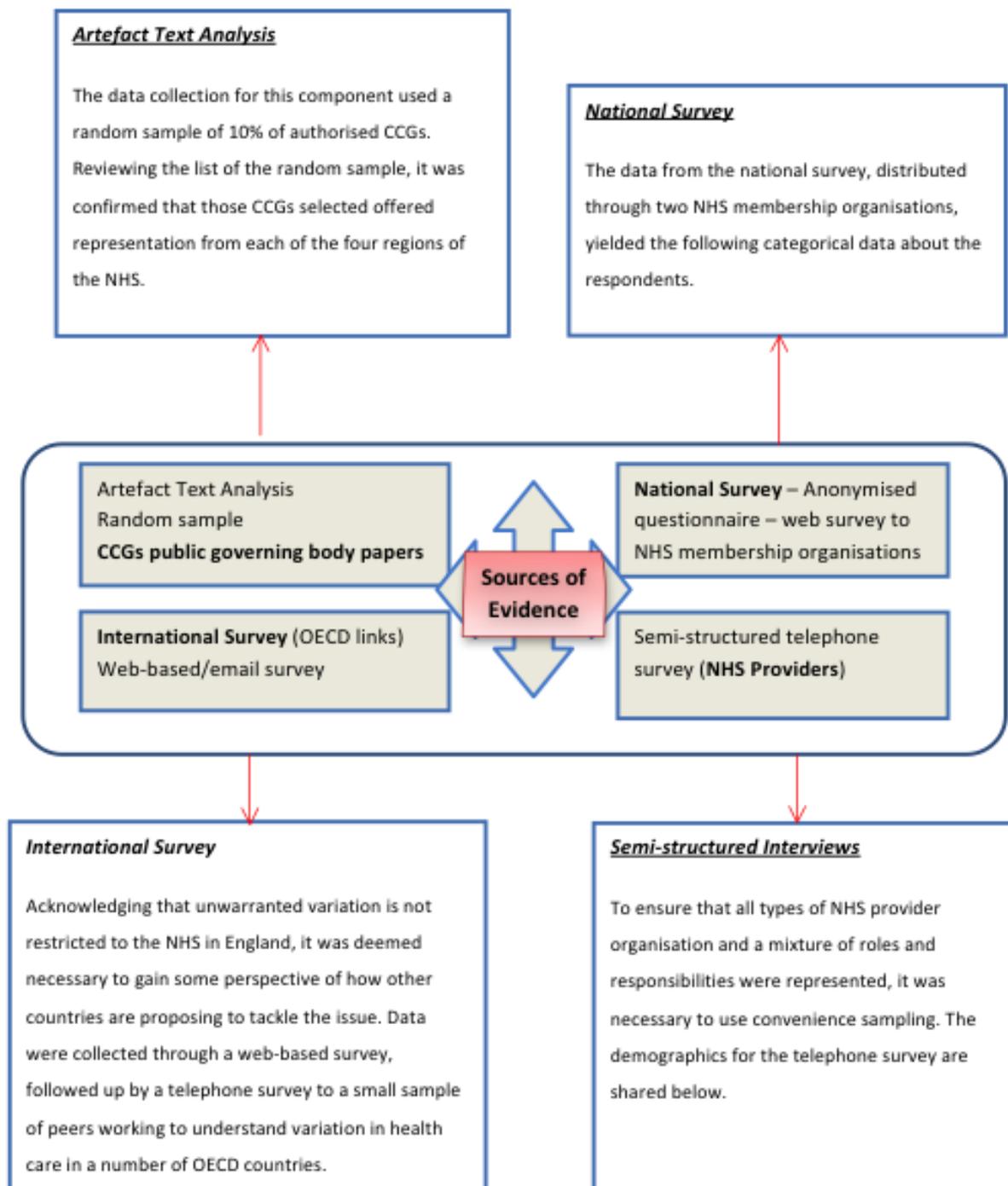
#### **7.1.1 Sources of Evidence**

There are four sources of data for this document. First, there is a national survey which collected data via an anonymised questionnaire from the membership of two national NHS organisations, which yielded 242 responses. The anonymised survey did offer a representative, albeit small, sample of NHS staff which was acknowledged as a limitation to the overall study. Therefore, to strengthen the study, three further data sources were used (Figure 8) with the findings triangulated to offer a strong evidence base.

Those four sources of data are illustrated below:

- A national survey of two NHS membership organisations
- A semi-structured telephone survey of NHS Providers.
- Artefact Analysis from a random sample of CCG governing body papers
- International survey of OECD countries

**Figure 8 – Description of the sources of evidence for Document 5**

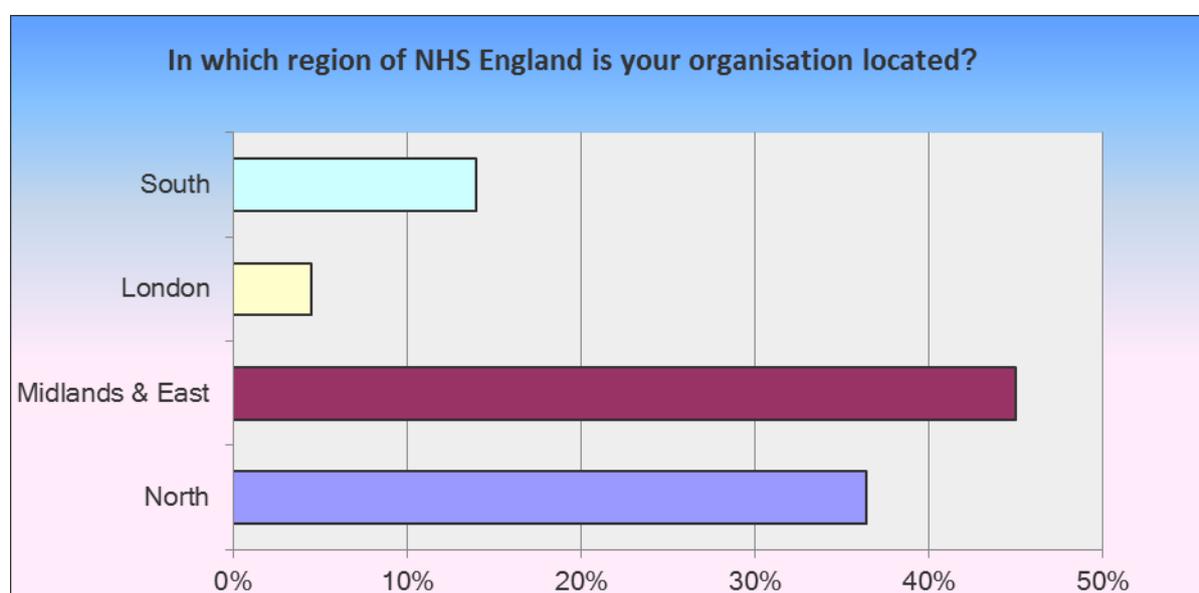


These sources of data will complement the data and findings captured in Documents 3 & 4 (DaSilva 2012c; 2013) as illustrated in figure 6 - pg 46

### 7.1.2 Survey Demographics

The first figure shows the demographics of respondents from the national survey. Analysis revealed that the 242 responses yielded responses from each of the four geographical and administrative regions of NHS England, confirming a good geographical spread of the NHS. Although it was not a true representative sample, it is considered sufficiently diverse to analyse and present the findings as evidence to answer the research questions.

**Figure 9: Region of respondents' workplace**



Answer Options	Response Percent	Response Count
North	36.4%	88
Midlands & East	45.0%	109
London	4.5%	11
South	14.0%	34
<i>answered question</i>		<b>242</b>
<i>skipped question</i>		<b>0</b>

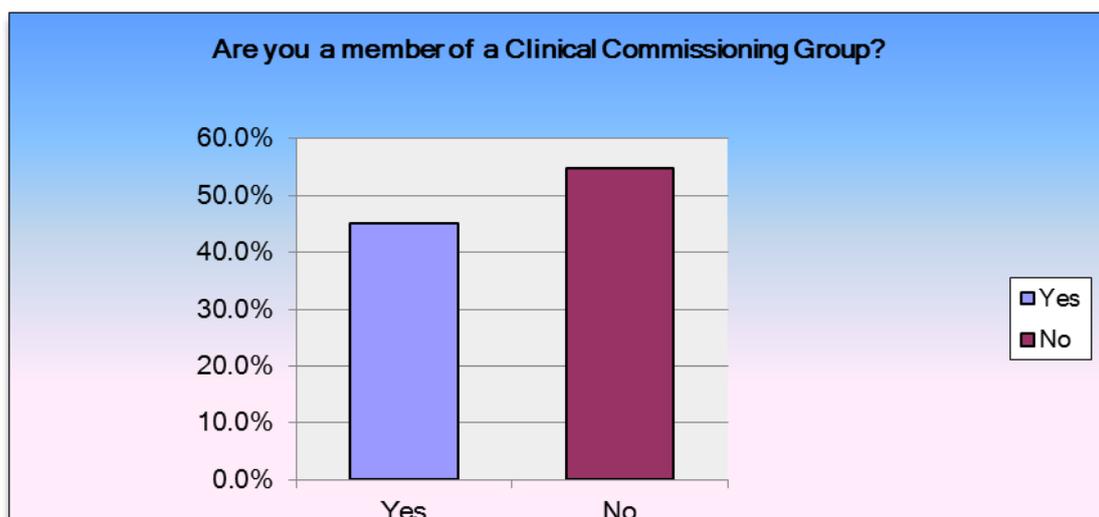
The highest numbers of responses were from the two geographical regions covering the North of England and the Midlands and East region. This pattern of responses raises an interesting question, which would warrant its own research study: Is there an uneven spread of knowledge or interest in the topic of variation in health care, with a sharper focus towards the North of England creating a

North/South divide? Alternatively, is there a geographical divide in the observation of the incidence of variation across the NHS, with it being a bigger problem for the north of the country?

The literature would contradict that assertion, with evidence to suggest that there is not a North/South divide; many studies (Reid et al, 1999; McPherson, 2008; Dodgion & Greenberg, 2009; McBride et al, 2010; Appleby et al, 2011; DH, 2010c; 2011) have confirmed the existence of variation in health care across the wide geography of NHS England. It is, therefore, reasonable to declare that it is not an issue restricted to any one part of the country. A possible cause for this pattern of response could be researcher bias, where the higher response rate has come from those areas where the researcher may have had an influence on those subjects responding to the survey. Again, that hypothesis would require a much deeper exploration and analysis to eliminate bias (Cameron & Price, 2009). However, the risk of bias was noted and the action taken to mitigate that risk was to use multiple sources of data, (Figure 8), and always to retain an open mind about the outcome of the research.

The next question aimed to identify whether the respondents were a member of a Clinical commissioning group (CCG) or not. The NHS established 211 CCGs in April 2013 to take over the commissioning role of the Primary Care Trusts and some of the work of Strategic Health Authorities, which had been disestablished in the latest NHS organisational reforms as described in 'Equity and Excellence – Liberating the NHS (DH 2010a).

**Figure 10: Membership of a Clinical Commissioning Group**



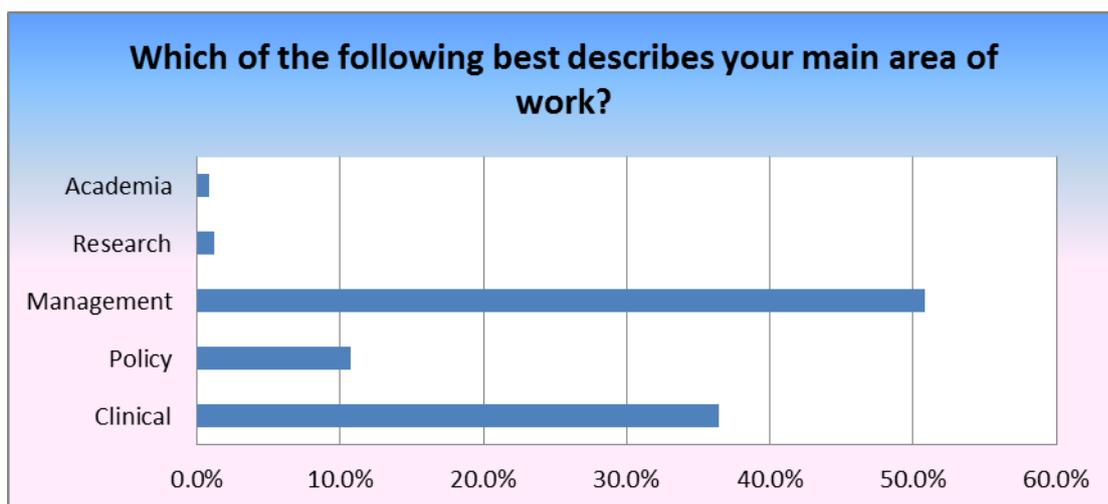
Are you a member of a Clinical Commissioning Group?		
Answer Options	Response Percent	Response Count
Yes	45.2%	90

No	54.8%	109
<i>answered question</i>		<b>199</b>
<i>skipped question</i>		<b>43</b>

The response reveals that 45% of respondents were a member of a CCG and 55% were not. This does not, however, offer a clear picture of the respondents, nor is it possible to assume that the 55% of respondents claiming not to be in a CCG were functioning in a provider organisation. The next question aimed to understand more of the role of respondents.

It is acknowledged that the response to this next question did not yield a perfect representative sample of the NHS workforce, according to data from the health and social care information centre ([www.hscic.gov.uk/workforce](http://www.hscic.gov.uk/workforce)) but the survey did produce a good spread of professional groups which offers the study an acceptable blend and cross-section of the NHS workforce, as described in figure 11 below.

**Figure 11: Respondents main area of work**



Which of the following best describes your main area of work?		
Answer Options	Response Percent	Response Count
Clinical	36.4%	88
Policy	10.7%	26
Management	50.8%	123
Research	1.2%	3
Academia	0.8%	2
Other (please specify)		21
<i>answered question</i>		<b>242</b>

The highest response, 51%, claimed that the description “management” best described their role, followed by 36% of respondents selecting that the title “clinical” best described their role. A further

11% identified their role as being “policy” and 2% as, “research” or “academia”. There were another 21 responses identified themselves as belonging to the category of “other”; which, on analysis appears to be more related to a role description, not classification of role; for example, Head of Performance, Prescribing Advisor or Development Officer Public Health.

### 7.1.3 Triangulating the Data

The study used multiple sources of data which were triangulated as a method of increasing the validity by mitigating the risk of bias and potential limitations of a small sample from the national survey, as introduced in section 6.4.3.

The next data set was gathered through a semi-structured telephone survey of a NHS Providers. It was not possible, due to constraints of time and resource, to include all NHS providers in this study as the number of organisations reaches almost 300, even when excluding non-for-profit organisations and general practices. Therefore, a sampling method was adopted which sought to ensure that a mixture of provider types were included and for the sample to include at least one provider type from each of the main types of provider commonly found in the NHS. The sample was achieved using the technique of non-probabilistic sampling to identify a number of individuals (n=10) working at a senior executive or board level position and furthermore, in a mixture of roles, as illustrated in Table 2.

**Table 2 – Characteristics of respondents and types of provider organisations**

	<b>Provider type</b>	<b>Role of respondent</b>
1	Hospital provider (FT)	Director of Finance
2	Hospital provider (FT)	Chief Executive
3	Community provider (non-FT)	Director of Operations
4	Mental health and community (FT)	Director of Development and Strategy
5	Hospital provider (FT)	Director of Operations
6	Hospital provider (non-FT)	Director of Nursing, Quality and Service Improvement
7	Mental health and learning disabilities partnership trust (FT)	Director of Service Development
8	Hospital provider (non-FT)	Chief Executive
9	Hospital provider (non-FT)	Chief Operating Officer
10	Hospital provider (FT)	Director of Finance and Contracting

The third data set, complementing the national survey and telephone interviews, was sourced through artefact data analysis of publically available papers from the governing body of a random sample of authorised Clinical Commissioning Groups in England. Again, the justification for the random sample is a reflection of the constraints of time and resources, which prevented a collection of data from all 211 CCGs to cover the full geography of the NHS across England. Therefore, a random sample of 10% of CCGs was created. The method used to create this sample was to scan the NHS England website to extract the national list of the 211 authorised CCGs and then to randomly select 21 CCGs. Once the sample was identified a time frame was considered appropriate in which to make the search for evidence and a 6 month time period was created, justified as being the first 6 months of CCG full authorisation as a public body; the period for the data search was April 1st 2014 to 30<sup>th</sup> September 2014.

The process to identify and separate those papers which were considered to be of interest and relevant to this study was through the use of the search terms, “variation” and “unwarranted variation”. A word search of each of the websites of the selected CCGs yielded a total of 903 papers for analysis. The next step was to eliminate any documents which had surfaced through the first search but could be considered outside the scope of this study, as the search terms applied to a management or governance control schedule. Table 3 (below) offers the detail of those documents available for review.

Of the 903 papers available for review, there were 378 that had a reference to the search term “variation” or “unwarranted variation”. Closer scrutiny eliminated 148 of those documents from the study as the reference to ‘variation’ was linked to either a technical or a financial transaction for the purpose of executive governance processes (for example, “variations to standing financial instructions”).

**Table 3 – Number of public governing body papers available for analysis from sample of CCGs**

<b>Analysis</b>	<b>Number of documents</b>
Total number of documents available from website search	903
Documents that include a reference to search terms	378
Number of documents eliminated as reference to search term was a technical definition/management process	148

<b>Number of papers available for analysis</b>	<b>230</b>
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The remaining 230 documents were then coded and posted into a Board agenda heading (Figure 16). The final set of data was collected from an international cohort, considered valuable to set the context of the issue being studied and to illuminate the findings. The source of evidence for this data set was collected through a web-based survey of a number of OECD countries [n=20] to offer an international perspective on the topic of variation in health care. The countries selected were identified using the OECD website and the selection was made from those countries with a representative member of the OECD medical practice variation working group. A small sample of individuals from that group was then invited to participate in a follow up telephone survey.

That international survey yielded a response from the following 17 countries: Australia, Canada, Czech Republic, Denmark, Finland, France, Germany, Italy, Korea, Kosovo, Netherlands, Norway, Portugal, South Africa, Spain, Switzerland and USA. Six respondents offered subsequently to participate in a small follow-up telephone survey. The countries participating in the telephone survey comprised Denmark, Finland, Germany, Netherlands, Norway and Spain.

The findings from all sources of evidence will now be considered for analysis and presented, using the key research questions as a framework to guide the reader through the analysis.

## **7.2 ANALYSIS**

The analysis from the questionnaire started with a validation of all of the returned questionnaires to ensure that they had been completed properly and that any that could not be used was rejected at this point. The information was then transferred from the website survey tool onto a Microsoft Excel spreadsheet, to allow for interrogation. Figures were then created to display the data for descriptive analysis.

The purpose of interviewing is a sound method to gain information to understand the meanings people place on their experience, not to get answers, nor test a hypothesis (Seidman, 2006). Interviewing can, however, provide too much information (Cameron & Price, 2009) and researchers need to be careful not to lose the flow of information whilst trying to manage the interview. The interviews for this study were recorded and replayed several times before being manually coded, searching for patterns and themes of both supporting and contrasting comments. These were separated into a workable number of concepts (Saldaña, 2011), being aware of researcher bias (Bryman & Bell, 2007) and to code what is said not what is heard.

The data generated from the artefact text search was also coded using the search terms (variation, variations and unwarranted variation) and cross-referencing them against the title of the paper from the governing body agenda. The citations of the search terms were then entered onto a Microsoft Excel spreadsheet and data from the search were tabulated to provide a figure for analysis.

This section will now disclose the findings from the analysis of the combined primary data to answer the research questions and will be supplemented with evidence from previous research (DaSilva, 2012b; 2012c; 2013) and what the literature review generated. The section will begin with a reminder of the first question and the scale of the problem of variation and why it is imperative that the NHS responds.

### **7.3 QUESTION 1 – WHAT ARE VARIATIONS IN HEALTHCARE AND WHY ARE THEY IMPORTANT?**

This section will reiterate why variation in health care is an important policy issue and that it remains a problem for the NHS. This section will reiterate why it is imperative that the NHS identifies and address unwarranted variation and will explore who should be dealing with that problem.

A literature review (DaSilva, 2012b) has confirmed that variation; that is, the unexplained differences in the way care is provided from one area or hospital to another for the same condition or diagnosis, or a difference in the costs or access to care for the same or similar conditions is a ubiquitous problem for the NHS (DaSilva, 2012b). That problem spans the entire organisation (Dodgion & Greenberg, 2009) presenting a problem to the NHS and even though Hannan (1999) reminds us that unwarranted variation is the hallmark of poor quality care and DaSilva (2012a) reminds us that variation has been ever present in the NHS, it remains an unresolved puzzle.

The literature also confirms that, since the seminal paper (Glover, 1938) identifying the presence of variation in health care, many articles have reconfirmed the existence of variation in health care across demographic groups, geographic areas, institutions and even within individual health care providers (McPherson et al, 1986; Ham, 1988; Berwick, 1991; Wennberg & Wennberg, 2003; de Jong et al, 2006; Appleby et al, 2011; Castelli et al, 2014).

Whilst these studies continue to demonstrate the incidence of variation and many remind us of the importance of dealing with variation, there is a paucity of literature to declare how the NHS could, or should, respond to unwarranted variation, or who should take the lead. Of concern, is that on those

few occasions where action is proposed, they stop short of offering tangible solutions (White, 2011), and many evade the identification of the perceived barriers to action, thus maintaining an important focus on the topic but reiterating that unwarranted variation presents an unsolved puzzle, one which deserves greater exploration and understanding (Darzi, 2008).

This position validates the importance of this study which aims to understand how the NHS should respond to variation, who should be dealing with variation and to appreciate what are the perceived barriers that prevent the NHS from doing so. The study is further validated by the perceived gap in the literature (DaSilva, 2012b) and the tacit assumption that the NHS will accept the recent national policy directive and respond by shining a light on variation, as declared in the NHS Mandate (DH, 2013). This medium may be a way of prompting the NHS to take action as it is the instrument used to hold the NHS accountable to the Secretary of State, as public guardian of the service, (Dixon & Ham, 2012) and for the period covering the years 2013-2015 objectives for the NHS commissioning board to include:

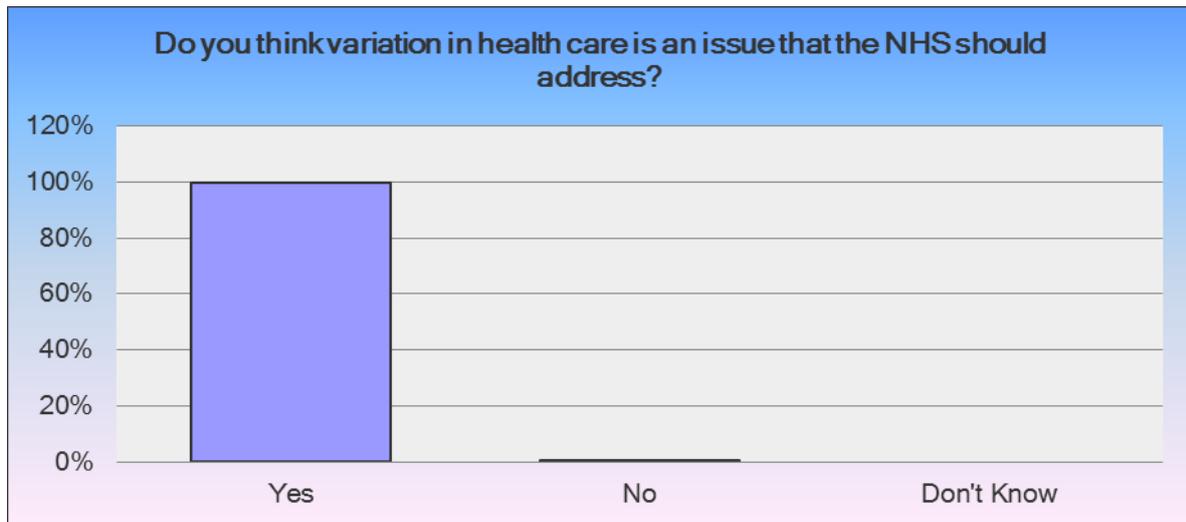
- *“reducing unjustified variation between hospitals in avoidable deaths, so that standards in all hospitals are closer to the best”(pg7)*
- *“to shine a light on variation and unacceptable practice”(pg 13)*
- *“Success will be measured not only by the average level of improvement but also by progress in reducing health inequalities and unjustified variation”(pg 27).*

The declaration of this ambitious policy is understandable, but it comes with its own health warning, particularly as the evidence has demonstrated a long track record of variation increasingly being observed in the NHS but with little evidence of action being taken to address variation (DaSilva, 2012b). The policy initiative does not offer any clarity on “how” or “who” should reduce unwarranted variation and it is equally shy in defining which organisation(s) should lead the search for and reduction of unwarranted variation.

That is a situation that required a better understanding which this study aimed to explore by first examining whether the NHS considers that variation should be addressed and if so, is it their role to do so?

The national survey invited respondents to answer the following question:

**Figure 12: Is variation an issue the NHS should address?**

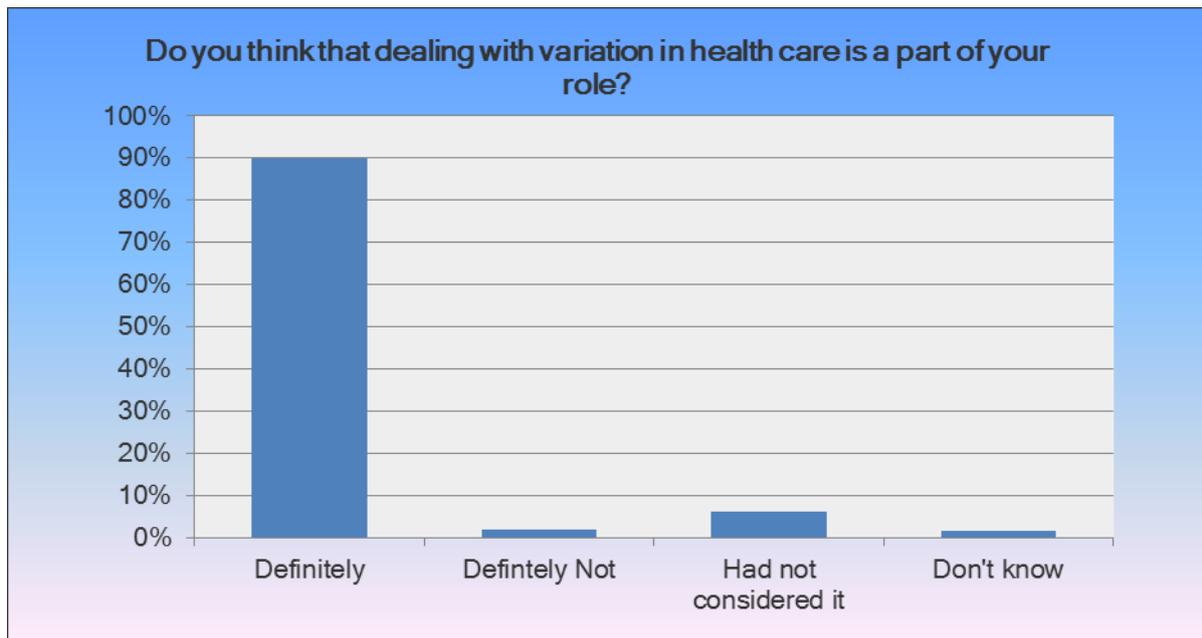


Answer Options	Response Percent	Response Count
Yes	99.6%	230
No	0.4%	1
Don't Know	0.0%	0
<i>answered question</i>		<b>231</b>
<i>skipped question</i>		<b>11</b>

The responses suggest that there is a strong stated confirmation, 99.6% of respondents, that variation is a problem and one that should be addressed by the NHS. Interestingly, this response is remarkably similar to that gleaned from a more controlled survey, limited to the NHS organisations across the geography of the East Midlands, conducted 12 months previously (DaSilva, 2013). The findings from that survey revealed that 91% of respondents believed that the NHS should be taking action to identify and reduce unwarranted variation.

This evidence that variation is a problem and one that should be addressed is strengthened further by the responses which suggests that not only does 99% of respondents consider it important that the NHS addresses variation, but, the evidence in the next chart reveals that 90% think that addressing variation is a part of their role (Figure 13).

**Figure 13: Is dealing with variation a part of your role**



Do you think that dealing with variations in health care is a part of your role?		
Answer Options	Response Percent	Response Count
Definitely	90.1%	218
Definitely Not	2.1%	5
Had not considered it	6.2%	15
Don't know	1.7%	4
<i>answered question</i>		<b>242</b>
<i>skipped question</i>		<b>0</b>

These findings infer that the NHS considers the topic of variation as being important and one that should be addressed also inferring that the NHS accepts the policy directive described in the NHS Mandate. This perspective is further strengthened when we note that individuals also regard it a part of their role to do take action; a claim corroborated through the evidence of two previous sets of data yielded from an interpretive piece of ethnographic research (DaSilva, 2012c). The claim that variation is a problem for the NHS is emphasised further from the evidence from the verbatim text from three sets of semi-structured interviews; first a review of the comments from the executive members of the national NHS Commissioning Board, when asked:

*“Do you think variation is an important issue for the NHS?”*

*“One of the great challenges ahead of us in terms of developing health care in a constrained financial environment is to tackle these [variations].” [Executive member, NHS Commissioning Board]*

*“Yes, I have a view that there’s huge variation in health care across England. And it’s for a variety of reasons and we ought to be addressing it more than we are doing.” [Executive member, NHS Commissioning Board]*

*“Dealing with variation has to be one of the top priorities of the NHS Commissioning Board... I think it should be absolutely mandatory. The challenge is how is that to happen without making it a contractual issue.” [Executive member, NHS Commissioning Board]*

Secondly, by analysing the responses from leading General medical practitioners (GPs) working at a national and regional level in a role to enhance clinical leadership in the planning and commissioning of care; they responded as follows:

*“Do you think variation is an important issue for the NHS?”*

*“We need to decide how do we deal with variations and we do have to deal with it.” [GP]*

*“I think it’s very clear that the issue of variation in health care is rising up the agenda, both at a level with the community, within general practices and at a national level.” [GP]*

*“I think the NHS is relatively unsophisticated in it [NHS] may tolerate variation but if it does, then I have a sense that it tolerates variation because it’s easier to tolerate variation and put a lot of other stuff in tick-boxes than it is to provide a culture where ambiguity, variation and the understanding of that issue is acceptable.” [GP]*

Third, from the evidence collected during telephone interviews with senior executives working in provider organisations. When asked to reflect on the question, *“Do you think variation is an important issue for the NHS?”*

*“The NHS has to respond to variation, its waste but it’s not that straight forward, we try to weed out unnecessary differences in the way we operate, and if they are variations to you, they are constantly being looked at.” [FT Finance Director]*

*“Yes, we must challenge variation but only where it shows poor productivity.” [FT Director of Operations]*

*“I think there’s a basic issue which hasn’t been thought through which is: What should our response to variation be?” [Non-FT Chief Operating Officer]*

### **7.3.1 Summary**

The answer to this first research question is clear; the NHS does consider variation as being a problem for the NHS and sufficiently important to warrant more action to identify and reduce unwarranted variation. The majority of staff NHS believes it is their role to investigate and address that variation, a perspective which is reinforced when combining the three sets of evidence together and corroborated further when blending these findings with the findings from the national survey.

However, these claims are inconsistent with other evidence assembled from a review of the literature (DaSilva 2012b) which demonstrated that variation has been observed in the provision of care for more than 70 years (Glover, 1938) and that more variation continues to be recorded (DH 2010c, 2011). It is puzzling, therefore, that whilst there is full endorsement of the importance of variation in the NHS and the acknowledgement that staff in the NHS believe it to be a part of their role, there does not appear to be much action to identify and reduce unwarranted variation. This perplexing position adds credence to this study and also warrants the introduction of the next section which is to understand how the problem of dealing with unwarranted variation should be addressed and who should do it?

## **7.4 QUESTION 2 – HOW SHOULD THE PROBLEM OF DEALING WITH UNWARRANTED VARIATION BE ADDRESSED?**

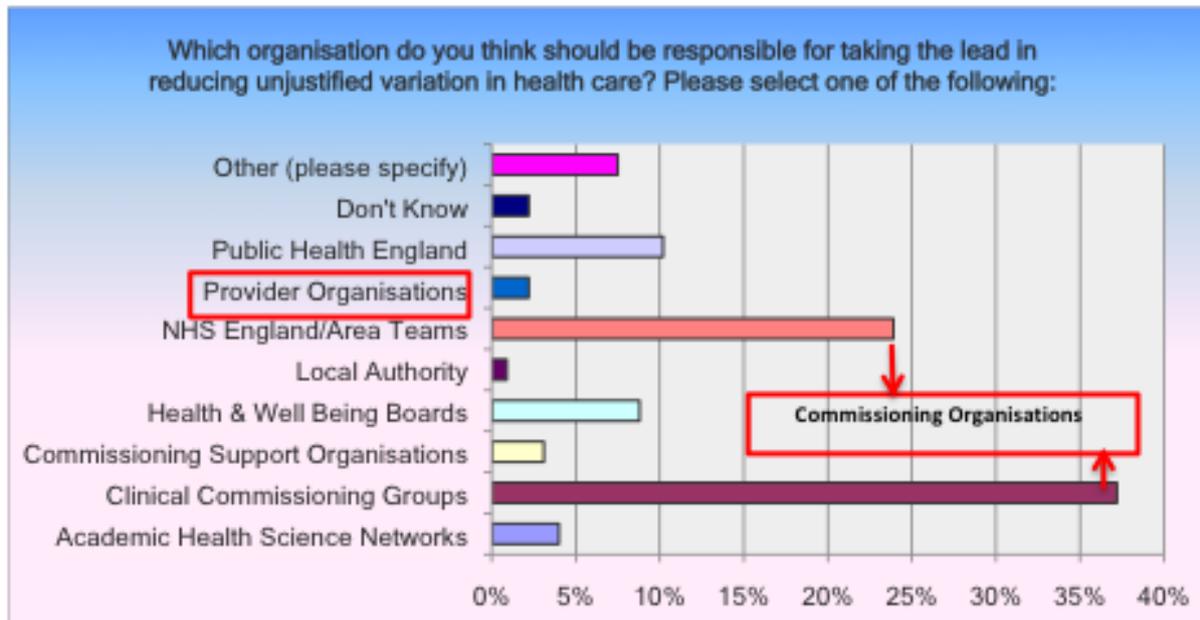
### **7.4.1 Who should respond?**

The previous section has confirmed the claim that the NHS does perceive variation is a problem for the NHS and is one which deserves to be addressed. Furthermore, there an overwhelming endorsement that individuals consider taking action to reduce variation is a part of their role. What remains unclear, however, is whether the individuals responding were doing so from a commissioner or a provider perspective (Figure 14) and this section investigated whether taking action to reduce unwarranted variation is considered a role for commissioning and/or provider organisations; a key theme of the study, as described in chapter 2.

Chapter 2 has presented the policy background and supporting literature to set the context of the separation of NHS organisations into either commissioning or provider organisations, as the NHS adopted quasi-market principles which were a result of the reorganisation of the NHS in 1989, described in the white paper, “Working for Patients” (DH,1989). A core component of this study has been to understand who should deal with variation and in particular which organisation(s) should take action and how they should go about addressing the problem. As no literature could be found to enlighten us whether commissioning or provider organisations should lead the response to identify and reduce unwarranted variation, this study aimed to elicit new knowledge to understand whether that lack of clarity prevented action from being taken. A supplementary aim was established which was to distinguish how commissioning and provider organisations understand each other’s position of the topic and what they perceive are the barriers preventing action. The investigation sought to understand which organisation(s) the NHS thought should lead the search for unwarranted variation and used all four sources of evidence; the national survey, verbatim text from semi structured interviews, artefact data analysis and international survey.

The findings are presented below starting with the findings from the national anonymised survey which used two NHS membership organisations as the sample. The survey was posted on the website of both membership organisations and as the questionnaire did not seek out to identify whether the respondent was from a provider or commissioning organisation it is not possible to separate out those responses:

**Figure 14: National survey of NHS Membership Organisations**



Answer Options	Response Percent	Response Count
Academic Health Science Networks	4.0%	9
Clinical Commissioning Groups	37.2%	84
Commissioning Support Organisations	3.1%	7
Health & Well Being Boards	8.8%	20
Local Authority	0.9%	2
NHS England/Area Teams	23.9%	54
Provider Organisations	2.2%	5
Public Health England	10.2%	23
Don't Know	2.2%	5
Other (please specify)	7.5%	17
<i>answered question</i>		<b>226</b>
<i>skipped question</i>		<b>16</b>

The findings offer an interesting perception, there is not an overwhelming vote for one organisation, although commissioning organisations (categorised in the table as CCGs and the NHS England Commissioning Board, through the Local Area Teams) do equate to more than 25% of overall responses. It is also interesting that the responses imply that it is not a role for provider organisations as shown in Figure 14, which reveals that only 2% of respondents to the national survey considered it a role for provider organisations.

There is a sense of reasoning to that response, a line of logic which can be traced back to the inferred view from executive members of the commissioning board, where an argument is crafted to

support a claim that the search and reduction of unwarranted variation is a role for commissioning organisations, albeit, from the evidence, local organisations, not the national board! This claim is demonstrated in the tacit assumption, revealed during the interviews with members of the national commissioning board (DaSilva, 2012c), that *local* commissioning organisations, the new CCGs, ought to be the lead organisations to take any necessary action. The implication being that CCGs should deliver that challenge by using existing management and contracting processes through their identified provider organisations.

Taking this superficial logic forward it can be alleged that CCGs could deliver this action through the application of their responsibility to set and manage contracts with provider organisations. Those contracts should have agreed specifications to which the commissioning organisations could hold providers to account for delivery; including the identification and reduction of unwarranted variation. Curiously, that implied management control was declared as being a process for CCGs, not necessarily the national commissioning board itself, who by inference appeared to absolve itself from any responsibility to addressing unwarranted variation, even in the parts of the service where the commissioning board is the lead commissioner, for example specialised commissioning.

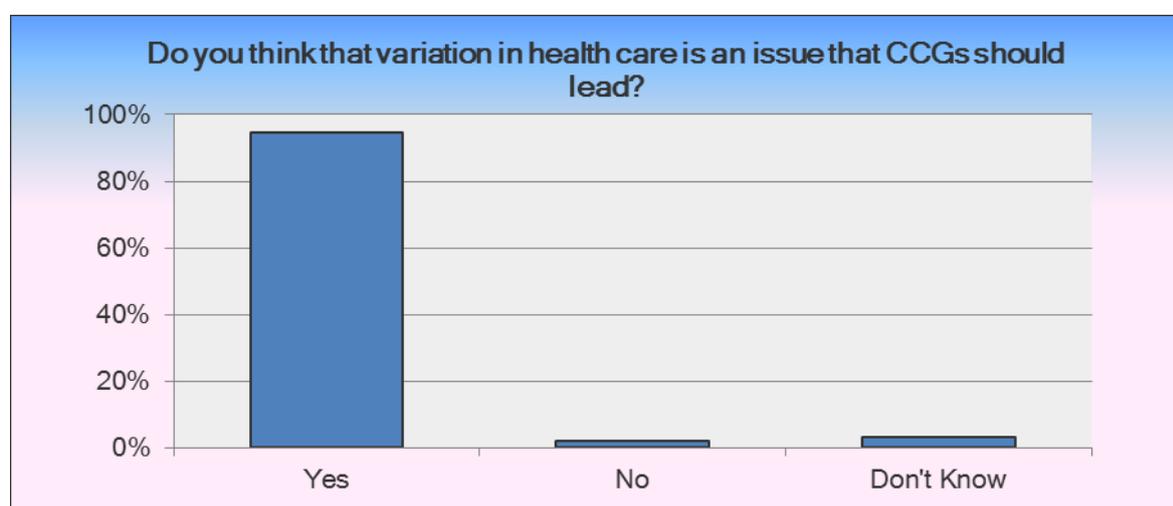
That logic is, however, considered as being too simplistic and probably based on the loose notion that the funds for the planning and procurement of services for a local population and the responsibility for ensuring services are available to meet the needs of that population rests with commissioning organisations, meaning it is they who should lead the response. The argument is clearly flawed if we recall the work of Plesk (2000) and his description of the NHS as a complex adaptive system where controls are diffuse and behaviours difficult to control and the logic is equally inconsistent with the observations of Jones & Wood (2010) and their declaration that commissioning is difficult within the NHS, made more difficult by the power retained by the provider organisations, some of them giants of the NHS. It could be suggested that the assumed logic made by the members of the NHS commissioning board either chooses to ignore Plesk's contribution of the NHS being a complex adaptive system, or that they simply choose to believe that there is a hierarchy within the commissioning structure with the national board sitting at the pinnacle of that structure, setting and directing policy, not implementing it themselves. This discrepancy in commissioning duties is illuminated neatly by the views of one of the executive members of the commissioning board who claimed:

*“Have we ever consciously sat down and said these are the levers we’re going to use to reduce unwarranted variation or whatever? No, we haven’t! But they are potentially there... so we’re [NHS Commissioning Board] going to have to sit down and think about how we might do that. We’ve never done that before. I mean certainly we’ve never done in the past, just to think about how we can make that [align incentives] happen.... I’ve put no effort into doing it, by the way..” [Executive member, NHS Commissioning Board]*

These findings are most alarming; the national commissioning board do not appear to be taking any action to reduce unwarranted variation, consider it a role for the new CCGs and are not even thinking about addressing unwarranted variation. Yet, through the NHS Mandate, the executive board have declared that the NHS should place a spotlight on variation; leading to the next question, which attempted to clarify whether the NHS agrees with the notion that the reduction of unwarranted variation is a role for the new CCGs.

This issue was examined through several data sources, starting with the national survey.

**Figure 15: Should CCGs lead the response to variation in health care?**



Answer Options	Response Percent	Response Count
Yes	94.7%	180
No	2.1%	4
Don't Know	3.2%	6
<i>answered question</i>		<b>190</b>
<i>skipped question</i>		<b>52</b>

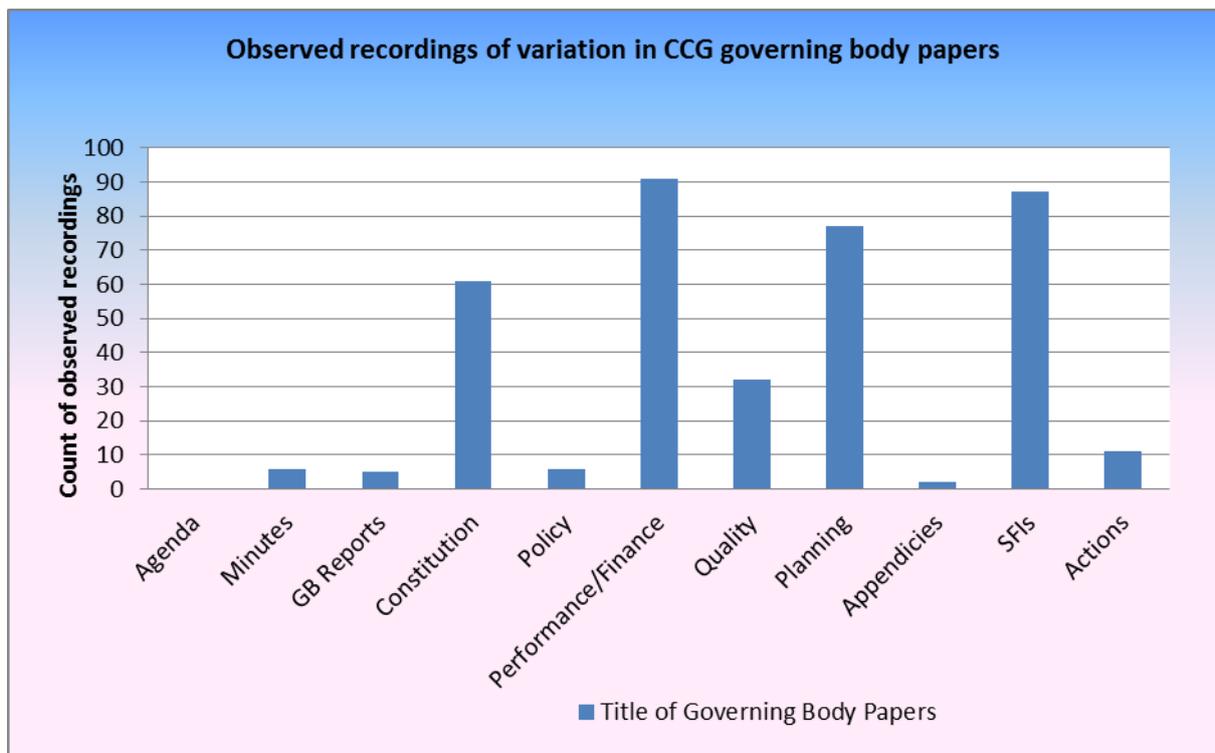
The response from the survey appears to be a compelling confirmation that addressing variation is considered a role for CCGs, underlining the inferred assumption from executive members of the commissioning board. This prompted the next line of inquiry which was to investigate whether there is any evidence of CCGs actually doing anything about reducing unwarranted variation and also what do provider organisations think of CCGs taking the lead.

To answer that line of inquiry the study turned first to the findings from the artefact analysis of governing body board papers from the random sample of CCGs (Table 3).

The sample had yielded 903 papers available for review and following a process of analysis and coding there were 378 documents that had a reference to the search term “variation” or “unwarranted variation” of which 230 documents were retained for the study. The 230 documents were then scrutinised to understand whether there was an equal distribution of observed recordings of the search terms across all those CCGs included in this study. That was proven not to be the case. The observed range of documents referring to the search terms, “variation” or “unwarranted variation” ranged from zero (n=12), to a CCG with 42 recordings.

The 230 documents were then coded to be displayed against a set of board agenda headings to understand where those references could be found in the public governing body papers and a total of 370 instances were noted of the search terms as illustrated in the chart below.

**Figure 16: Observed recording of the term variation or unwarranted variation**



The findings do reveal some important points. First that the topic is discussed in some, but only a few CCGs, with a small number of CCGs (n=4) accounting for the majority (51%) of the total recorded observations. The topic could not be found on the agenda of any CCG but could be found on supporting documents, suggesting that the issue is not considered sufficiently important to warrant its own agenda item, regardless of the NHS Mandate declaration that the NHS should place a spotlight on variation. The second important observation is that where the topic was making it to the governing body board of CCGs, the agenda headings to which the documents were directed at the meetings revealed that 92 of the 230 documents (40%), could be found in the section of the meeting relating to “performance and finance”. This is of concern on two counts.

First, the analysis demonstrates that the topic is not on the agenda of CCGs and is, therefore, not reaching the “top table” of the CCG, which mirrors the position of the national commissioning board, thus leaving the topic unexplored. Second, where the topic is finding its way into the governing body papers, for the majority of the time, it is as a performance or finance issue; a position which reiterates the concerns of GPs that if the NHS was to address variation then it would become a performance issue for GPs, an issue uncovered in earlier research (DaSilva, 2012c) and illustrated below from the text from semi-structured interviews with GPs:

*“I think that the danger we have in the NHS is that we don’t get performance managed on the [variation] data, I think we should be performance managed on how we respond to the data”*

*“...my biggest fear is the Commissioning Board and CCGs will go into command and control”*

*“I think many managers are frightened of this [variation] data and think it’s a performance thing”*

*“There is a fear amongst GPs that the Commissioning Board is going to have a stick that it’s going to be ... taking a sort of straight jacketed approach towards Primary Care.”*

*“I would say is that as GPs, we’re aware of our variations and a lot of it boils down to we don’t really understand very well how to address it.”*

The final statement effortlessly reminds us of the importance of this study and that the evidence establishes, that neither the terms variation, nor unwarranted variation, get much “air-time” or discussion at commissioning board or CCG governing body meetings, but where it does get raised is favouring a performance management route, vindicating the concerns of GPs.

This evidence is a fundamental concern; one which suggests that variation is going unchecked by commissioners, the implication being that neither the national nor local commissioning organisations are focused on this issue. This is in sharp contrast to the declaration from the earlier survey (Figure 12) that revealed 99% of respondents believe the NHS should respond to variation and that 90% believe it is their role to do so (Figure 13)! This confusing picture obliges further evidence, to appreciate what the provider organisations think, in particular about the observed recordings of the term variation from the artefact analysis (Figure 16) and the inferred logic from the national commissioning board that CCGs should lead the search for and reduction of unwarranted variation. To answer that line of inquiry the study now turns to the findings from the semi-structured telephone interviews from providers as described in Table 2.

The findings from the semi-structured interviews with executives from provider organisations cast a worrying dark shadow over the issue of the NHS addressing variation. Plesk (2000) reminded us that the NHS is not a monolithic, command and control organisation, but is more akin to a complex adaptive system where the interaction between system agents is flexible. It would appear that this is none more the situation than in the relationship between provider and commissioning organisations. What became unmistakably clear during the interviews was that when the executives from provider organisations were invited to comment on whether the lead role to identify and address unwarranted variation should sit with commissioning organisations, there was an unequivocal declaration that it should not, moreover that it is not a part of the commissioning role at all.

Of more concern, however, were their endorsements that they considered it to be a role and a function for provider organisations – and were adamant that it is a role for provider organisations alone; even though, as stated earlier, providers have collectively maintained a degree of inertia and done nothing about addressing unwarranted variation for the past 40 years! These observations have exposed conflicting views about whether commissioning or provider organisations should take action to reduce unwarranted variation, an attitude which has created an unhelpful tension, but one which is probably not restricted to the topic of unwarranted variation. Indeed, the separation of

commissioners and providers and the lack of a coherent system of care appears to be a fundamental issue which should be addressed before the NHS can start taking action to identify and reduce unwarranted variation, as it appears from the observations below, that the two congregations have different strategic, regulatory and operational goals which appear to work against each other not as a system.

This claim is evidenced by the responses from provider organisations with their responses suggesting that the task is definitely not something that any commissioning organisation to focus on, certainly not the CCGs, with the emphasis being that reducing unjustified variation is something for the provider organisations to deal with and provider organisations alone; their concern being that if commissioners get involved, the situation would only get worse! That evidence of discord about commissioners playing a part in the search for variation is displayed clearly by the comments from provider organisations when asked: *“Who should lead the identification and reduction of unwarranted variation in the NHS?”*

*“I would suggest that CCGs have enough other ‘stuff’ to get on with and that the lead on reducing variations is provider business.”* [Director of Finance]

*“They [CCG] have got no fucking chance of dealing with variation now that public health has gone to the local authority, which is a great loss; they don’t have the capability or the resources or any fucking clue how to deal with variations, unless it’s in our costs.”* [Chief Executive]

*“The CCG should get on and sort general practice out, that’s what they are there for... if they [CCG] would leave us [provider] alone to get on with what we are good at, we would all be better off. The CCGs aren’t there to tackle variations, but will have a go, like they have a go at everything else instead of sorting out GPs.”* [Chief Operating Officer]

*“The new commissioning organisations are not fit for purpose to tackle such big picture stuff, they need to join up and work together... but that won’t happen, they will just fuck it up as always.”* [Chief Finance Officer]

*“If CCGs were meant to do this kind of stuff, they would be called health authorities, with the resources and manpower to be effective, they are just too small.”* [Director of Development and Strategy]

The statements clearly portray some very strong views about the ability and capacity of commissioning organisations to address unwarranted variation, but again, it may also be a reflection of what providers think about commissioning organisation in general, outside the remit of this study. What became clear, however, is that providers unanimously believe that variations will increase rather than reduce if the action to identify and reduce unwarranted variation is left solely with commissioning organisations.

*“No! CCGs should not be dealing with variations, it’s not their purpose. I think variation will increase, not reduce, with the new arrangements... we[providers] still have to treat what comes in through the front door whilst the 5 CCGs we contract with are all sorting out their own protocols and staff, there is bound to be more variations.”* [Chief Executive]

*“I think it’s a quality issue, there are different commissioners expecting us to work to their different processes, variation is inevitable... there is no clear guidance how we should sort our patients out... it’s difficult, for patients and staff here.”* [Director of Nursing and Quality]

*“... and it is impossible to have a proper conversation with CCG staff about these sorts of things... many are too junior and task orientated, it will only get worse.”* [Director of Operations]

These comments demonstrate a harsh contrast between the views of the providers, the response to the national survey and the tacit expectations of the NHS Commissioning Board, all revealing a striking dispute about which organisation should lead this challenging agenda. This situation may be, in part, a result of the frequent reforms, particularly of commissioning organisations which initiates an ever changing relationship between commissioning organisations and providers.

One further possible explanation for this dispute is the constant pressure provider organisations feel under whilst commissioning organisations re-organise and change personnel. The flow of patients and associated activity does not appear to change when the NHS reorganises, yet the behaviour of the new commissioning organisations does as they seek to establish themselves as being “fit for purpose”; shifting their focus to higher strategic partnerships and plans sometimes at the expense of the provider organisations (Hughes et al, 2013).

The churn of commissioning organisations through frequent re-organisations is well expressed in the following statements from executives working in provider organisations:

*“There is a huge difference in pace between the daily operational work and targets we are expected to hit and the pace that the CCG work at. I don’t think that the CCGs have got any idea about the numbers and types of patients we see. The A&E is a focus for them [CCG] and that is working to a maximum, they [CCG] forget about the wards, discharge processes and support teams so I don’t think they should be interested in dealing with variations in our trust.”* [Chief Operating Officer]

*“If the same people would stick around, they would stand a chance but CCGs are light weight PCTs and have to work alongside GPs... and they will never agree on anything strategic... so it’s the merry-go-round of staff in commissioning that reduces your chance... sorry!”* [Chief Executive]

What has become clear is the striking difference of views between the providers and commissioning organisations about which should take the lead, perhaps due to differing strategic and operational obligations. Provider organisations clearly think it is their role to lead the identification and reduction of unwarranted variation yet they do not appear to be doing much about it. Conversely, it appears that commissioning organisations also consider it to be their role but are indecisive about doing so. Of more importance, however, is that neither appears to be taking any action to reduce unwarranted variation perhaps and little clarity about how they should go about it apart from the application of management tools such as the NHS standard contract as described above.

This stimulated a line of inquiry to understand whether the NHS in England is alone on this matter and the next source of evidence from an international survey suggests the NHS is not alone. Acknowledging it is always difficult to make direct comparisons between countries as each has its own terminology; for example, the organisations we refer to as commissioners are often referred to as payers in many of the OECD countries. The aim of this survey though was to obtain a perspective from other countries to understand whether the NHS in England was alone in its pursuit of identifying and reducing unwarranted variation.

Many of the OECD countries engaged in the study are faced with a similar dilemma of increasing incidence and awareness but little or no action to identify and reduce unwarranted variation. Even

when accounting for the fact that their health system was different and that they did not have the clear separation that the NHS has of payers (commissioners) and providers, respondents did offer an important insight into this area.

*“We have a central system with municipalities and nobody really knows what to do... I don’t know who should lead but we think of a conference with clinicians and politicians to organise a solution should happen.” [Denmark]*

*“Our health [system] is not split like yours; there is a reform to have a purchaser and provider split but not now. I cannot pinpoint who should lead but think that ministers will tell the hospitals to do it.” [Finland]*

*“We do not have a fixed programme to do this, we have lots of small pieces going on and the research centre [VPM Atlas/ECHO] does lead the focus for data but I don’t know what happens then.” [Spain]*

*“First, it should be clinicians and national policy makers make it a job for the insurers but they don’t work in the clinics... they have to be encouraged to work together in a coherent way.” [Netherlands]*

*“We have too many big hospitals and many beds with poor ambulatory services. The hospitals will not do it, we pay them too much and our GP system cannot change that... we have to learn from other countries.” [Norway]*

The evidence from the survey of OECD countries suggests a similar picture to that of the NHS in England: that the topic of variation remains an unsolved puzzle, one that many countries are trying to address. In many of these countries, there is not a clear purchaser/provider split, as described in the NHS in England, but there are organisations responsible for funding care and others responsible for providing care. It appears that in the six countries participating in the follow up telephone survey, neither their equivalent provider organisations nor commissioners (payers) are dealing effectively with identifying and reducing unwarranted variation and neither has the lead responsibility.

The answer to who should lead remains unclear, an issue which will be discussed later in the section exploring the barriers to the NHS taking action, but next the study aimed to identify how the NHS should respond.

#### 7.4.2 How should the NHS respond to variation?

The evidence, thus far, has demonstrated that the NHS is not taking much action to identify and reduce unwarranted variation, regardless of the declaration in the NHS Mandate and the evidence that variation continues to be a problem for the NHS; as unwarranted variation is the hallmark of poor quality (Hannan, 1999) and a waste of valuable resources (Wennberg, 2010). Providers vehemently claim it to be their role, yet appear to be in a state of inertia about taking action and the commissioning organisations do not fare much better either; as the national commissioning board appear to absolve itself from either thinking about the issue or taking any necessary action with a conviction that it is the role for CCGs who in turn don't appear to be taking much action and have difficulty finding space for the topic on their governing body agenda.

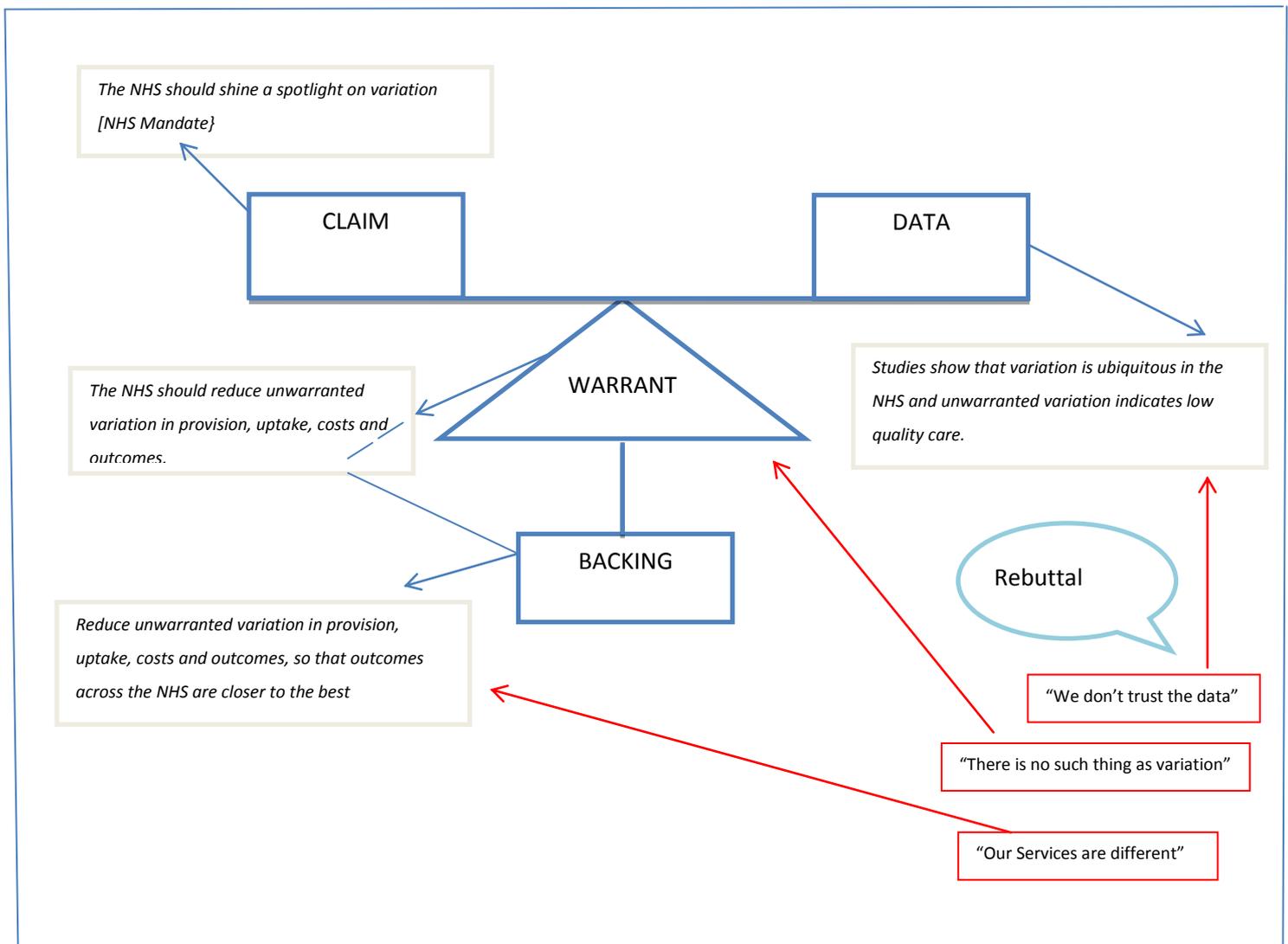
So what needs to be put in place to enable the NHS to be in a stronger position to be able to respond? Throughout this study several common themes have surfaced and some of those themes will be explored in greater detail here.

The literature (DaSilva, 2012b) suggests that the first challenge to encouraging the NHS to deal with the problem of unwarranted variation would perhaps be to raise the awareness and the profile of variation in the NHS, as described in the NHS Atlas of Variation series (DH, 2010c) and to create a cogent argument as to why the NHS should respond. DaSilva, (2013) cited the work of Stephen Toulmin and how his theory of creating a structured argument can offer a more cogent rationale for taking action to reduce unwarranted variation. This is considered essential if the NHS is to take action and reduce unwarranted variation and a brief overview of this model is presented below.

Toulmin created a model to help articulate, justify and explain an argument by filleting and describing any argument as having four main components, each of equal importance and each requiring careful crafting to present a case of reasoning and a desired outcome. Those five components are based on the following components:

- Claim,
- Data,
- Warrant
- Backing and
- Rebuttal - visualised as:

**Figure 17- Adaptation of Toulmin's model argument**



Adapted from: Toulmin, S. (1958). *The Uses of Argument*, Cambridge, England: Cambridge University Press

As a model, this concept works by breaking the issue, in this case the identification and reduction of unwarranted variation, into clear inter-related categories which should stimulate the creator of the claim to progress to create a persuasive narrative, in this case as a rational argument to galvanise professionals into action. The warrant is the key to this model and will often be powerful enough to stand alone and be sufficiently clear. However, there are occasions, according to Toulmin, where the warrant is only broadly accepted and is met by a rebuttal which requires defending or 'backing' with a narrative to help the explanation of the warrant, in this case that the reduction of unwarranted variation releases resources to invest in higher value health care and reduces harm done to patients, or that reducing unwarranted variation reduces waste and duplication. Finally, it is important to note that Toulmin's model does not create a fixed argument; rather it is a dynamic theoretical model

where the claim needs to be refreshed, the data renewed and the warrant re-framed to counter any rebuttals.

The NHS Mandate (DH, 2013) has made a bold declaration, or 'claim', that the NHS should 'shine a spotlight on variation', but that claim alone, without justification through the creation of a coherent argument, is fundamentally flawed. The NHS has to move beyond the observation and recording of variation across demographic groups, geographic areas, institutions and even within individual health care providers as described previously, to one where action can be taken to identify and reduce unwarranted variation. That, it is argued, will require the construction of a better justification and purpose, backed with good data to warrant the claim that the NHS should take action to identify and reduce unwarranted variation, with a persuasive explanation of what needs to be done, by who, why and when and that complexity needs to be understood by all (Cohn, 2013).

Regrettably, the findings thus far, suggest that the NHS has only part fulfilled the requirements of a coherent argument to stimulate the NHS to search for and reduce unwarranted variation; the claim has been made. The evidence obtained through this study makes it clear that the NHS is aware and alert to the incidence of variation, creating the unmistakable and that the NHS not only consider the issue to be important but that NHS staff consider it is their role to address variation, but do not know how to respond.

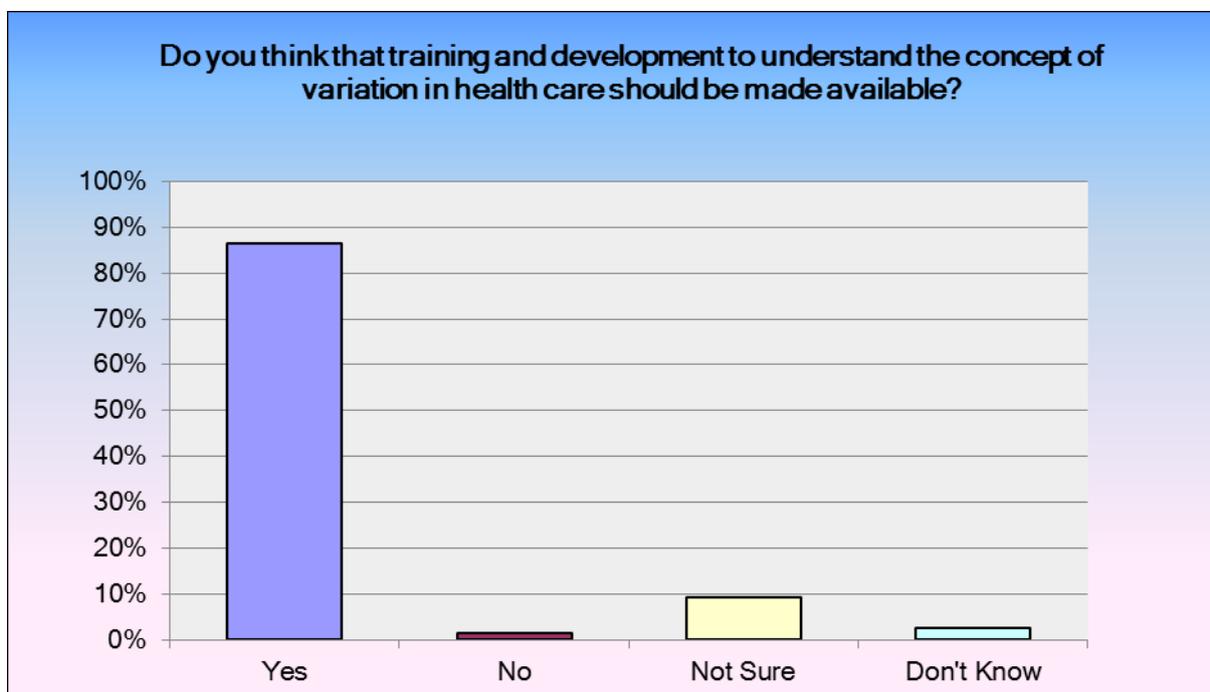
A hypothesis can be developed to advocate that the awareness is shallow and any claim seeking the NHS to identify and reduce unwarranted variation is superficial, substantiated by the findings thus far and the literature. The Mandate has made the claim but it appears that neither commissioning nor provider organisations are responding. The next natural stage for this study is to explore what is preventing them from taking action and whether there are opportunities being missed.

#### **7.4.3 Could training help the NHS respond to variation?**

This study was seeking to understand whether the NHS considers that training and development should be provided to create a better understanding of the concept of variation and kick-start the NHS to systematically address the problem that variation poses. The recent reforms (DH, 2010a) have seen the creation of new organisations; Health Education England (HEE) and new agents in the recently formed Academic Health Science Networks (AHSN) both ideally positioned to heighten awareness and improve the opportunities of training and development around the concept of

variation. It is worth noting that in the national survey (Figure 14) only 4% consider AHSNs to be the organisation to lead this work and there is no first-hand evidence to suggest that either the AHSNs or HEE are picking up the baton. The study has already identified that neither providers nor commissioners are taking the initiative so perhaps HEE and the AHSN should step into that vacuum, the alternative being that the current way that variation is going unchecked (DaSilva, 2013) will be prolonged, and the policy initiative to identify and reduce unwarranted variation will have failed even with the forceful recognition that the NHS needs to drive down unwarranted variations to meet patients' changing needs, reduce harm and prevent the waste of valuable resources (NHSE 2014).

**Figure 18: Could training help the NHS reduce unwarranted variation**



Answer Options	Response Percent	Response Count
Yes	86.4%	159
No	1.6%	3
Not Sure	9.2%	17
Don't Know	2.7%	5
<i>answered question</i>		<b>184</b>
<i>skipped question</i>		<b>58</b>

The response indicates unequivocal support that training and development should be made available. However, at first sight, the table indicates that 86% (n=184) declare that they think

training should be offered, this figure hides an interesting point, 24% (n=58) of respondents chose to skip this question, thus making it difficult to draw any real conclusion. The response does imply that if the NHS is going to succeed in solving the puzzle presented by the concept of unwarranted variation, that a description of “how” the NHS should respond may lie in closing the perceived gap in the training modules. This position substantiates earlier research, (DaSilva, 2012c) with undisputable, matching responses from members of the national commissioning board and leading GPs to suggest that the concept of understanding variation should become a core concept of professional development programmes.

*“Where doctors are trained I think makes a difference. I think the people who have been responsible for supervising them and training them make a difference, that’s where we should start.”* [Executive member, NHS Commissioning Board]

*“I think you should go right back to the start of training to be quite honest. I think it’s medical training and for GPs it’s vocational training and specialist training for others.”* [GP]

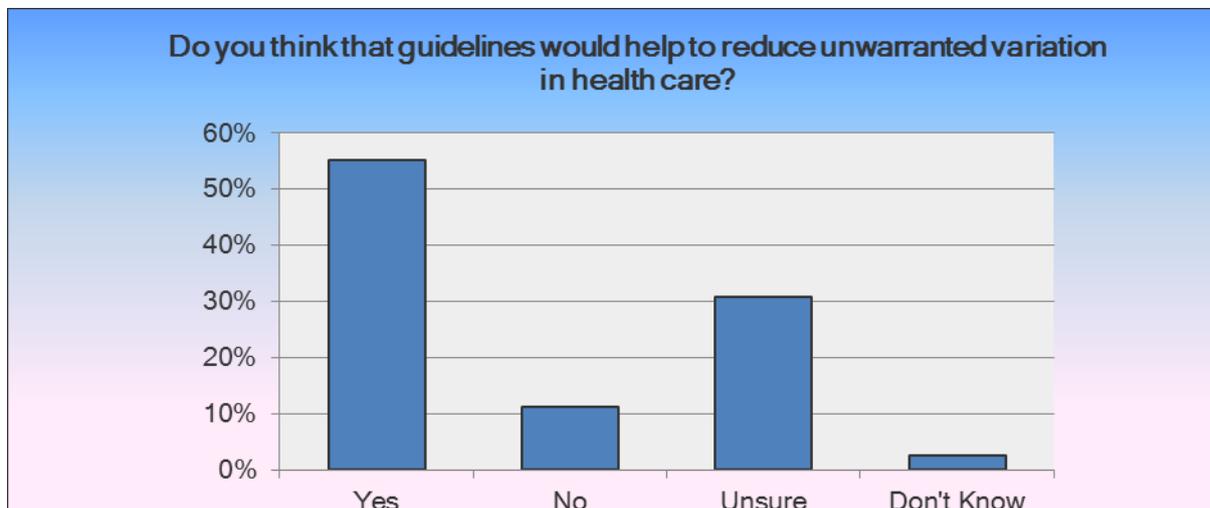
The issue of training and development is clearly an issue for further research, and one that would need to be reviewed alongside other changes to the professional development of NHS staff including the availability of resources. On a positive note, Jewson et al (2014) suggest that the current period of austerity is not reducing the opportunity of training but that limited funds have to go further, implying that a development programme could be resourced. It is unclear whether training to increase the confidence and competence to explore and address unwarranted variation; an essential factor according to Mulley (2009) would find its way onto the curriculum.

These findings support the literature which reveals a remarkable symmetry to this testament and the position of the NHS a decade ago. At that time Sipkoff (2003) displayed nine steps to describe how the NHS could reduce variation. Whilst he did not go as far as offering a clear definition, or stating who should lead, he did suggest that tools were available to enable the NHS to identify and reduce unwarranted variation. One tool, which has become a theme throughout this study, is the application of clinical guidelines. This introduced the question, could guidelines help to reduce unwarranted variation in health care?

#### 7.4.4 Could guidelines help the NHS to reduce variation?

The causes of variation were highlighted in Figure 2 where the supporting literature revealed that significant practice variation occurs where there is often a lack of clinical evidence. Some claim this situation could be resolved using clinical guidelines (Schwalm & Yusuf, 2011). The literature also showed that clinical guidelines are often employed as a means for reducing variation in health care and costs and for improving the quality of patient care (Rashidian et al, 2008) and are considered the most common initiative to reduce unwarranted variation in clinical practice (Cabana et al, 1999; Panella et al, 2003 Grimshaw et al, 2004). However, the implementation of clinical guidelines remains a contentious issue (Kennedy et al, 2010) as they are often seen as an attempt to reduce the freedom of professionals and considered as a covert process to manage resources. The findings from this study strongly support the findings from the available literature; with more than half of the respondents (55%) claiming that clinical guidelines could contribute to the reduction of unwarranted variation whilst a third (31%) were unsure, and a further 11% claiming that guidelines would not help to reduce variation in health care as illustrated below:

**Figure 19: Could guidelines help the NHS reduce unwarranted variation**



Answer Options	Response Percent	Response Count
Yes	55.2%	127
No	11.3%	26
Unsure	30.9%	71
Don't Know	2.6%	6
<i>answered question</i>		<b>230</b>
<i>skipped question</i>		<b>12</b>

However, the devil is in the detail of how those guidelines are to be implemented across the NHS. This response raises an interesting point in that there appear to be positive views about the principle and intention of implementing guidelines but that interest is less positive when it comes to the application (Gupta et al, 1997) and uptake of guidelines (de Jong et al, 2010; Carlsen & Bringedal, 2011).

The responses from the telephone survey of OECD countries shed no more light on this subject, reminding us that when considering the use of guidelines as a method of addressing unwarranted variation that the NHS in England is not so very different to many countries:

*"We have the same problem... our doctors don't follow procedure of guidelines always."*  
[Denmark]

*"There are times when we can use some help to make doctors follow guidelines but is not easy."* [Finland]

*"It is not our job to tell the doctors what to do, we provide the evidence and ask them to make ways to change it."* [Spain]

*"We know we have to make changes and the discussion is variation, most of the time we can make guidance, most of the time they ignore it."* [Norway]

Interestingly, the interviews with peers from OECD countries raised another important issue, one which needed to be examined before this study can conclude, which is the language applied to this subject and the call for clearer definitions.

Some of the OECD countries are just beginning to scratch the surface of the issue of variation whilst others have been exploring the concept for many years, as in England, and yet none appear to have a common and agreed classification or definition for their healthcare system, as illustrated by the text below:

*"We need a vocabulary to explain what we mean and what we are doing; we need to distinguish between good and bad, including under and over treatments."* [Netherlands]

*"It's not that clear... we use the term 'unwarranted' in our department but it is not the only word used."* [Spain]

*"Yes... there are many ways to describe variation and we have not bothered thinking about a [single] word."* [Germany]

*"We don't think our country is looking for a word, we are trying to change resources and make a fairer system."* [Denmark]

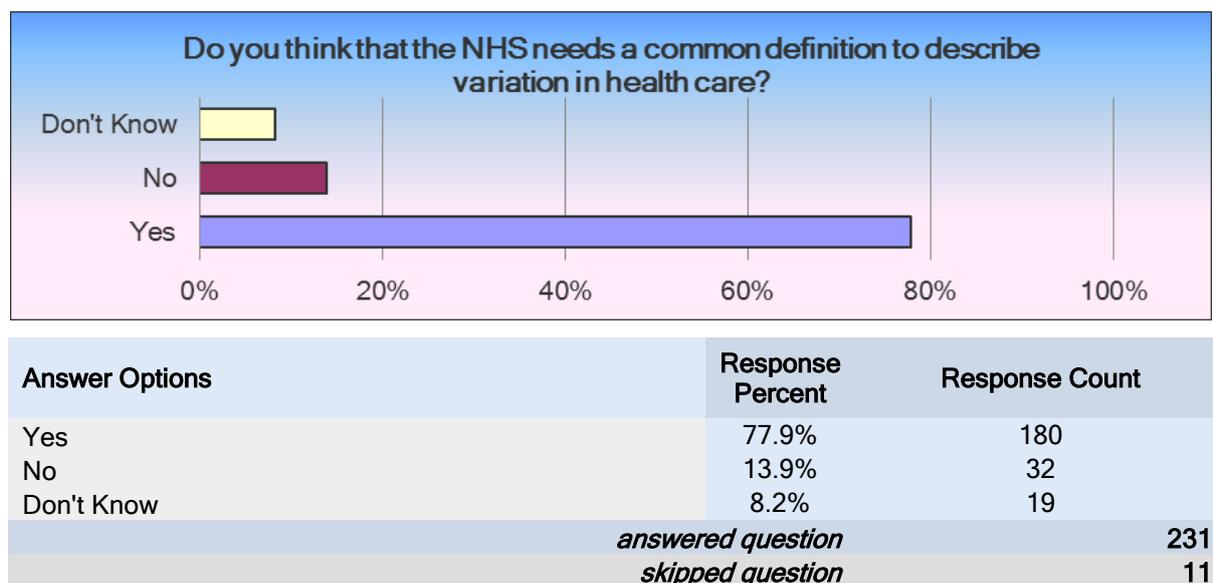
This issue is, of course, important when applying Toulmin's theoretical model, as without a clear understanding of what is being claimed it will be difficult to craft a well-defined narrative and seek action; the alternative being that the argument will default with many more rebuttals and prolonged inertia. This study developed to understand whether the NHS has a common definition and whether one would help stimulate action.

#### **7.4.5 Would a common definition help?**

One of the key themes emerging throughout this study has been the disagreement about the need for a definition and classification of what constitutes unwarranted variation (DaSilva 2012b, 2012c, 2013). The literature repeats this dilemma frequently stopping at the assertion that the concept of variation is multi-faceted, expressed as either 'common cause variation' which is random and which can never be eliminated (Neuhauser et al; 2011) or defined as 'special cause variation', that variation which is considered to be the result of external processes and one which management can take action to reduce; referred to as unwarranted variation (Wennberg, 2010). The mystification about the need for a definition is very much alive and is compounded by the multiple classifications found in the literature, where the NHS frequently draws on classifications such as, "unintended" (Berwick, 1991), "inappropriate" (Cabana et al, 1999), "unwarranted" (Mulley, 2009) and "unexplained" (Richards, 2009). This raises the question whether the NHS considers that the lack of a definition and clear classification is preventing the NHS from taking action to reduce unwarranted variation.

There was no specific literature found to help solve this part of the puzzle although, by implication, the literature, corroborated by the findings from this study, do imply that there is not a consensus amongst NHS staff on either a definition or the need for a definition. Therefore, this study sought to add to the body of knowledge and understand whether the NHS considers it necessary to have, a definition of unwarranted variation. The data were collected through the national survey which asked whether the NHS needs a common definition to describe variation in healthcare.

**Figure 20: Does the NHS need a common definition**



It is clear from the evidence, illustrated in the Figure 20, that the NHS considers that a definition should be developed with a 78% (n=180) response rate from the national survey, a declaration which practically replicates the findings from a previous smaller geographical survey, undertaken 12 months previously, where 75% of respondents considered that the NHS does require a clear definition (DaSilva, 2013). From that evidence it would be simple to accept these findings and push the NHS to come up with a definition. However, that assertion hides some interesting issues and conflicting views, issues that have remained hidden and silent until now which need to be shared to help put this issue in perspective before any conclusions can be drawn.

Whilst the evidence makes a case for a definition to be drafted, the findings from the interviews with executive members of the national commissioning board exposes a serious level of conflict amongst members and some polarised views on the issue of whether first, there should be a definition and secondly who should create one, as illustrated by the comments below:

*“I am intrinsically opposed to the concept of defining variation... as there are different degrees for legitimate variations in different processes and outcomes.”* [Executive member, NHS Commissioning Board]

*“I think there should be a commonly-used definition of what warranted and unwarranted variation is. I think it’s quite difficult to do but I think it must be possible...”* [Executive member, NHS Commissioning Board]

*“I think we do need a more clear definition.”* [Executive member, NHS Commissioning Board]

These statements offer a sharp contrast to the findings of the national survey, and it would appear that whilst some of the executive members of the national commissioning board concur with the response to the survey, there are deep and contrasting views within the NHS Commissioning Board. One clear example and potential barrier to the NHS responding to the call to reduce unwarranted variation is a perceived lack of leadership from the national board, exposed earlier that the role to reduce variation is for local, not national commissioners and compounded by the claims that the leadership for this would not be coming from the “top team”; perhaps, being objective, that decision may be on the understanding that many of the policies for reducing variation only work at the level of the individual clinician, not national policy (Love, 2013).

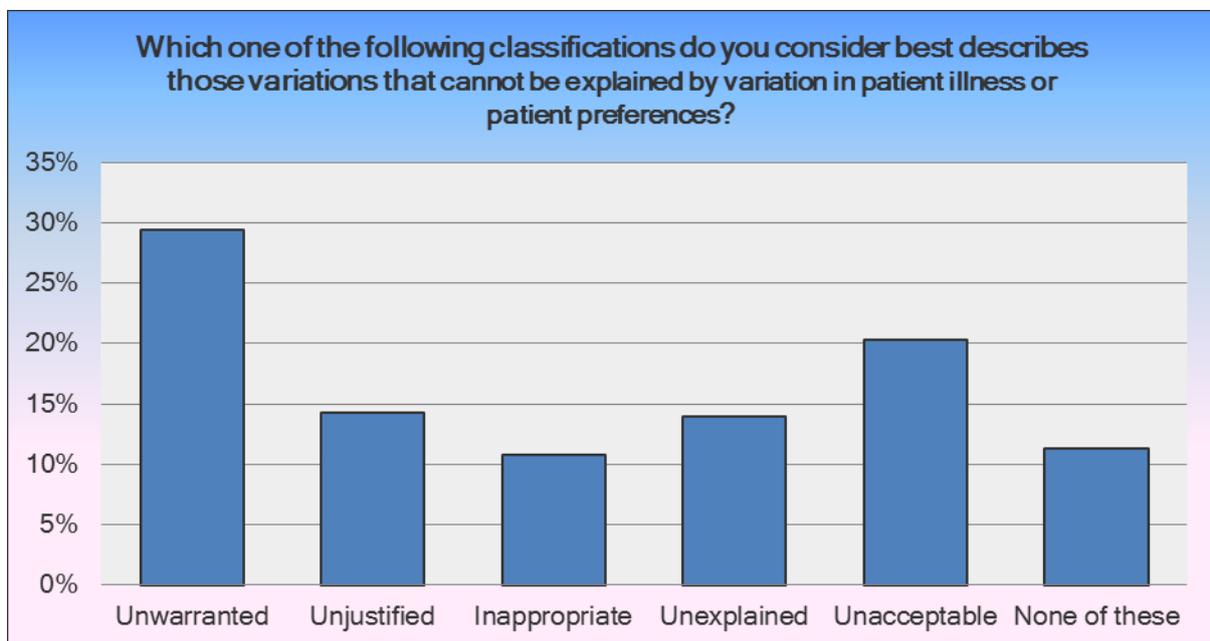
This conundrum about the crafting of a definition is not restricted to the NHS in England. The evidence, to this point, has exposed a potential barrier which prevents the NHS systematically addressing unwarranted variation. On the one hand, the evidence has confirmed that the NHS would favour a definition and that may be a good starting point to creating a cogent argument to explain why and how the NHS should address unwarranted variation. On the other hand, the discord revealed from members of the national commissioning board suggests that the creation of a definition will not be coming from there.

Again, remaining unprejudiced, it may be that the commissioning board appreciates that the development of a definition is going to require a well-articulated rationale for doing so and some sensitive moderation of different groups, a point which reiterates the claim by Bojakowski (2010) who stated that any definition should be done by consensus. Perhaps the next stage of investigation

for that consensus building is to appreciate what classification might be used to start that consensus building.

Reflecting on the responses above and with a subsequent review of the literature a record was made of the multiple classifications and interchangeable terms applied in the literature. This study sought to understand whether there was a favoured classification across the NHS. The first step was to identify the five most common classifications within the literature and apply that ‘top 5’ to create a question to help explore which classification, if any, gains favour with the NHS.

**Figure 21: Does the NHS have a preferred classification**



Answer Options	Response Percent	Response Count
Unwarranted	29.4%	68
Unjustified	14.3%	33
Inappropriate	10.8%	25
Unexplained	13.9%	32
Unacceptable	20.3%	47
None of these	11.3%	26
<i>answered question</i>		<b>231</b>
<i>skipped question</i>		<b>11</b>

The survey generated a mixed response, with no one classification coming out as a clear favourite. The rationale for this position maybe found in the earlier findings that there is an awareness of variation as a topic but that it remains a nebulous concept, one which has not received much

attention and a policy area which is under-developed which itself may be one of the main barriers to explain why the puzzle of unwarranted variation remains unsolved. These findings also suggest that there is a lack of leadership and no consensus from the “centre”, creating an air of confusion across the NHS; building a culture of dissonance and inertia around the concept of variation.

#### **7.4.6 Summary**

Thus far, the evidence has demonstrated that the NHS believes that variation should be addressed; the majority of the workforce believes it is a part of their role and although there has been a declaration through the medium of the NHS Mandate that the NHS should shine a light on variation, little has been constructed beyond that claim. There is a lack of a coherent argument, constructed in a way that is understandable to the NHS workforce as to why the NHS should bother searching for unwarranted variation. The NHS has declared that it would find a definition helpful but that is met with an ambiguous and conflicting response from the national commissioning board, which imply that they acknowledge that the topic is important but have done nothing about it. To be clear, there is no intention from the executive members of the national commissioning board to lead the discussions or to create a definition, something the NHS has declared it would find useful. This conveys an air of inertia, rather than a curiosity to act, which Mulley (2009) suggests is the way forward if health systems are to address variation.

A considerable number of respondents do, however, imply a degree of curiosity and consider that training should be made available to help the NHS better understand the concept of variation. That claim would suggest that there is an ambition to address variation, but that organisations do not know how, or where to start the search for unwarranted variation. There is also a call from the NHS for a clearer definition for variation and description of unwarranted variation, a call which is receiving no attention from the national leadership team or any other sections of the NHS.

These perceived barriers are preventing the NHS from responding to the call that the NHS should reduce unwarranted variation in provision, uptake, costs and outcomes are many levels. Some are at a strategic, national policy level; for example, the retention of the separation of commissioning and providing and the sustained use of quasi-market principles with differing objectives and perverse incentives creating a tension for the system to pull together to identify and reduce unwarranted variation. Other barriers at strategic level are exhibited by the constant reforms, particularly of commissioning organisations. There are other barriers at a behavioural level, demonstrated by an

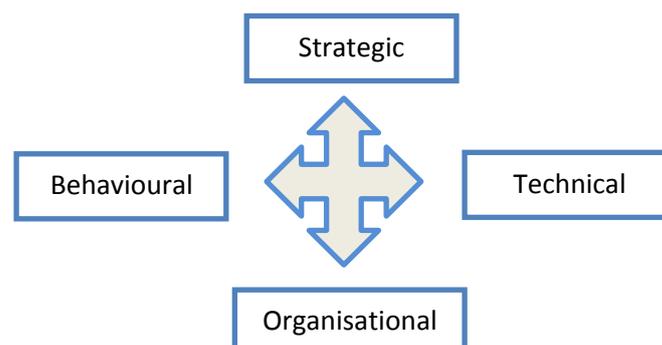
absence of leadership on the topic at the national board, and the technical level, illustrated by the lack of effort to first sit down and consider what the NHS should do about variation, including looking at the incentives and drivers available and second, a lack of acknowledgment that, as national commissioners, they should be leading that work on the areas that they hold responsibility, and leading the work to craft a cogent argument and definition for the NHS to respond to. There are further barriers in place at the operational level of the NHS where clinicians and managers fail to see eye-to-eye over incentives and targets and where there is a lack of management grip over the topic evidenced by CCGs failure to find a place for the topic on their governing board agendas and provider organisations making dull and hollow claims that it is a role for providers but do nothing about it.

This paints a sorry picture and the only salvation is that the NHS in England is not alone; many OECD countries are facing the same challenge; some are at the beginning of that journey whilst others declare that they have been studying variation for many years, but equally have not moved on to formulate a cohesive and rational argument as to why it is imperative that the health system take action to identify and reduce unwarranted variation and removes those barriers which prevent action.

### 7.5 QUESTION 3 – WHAT ARE THE PERCEIVED BARRIERS TO THE NHS RESPONDING TO UNWARRANTED VARIATION?

Thus far, the study has used the evidence and supporting literature to answer the first two questions, both of which have highlighted several potential barriers to explain why the NHS may not be taking action to identify and reduce unwarranted variation. What has become clear from the evidence that there is not one single barrier to action, there is a cocktail of strategic, operational, behavioural and technical barriers, confirming Knickman’s (2004) claim.

**Figure 22 –Perceived Barriers to Action**



### 7.5.1 Strategic Barrier

An unambiguous barrier is the absence of a clear and coherent argument to justify and explain why the NHS should be taking action to reduce unwarranted variation. Thus far, the rationale for action has been conveyed using the blunt instrument of policy. The issue of a crafting a cogent argument has been discussed previously, where Bojakowski, (2010) suggests it must be done by consensus and in section 7.4.2 there is a proposal that Toulmin's theoretical model offers a helpful framework to assist in the construction of a sound narrative for action. To improve on that we can combine Toulmin's theoretical model with other models, starting with the eight steps of successful change described below by Hurst (2010).

The Department of Health, politicians and national leaders will need to make a fundamental step-change in the way they communicate strategic expectations, as no strategy can sail freely across the under-current of culture, or as Davies (2002) concluded 'Culture eats strategy for breakfast every day every time'. Davies (2002) also warns that the NHS is intensely tribal and to align both strategy and culture, which according to Stanford et al, (2012) is needed to improve patient outcomes may be a barrier too far. Morgan and Liker, (2006) remind us that an organisations culture defines what goes on in its workplace, a point not lost on Schien (2004) who suggests organisational culture is the way workers learn to solve daily problems and external tasks and neglecting the issue of culture, when setting strategy, is side-stepping a sizeable barrier to success.

A second strategic barrier to emerge from the findings is the relentless attachment of successive governments to using market principles as a process of reform, demonstrated by the separation of commissioning and providing, with varying degrees of regulation and performance management. This study has revealed a sense of mistrust between the two congregations, leading to inertia about taking action to reduce unwarranted variation.

Two change models could help here. The first is to aid the strategic intent (Hurst, 2010) and the second, perhaps more useful to assist organisations implement the policy, are the eight steps defined in Kotter's model of change management (Kotter, 1996).

**Table 4 – Effective ways to realise policy reform (Hurst 2010)**

The role of the professional monopolists who provide health services
Communication and engagement – <i>a rational argument for change</i>
A clear diagnosis and a compelling design for a reform
The role of information and evidence
Use of incentives, to align the interests of stakeholders
The role of international comparisons of health system performance
Taking advantage of political “windows of opportunity”
Securing sufficient resources to “oil the wheels of change”

Reviewing Hurst’s eight ways to reform reveals a yawning gap between the ambition of policy makers to reduce unwarranted variation and the reality identified from the findings in this study. The call to reduce unwarranted variation was communicated via the NHS Mandate (DH, 2013) and the likelihood of it being a success is severely restricted based on the literature and findings from this study. There is no evidence to indicate that any one of the above has been followed or even considered. Indeed, it could be effortlessly claimed that each has been ignored. If the NHS is to take the identification and reduction of unwarranted variation seriously, these eight ways to reform need to be followed assiduously from the strategy makers, which can be strengthened by NHS organisations applying Kotter’s eight step change model.

### **7.5.2 Organisational Barrier**

The risk presented by organisational culture does not evaporate as the policy moves through the NHS; indeed it exists at several levels (Schien, 2004) and local culture may cause more resistance to the policy objective and become a bigger barrier. Organisational culture encompasses the taken-for-granted values, assumptions, language and definitions of an organisation (Cameron and Quinn, 2005) each of which must be confronted when implementing change. According to Appelbaum et al (2012) Kotter’s model offers an agreeable process to prepare organisational change, albeit with a

few limitations, including a challenge to Kotter's claim that the eight steps should be followed in sequence; something the NHS may not be able to observe as health care moves at a rapid pace (Spahr, 2005).

**Table 5 - Kotter's eight steps to change: Adapted from Appelbaum et al (2012)**

1. Establish a sense of urgency about the need to achieve
2. Create a powerful coalition
3. Develop a vision and strategy
4. Communicate the change vision
5. Empower action
6. Generate some quick wins
7. Consolidate gains and produce more change
8. Secure new approaches in the corporate culture

Appelbaum et al (2012) conclude with a warning that following these eight steps does not guarantee success but disregarding one or more may mean that changes achieved through hard work and effort soon dissolve as the culture of the organisation thrives and people revert to the old and comfortable ways of doing things.

There is an agreeable synergy between the above two models of change, which draw together the steps which can help to eliminate barriers to action at both strategic and organisational levels. However, the barriers identified through this study are extended beyond strategic and organisational to include behavioural and technical barriers, compounded by the retention of competition through market principles and the fractured health care system.

### 7.5.3 Behavioural Barrier

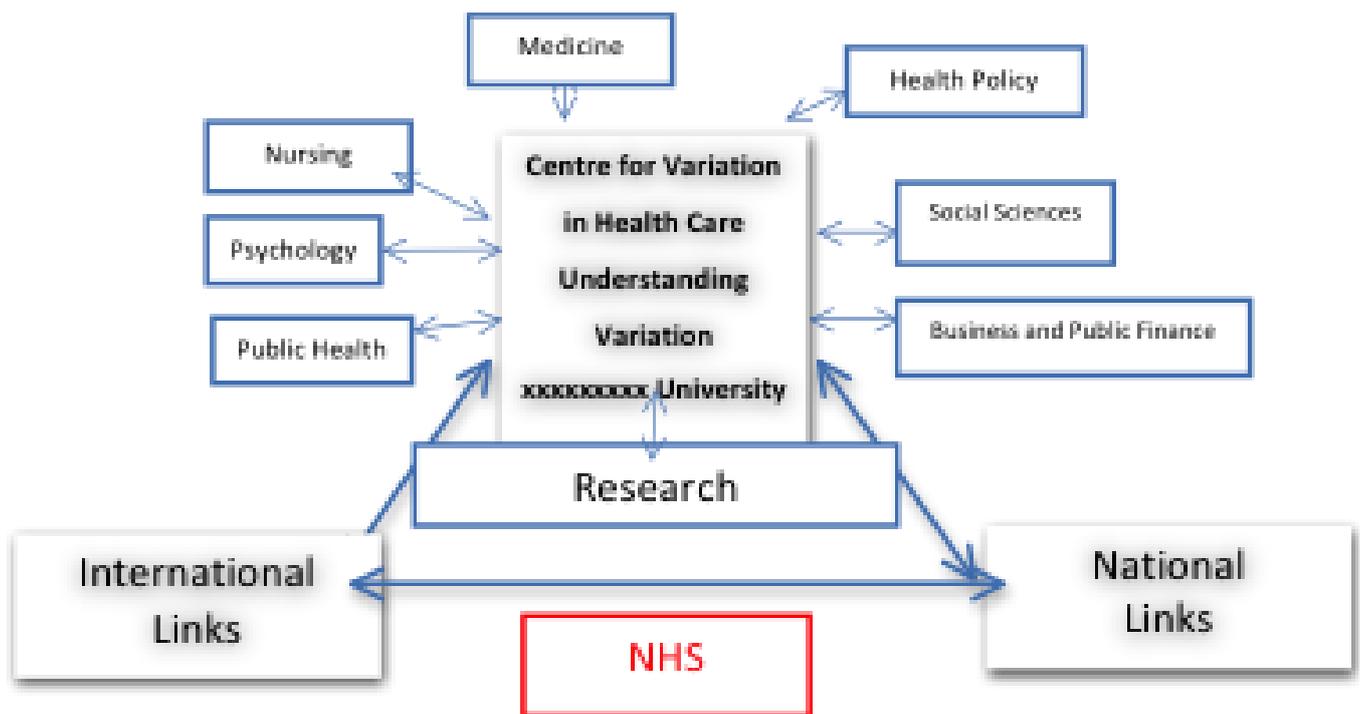
The above sections have highlighted the challenge of culture and how it can disrupt the effective implementation of national policy. Acknowledging that, a common barrier to success is the powerful monopoly held by both clinicians and providers in the NHS (Hurst, 2010). This issue has formed a tormenting thread which has woven itself throughout the study. First, the power and influence of clinicians and their dynamic relationship with managers, discussed previously in section 2.8, needs to be rebalanced. This study has reiterated that the long-standing tension between the clinicians and managers about 'who is in charge', which group should define service specifications, who should define unwarranted and who is responsible for the use of resources. This tension is not helped by the levels of bureaucracy, compounded by multiple layers of decision making at both clinical and management level, created by successive governments, which is now declared unfit for purpose, (Williams et al, 2007). It is argued that if the NHS is to take action to reduce unwarranted variation that there needs to be a united approach between clinicians and managers, at national and local level, with a clearly stated improvement methodology, using language and definitions which both parties can agree to, with accepted monitoring processes set against an agreed criteria.

One method of achieving that would be to mitigate another perceived barrier which is the lack of training and development on the topic. Action should be taken to include the concept of variation on all basic professional training programmes and to drive forward with the dis-continuation of uni-professional training. The NHS has long held an ambition to reduce uni-professional training and introduce more multi-professional training, where clinicians from all professions and managers are trained together (Blencowe et al, 2011). There is some hope that this ambition may come to fruition as the new organisations, Health Education England (HEE) and the Academic Health Science Networks (AHSN) can focus on multi-discipline and joint-professional training as these present a unique opportunity to align education, clinical research, innovation and training and education to improve patient care (Lipley, 2014).

The evidence from this study would suggest that training and development is not only required but the evidence has demonstrated that there is an appeal from the NHS for training and development to be made available and therefore should be considered as a priority for the NHS. A suggested model is presented below, ideally with clinicians and managers learning together within the 'centre of variation in health care' to understand and appreciate the strengths each discipline brings to solve

this puzzle. It is proposed that this training should be a fundamental part of all professional development and core training programmes.

**Figure 23 – Suggested framework to mitigate barrier of training/development**



However, that will not be sufficient in isolation, but could be a positive step forward as a method of contributing to the mitigation of another significant barrier, which has also been highlighted earlier; that is the marked contrast of views between the two congregations of the NHS - Commissioners and Providers; compounded by a bleak discrepancy in the expected behaviours of national and local commissioning organisations. Chapter 2 has described how successive governments have used market principles to reform the NHS and have retained the separation of the NHS into two congregations commissioning or providing through many reforms (Black, 2010).

The contrasting behaviours and views of the commissioning and provider organisations has been described in detail previously, where it is contested that the case for local commissioning organisations to take action has no coherent explanation, only superficial logic and is lacking a key

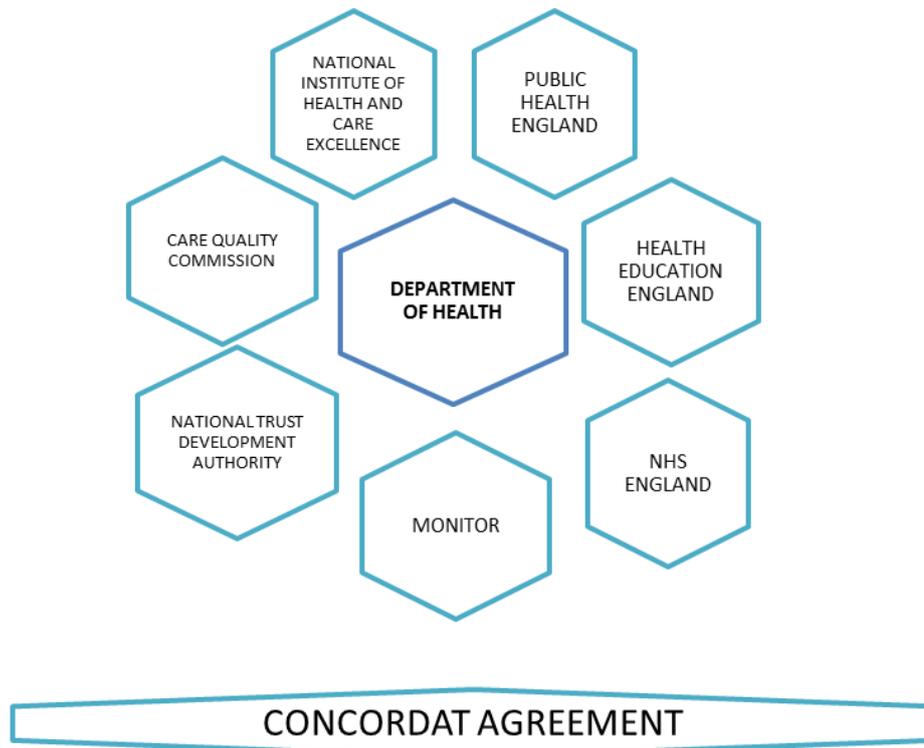
step proposed by Hurst (2010) that there is no incentive for commissioning organisations to lead this work. It is suggested that gap needs to be addressed urgently and would probably require the manipulation of some technical barriers.

#### **7.5.4 Technical Barrier**

Some of the technical barriers are probably unforeseen consequences of both strategic and organisational initiatives, for example, the national budget setting process and the business rules about savings and the need to deliver a year-end balanced budget set against a three year operational plan. These often prevent the NHS from constructing long term plans and reform of clinical pathways which take time to deliver. There are other national barriers which are the consequence of inconsistent regulatory processes for commissioning organisations, through the national commissioning board and for providers, through Monitor and the Trust Development Authority. It is proposed that there should be one set of regulatory processes, operating across the population, not organisationally determined and that those regulations are made transparent and the outcomes are publically available through a declaration of a shared responsibility of NHS organisations covering a defined population. The first step to this solution would be a better alignment of national policy, levers and incentives through a concordat between the national bodies responsible for health care.

The latest NHS reform has presented the opportunity for this to happen as a new set of arrangements are now in place. It is considered essential that each of these organisations publically declare their line of accountability and responsibility, and share their action plan to co-operate and work within their health care system to identify and reduce unwarranted variation. It is also suggested that the Department of Health, as the organisation that holds ultimate responsibility for the health care system in England, and the organisation to which the national organisations are accountable, should co-ordinate this work and start by crafting a concordat between those organisations.

**Figure 24 – Organisations that should be held accountable to each other for identifying and reducing unwarranted variation**



It is clear that neither the national, nor the local commissioning organisations, nor providers have made much progress in this arena, nor is there is a consensus on which organisation should lead, just inertia, mistrust and disharmony. It is postulated that this position is deepened as the organisations operate within a complex adaptive system, intensified as they are directly embroiled in a highly politicised system.

The concordat is a method to release some of that political pressure as the health system defines and defends its approach to reducing unwarranted variation in a collective response which must therefore, be more than a signature of intent. As each of the organisations declares their line of accountability and responsibility they should also declare how they plan to work with the organisations accountable to them, publically stating incentives and penalties. It is acknowledged that policy makers and planners do not, perhaps, always follow the epidemiology and evidence of variation but do follow performance ratings and national standards and the concordat could function at both the extrinsic, for example, the reputation and benchmarking of the organisation and at the intrinsic level, for example, having a direct impact on the payment structure for executives and incentives for Board members. The concordat could also be the instrument used to bring local

organisations together to work as a system, rather than independently, with local accountability through a local concordat, being careful that the bureaucracy does not become the driving force to make variation worse!

The establishment of a concordat to promote systems thinking, rather than organisational survival and clinical dominance may also develop opportunities to eliminate one of the more difficult barriers, the powerful resistance from provider organisations who, this study has confirmed, are overtly hostile to the notion that commissioning organisations should be involved in reducing unwarranted variation. There is evidence of a toxic relationship, from providers, with very little trust or confidence in the capability of commissioners to meet the challenge to reduce unwarranted variation on trust, with an unequivocal claim that variation will increase, not reduce, if it is left to commissioning organisations.

## **7.6 Summary**

This study has demonstrated that the barriers to taking action to reduce unwarranted variation are a mixture of strategic, organisational, behavioural and technical. The NHS needs to assess each of the barriers and clarify if one of the barriers is an unforeseen consequence of other policy initiatives, levers or incentives. It is clear that policy makers need to align policies to support the two main congregations, commissioners and providers, cast their differences aside and pull together to solve the puzzle presented by variation in the uptake, provision and costs of health care. New models of care should be designed which enable the system to operate together for the population they serve, not the organisation they administer. That may require some substantial modifications to NHS business rules and the generation of longer term relationships (Lewis et al, 2010). The worry though is that history has told us that the NHS suffers from frequent reorganisation (Hunter, 2012) and the way the NHS makes changes is not usually by subtle amendments to business rules but by significant and often top-down reorganisation, which, according to Kmietowicz (2014), needs to stop.

The following chapter will harvest the findings from this study and present concluding remarks, confirming that variation is a wide-ranging, long-standing difficult problem to resolve, not only for the NHS in England but world-wide, which has implications for practice.

## Chapter 8: Conclusion and implications for practice

### 8.1 OVERVIEW

This study set out to investigate the concept of variation in health care, in particular why they are a problem, what should be done to identifying and reducing unwarranted variation and what barriers there are which prevent the NHS taking action. During this five-year study the review of the literature has identified several recurrent themes which shaped the conceptual framework and a line of inquiry to answer the research questions (section 1.1). This chapter will now draw those findings together to a conclusion and highlight the implications for practice and areas for future research.

The literature revealed that the concept of variation has been a challenge to the NHS in England for more than 65 years (Glover, 1938). It remains an unsolved puzzle to date with many articles over the decades establishing the prevalence of unwarranted variation (McPherson et al, 1982; Chassin, 1993; Stukel et al, 2005; Wennberg, 2010). Whilst ample literature exists to express the problems of unwarranted variation, there is a paucity of literature to move the debate forward, beyond the observation and recording of variation, to describe what should be done to address the problem (DaSilva, 2013). That problem, however, is not an issue for the NHS in England alone; many countries are facing the same challenge to understand what barriers prevent the health systems identify and reduce unwarranted variation (Corallo et al, 2014).

This offers an authenticity to this study and a justification that is further strengthened by the lack of any material to guide readers to appreciate how the NHS perceives the issue, from both the commissioning and provider perspective and what the NHS considers are barriers preventing action to reduce unwarranted variation. This study has taken up that challenge aiming to create new knowledge to nudge that debate forward.

This study has presented fresh and timely insight, confirming that the concept of unwarranted variation is fairly well acknowledged but poorly understood, demonstrated by the ample fresh evidence that reducing unwarranted variation is an issue that the NHS believes it should address and that the majority of staff consider doing so a part of their role. This study has also confirmed that little or no action is being taken, by either national or local commissioning organisations or provider organisations, with the indication that there is a gap in knowledge which impedes the NHS taking action. Mulley (2009) asserts that we need to have both the curiosity and competence to resolve the

problem of unwarranted variation but it appears the NHS only meets half of his aspiration (DaSilva, 2013) it has some curiosity but lacks competence.

The verification from the NHS that tackling variation is important is welcome and suggests a way forward, but that declaration hides many of the potential barriers that prevents action being taken and why the puzzle of unwarranted variation remains unsolved: the power struggle and lack of mutual respect identified between commissioning and provider organisations on which organisation should lead this work and further compounded by the disagreement between clinicians and managers who should lead this agenda.

One of the significant findings from this study is the marked contrast of views on the topic between the two congregations of the NHS - Commissioners and Providers – compounded by a bleak discrepancy in the expected behaviours of the national and local commissioning organisations. The findings reveal that the national commissioning board have taken no time and put in no effort in to understanding the problem of unwarranted variation, but do imply that they expect local commissioning organisations – the Clinical Commissioning Groups – to respond to the problem and reduce unwarranted variation. Remarkably, the NHS also considers it a role for CCGs but the evidence has demonstrated that they have not made much progress, and the evidence suggests that action will not be happening any time soon as the CCGs are neglecting to put the topic on their own agenda, citing the lack of training as a barrier to taking that action.

The evidence that the topic does not appear on the agenda of CCGs suggests a deeper and more troublesome reservation, namely that their agenda may be being set by external, political and national, organisations and regulators rather than local organisations aspiring to address the burden of disease within their population. This hypothesis is drawn from the claim by Greer et al (2014) that gestures to decentralise are often covertly diluted by increasing the powers of central regulators and the evidence of the confusion and lack of leadership on this topic from the executive members of the NHS Commissioning Board, where there is a level of dissent amongst those members about not only whether they should respond but also about what should be done to reduce unwarranted variation. This position is a contradiction of the way the executive members behave when it comes to other more robust and tangible measures of national targets, a point not lost on the GPs who anticipate that NHS management will try to reduce unwarranted variation through a performance management route (DaSilva, 2012b).

This is an interesting conclusion as the case for local commissioning organisations to take the necessary action has no rational explanation, or incentive and is a case built on a loose argument of logic alone. That sense of logic is probably constructed from the perception that the commissioning organisations receive the majority share of NHS funds from the government to determine local services to meet the need of their population. The essence of logic continues that commissioning organisations could use some of these funds to invest in resolving the problem of identifying and reducing unwarranted variation. However, that comes with some awkward questions obtained from the evidence that; first, would the CCGs know where to place that investment; second, what return would they expect from that investment; and third, how would they monitor the impact of the investment?

Those questions were not lost on some of the respondents who declare that a reason why commissioning organisations are failing to act is that the expectation is made all the more difficult with the tightening management controls and reducing structures of the local commissioning organisations. One profound message from this study has been the impact that the separation of public health expertise, moving out of the CCGs and into the arena of the local authority will have on the reduction of unwarranted variation.

Another conclusion from this study to explain why the NHS is not taking action to reduce unwarranted variation is the powerful resistance from provider organisations who are not only overtly hostile to the notion that commissioning organisations doing this work but are adamant that it is their role and their role alone. Interestingly, that belief is clearly flawed and their claim weakened when it is noted that if provider organisations really do think it is their role, then why have they not done much about it for the life-span of the NHS? The perception of commissioners, by providers, is one of very little trust or confidence in the capability of commissioners, which may, of course, not be limited to the work on identifying unwarranted variation, but may be a much deeper routed problem.

This study has demonstrated that the constant churn and re-organisation of the NHS has also been cited as one of the reasons the NHS does not focus on reducing unwarranted variation as there is a political/managerial tension of delivering short term objectives. That tension leads to a blockage of innovation and progress when managers and professionals clash over the management and organisation of services.

This study concludes with the knowledge that the NHS is aware that it should reduce unwarranted variation in the provision, uptake and costs of health care but acknowledges the problem is not going to be addressed any time soon without stronger leadership, better training and a clearer articulation of the not only why the NHS should respond, but how and who should respond.

Nevertheless, that does not mean that this study has fallen short. On the contrary, the study has shed new light on the topic and exposed some of the barriers that prevent the NHS responding to the call to reduce unwarranted variation and has offered solutions to assist the NHS deal with this important policy issue and will conclude the study with implications for practice.

## **8.2 IMPLICATIONS FOR PRACTICE**

What is clear is that this important piece of health policy has drifted for years and still the NHS considers that tackling variation is an issue of importance. It is recommended that both commissioning organisations and provider organisations need to work together, and be equally involved in the investigation, classification, mitigation and reduction of unwarranted variation, supported by the national regulators through a concordat holding each to account. The findings from this study confirm that without the political, managerial and professional will and a new sense of leadership, with a well-constructed argument to support the claim that the NHS should reduce unwarranted variation, nothing will improve and the current position of inertia, where unwarranted variation goes unchallenged, will prevail. To move the debate forward, beyond that sense of inertia this study has highlighted 5 key steps:

1. A concordat is required between all major national health care organisations.
2. A national conduit is established to harvest, harness and share knowledge – this could, over the longer term, hold the concordat between national organisations assuring that the system levers and incentives are aligned.
3. An urgent improvement in the availability of training on the subject with modules to increase awareness and confidence to be able to investigate and address unwarranted variation.
4. A policy initiative which introduces the requirement of a variation impact assessment when NHS organisations are considering making significant reform and reorganisation to NHS services.
5. A clear process of engagement during reform.

The first two steps were discussed in the previous chapter and based on perceived gap in knowledge about how to identify, classify and reduce unwarranted variation. This is verified by the appeal for

training and development to be made available as a means of improving this situation. This awareness raising should be developed to enhance the confidence and competence of individuals, teams and their organisations to understand both the concept of variation and to create new opportunities to take action to identify and reduce unwarranted variation.

At present, the NHS in England does not have a focal point; it appears to be left to chance and it is proposed that this position can be better co-ordinated and facilitated by the creation of a central conduit for the harvesting, harnessing and sharing of the current knowledge. This facility, 'the Variation Knowledge Service' could be a virtual organisation, sitting alongside the national concordat and working across each of the seven organisations to assist in the development of a common narrative, definition and development programme. Alternatively, it could be a tangible organisation, hosted and located within an established academic organisation with an initial funding stream from the seven major organisations through the concordat to work to align incentives and regulations, develop training and offer specialist advice and consultancy.

The outcome from these first two suggestions is that the NHS, as a system, creates:

- ✓ a rational a cogent argument to explain why the action is important
- ✓ a clearly articulated definition to enable the service to respond
- ✓ an explicit, not implicit, claim that this is the role of the whole NHS, rather than the responsibility of just the local commissioning organisations
- ✓ incentives and enablers for the system to function together without penalty
- ✓ measures of success and processes to rapidly disseminate learning

The next step is linked to the first steps and instrumental in raising the profile and action to reduce unwarranted variation. The proposal is the development of national policy which would see the introduction of a 'variation impact assessment' (VIA) as a key component of all reconfigurations and reorganisations of NHS services. The 'VIA' would be a public document declaring how the reconfiguration of a service would lead to, at least no further unwarranted variation in the provision, uptake and costs of health care and where possible how it would reduce unwarranted variation. The responsibility for undertaking and signing off this assessment would be for the commissioning and provider organisations, as a joint process with their Regional officer and Health-watch; the national consumer champion in health and care with statutory powers to ensure the voice of the consumer is

heard by those who commission, provide and regulate services. Without this sign off, no significant reorganisation or reconfiguration should proceed.

The main aim of this critical piece of work is to assure the public that unwarranted variation will not be ignored and that the NHS will continually search for and address that variation, releasing resources to go toward higher value health care. Through the introduction of a 'Variation Impact Assessment' NHS organisations, their clinicians and managers, would work together to seek out and understand the level of unwarranted variation in their practice and assure the public that any changes to services will not increase the level of unwarranted variation, which causes harm, waste and duplication of services (DaSilva, 2012b; 2012c). The challenge to the introduction of a variation impact assessment process, however, is the stark evidence from this study that before this could become core business, there are training and development needs to address.

### **8.3 CONSIDERATION FOR FUTURE RESEARCH**

This study has answered the research questions and shed new light on the topic of variation in the provision, uptake and costs of health care. The findings are considered valuable in moving the debate forward, but there is acknowledgement that further work is required and further research to maintain the impetus. It is suggested that one of the key areas for future research could be to mitigate some of the limitations of this study and repeat it, taking a longer period of time to seek a higher response rate and perhaps breaking down responses to understand if there is any significant difference between clinicians and managers, or a difference in perception between those working in primary care and those in secondary care. That study could also explore the current availability of training including where, if at all, the concept of unwarranted variation can be found as a part of core professional training modules.

It is suggested that future research also seeks to explore and understand in more detail each of the recurring themes highlighted throughout this study. For example, reform and reorganisation has become a key theme from the literature and the findings of this study, as has the separation of commissioning and provider organisations, and it would be of benefit to gain a deeper understanding of the way reform could contribute to the quest to identify and reduce unwarranted variation. A key aim would be to understand whether the processes in place to retain market principles and competition increase or reduce unwarranted variation.

A further area of research would be to understand the governance arrangements of CCGs and work out why this topic is not finding its way onto the governing body agenda. This study has revealed that CCGs do not appear to have the issue of unwarranted variation on their agenda. It would be of great value to understand why this is the case and what, if anything, may reverse that trend. Furthermore, it would be of equal interest to find out whether provider organisations discuss this issue at board level, or within their organisational directorates, and whether the topic of unwarranted variation gets onto their agenda too, as well as to understand how both commissioning and provider organisations arrange their business, in particular, how matters of importance are selected and find their way onto the governing body agenda.

Another topic to explore would be how the NHS could incentivise action to identify and reduce unwarranted variation. The current payment structures within primary care and secondary care differ slightly with a 'fee for service' contract in general practice and the 'payment by results' scheme in secondary care. A powerful piece of research would be to investigate the impact these payment systems have on unwarranted variation in the provision, uptake and costs of health care, and whether those payment systems increase the perceived tolerance of unwarranted variation and whether the payment systems reduce the scope and ambition of commissioners or providers to respond to the challenge of identifying and reducing unwarranted variation.

Of equal importance, would be to explore and appreciate the circumstances leading innovation to generate variation in the provision, uptake and costs, and how those innovations can be spread and disseminated across the NHS as a method of rapid transformation and improvement of care. The question here would be to understand why some organisations are doing something about transforming services whilst others appear not to.

The first phase of this post-doctoral study will be to investigate the level of acceptance of the suggested implications for practice and to identify the potential to pursue these to test them out as being sensible and deliverable. Included in this piece of work will be an attempt to understand what support mechanisms are in place and what barriers need to be isolated and removed to make them happen. Only then might we understand how the NHS, as a system, can collaborate to classify, identify, reduce and mitigate unwarranted variation in the provision, uptake and costs of health care. That has to be worth exploring!

## References

- Abbott, S., et al. (2009). NHS purchaser–provider relationships in England and Wales: the view from primary care. *Social Policy and Administration*, 43, 1-14.
- Allen, P. (2009). Restructuring the NHS again: supply side reform in recent English health care policy. *Financial Accountability and Management*, 25, 373-389.
- Allen, P. (2013). An economic analysis of the limits of market based reforms in the English NHS. *BMC Health Services Research*, 13(Suppl 1), S1.
- Allsop, J. (1984). *Health Policy and the National Health Service*. London: Longman.
- Appelbaum, S. H., Habashy, S., Malo, J. L., & Shafiq, H. (2012). Back to the future: revisiting Kotter's 1996 change model. *Journal of Management Development*, 31(8), 764-782.
- Appleby, J., et al. (2011). *Variations in Health Care: The Good, the Bad and the Inexplicable*. London: King's Fund.
- Arah, O. A., et al. (2003). Conceptual frameworks for health systems performance: a quest for effectiveness, quality, and improvement. *International Journal for Quality in Health Care*, 15, 377-398.
- Ashcroft, R. E., et al. (2005). Reforming research ethics committees. *British Medical Journal*, 331, 587-588.
- Bach, P. (2010). A map to bad policies. *New England Journal of Medicine*, 362: 569-573.
- Baruch, Y., & Holtom, B. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61, 1139-1160.
- Berwick, D. (1999). Continuous improvement as an ideal in health care. *New England Journal of Medicine*, 320: 53-56.
- Berwick, D. M. (1991). Controlling variation in health care: a consultation from Walter Shewhart. *Medical Care*, 29, 1212-1225.
- Bevan, G., & Hood, C. (2006). Health policy: have targets improved performance in the English NHS? *British Medical Journal*, 332, 419.
- Birkmeyer, J. D., et al. (2013). Understanding of regional variation in the use of surgery. *Lancet*, 382, 1121-1129.
- Black, N. (2010). "Liberating the NHS" – Another attempt to implement market forces in English health care. *New England Journal of Medicine*, 363, 1103-1105.
- Blencowe, N. S., et al. (2011). Effects of changing work patterns on general surgical training over the last decade. *Postgraduate Medical Journal*, 87, 795-799.
- Bojakowski, S. (2010). Managing the paradox between equality and diversity in healthcare: Unwarranted vs warranted variations. *Journal of Management Marketing in Healthcare*, 3, 241-247.
- Bojke, C., et al. (2013). Regional variation in the productivity of the English National Health Service. *Health Economics*, 22, 194-211.
- Bowling, A. (2009). *Research Methods in Health: Investigating Health and Health Services*. Maidenhead, UK: Open University Press.
- Brody, H. (2010). Medicine's ethical responsibility for health care reform – the top five list. *New England Journal of Medicine*, 362, 283-285.

- Bryman, A. (1984). The debate about quantitative and qualitative research: a question of method or epistemology? *British Journal of Sociology*, 35, 75-92.
- Bryman, A. (2001). Integrating quantitative and qualitative research: how is it done? *Qualitative Research*, 6, 97–113.
- Bryman, A., & Bell, E. (2007). *Business Research Methods*. 2nd ed. Oxford: Oxford University Press.
- Buglear, J. (2005). *Quantitative Methods for Business: The AZ of QM*. Abingdon, UK: Routledge.
- Cabana, M. D., et al. (1999). Why don't physicians follow clinical practice guidelines? A framework for improvement. *Journal of the American Medical Association*, 282, 1458-1465.
- Cameron, S., & Price D. (2009). *Business Research Methods: A Practical Approach*. London: CIPD.
- Cameron, K. S., & Quinn, R. E. (2005). *Diagnosing and changing organizational culture: Based on the competing values framework*. John Wiley & Sons.
- Cardinaels, E., & Soderstrom, N. (2013). Managing in a complex world: Accounting and governance choices in hospitals. *European Accounting Review*, 22(4), 647-684.
- Carlsen, B., et al. (2007). Thou shalt versus thou shalt not : a meta-synthesis of GPs' attitudes to clinical practice guidelines. *British Journal of General Practice*, 57, 971–978.
- Carlsen, B., & Bringedal, B. (2011). Attitudes to clinical guidelines – do GPs differ from other medical doctors? *BMJ Quality and Safety*, 20, 158-162.
- Casparie, A. F. (1996). The ambiguous relationship between practice variation and appropriateness of care: an agenda for further research. *Health Policy*, 35, 247-265.
- Castelli, A., et al. (2014). Examining variations in hospital productivity in the English NHS. *European Journal of Health Economics*, 1-12.
- Chambers, N., et al. (2013). The practice of commissioning healthcare from a private provider: learning from an in-depth case study. *BMC Health Services Research*, 13(Suppl 1), S4.
- Chassin, M. R. (1993). Explaining geographic variations. The enthusiasm hypothesis. *Medical Care*, 31(5 suppl), YS37-44.
- Checkland, K. (2012) Management in general practice: the challenge of the new General Medical Services contract. *British Journal of General Practice* , 54, 734-739.
- Cheung, C. R. L., & Gray, J. M. (2012). Unwarranted variation in health care for children and young people. *Archives of Disease in Childhood*, 98: 60-65.
- Clough, P., & Nutbrown, C. (2012). *A Student's Guide to Methodology*. London: Sage.
- Cluzeau, F. A., & Littlejohns, P. (1999). Appraising clinical practice guidelines in England and Wales: the development of a methodologic framework and its application to policy. *Joint Commission Journal on Quality Improvement*, 25, 514-521.
- Coleman, A., et al. (2010). Local histories and local sensemaking: a case of policy implementation in the English National Health Service. *Policy and Politics*, 38, 289-306.
- Conroy, M., & Shannon, W. (1995). Clinical guidelines: their implementation in general practice. *British Journal of General Practice*, 45, 371-375.
- Cook, J., et al. (2009). Response rates in postal surveys of healthcare professionals between 1996 and 2005: an observational study. *BMC Health Services Research*, 9, 160.
- Corallo, A. N., et al. (2013). A systematic review of medical practice variation in OECD countries. *Health Policy*, 114, 5-14.

- Cox, D. (1991). Health Service Management – A Sociological View: Griffiths and the Non-Negotiated Order of the Hospital. In: Gabe, J., et al. *The Sociology of the Health Service*. London: Routledge. pp. 89-114.
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Thousand Oaks, CA, US: Sage.
- Creswell, J. W. (2011). Controversies in Mixed Methods Research. In: Denzin, N. K., & Lincoln, Y. S. *The Sage Handbook of Qualitative Research*. Thousand Oaks, CA, US: Sage. pp. 269-284.
- Crump, B., & Adil, M. (2009). Can quality and productivity improve in a financially poorer NHS? *British Medical Journal*, 339, 1175-1177.
- Darzi, A. (2008). *High Quality Care for All: NHS Next Stage Review Final Report*. Norwich: TSO.
- DaSilva, P. (2012a). *Increasing Value: Commissioning on the Front Line*. Chichester, UK: Kingsham Press.
- DaSilva, P. (2012b). *Literature review*. (Submitted in part fulfilment of DBA programme at Nottingham Trent University, unpublished.)
- DaSilva, P. (2012c). *An interpretive report on a piece of ethnographic research*. (Submitted in part fulfilment of DBA programme at Nottingham Tent University, unpublished.)
- DaSilva, P. (2013). *A report on a piece of structured research*. (Submitted in part fulfilment of DBA programme at Nottingham Trent University, unpublished.)
- Davies, H. T. (2002). Understanding organizational culture in reforming the National Health Service. *Journal of the Royal Society of Medicine*, 95(3), 140-142.
- Dawson, J., et al. (2010). The routine use of patient reported outcome measures in healthcare settings. *British Medical Journal*, 340, 464-467.
- Day, P., & Klein, R. (1983). Two views on the Griffiths report. The mobilisation of consent versus the management of conflict: decoding the Griffiths report. *British Medical Journal*, 287, 1813.
- Day, P., & Klein, R. (1991). Britain's health care experiment. *Health Affairs*, 10, 39–59.
- Degeling, P. J., et al. (2004). Making clinical governance work. *British Medical Journal*, 329, 679-681.
- Delamothe, T. (2008). A fairly happy birthday. *British Medical Journal*, 337, 25-29.
- Denzin, N. K. (1970). *The Research Act: A Theoretical Introduction to Sociological Methods*. Piscataway, NJ, US: Transaction Publishers. Taken from: Thurmond, V. A. (2001). The point of triangulation. *Journal of Nursing Scholarship*, 33, 253-258.
- de Jong, J., et al. (2006). Medical Practice Variation : Does it Cluster within General Practitioners' Practices ? In: Westert, G. P., et al. *Morbidity, Performance and Quality in Primary Care*. Abingdon, UK: Radcliffe. pp. 125–134.
- de Jong, J. D., et al. (2010). Do guidelines create uniformity in medical practice? *Social Science and Medicine*, 70, 209-216.
- Denis, J. L., & Forest, P. G. (2012). Real reform begins within: an organizational approach to health care reform. *Journal of Health Politics, Policy and Law*, 37, 633-645.
- Department of Health and Social Security. (1983). *NHS Management Inquiry*. London: HMSO.
- Department of Health. (1989). *Working for Patients*. London: HMSO.
- Department of Health. (1990). *National Health Service and Community Care Act 1990*. London: HMSO.

- Department of Health (2007). Speech by Rt Hon Patricia Hewitt MP, secretary of state for health, 20 February 2007 to the King's Fund: Commissioning new providers 2007. [www.dh.gov.uk/en/News/Speeches/DH\\_074569](http://www.dh.gov.uk/en/News/Speeches/DH_074569)
- Department of Health. (2009). *The Year: NHS Chief Executive's Annual Report 2008/09*. London: 2009.
- Department of Health. (2010a). *Equality and Excellence: Liberating the NHS*. London: DH.
- Department of Health. (2010b). *NHS Operating Framework for NHS England 2011/12*. London: DH.
- Department of Health. (2010c). *NHS Atlas of Variation Compendium 1*. London: DH.
- Department of Health. (2011). *NHS Atlas of Variation Compendium 2*. London: DH.
- Department of Health. (2012). *Health and Social Care Act 2012*. London: DH.
- Department of Health. (2013). *The Mandate – A Mandate from the Government to the NHS Commissioning Board: April 2013 to March 2015*. London: DH.
- Dodgion, C. M., & Greenberg, C. C. (2009). Using population-based registries to study variations in health care. *Journal of Oncology Practice*, 5, 319-320.
- Drennan, V., et al. (2011). Establishing new nursing roles: a case study of the English community matron initiative. *Journal of Clinical Nursing*, 20, 2948-2957.
- Dunbar, J. A. (2011). When big isn't beautiful: lessons from England and Scotland on primary health care organisations. *Medical Journal of Australia*, 195, 219-221.
- Dusheiko, M., et al. (2008). Explaining trends in concentration of healthcare commissioning in the English NHS. *Health Economics*, 17, 907-926.
- Edwards, N. (2010). *The Triumph of Hope over Experience*. London: NHS Confederation.
- Ellwood, S. (1997). The response of fundholding family doctors to price signals. *Financial Accountability and Management*, 13, 345-365.
- Enthoven, A. C. (1990). Internal market reform of the British National Health Service. *Health Affairs*, 10, 60-70.
- Enthoven, A. C. (2009). Integrated delivery systems: the cure for fragmentation. *American Journal of Managed Care*, 15, S284.
- Epstein, A. M. (2006). Paying for performance in the United States and abroad. *New England Journal of Medicine*, 355, 406-408.
- Evetts, J. (2011). A new professionalism? Challenges and opportunities. *Current Sociology*, 59, 406-422.
- Exworthy, M., & Frosini, F. (2008). Room for manoeuvre? Explaining local autonomy in the English National Health Service. *Health Policy*, 86, 204-212.
- Ferlie, E. (2010). *Networks in Health Care: A Comparative Study of Their Management, Impact and Performance*. (Doctoral dissertation, School of Management, Royal Holloway, University of London.)
- Fisher, C. M. (2007). *Resource allocation in the public sector: values, priorities, and markets in the management of public services*. Psychology Press.
- Fisher, C. (2010). *Researching and Writing a Dissertation: An Essential Guide for Business Students*. 3rd ed. Harlow UK: Pearson.
- Flynn, R. (2012). *Structures of Control in Health Management*. London: Routledge.

- Freeth, D. S., et al. (2008). *Effective Interprofessional Education: Development, Delivery, and Evaluation*. Oxford: Blackwell.
- Freidson, E. (1994). *Professionalism Reborn: Theory, Prophecy, and Policy*. Chicago: University of Chicago Press.
- Fulop, N., et al. (2005). Changing organisations: a study of the context and processes of mergers of health care providers in England. *Social Science and Medicine*, 60, 119-130.
- Garber, A. M. (2011). *Competition, Integration and Incentives: The Quest for Efficiency in the English NHS*. London: Nuffield Trust.
- Glover, J. A. (1938). The incidence of tonsillectomy in school children. *Indian Journal of Pediatrics*, 5, 252-258.
- Godlee, F. (2011). Tackling practice variation. *British Medical Journal*, 342, d1884.
- Goldkuhl, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, 21, 135-146.
- Gorman, G. E., & Clayton, P. (2004). *Qualitative Research for the Information Professional*. London: Facet Publishing.
- Gravelle, H., et al. (2007). Impact of case management (Evercare) on frail elderly patients: controlled before and after analysis of quantitative outcome data. *British Medical Journal*, 334, 31.
- Greener, I., et al. (2011). *A Realistic Review of Clinico-Managerial Relationships in the NHS : 1991-2010*. London: NIHR Service Delivery and Organisation Programme.
- Greer, S. L., et al. (2014). *A Reorganisation You Can See from Space: The Architecture of Power in the New NHS*. London: CHPI.
- Gridley, K., et al. (2012). Can general practitioner commissioning deliver equity and excellence? Evidence from two studies of service improvement in the English NHS. *Journal of Health Services Research and Policy*, 17, 87-93.
- Grimshaw, J., et al. (2004). Effectiveness and efficiency of guideline dissemination and implementation strategies. *Health Technology Assessment*, 8(6).
- Grol, R. (1992). Implementing guidelines in general practice care. *Quality in Health Care*, 1, 184-191.
- Grypdonck, M. H. (2006). Qualitative health research in the era of evidence-based practice. *Qualitative Health Research*, 16, 1371-1385.
- Guba, E. G., & Lincoln, Y. S. (1994). *Competing Paradigms in Qualitative Research*. Thousand Oaks, CA, US: Sage. Taken from: Fisher, C. (2007). *Researching and Writing a Dissertation: An Essential Guide for Business Students*. Harlow, UK: Pearson.
- Gubb, J., & Meller-Herbert, O. (2009). *Markets in Health Care*. London: Civitas.
- Guest, G., et al. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18, 59-82.
- Guillemin, M. & Gillam, L. (2004). Ethics, reflexivity, and “ethically important moments” in research. *Qualitative Inquiry*, 10, 261-280.
- Gundersen, L. (2000). The effect of clinical practice guidelines on variations in care. *Annals of Internal Medicine*, 133, 317-317.
- Gupta L, et al. (1997). Clinical practice guidelines in general practice: a national survey of recall, attitudes and impact. *Medical Journal of Australia*, 166, 69-72.
- Ham, C. (1988). *Health Care Variations: Assessing the Evidence*. London: King’s Fund.

- Ham, C. (2008). World class commissioning: a health policy chimera? *Journal of Health Services Research and Policy*, 13, 116-121.
- Ham, C. (2012). Competition in the NHS in England. *British Medical Journal*, 342, d1035.
- Hannan, T. J. (1999). Variation in health care – the roles of the electronic medical record. *International Journal of Medical Informatics*, 54, 127–36.
- Hibbard, J. H., et al. (2005). Hospital performance reports: impact on quality, market share, and reputation. *Health Affairs*, 24, 1150-1160.
- Hughes, D., et al. (2013). Co-operation and conflict under hard and soft contracting regimes: case studies from England and Wales. *BMC Health Services Research*, 13(Suppl 1), S7.
- Hunter, D. (1996). The changing roles of health care personnel in health and health care management. *Social Science and Medicine*, 43, 799-808.
- Hunter, D. (2012). NHS “reform” in England: where is the public interest? *British Medical Journal*, 344: e2014.
- Hurst, J. (2010). *Effective Ways to Realise Policy Reforms in Health Systems*. Paris: OECD.
- Illich, I. (1988). *Limits to Medicine*. London: Penguin.
- Ileri, S., et al. (2011). A qualitative and quantitative study of medical leadership and management: experiences, competencies, and development needs of doctor managers in the United Kingdom. *Journal of Management and Marketing in Healthcare*, 4, 16-29.
- Jewson, N., et al. (2014). Training in the public sector in a period of austerity: the case of the UK. *Journal of Education and Work*. DOI: 10.1080/13639080.2014.900169.
- Jones, T., & Wood, J. (2010). *Improving the Quality of Commissioning GP Services*. London: King’s Fund.
- Kelleher, D., et al. (2013). *Challenging Medicine*. Abingdon, UK: Routledge.
- Kennedy, P. J., et al. (2010). Clinical practice variation. *Medical Journal of Australia*, 193, S97.
- Kernick, D., & Sweeney, K. (2001). Post-normal medicine. *Family Practice*, 18, 356-358.
- Kitto, S. C., et al. (2008). Quality in qualitative research. *Medical Journal of Australia*, 188, 243.
- Klein, R. (2010). *The New Politics of the NHS: From Creation to Reinvention*. London: Radcliffe.
- Kmietowicz, Z. (2014). End top-down changes to NHS, says think tank. *British Medical Journal*, 348, g3832.
- Knapp, M., et al. (2001). Commissioning for quality: ten years of social care markets in England. *Journal of Social Policy*, 30, 283-306.
- Knickman, J. R. (2004). The Dartmouth data: moving from analysis to action. *Health Affairs*, Suppl Variation, VAR121-3.
- Leggat, S. G., et al. (2011). High performance work systems: the gap between policy and practice in health care reform. *Journal of Health Organization and Management*, 25, 281-297.
- Lewis, R., & Dixon, J. (2005). *NHS Market Futures: Exploring the Impact of Health Service Market Reforms*. London: King’s Fund.
- Lewis, R. Q., et al. (2010). *Where Next for Integrated Care Organisations in the English NHS?* London: Nuffield Trust.
- Light, D. (1998). *Effective Commissioning: Lessons from Purchasing in American Managed Care*. London: Office of Health Economics.

- Love, T. (2013). *Variation in Medical Practice: Literature Review and Discussion*. Wellington, Australia: Saphere Research Group.
- Lugtenberg, M., et al. (2011). Perceived barriers to guideline adherence: a survey among general practitioners. *BMC Family Practice*, 12, 98.
- McBride, D., et al. (2010). Explaining variation in referral from primary to secondary care: cohort study. *British Medical Journal*, 341, c6267.
- McDonach, E., et al. (2009). Reflections on applying for NHS ethical approval and governance in a climate of rapid change: prioritising process over principles. *International Journal of Social Research Methodology*, 12, 227-241.
- McPherson, K., et al. (1982). Small-area variations in the use of common surgical procedures: an international comparison of New England, England, and Norway. *New England Journal of Medicine*, 307, 1310-1314.
- McPherson, K., et al. (1986). Regional variations in the use of common surgical procedures: within and between England and Wales, Canada and the United States of America. *Social Science and Medicine Part A*, 15, 273-288.
- McPherson, K. (2008). Commentary: James Alison Glover (1874-1963), health care variations research then and now. *International Journal of Epidemiology*, 37, 19-23.
- McPherson, K., et al. (2013). *International Variations in a Selected Number of Surgical Procedures*. Paris: OECD.
- Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *Lancet*, 358, 483-488.
- Mannion, R. et al., 2009. From cultural cohesion to rules and competition: the trajectory of senior management culture in English NHS hospitals, 2001-2008. *Journal of the Royal Society of Medicine*, 102(8), pp.332-336.
- Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice*, 13, 522-526.
- Maynard, A. (2011). The powers and pitfalls of payment for performance. *Health Economics*, 21, 3-12.
- Mays, N., & Dixon, A. (2011). *Assessing and Explaining the Impact of New Labour's Market Reforms. Understanding New Labour's Market Reforms of the English NHS*. London: King's Fund.
- Maxwell, J.A. (2008). Designing a Qualitative Study. In: Tashakkori, A., & Teddlie, C. *Handbook of Mixed Methods in Social and Behavioral Research*. Thousand Oaks, CA, US: Sage. pp. 214-253.
- Mercuri, M., & Gafni, A. (2011). Medical practice variations: what the literature tells us (or does not) about what are warranted and unwarranted variations. *Journal of Evaluation in Clinical Practice*, 17, 671-677.
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass.
- Michalec, B., & Hafferty, F. W. (2014). Medical Education and Professionalism. In: *The Wiley-Blackwell Encyclopedia of Health, Illness, Behavior, and Society*. Hoboken, NJ, US: Wiley-Blackwell.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis*. Thousand Oaks, CA, US: Sage.
- Millar, R., et al. (2011). *Liberating the NHS: Orders of Change?* Birmingham: HSMC, University of Birmingham.
- Morgan, J.M. & Liker, J.K., 2006. *The Toyota product development system*, Productivity Press.

- Moule, P., & Hek, G. (2011). *Making Sense of Research: An Introduction for Health and Social Care Practitioners*. London: Sage.
- Mulley, A.G. (2009). Inconvenient truths about supplier induced demand and unwarranted variation in medical practice. *British Medical Journal*, 339, b4073.
- Neal, J. (2005). Practice based commissioning: an introduction. *BMJ Career Focus*, 331, gp130-gp131.
- Neuhauser, D., et al. (2011). The meaning of variation to healthcare managers, clinical and health-services researchers, and individual patients. *BMJ Quality and Safety*, 20(Suppl\_1), i36-i40.
- NHS Institute. (2008). [http://www.institute.nhs.uk/quality\\_and\\_service\\_improvement](http://www.institute.nhs.uk/quality_and_service_improvement)
- O'Dowd, A. (2011). MPs propose toning down aspects of health bill that increase competition in NHS. *British Medical Journal*, 342, d1643.
- O'Leary, Z. (2009). *The Essential Guide to Doing Your Research Project*. London: Sage.
- Orb, A., et al. (2000). Ethics in Qualitative Research. *Journal of Nursing Scholarship*, 33, 93-96.
- Panella, M., et al. (2003). Reducing clinical variations with clinical pathways: do pathways work? *International Journal for Quality in Health Care*, 15, 509-521.
- Paton, C. (2013). Never say never again: re-forming and deforming the NHS. *Health Economics, Policy and Law*, 8, 243-249.
- Plowright, D. (2012). *Using Mixed Methods Frameworks for an Integrated Methodology*. London: Sage.
- Plsek, P. (2000). Redesigning Health Care with Insights from the Science of Complex Adaptive Systems. In: *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press. pp.309-322.
- Pollock, A. M., & Godden, S. (2008). Independent sector treatment centres: evidence so far. *BMJ: British Medical Journal*, 336(7641), 421.
- Porter M.E., & Teisberg EO. (2006). *Redefining Health Care*. Boston, MA, US: Harvard Business School Press.
- Price, D. (2006). A Bi-paradigmatic Analysis of Organisational Culture. Taken from: Cameron, S., & Price, D. (2009). *Business Research Methods: A Practical Approach*. London: CIPD.
- Propper, C., et al. (2008). Competition and quality: evidence from the NHS internal market 1991-99. *Economic Journal*, 118, 138-170.
- Rashidian, A., et al. (2008). Falling on stony ground? A qualitative study of implementation of clinical guidelines' prescribing recommendations in primary care. *Health Policy*, 85, 148-161.
- Reid, F. D. A., et al. (1999). Explaining variation in hospital admission rates between general practices: cross sectional study. *British Medical Journal*, 319, 98-103.
- Reynolds, L., & McKee, M. (2012). Opening the oyster: the 2010-11 NHS reforms in England. *Clinical Medicine*, 12, 128-132.
- Richards, S. (2009). Should the NHS strive to eradicate all unexplained variation? Yes. *British Medical Journal*, 339, b4809.
- Richards, H. M., & Schwartz, L. J. (2002). Ethics of qualitative research: are there special issues for health services research? *Family Practice*, 19, 135-139.
- Roland, M., & Rosen, R. (2010). English NHS embarks on controversial and risky market-style reforms in health care. *New England Journal of Medicine*, 364, 1360-1366.
- Saldaña, J. (2011). *The Coding Manual for Qualitative Researchers*. London: Sage.

- Saltman, R. B., et al. (2006). *Decentralisation in Health Care*. Maidenhead, UK: Open University Press.
- Sandelowski, M. (2000). Focus on research methods – whatever happened to qualitative description? *Research in Nursing and Health*, 23, 334-340.
- Schang, L., et al. (2014). From data to decisions? Exploring how healthcare payers respond to the NHS Atlas of Variation in Healthcare in England. *Health Policy*, 114, 79-87.
- Schien E,H. 2004 *Organisational Culture and Leadership* J Wiley & Sons.
- Schwalm, J. D. R., & Yusuf, S. (2011). Commentary: 'The end of clinical freedom': relevance in the era of evidence-based medicine. *International Journal of Epidemiology*, 40, 855-858.
- Seidman, I. (2006). *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. New York: Teachers College Press.
- Sheldon, T. A. (2005). Making evidence synthesis more useful for management and policy-making. *Journal of Health Services Research and Policy*, 10(Suppl 1), 1-5.
- Silverman, D. (2010). *Qualitative Research*. London: Sage.
- Sipkoff, M. (2003). 9 ways to reduce unwarranted variation. *Managed Care*, 12, 20-24.
- Siriwardena, A. N. (1995). Clinical guidelines in primary care: a survey of general practitioners' attitudes and behaviour. *British Journal of General Practice*, 45, 643-647.
- Smith, J., & Charlesworth, A. (2011). *NHS Reforms in England: Managing the Transition*. London: Nuffield Trust.
- Smith, J. A., & Mays, N. (2012). GP led commissioning: time for a cool appraisal. *British Medical Journal*, 344, e980.
- Smith, J., et al. (2013). *Commissioning High-quality Care for People with Long-Term Conditions*. London: Nuffield Trust.
- Som, C. V. (2005). Nothing seems to have changed, nothing seems to be changing and perhaps nothing will change in the NHS: doctors' response to clinical governance. *International Journal of Public Sector Management*, 18, 463-477.
- Spahr, R. (2005). "Acting" Leadership Roles: Lessons Learned. *Physician executive*, 31(5), 40.
- Spallek, H., et al. (2010). Barriers to implementing evidence-based clinical guidelines: a survey of early adopters. *Journal of Evidence Based Dental Practice*, 10, 195-206.
- Spence, D. (2010). Bad medicine: specialisation. *British Medical Journal*, 341, c4903.
- Spyridonidis, D., & Calnan, M. (2011). Are new forms of professionalism emerging in medicine? The case of the implementation of NICE guidelines. *Health Sociology Review*, 20, 394-409.
- Stanford, J. R., Swaney-Berghoff, L., & Recht, K. (2012). Cardiac surgical outcomes improvement led by a physician champion working with a nurse clinical coordinator. *American Journal of Medical Quality*, 27(1), 5-10.
- Stevens, S. (2004). Reform strategies for the English NHS. *Health Affairs*, 23, 37-44.
- Stukel, T. A., et al. (2005). Long-term outcomes of regional variations in intensity of invasive vs medical management of Medicare patients with acute myocardial infarction. *Journal of the American Medical Association*, 293, 1329-1337.
- Tanenbaum, S. J. (2013). Reducing variation in health care: the rhetorical politics of a policy idea. *Journal of Health Politics, Policy and Law*, 38, 5-26.
- Tanne, J. H. (2005). Doctors who write guidelines often have ties to the drug industry. *British Medical Journal*, 331, 982.

- Teddlie, C., & Yu, F. (2007). Mixed methods sampling: a typology with examples. *Journal of Mixed Methods Research*, 1, 77–100.
- Thompson, A. G., & France, E. F. (2010). One stop or full stop? The continuing challenges for researchers despite the new streamlined NHS research governance process. *BMC Health Services Research*, 10, 124.
- Thomson, A. G. (2002). Variation may be good for your health: the nature of evidence. *International Journal for Quality in Health Care*, 14, 1-3.
- Thurmond, V. A. (1991). The point of triangulation. *Journal of Nursing Scholarship*, 33, 253-258
- Tod, A. M., et al. (2002). Ethical review of health service research in the UK: implications for nursing. *Journal of Advanced Nursing*, 40, 379-386.
- Toulmin, S. E. (2003). *The Uses of Argument*. Cambridge: Cambridge University Press.
- Trochim, W. M. (2006). *The Research Methods Knowledge Base*. 2nd ed. Available at: <http://www.socialresearchmethods.net/kb/> (cited September 2014).
- Van de Ven, A. H. (2007). *Engaged Scholarship: A Guide for Organizational and Social Research*. Oxford: Oxford University Press.
- Wade, E. (2011). Commissioning reform in the NHS: will he who pays the piper ever really call the tune? *Clinical Medicine*, 11, 35-39.
- Wennberg, D.E., & Wennberg, J.E. (2003). Addressing variations: is there hope for the future? *Health Affairs*, Suppl Web Exclusives, W3-614-7.
- Wennberg, J.E. (1984). Dealing with medical practice variations: a proposal for action. *Health Affairs*, 3, 6–32.
- Wennberg, J. E. (2004). Practice variations and health care reform: connecting the dots. *Health Affairs*, Suppl Variation, VAR140-4.
- Wennberg, J. E., et al. (2008). *Tracking the Care of Patients with Severe Chronic Illness: The Dartmouth Atlas of Health Care 2008*. Lebanon, NH, US: Dartmouth Institute for Health Policy and Clinical Practice.
- Wennberg, J. E. (2010). *Tracking Medicine: A Researcher's Quest to Understand Health Care*. Oxford: Oxford University Press.
- White, J. (2011). Prices, volume, and the perverse effects of the variations crusade. *Journal of Health Politics, Policy and Law*, 36, 775.
- Williams, S., 2007. Lost in the global sum ? Professional and practice development in primary care after the new general practice contract. *Practice*, (June), pp.439–440
- Winyard, G. (2003). Doctors, managers and politicians. *Clinical Medicine*, 3, 465-469.
- Woodin, J. (2006). Health Care Commissioning and Contracting. In: Walshe, K., & Smith, J. *Healthcare Management*. Maidenhead, UK: Open University Press. pp. 201-223.
- Woods, J. (2010). *Clinical commissioning: what can we learn from previous commissioning models?* <http://www.kingsfund.org.uk/topics/nhs-reform/white-paper/gp-commissioning>
- Yin, R. (2009). *Case Study Research: Design and Methods*. 4th ed. London: Sage.