The role of management control systems in the VBHC strategy formulation process
– Exploring management control systems as a package

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Abstract

The study explores the role of management control systems in a strategy formulation process, this by viewing management control systems as a package and addressing its role in the Value Based Health Care (VBHC) strategy formulation process at Uppsala University Hospital. Previous studies exploring the relationship between management control systems and strategy have found the relationship to be interrelated and that management control systems can take either an interactive or diagnostic role. However, these studies are limited in their approach as they do not address management control systems as a package, thus failing to capture the importance of informal control systems and the impact separate controls have on each other. Applying a case study design using semi-structured interviews, the study partly supports the findings of earlier studies emphasizing how management control systems can be classified and used for both interactive as well as diagnostic purposes. The study however, expands the view of earlier research by emphasizing how diagnostic controls should be further classified as either enforcing or reinforcing control systems, as well as emphasizing the importance of timing for understanding the different roles of management control systems in a strategy formulation process.

Keywords: Management control systems, Package, Role, VBHC, Strategy formulation.
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1. Introduction

The first chapter starts by giving a background to the topic of the study which is later followed by a discussion of the problem eventually leading to the study's formulated research question and aim. The chapter is concluded with a section addressing the study’s limitations and contributions.

1.1 Background

Management control systems are argued to be necessary tools for directing the behaviour of members of an organisation to be in line with set objectives and strategic directions (Simons, 1995; Merchant & Van der Stede, 2012). In the healthcare sector however, there has been a vast turnover of different strategic ideas and management concepts that have repeatedly overturned management control systems and changed the conditions for the members of the sector (Fredriksson et.al., 2015). This have partly resulted in adverse effects, something that is well illustrated in the following statement:

“There is a dilemma in the healthcare sector, and in most private sector organisations as well, that there is some form of reorganization fatigue and project misery. Everyone just sigh, a new strange idea and a new whim that will only result in an increased workload.”

(Interviewed process leader at Uppsala University Hospital)

As expressed by this process leader at Uppsala University Hospital, facilitating strategic change can be a comprehensive challenge for management as it requires the need to achieve behaviour among members of the organisation, congruent with the new strategic direction (Simons, 1995). When new strategic ideas and agendas are presented, a fatigue for strategic change can create obstacles that the organisation needs to overcome in order to achieve a successful strategic adoption (Walshe, 2009). This vast turnover of different strategic directions and management concepts characterizing the healthcare sector has therefore contributed to a climate where the members of the sector are increasingly getting tired of adopting and embracing new strategic ideas. They therefore tend to discard new strategic ideas before utilizing its full potential (Fredriksson et.al., 2015).

The most recent strategy presented for the healthcare sector is Value Based Health Care (VBHC) whose fundamental idea is to emphasize the needs of the patient by measuring the value of
healthcare through the whole care process (Porter, 2010). The strategy described as, “The strategy that will fix health care” (Porter & Lee 2013, P.1) has received global recognition, and is now being implemented in hospitals throughout the world. This includes Sweden, where Uppsala University Hospital is one of the early adopters, working continuously since 2013 with formulating the VBHC strategy. However, a climate of reorganisation fatigue and project misery in the healthcare sector, may challenge senior management at Uppsala University Hospital to achieve a successful strategy formulation.

It is therefore necessary for management to utilize management control systems as a tool for achieving a successful strategic formulation, this since distinct management control systems aligned with the overall strategy of the organisation has been argued to be essential for the success of a strategic direction (Malmi & Brown, 2008). This implies that a strategy is incomplete without supporting control systems, as it would risk causing unintended behaviour and outcomes not aligned with the overall strategy (Simons, 1995). Earlier studies considered management control systems as being subordinate to strategies, meaning that management control systems are implemented as a mean to reinforce an already implemented strategy (Langfield-Smith, 1997). Later studies however question this view by illustrating how management control systems can have the ability to impact strategy, implying that the relationship between management control systems and strategy is best understood as interrelated, and that management control systems both shapes, and are being shaped by strategy (Kober et al., 2007). In the process of formulating a strategy, studies have further illustrated how the role of management control systems can vary and be used differently (Simons, 1991), either by enforcing a strategic direction on the members through top-down strategy implementation, or by enabling an environment that facilitates learning and influence the strategy through a bottom-up strategy formation approach (Ahrens & Chapman, 2004). Understanding how management control systems can be used in a strategy formulation process can therefore be argued to be of great importance for the success of any strategic direction.

1.2 Problematization

The view that an organisation's management control system needs to be aligned with the firm's strategic objective to achieve a congruent behaviour within the organisation has long been debated (Otley, 1980; Simons, 1995), and was first expressed in the mid-1960s by Robert N. Anthony (1965). This view of management control systems has since been expanded by
emphasizing the need to view management control systems as a package (Otley, 1980; Malmi & Brown, 2008). The idea of management control systems as a package springs from the notion that the effects of separate control systems are difficult to isolate, and may therefore as a result cause mismatched signals (Otley, 1980; Malmi & Brown, 2008). However, despite the long existence of the idea of a control package, it has not had the desired impact on management control systems research (Malmi & Brown, 2008). Malmi and Brown (2008) therefore stress the importance of viewing management control systems as a package by arguing that this is crucial in order for an organisation to successfully adopt new strategic directions. Studies not adopting this view therefore fails to grasp important aspects, leaving an incomplete understanding of the impact of separate controls in the studied context (Malmi & Brown, 2008).

This is the case of earlier studies addressing the role of management control systems in a strategy formulation process, as they have tended to focus on management accounting systems and other types of formal controls (Simons, 1990; Ahrens & Chapman, 2004; Skærbæk & Tryggestad, 2010; Frigotto et al., 2013). This research approach has also meant that earlier studies neglected the importance of informal controls, especially since the importance of informal controls, such as organisational culture, has been increasingly recognized in recent management control systems literature (Merchant & Van der Stede, 2007; Malmi & Brown, 2008; Ferreira & Otley, 2009). More recent research has described informal control as an overarching yet sharp form of control for an organisation, implying that informal controls needs to be considered when studying the role of management control systems in a strategy formulation process (Merchant & Van der Stede, 2012; Malmi & Brown, 2008). This is something that the management control systems package created by Malmi and Brown (2008) has included.

Earlier studies addressing the role of management control systems in a strategy formulation process are therefore limited in their approach by only scrutinizing separate management control systems, hence, not considering the impact separate controls have on each other (Otley, 1980; Malmi & Brown, 2008). As such, the perspective of earlier studies is not compatible with Malmi and Brown’s (2008) argument that management control systems need to be studied as a package. These studies therefore leave us with an incomplete understanding and a clear knowledge gap, suggesting that the role of management control systems in a strategy formulation process needs to be further explored by applying Malmi and Brown’s (2008) framework. Uppsala University Hospitals ongoing formulation of VBHC thus provide a unique opportunity to evolve our
understanding for how management control systems are used and the role they have in the strategy formulation process, leading us to the following research question:

What role does management control systems have in the VBHC strategy formulation process and what influence these roles?

1.3 Aim
The study aims to develop an increased understanding for the role of management control systems in a strategy formulation process as well as an increased understanding for how these roles are influenced. This by viewing management control systems as a package, thus incorporating both informal and formal controls and addressing their role in the VBHC strategy formulation process at Uppsala University Hospital.

1.4 Limitations and contributions
While the aim of this study is to explore and develop an increased understanding for the role of management control systems in a strategy formulation process, the scope of this study is limited to addressing the role from a management control system perspective. The analysis will therefore address the role of different management control systems in relation to the VBHC strategy. How the VBHC strategy is transformed is not a primary focus for this study. We are aware of the issues related to applying two grand concepts that is management controls systems and strategy. This is however something considered necessary in order to be able to conduct this study and understand the role of management control systems in a strategy formulation process. This since management control systems per definition are used as a tool to enable a strategy. Exploring management control systems without considering strategy would leave us with an incomplete understanding of the different roles of management control systems and would hence not allow us to fulfil the aim of this study.

From a practical perspective, the findings of this study are of special interest for health care organisations adopting the VBHC strategy, but the intentions of this study is to further contribute to the management control systems literature by evolving our understanding of the roles different control systems can adopt in a formulation process. Hence, the theoretical contributions are directed towards the field of management control systems literature.
1.5 Disposition

The remainder of this study is structured as followed. The second chapter of the study, presenting the theoretical background, elaborates on the components of management control systems package as well as addressing the relationship between management control systems and strategy and the role of management control systems in a strategy formulation process. The chapter is concluded with a theoretical summary and a conceptual framework. Chapter 3 addresses the methodological approach which incorporates the research approach as well as the methodological considerations with the chosen method. In order to provide a better understanding of how the analysis was conducted, the chapter also includes an explanation of the analysis and the choices made during the process. In chapter 4, the VBHC strategy is presented followed by a presentation of the study’s empirical data, structured in accordance with the strategic components of VBHC. In chapter 5 the empirical data is analysed by applying the conceptual framework. The study is concluded in chapter 6 along with suggestions for future research.
2. Theoretical background

The following chapter addresses theory and previous research that is the foundation for the study’s conceptual framework. Initially, management control systems as a package is presented. This is followed by a section addressing the relationship between management control systems and strategy as well as the earlier research addressing the role of management control systems in a strategy formulation process. The chapter is then summarized and a conceptual framework is presented.

2.1 Management control systems as a package

The idea of management control systems as a package has been discussed since the early 1980s when Otley (1980) addressed issues concerning the difficulty of isolating the effect of separate control systems. However, there has long been a lack of clarity as to what the term management control systems comprises, with researchers presenting their own frameworks as well as their own definitions of the concept (Simons, 1995; Merchant & Van der Stede, 2007; Malmi & Brown, 2008). The lack of a uniform definition of management control systems demands a clarification of the studies position in regards to what is included in the term. In the mid-1990s, Simons (1995) presented a framework that was widely recognized where he defined management control systems as “management control systems are the formal, information-based routines and procedures managers use to maintain or alter patterns in organisational activities” (p.5). Management control systems is as such a wide concept that includes several separate controls. However, in Simons (1995) definition there is a view of management control systems as being comprised of formal controls. Research has since expanded this view by increasingly recognizing that management control systems is a combination of formal as well as informal controls that work in collaboration (Merchant & Van der Stede, 2007; Malmi & Brown 2008).

Malmi and Brown (2008) therefore expands the definition of Simons (1995) by stating that “management controls include all the devices and systems managers use to ensure that the behaviours and decisions of their employees are consistent with the organisation’s objectives and strategies, but exclude pure decision-support systems.” (p.290). When constructing the theoretical discourse for this study, it is key that the adopted view of management control systems is aligned with the aim of the study. Malmi and Brown's (2008) framework fulfil these requirements as it focuses on the relationship between strategy and management control systems.
This is key to the study as it is addressing the role of management control systems in formulating the VBHC strategy.

2.1.1 Malmi and Brown’s framework

The framework presented by Malmi and Brown (2008) include five separate groups which in combination form a package of control systems. Each group can also be further divided into subcategories and will be presented in the following section.

![Figure 1: Management Control Package (Malmi & Brown, 2008)](image)

Planning is used as a management control system by setting out the goals for the organisation and by doing so directing efforts and behaviour. Planning is divided into two subgroups, namely action planning and long range planning. Action planning refers to the short-range decisions, affecting a 12 months’ period, whilst long-range planning sets the goals for the longer time periods. As such, action planning has a tactical focus, whereas long-range planning is more of strategic focus in nature, comprising of the organisations strategic priorities and initiatives that are considered effective for controlling the behaviour of the members in the organisation (Malmi & Brown, 2008). This view differs some from that of Merchant and Van der Stede (2007) who include planning together with budgeting in their financial result control system. Malmi and Brown (2008) however reject this view as they argue how planning can be used as a control system without financial references.
Cybernetic controls is perhaps what has been historically most associated with management controls, and in the framework of Malmi and Brown (2008) the definition of cybernetic controls is retrieved from that of Green and Welsh (1988) who defines cybernetic control as “a process in which a feedback loop is represented by using standards of performance, measuring system performance, comparing that performance to standards, feeding back information about unwanted variances in the systems, and modifying the system’s comportment” (p.289). Cybernetic controls are then further divided into four separate subcategories, namely; budgets, financial measures, non-financial measures and hybrid controls containing a combination of both financial and non-financial controls (Malmi & Brown, 2008).

Budgets has several uses for an organisation, but in terms of being a management control system it is primarily used for planning acceptable levels of behaviour and evaluating the performance of units or individuals in comparison to those plans. The second category of cybernetic controls, financial measures, is closely linked to budgets but is more of a financial performance measurement system, unlike budgets that have much wider scope. Financial measures thus include target setting which is then followed up to hold employees accountable for that specific measurement. A good example of financial measurements as a control system is return on investment (Malmi & Brown, 2008).

Non-financial measures are focused on other aspects that financial measurements are unable to identify as performance drivers, and can be seen as a compliment to such measures, and have become increasingly important in many contemporary organisations. The final category of cybernetic controls is hybrid controls, which can be best described as a combination of both financial as well as non-financial controls (Malmi & Brown, 2008). A well-known example of hybrid controls is the balanced scorecard which was first presented by Kaplan and Norton (1996). The balanced scorecard measures performance by including several different factors which they identify as key components, and is presented as a suitable tool for introducing new strategies at both an organisational as well as on a business unit level (Kaplan and Norton, 1996).

Reward and compensation refer to controls that are used to increase efforts by individuals or groups using the occurrence of compensations and rewards. Thus rewards and compensations are used as motivational tools for increasing performance and achieving congruence between goals and activities (Bonner & Sprinkle, 2002). Bonuses are a common example of a control system
that falls within this category and are applied in many organisations to increase efforts (Malmi & Brown, 2008).

Administrative controls refer to how the organising of individuals and groups, the specification of how tasks are to be performed, the monitoring of behaviour and the determination of who employees are held accountable for their behaviour are used as control systems (Malmi & Brown, 2008). The framework contains three separate control systems that fall within this category; governance structure, organisation structure and finally policies and procedures. Governance structure refers to how a firm's board structure and composition of its management and project teams form a control system that includes both the formal lines of authority and accountability as well as control systems that aid the organisation to co-ordinate activities between different functions and units. Meetings and schedules are examples of such forms of control. Policies and procedures are, as it appears, the bureaucratic approach for clarifying the standard operating processes and behaviours within a firm (Macintosh & Daft, 1987). Policies and procedures are similar to what Merchant and Van der Stede (2007) refer to as action controls. Malmi and Brown’s thus expands this view by evolving our perception of administrative controls to also include governance and organisational structure. Organisational structure is a control system in terms of how the organising of individuals can be used to direct employee behaviour. This since a specific structural type can encourage certain types of contacts and relationships within the organisation (Abernethy & Chua, 1996).

The final part of the framework that composes the management control package by Malmi and Brown (2008) is that of cultural controls. Cultural controls fall under the category of informal control systems with organisational culture being viewed as a control system when implemented with the intention to regulate behaviour. In Malmi and Brown's (2008) definition of cultural controls, three components are considered; value-based controls, clan controls and symbol-based controls. Value-based controls are defined as what Simons (1995) first described as belief systems; “the explicit set of organisational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organisation” (p.34). Clan controls refers to how individuals are exposed to distinct subcultures within an organisation which in turn instils in them a set of skills and values. A clan can be both a specific group such as a profession or separate groups within the organisation, such as a unit or division. Clan control become a management control system through establishing values, rituals
and belief of that group that individuals adapt to (Ouchi, 1979). The final dimension of cultural controls, symbol-based controls refers to how visible expressions such as workplace design can be implemented to develop a specific culture (Schein, 2004). For example, dress codes can be used to create a sense of professionalism (Malmi & Brown, 2008).

Malmi and Brown's view of what comprise the informal controls differ from that of Merchant and Van der Stede (2007), who argue that informal controls should be distinguished as either cultural or personnel controls. Personnel controls are conceptualized through the use of selection and placement of employees as well as training, concepts that can also be identified in Malmi and Brown’s (2008) framework. Although selection of the organization's members is recognized as a cultural control in their framework, placement and training is rather seen as a form of administrative controls. Placement as it relates to their view of organisational and governance structure, and training as it often associated with teaching members to follow specified policies and procedures (Malmi & Brown, 2008).

2.2 Defining strategy

There has been a variety of strategy definitions provided in the research literature over time. Central in management theory is the definition by Chandler (1962) stating that “Strategy is the determination of the basic long-term goals of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals” (p.13). His early definition received wide acknowledgement, but later became criticised by Mintzberg (1978) who argued that this type of definition assume that strategy is something explicit, developed purposefully and made in advance of the specific decisions to which it applies, thus viewing strategy as a plan. As a consequence, he further argues that this perspective on strategy limit researchers’ ability to draw conclusions and make abstract normative generalisations (Mintzberg, 1978).

In accordance with Mintzberg’s (1978) view on strategy definition, this study needs a definition that recognizes and allows strategies to develop over time. This criterion is fulfilled by the definition of Porter (1980) who argues that strategy is a “broad formula for how a business is going to compete, what its goals should be, and what policies will be needed to carry out those goals” and the “...combination of the ends (goals) for which the firm is striving and the means (policies) by which it is seeking to get there” (p.xvi). By applying Porter’s (1980) definition of
strategy, the concept of VBHC can be identified as a strategic direction. The way to compete and the goals for the organisation referred to in the definition by Porter (1980) can be identified as value for the patient as described in the VBHC strategy.

2.3 The relationship between Management Control Systems and strategy
Many studies have explored the relationship between management control systems and strategy (e.g. Simons, 1987; Simons, 1990; Simons, 1991; Langfield-Smith, 1997; Kober et al., 2007; Skærbæk & Tryggestad, 2010; Jørgensen & Messner, 2010). Simons (1987) provided an early understanding of the relationship and proposed how control systems are adapted in accordance with different strategies. This suggested a view of management control systems as being subordinate to organisational strategy, and implemented and adapted to reinforce and fit that specific strategy (Langfield-Smith, 1997). Such an understanding was further developed by studies showing how management control systems have the ability to shape and form strategies (Kober et al., 2007). This was well illustrated by Skærbæk and Tryggestad (2010), who studied how accounting systems aided the transgressing evolvement of a corporate strategy, concluding that accounting devices can have the ability to help formulate and impose an adaption of a strategy. The relationship between management control systems and strategy is, thus, not unilateral, but rather interrelated with the capacity to shape and form each other (Kober et al., 2007). The relationship between the two could therefore be characterized as being complex yet mutually interrelated, where management control systems both shape, and is being shaped by strategy, evolving and forming each other over time (Kober et al., 2007).

2.3.1 The role of management control systems in a strategy formulation process
In the early 1990s Simons (1990; 1991) criticized how historical research conceptualizing management control systems in terms of implementing a strategy, for failing to recognize the influence of management control systems in the strategy formulation process. His initial findings illustrate how management control systems can take an interactive as well as a diagnostic role and that managers must choose how different controls are used. This depending on if management strive to create an environment allowing the formation of strategy within the organisation or if they advocate the implementation of an already fully developed strategy during the strategy formulation process. The different roles adopted by the management control systems in a strategy formulation process will be divided and further clarified in the following sections.
2.3.1.1 Interactive controls
Interactive controls are used for facilitating learning and are interactively influencing strategy (Simons, 1990). Simons (1990) describes how management control systems become interactive when managers use control systems to monitor and intervene decision activities of employees on an ongoing basis. He argues that managers have the possibility to choose which controls to make interactive and how controls are more likely to be used interactively if they collect information about strategic uncertainties. Interactive controls therefore offer an opportunity for managers to debate and challenge assumptions and action plans within the organisation but rely on the attention of the operating staff from all levels of the organisation. He further argues that this is a result of managers’ awareness of how decisions and actions emerging from several parts of the organization have the ability to affect strategies, hence making the management's primary job to provide guidance, resources and incentives to motivate the members of an organisation to provide and interpret new information for the organisation to adapt to (Simons, 1990).

Ahrens and Chapman (2004) had similar thoughts when they studied the role of management control systems in accounting for flexibility and efficiency. They described what they referred to as enabling controls that are rather deployed to allow employees to deal directly with emerging issues on a contingency basis (Ahrens & Chapman, 2004). This was originally recognized by Adler and Borys (1996) who further argue that the use of enabling procedures is an efficient tool for helping committed employees becoming more effective as well as reinforcing their commitment. As such, enabling controls are described as an efficient tool for a bottom-up strategy formation as it embraces knowledge from all levels of the organisation to allow the members to help change and shape the strategic direction of the organisation (Ahrens & Chapman, 2004).

2.3.1.2 Diagnostic controls
Simons (1991) further developed the understanding of the role of management control systems by distinguishing that control systems may have either an interactive role or what he referred to as control systems having a diagnostic role, which he described as control systems used as a tool by management by exception. The diagnostic controls are as such the controls used in a traditional sense as a tool for implementing intended strategies. His study therefore suggests that there are fundamental differences in how managers use different control systems and that top managers do not focus their attention towards efficiency-related controls, such as cost accounting.
systems (Simons, 1991). Just like in the case of interactive controls, managers also have the possibility to choose which controls to make diagnostic and the characteristic of such controls depend directly on how the controls are implemented (Simons, 1991; Adler & Borys, 1996).

In line with Simon’s (1991) view on diagnostic controls, Ahrens and Chapman (2004) also present what they refer to as coercive controls, which are best described as a counterpart to the enabling controls presented above. As such, opposite to how enabling controls are advocated to encourage a bottom-up strategy formation, coercive controls are presented as a mean for implementing a top-down strategy. This as coercive controls are designed to be a fool proof system giving workers limited options for action. Hence, instead of fostering organisational learning, coercive controls are designed to force compliance and enforcing an already fully developed strategy that management wish to deploy (Ahrens & Chapman, 2004).

2.4 Theoretical summary and conceptual framework
Previous research has shown how the impact of separate controls is difficult to isolate, therefore having an impact on each other. Studies therefore advocate the need to view management control systems as a package, which composes of both formal as well as informal control systems. As previous research has illustrated, the relationship between management control systems and strategy is interrelated, meaning that management control systems both shapes, and are being shaped by strategy. The role of management control systems in the strategy formulations process of an organisational strategy has been addressed in previous studies suggesting that the role can be both diagnostic and interactive. Diagnostic controls are illustrated to be used for monitoring and evaluating performance and seen as a tool for management to implement an already fully developed strategy, hence used with a top-down approach. Interactive controls, on the other hand, are means for facilitating learning and interactively influencing strategy and are seen as a way for management to facilitate strategic change. Interactive controls are therefore often characterized by a bottom-up strategy deployment. These studies further emphasize the need for managers to specify the role of a specific control system in the strategy formulation process.
The framework is initiated from Malmi and Brown’s (2008) control package, which should be viewed as a tool box for comprising a control package used for strategy deployment. The control systems in the package can further have the role of either being diagnostic/coercive which enables a top-down strategy implementation through measuring and evaluating performance, as well as having an interactive/enabling role that advocates a bottom-up strategy formation. This is illustrated in the model by how the different management control systems in the package presented by Malmi and Brown (2008) can be used for different purposes hence having different roles in the strategy formulation process. By applying the package perspective that emphasizes how the effect of different controls are unable to be isolated, the study addresses the occurrences of both interactive as well as diagnostic controls in the strategy formulation process and how a package perspective can contribute to our understanding for how the roles of different control systems are adopted.
3. Method

In this section the study's course of action is presented. The methodological choices are motivated as well as the choice of organisation and the respondents participating in the study. The section further addresses the operationalization and is concluded with a section concerning method considerations.

3.1 Research approach

The study’s aim is to explore and develop an increased understanding for the role of management control systems in a strategy formulation process. Due to the complex relationship between management control systems and strategy, Langfield-Smith (1997) argues that studying the interaction between them can only be done by applying in depth research methods. Hence, a case study was conducted, applying a qualitative research approach, using semi-structured interviews for gathering empirical data. This since both open and more specific questions needed to be asked in order to answer the study's research question.

The design of the interview questions was further adapted depending on the position of the respondents within the organisation, making structured interviews unsuitable for the study. Non-standardized interviews such as semi-structured interviews, which are normally analysed qualitatively, are therefore considered an appropriate method for case studies as it strives to understand an issue from the perspective of the respondent. This allows studies to not only address questions regarding “what” and “how”, but also to conduct studies with more explorative characteristic by answering questions concerning” why” (Saunders et al., 2009). Thus making it a more suitable method for the study, as this approach supported the study's need to address the topic from different levels within the organisation.

The questions were constructed prior to the interviews but adapted to the respondent's role in the organisation. The questions were further designed to be open, allowing the respondents to discuss and develop their answers. Having open questions based on themes allowed the respondents to talk freely, which in turn meant that the order of which the questions were addressed in the interviews could vary. This further provided the possibility to ask follow up questions adapted to the answers and experiences of each respondent. After permission from the respondents, the interviews were recorded, and later transcribed and sent back to the respondent for review, this to allow the respondent to develop or if needed correct any misunderstandings.
3.2 Organisation

Since the study explores the role of management control systems in a strategy formulation process, it was crucial to find an organisation that had recently undergone a strategic shift, this since a new strategic direction needs to be formulated to fit in the organisation (Langfield-Smith, 1997). The adoption of VBHC in Swedish hospitals provided a good opportunity to study a newly formulated strategic direction, in an organisation working actively to support it. With Uppsala University Hospital, having adopted VBHC in 2013, the organisation fulfils these criteria, thus being a well-suited organisation for the study. By studying a strategy formulation process at an early stage, the members of the organisation were able to share relevant experiences from the process.

3.3 Respondents

As the study addresses the role of management control systems in a strategy formulation process, respondents from two different levels within the organisation were interviewed, which included, senior management level as well as operational level. The objective was to trace the full cycle of how management control systems are used throughout the organisation from formulation to practical way of operating. The respondents on senior management level were interviewed to identify how the work with management control systems is designed in accordance with VBHC, whereas the additional levels throughout the organisation testified on how these controls are perceived, and whether there are cases of decoupling hindering the management control systems to enable the organisation to both work in accordance with and to develop the strategic direction of VBHC.

The participating respondents in the study were chosen using snowball sampling (Saunders et al., 2009), meaning that the respondents interviewed were able to direct us towards additional individuals relevant to interview for the aim of the study. Contact with the organisation was first initiated through email correspondence with the Chief Financial Officer (CFO). After an initial meeting where the intentions of the study were presented, the CFO was able to help obtain interviews with relevant people at senior management level. At the first interview at senior management level, with the Director of VBHC, further recommendations for relevant respondents throughout the organisation, i.e. operational managers, process leaders (physicians responsible for the development of VBHC in their specific patient population) and patient representatives were provided. These respondents were later contacted by mail or phone,
securing relevant interviews from which further interviews could be secured by their recommendation. Towards the end of the interview process it was difficult to retain any new information, and recommendations for further interviews were often directed towards respondents already participating in the study. At this point, we experienced a sense of saturation in terms of data collection and no further interviews were considered necessary to enrich the quality of the collected data. All of the respondents participating in this study are presented in table 1 below. The respondents are further divided into two levels; at the top the senior management level and below the respondents representing the operational level.

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Interview type (Length)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director of VBHC</td>
<td>Personal (90 min)</td>
<td>2016-02-29</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>Personal (55 min)</td>
<td>2016-03-10</td>
</tr>
<tr>
<td>Chief Controller</td>
<td>Personal (50 min)</td>
<td>2016-03-15</td>
</tr>
<tr>
<td>Executive Vice President</td>
<td>Personal (40 min)</td>
<td>2016-03-15</td>
</tr>
<tr>
<td>Operational manager</td>
<td>Personal (30 min)</td>
<td>2016-03-22</td>
</tr>
<tr>
<td>Operational manager</td>
<td>Personal (35 min)</td>
<td>2016-04-11</td>
</tr>
<tr>
<td>Process leader</td>
<td>Personal (30 min)</td>
<td>2016-03-22</td>
</tr>
<tr>
<td>Process leader</td>
<td>Personal (40 min)</td>
<td>2016-03-30</td>
</tr>
<tr>
<td>Process leader</td>
<td>Personal (60 min)</td>
<td>2016-03-30</td>
</tr>
<tr>
<td>Process leader</td>
<td>Personal (40 min)</td>
<td>2016-04-01</td>
</tr>
<tr>
<td>Patient representative</td>
<td>Personal (35 min)</td>
<td>2016-03-30</td>
</tr>
</tbody>
</table>

*Table 1: Compilation of interviews conducted for the study*

Ethical considerations have been taken in the study by giving a short presentation before each interview of the purpose of the study and the intentions of the interview. By being briefed on what the material will be used for, the respondents are, according to Bryman and Bell (2011) more likely to feel comfortable and therefore able to talk more freely. Furthermore, each respondent was informed of the fact that they would remain anonymous and that they would be referred to by their professional role and not by name. At senior management level, anonymity is hard to obtain due to the characteristics of the professional role within the organisation which was communicated for approval.

### 3.4 Operationalization

Since the study was conducted through interviews on different levels in the organisation, the questions were adapted to the level of which the respondent are active. Initially, interviews were conducted at senior management level in order to identify the control package and the strategic direction of VBHC. The interviews at senior management level consisted of three parts. Firstly,
addressing the organisation's view of VBHC and how this has been developed since initial implementation, secondly to identify the management control systems package used in the strategic direction, and thirdly to grasp the awareness of how the controls impact each other as a package. Initial interviews at senior management level were therefore of key importance as they were the basis for the design of the questions for interviews conducted at an operational level.

In part one, question 1 and 2 (see Appendix A) addresses how the organisation view VBHC as a strategy. These questions were formulated to identify how senior management aim to adapt VBHC in accordance with the specific needs of the organisation, as well as, to identify how this strategic direction differs from earlier practices. Question 3-5 address how the view of VBHC as a strategic direction has been allowed to evolve since initial implementation. Questions 6-7 address how senior management level perceive how well activities enables VBHC and how the strategy fit into the overall organisation. In part two, questions 8-19 were specifically designed to identify the different components of the management control systems package as presented by Malmi and Brown (2008) and how these are applied. Questions in part three, questions 20-22 were applied to identify an awareness of management control systems as a package, and controls considered of key importance for VBHC. The final question, question 23, was asked to ensure that the topic had been well covered and that no valuable information had been lost. The question was thus designed to allow respondents to freely elaborate on what they deemed important to emphasize.

Questions directed towards the operational level (see Appendix B) in the organisation were designed in order to grasp how the controls used to enable VBHC are perceived and how they affect the members at an operational level. Question 1-2 were specifically directed towards VBHC, how it is perceived and how it has changed their way of working. Questions 2-4 were formulated to allow the respondents to elaborate on how they perceived VBHC to be prioritized by the organisation and on how they perceived to be controlled to work in accordance with VBHC. This in order to identify the control systems that have the most impact on the operational level. Question 5 was intended to help understand how the respondents in their role tried to influence a VBHC working environment, hence controls they identified as important to spread the concept throughout the organisation. Question 6-7 allowed the respondents to provide information on how VBHC had been developed during the process, thus how the strategy had evolved and changed from initial implementation, as well as the challenges that may have
hindered the progress. Question 8-9 were more specific as they addressed specific controls by discussing the process groups created and how they are perceived to have enabled VBHC as well as how the culture have aided the process. Question 10 was like the final question at senior management level designed to ensure that the topic had been well covered and that no valuable information had been lost, thus allowing respondents to freely elaborate on what they deemed important to emphasize.

3.5 Purpose of the analysis
To gain a better understanding, this section provides an explanation regarding how the empirical data was structured and how the analysis was performed by operationalising the choices made in the process. The interview questions were primarily structured to evolve our understanding for how the different control systems in the package were applied to support the VBHC formulation process. In order to answer the research question concerning the role of management control systems in the VBHC strategy formulation process, it was key to conceptualize VBHC in a sufficient manner. This was achieved by applying the six strategic components (which are further presented in section 4.1) that Porter and Teisberg (2006) consider as imperatives for healthcare organisations when adapting VBHC. These six components were therefore adopted as themes, for which the information obtained from the interviews were interpreted and categorized in accordance with. Interpreting and categorizing the empirical results in accordance with the six components of VBHC facilitated a better understanding of how management control systems were applied to enable and support the different aspects of the VBHC strategy. This since VBHC has been interpreted and formulated at Uppsala University Hospital and by presenting the empirical results with in the context of VBHC, contextual factors were able to be isolated, hence providing a deeper understanding for how VBHC as an initial strategic direction has been adapted in the studied organisation.

Based on this foundation, the analysis was initiated in accordance with the conceptual framework by identifying and mapping fundamental control systems that comprise the package used in the VBHC formulation process at Uppsala University Hospital as well as controls that were under development to be implemented at a later stage. This part was crucial for understanding the role of the different control systems in the strategy formulation process and to move forward in the analysis. To understand the role of management control systems in the VBHC strategy formulation process, a two perspective analysis was applied, dividing the control package into an
interactive and diagnostic part. The interactive part refers to the control systems identified as being involved in the strategy formation process. The diagnostic part on the other hand refers to the control systems used in the strategy implementation process. The two-part perspective was applied as a response to earlier research emphasizing the interrelated role of management control systems and strategy, thus allowing the study to have an explorative approach.

3.6 Method considerations

When addressing the role of management control systems in a strategy formulation process, it is important to consider the specific setting of the studied context. Healthcare organizations have been identified to act and behave in a complex manner as they tend to be dynamic and composed of different intelligent agents (Rouse, 2008). Furthermore, healthcare organizations generally have vague organizational boundaries since members of the organization are simultaneously members of other organizations (Plsek and Greenhalgh, 2001). These contextual factors need to be considered when interpreting the result of this study. Method specific consideration will be further addressed in the following sections.

3.6.1 Quality criteria

Bryman and Bell (2011) discusses how external/internal reliability and validity are insufficient for evaluating qualitative research. They argue that inherent qualitative characteristics such as measurement and replicability constraints, call for assessment tools other than the ones used for quantitative research. They therefore argue that qualitative research needs to be assessed on two primary criteria; trustworthiness and authenticity. In line with the views of Bryman and Bell (2011), this study is based on a trustworthiness and authenticity approach. The trustworthiness criteria are deemed to be high since the research has been carried out in accordance with established research methods (see section 3.1). Trustworthiness is further enhanced by the use of respondent validation, where the respondents have been provided with a transcribed version of the interview, thus giving them the opportunity to confirm that the researchers have understood them correctly. This criterion has also been enhanced through describing how management control systems are used in the strategic direction of VBHC from the perspective of members from different levels of the organisation. However, qualitative studies based on interviews are always difficult to replicate, since social setting and other contextual factors are likely to be impossible to recreate in other contexts. This may interfere with the trustworthiness criterion which was considered in the empirical research and compensated by acting in good faith and by
not allowing for personal values to influence the empirical research and the findings derived from it (Bryman & Bell, 2011).

The authenticity criterion refers to concerns that the study will not represent what it was set out to represent (Bryman & Bell, 2011). The authenticity of the study was enhanced by using semi-structured interviews which allowed the interviewers to ask open-ended questions and if needed, to follow up on answers with additional questions. This allowed the researchers to make sure that the answers were of relevance for the study.

However, since the study only involves one single case, the results cannot be generalized to the total population. The limitation related to the generalization of findings is an overall weakness of qualitative studies and Saunders et al. (2009) suggests that the results of a qualitative study should rather be seen as the generalization of theory. Consequently, the results of this study should therefore be regarded as first insights into the role of management control systems in a strategy formulation process. Furthermore, exploratory studies have been found to cause difficulties in recognizing how theory is applied in practice. Saunders et al. (2009) argues how this can be compensated by the researcher being open and flexible when analysing the empirical results and by allowing the research analyses to consider new and unplanned findings. In line with Saunders et al. (2009), the understanding of the theory application issue has developed over time, implicating that the conceptual framework of this study is best understood as a process.

### 3.6.2 Interviews

Saunders et al., (2009) argues that one of the shortcomings related to relying qualitative research on interviews, is that the respondents may become affected by the interviewers. This can be caused by interviewers using a certain body language or by the respondent feeling a need to provide answers just to make a good impression. To reduce the impact of the interviewers, the interviews began with neutral and general questions and leading questions were avoided throughout the interviews. Furthermore, the interviews were performed in the offices of the respondents in order for them to feel secure and at-ease. Further criticism towards semi-structured interviews, is the lack of standardization (Saunders et al., 2009). To avoid this issue, it was central to ensure that all the, in advance prepared, questions were answered and all topics covered during the interviews.
When documenting the interviews, notes were taken in combination with the interviews being recorded. According to Saunders et al., (2009) there is a risk when recording interviews that the respondents feel concern, therefore providing cautious answers. To avoid this, making sure that the respondents felt comfortable being recorded was important as well as given them the opportunity to review the transcribed version of the interview to be able to elaborate or correct any misunderstandings. The respondents were further allowed to be anonymous in the citations in the empirical sections of the paper, which was communicated to the respondent at the beginning of the interview.

Bryman and Bell (2011) argues that interview questions should be handed out to the respondents in advance in order to strengthen reliability. However, Trost (2010) disagrees with Bryman and Bell (2011), by arguing that, if respondents are shown some of the interview questions in advance, their responses could be affected and respondents should therefore only be provided with the questions in advance if absolutely necessary. In line with Trost (2010) the interview questions were not provided in advance in order to avoid prepared answers. Saunders et al. (2009) further identifies the risk of misunderstanding the respondent. Therefore, all respondent was asked if the interviewers could contact them at a later stage for any clarifications.

3.6.3 Information evaluation
The study’s ambition to explore the role of management control systems from a package perspective has meant that the conceptual framework is to a large extent based on Malmi and Brown (2008). The reliance on their research is something that we are aware of. Malmi and Brown’s (2008) framework is however a composition and development of management control systems as presented in several previous studies from prominent researchers in the field. Their framework is as such based on a comprehensive review of the management control systems literature, emphasizing the views of several researchers, which should increase the reliability of the management control systems package framework. Their management control systems package is further incorporated in this study’s conceptual framework that take additional literature concerning the role of management control systems and its relationship with strategy into consideration.
4. The VBHC strategy and findings at Uppsala University Hospital

The first section of this chapter addresses the case-study that is the foundation for the empirical findings of this study. Initially the VBHC strategy as developed by Porter and Teisberg (2006) will be presented, followed by a presentation of Uppsala University Hospital. In the second part of the chapter, the empirical findings, that is Uppsala University Hospitals work to enable VBHC is presented. The empirical results are structured within the context of VBHC, and presented from the perspective of both the senior management and the operational level at the hospital.

4.1 The VBHC strategy

Value-based health care (VBHC) was first presented by Porter and Teisberg (2006), who describes health care systems as being characterized by cost escalation, unsatisfactory quality and limited access to healthcare. They argue that previous strategic ideas have failed to deliver on these premises and describe these reforms as being incomplete, attacking the profession and, rather than solving problems, triggering new ones.

The VBHC strategy was presented as an alternative to earlier strategic ideas by emphasizing the value for the patient as both an overarching goal for healthcare delivery, as well as the determinant of the rewards given (Porter & Teisberg, 2006). Porter (2010) argues that the focus on value considers the interests of all actors involved and makes the service providers compete on the premises of the patient. The value measurement includes all activities and resources used in meeting a set of patient needs and is defined by the ratio between health outcomes per dollar spent. Outcome is condition-specific and multidimensional and to define outcome Porter (2010) suggest to combine a set of relevant outcomes with the conditions and with the circumstances for the patient to cover both long- and short-term health aspects. Cost refers to the total cost of the full-care cycle for a patient’s medical condition, and do not consider the cost of individual services. Value can therefore be summarized as patient outcome relative to cost. This implicates that there are two ways to enhance value in health care delivery; either by improving the outcomes of care or by reducing cost.

\[
Value = \frac{Outcome}{Cost}
\]

*Figure 3: Value Ratio, (Porter, 2010)*
4.1.1 Strategic components of VBHC

Porter and Teisberg (2006) presents a strategic agenda comprising of six interrelated components for healthcare organisations to adapt in order to work in alignment with VBHC.

1. Organize into Integrated Practice Units (IPUs)
2. Measure outcomes and costs for every patient
3. Move to Bundled payments for care cycles
4. Integrate care delivery across separate facilities
5. Expand excellent services across geography
6. Build an enabling Information Technology platform

*Figure 4: Strategic agenda (Porter & Teisberg, 2006)*

(1) The first component is for organisations to be structured in such a way that the care provided to patients is medically integrated with their particular medical conditions. Porter and Teisberg (2006) advocate “Integrated Practice Unit structure” as an optimal way for healthcare organisations to deliver value where IPU is a team covering the full range of expertise and skills needed to address a medical condition over the full cycle of care. (2) The second component relates to the importance of measuring results, experiences, methods and patient attributes for each medical condition within each IPU. This since Porter and Teisberg (2006) argue that standardized outcome and cost measurements that can be compared over time and between different care providers are essential for organisational learning and innovation. (3) The third component is for healthcare systems to implement bundled payments as reimbursement system for healthcare providers which is a reimbursement system covering the cost of the full cycle of care. (4) The fourth component relates to integrate the care providers for the full care cycle and enable mutual exchange between those. (5) The fifth component emphasize the need to grow locally and geographically in areas of strength. This since, Porter and Teisberg (2006) argue that
growth strategies should be focused on IPU level and healthcare organisation should expand by going deeper into the areas in which they excel. (6) The sixth strategic component relates to Information Technology, where systems need to be integrated between IPUs for enabling organisations to collect, compile and utilize information on activities, methods and results for patients over the full care cycle (Porter & Teisberg, 2006).

4.2 Uppsala University Hospital
Uppsala University Hospital situated in Uppsala, Sweden is one of seven University Hospitals in the nation and has together with Karolinska Institute in Stockholm and Sahlgrenska in Gothenburg been one of the early adopters of Value Based Health Care in the country. As such, the formulation of the new strategic objective of VBHC is a largely uncharted territory in the Swedish health care sector, thus demanding a lot of the organisations now undergoing this strategy formulation process. Uppsala University Hospital is also one of the largest hospitals in Sweden with 7 998 employees (as of April 2016), with an annual turnover of just under 8 billion SEK (Akademiska, 2016). Due to the extent and complexity within the organisation, the hospital has initially not strived for a broad adoption of VBHC, but has rather been adopting VBHC for a few patient populations at the time, primarily focusing on different forms of cancer populations and the hospital's centre for burn injuries, as well as additional patient population groups. The organization's focus on VBHC can be further identified in the target vision for the hospital stating that they strive to become “the leading University Hospital that creates the largest value for the patient's” (Akademiska, 2016), which is the very core idea for which VBHC is developed to enable.

4.3 Empirical findings at Uppsala University Hospital
Uppsala University Hospital’s way of interpreting and enabling VBHC will further be addressed from both a senior management perspective as well as from the perspective of the operational level. This in order to grasp how controls are formulated to enable VBHC as well as how they are perceived by the operational levels of the organisation. The empirical findings will be presented within the context of the six components that comprises the VBHC strategy.
4.3.1 Organize into Integrated Practice Units (IPUs)

The first component is the notion of organizing the health care into integrated practice units. At Uppsala University Hospital this has been interpreted by forming process groups with representatives from different functions in the care cycle.

4.3.1.1 Senior management

From a senior management perspective there has been a primary focus on shifting the organisational structure from an historically vertical structure with separate divisions and departments, to in the context of VBHC creating a more horizontal organisational structure that enables a mutual exchange between the teams involved in the different parts of the whole patient care cycle. This is an exchange that aims to improve the outcome as well as the value as perceived by the patient in the care process. The implementation of VBHC was described as an initiating factor for restructuring the organisation. The Chief Controller stated:

“we restructured our organization on May 1 last year, and part of the motive for restructuring the organization was that it would clearly support Value Based Healthcare, adoption really.”

Restructuring the organisation and organise care delivery through integrated practice groups are seen as the very fundamental to develop VBHC in the organisation. To create an organisation where members from different parts of the organisation meet each other and work in teams around the patient was expressed by senior management as the primary focus of VBHC.

“The base is the interdisciplinary team collected from different specialties, different units together with the patient get together in an interdisciplinary collaboration”

When asked whether the development of VBHC in the organisation is enforced from senior management or rather created at an operational level, the CFO stated that:

“It must be done on the floor, as I see it. We can just support and create opportunities and then be interested in the forward operation, so that we carry it all the way from the medical director and the hospital’s senior management and all the way down, to emphasize the importance of us doing this. Nothing is so devastating as examples of management control systems that are not visible supported by senior management, how will you then be able to get the trust to the
When discussing how the new organisational structure prioritize VBHC within the hospital, one member of senior management exemplified how this is perceived by stating:

“one can perceive it as now all of a sudden here comes this Value Based Health Care, and then some may experience that it has some sort of precedence over others and then some think that, yes, but what about my patients, they will never get to go before VBHC patients, and that they are of less priority”

That senior management level prioritized VBHC in the organisation was therefore expressed as a clear support in their work of enabling VBHC at operational level.

4.3.1.2 Operational level

The view of the new organisational structure consisting of integrated practice units as expressed by senior management level, was positively reflected at the operational level. Although initially being sceptic to the idea, viewing this as just another time consuming meeting being enforced on them. The respondents view had gradually shifted and the integrated process groups are now considered as something positive. This is partly since the groups have allowed them more freedom to develop VBHC and increased their understanding for the different functions in the care cycle.

“What has happened is that those who worked here for 20 years with the same patient group meet each other for the first time. Instead of referrals they meet each other and learn from each other. “

Senior management's objective to create opportunities for the operational levels of the organisation to be allowed more freedom to develop VBHC on the floor was also primarily received positively giving the physicians more creative room to improve the care process:
“...we have not been controlled...rather we control them and they provide us the resources, but it is we who say where we want to go, this is the path we choose, and this is how we want to deliver healthcare”

However, this autonomy as perceived by the operational staff relies upon the professional culture. To strive for delivering value was perceived to be an important success factor for developing VBHC in a congruent direction. This freedom provided by senior management to develop and improve health care have been well received by the members in the organisation as VBHC as a strategy is well suited with the culture within the profession. As such the culture has been central in driving the development process of VBHC forward, as reflected in the following statement by a process leader:

“To create the best care, that is my main incentive, I will strive for creating the best cancer care in Sweden. I want to show that this [VBHC] works.”

At an operational level the importance of senior management commitment is further highlighted as a success factor for VBHC. That regular follow up meetings and continuous reporting that was put in place by management was considered a key factor in their continuous development of VBHC.

“it is of course my main responsibility to ensure that we are pushing things forward, and then to report up to the control committee, and report in such a way so that we are heard and get the resources that we want.”

Another key success factor was how the new organisational structure has prioritized VBHC which was explained by a process leader when answering the question if VBHC was prioritized:

“Incredible difference, thanks to us being part of the Value Based Health Care, we are able to label our referrals which give them a priority in the radiology department, so that our patients are processed faster. Before we started with Value Based Health Care, we sometimes had to put the patients at the hospital because of hospitalized patients having a higher priority to get x-rays than patients who are at home, so one could say that we manipulated the system, but we no longer need to do so, the x-rays shows up there on Thursday, so it's a really big difference.”
As expressed by senior management level, the priority of VBHC patients was an important aspect of communicating that the senior management support the VBHC formulation process. This was perceived as something beneficial at operational level as it clearly illustrated the importance of VBHC for the organisation.

4.3.2 Measure outcomes and costs for every patient

The second component in Porter’s strategic agenda to create value is the importance of measuring outcomes and costs at patient level. The hospital has had a clear focus in this part of VBHC on the importance of outcome rather than cost. The decision to focus on the quality of healthcare rather than on the financial measurements necessary to predict cost for each individual patient is motivated by the already existing quality for a low cost in Swedish health care.

“In Sweden where we have a good quality at a good cost according to many comparisons, the focus is different from the beginning….it is rather that we have a way of working where you work with quality in which quality and outcomes are essential.”

4.3.2.1 Senior management

From a senior management perspective, the freedom given to the operational level, as described earlier, also applies to measuring outcomes. Outcome measurements have been focused on aspects that are important for the patient and there is a clear awareness of avoiding process related measurements that have been a priority in the past.

“We work a lot more with outcome and quality measurements that are important for the patient and their results, and try not to focus on process related measurements that we used to.”

The cost aspect in this component has however consciously been neglected in favour of outcome measurements. This in order to enhance the primary importance of quality and outcome as the fundamental aspect of the VBHC work for Uppsala University Hospital. The intent is however to develop cost related measurements in the future. The Director of VBHC explained this focus by stating that:
“It is important to make sure that we have patient level outcomes under control before we start to experiment with cost control mechanisms”

In line with this, the CFO emphasized the importance for physicians to understand the financial consequences of their decisions but not necessarily base their decisions on financial aspects:

“Cost figures are important when it comes to understanding the financial consequences of a decision, but I do not mean that every physician should be going around and thinking of everything in monetary terms. Instead they should focus on to do right in the work and Value Based Healthcare is a key as I see it”

Another aspect behind the decision to withhold the cost measurements in an early stage of the VBHC formulation, apart from creating enthusiasm by focusing on outcome has also been issues related to IT constraints. Current IT systems have not been able to present up to date data needed to support VBHC. Enabling IT systems to present live data has been one of the main challenges for senior management.

4.3.2.2 Operational level

As development of healthcare in accordance with VBHC is done at an operational level, the central outcome measurements provided has also to a certain extent been developed here. Outcome measurements have been formulated together with a patient representative to cover the most important outcome measurements for each condition.

“We have gone through the things that we and a patient representative thought was the most important of our disease. So we have selected six variables that we follow for all patients”

One of these measurements produced in collaboration with patient representatives was that of perceived comfort/safety during the care process. Both the patient representative as well as the process leader responsible for that particular condition described how it was important for the patient to receive a diagnosis more quickly due to anxiety caused by not knowing. This was brought to the process groups that were able to change their routines so that the waiting time for a diagnoses was reduced from four weeks to one week, thus increasing the value as perceived by the patients.
However, at an operational level there were also concerns expressed regarding the workload related to registering different measurement data and the negative consequences this have in their role as care providers.

“There is a lot of work related to measuring outcome and we have had difficulties with being able to see what we have achieved. Measuring outcome is unfortunately a time consuming task.”

The senior management's decision to withhold the focus on cost measurements have been well received from an operational point of view, and can arguably be considered a key success factor for how VBHC was received and adopted by the members of the organisation. There has been a vast turnover of different strategic objectives and management concepts in the healthcare sector and all of the respondent expressed a relief with VBHC since its predecessor tended to have a cost focus. Even though this is not consistent with the original ideas of formulating VBHC, this approach has proven to be one of the strengths for the adoption of the strategy by the members. When asked about how the culture of the profession impacted VBHC in comparison with earlier ideas the responses were often consistent with the statements from the following process leaders:

“VBHC is more compatible, the former felt as if we were building cars, but we are not a factory and people are not cars that you can build. Therefore, it [Lean] was wrong from the start, I think. You cannot compare people with a factory”

Another process leader expressed similar thoughts but showed an awareness of how this approach was a way for the senior management to sell VBHC to the organisation.

“VBHC is genius in that way, because of course it has a cost part but it has been toned down by the senior management and avoiding cost is surely a way for the senior management to sell this to the organisation and create enthusiasm.”

However, regardless of him seeing the true intentions of senior management selling VBHC to the organisation, he was yet positive to the approach and did not see this as a major obstacle in his role in the VBHC process.
4.3.3 Move to bundled payments for care cycles
The third component of the VBHC strategy is to adapt the reimbursement system for health care by moving to bundled payments for a specific condition over the full care cycle. Porter and Teisberg (2006) had the US healthcare system in mind when designing this component, however the Swedish healthcare system differ in the sense that it relies on public funding. At Uppsala University Hospital the process of adapting the reimbursement systems is under development, partly due to their outcome focus but also as a result of political decisions being needed.

4.3.3.1 Senior management
Neglecting adapted reimbursement systems in the early stages of the implementation is closely related to the decision to withhold cost measurements as described earlier. There were concerns that if reimbursement systems were to be adjusted in the initial phase of VBHC, it would risk causing unintended behaviour not align with the overall objectives of the VBHC strategy.

“If you start at the other end and try to find a reimbursement system that will stimulate this, there has been concerns that things might start to happen in health care as it always does when you start with a reimbursement system, that you adapt to it with the consequence that it will not be good for the patient, in any case that you lose the focus on the patient.”

However, it was also clarified that the current reimbursement system, that neither support nor punish their work with VBHC in the organisation was a necessary aspect in order for them to prioritize the quality of healthcare and outcome in the process. Had the current reimbursement system had negative consequences for VBHC, they might have had to take action at an earlier stage.

4.3.3.2 Operational level
The operational level showed awareness for how different reimbursement systems may affect their work. They described how their way of working with VBHC have reduced the number of visits for the patients, resulting in the hospital losing a source of income for out of county patients but none of the respondents at operational level expressed that this have been opposed by the senior management or that they have considered the economic consequences when making these changes. As such, the reimbursement system is at its current state not something
the operational level addressed in a particular sense, neither as an issue nor as an opportunity in relation to VBHC.

“They [senior management] have control over the money and the resources. But they don’t know healthcare, but we do, and if we can present a good healthcare solution, then they buy that and provide us the resources we need.”

As expressed by this process leader they experienced some limitations in form of cutbacks and budget restraints, but they still perceived that they were getting the resources necessary to evolve their work with VBHC.

4.3.4 Integrate care delivery across separate facilities
The fourth component in the VBHC strategy is for healthcare organisations to integrate healthcare delivery to include the full cycle of care. In the case of Uppsala University Hospital this means to integrate primary care as well as municipality driven care into Value Based Health Care delivery. A patient is often referred to the hospital by an initial examination at a primary care provider meaning that the outcome measurements, such as comfort/safety and other VBHC specific characteristics applies. However, the implementation of VBHC is hospital bound, and has not yet been integrated with other care providers.

4.3.4.1 Senior Management
Senior management expressed concerns with integrating other care providers in the care cycle into VBHC. Their concerns were directed towards budgets and how politicians at county level would be unable to withhold separate budgets for different care providers.

“When the patient moves between these providers, the patient also moves across different budgets...as it is set up to be, none is willing to take the costs from the other.”

They describe the situation as already being resource limited with budgetary cuts being enforced on them. They therefore called for a county level decision but did not expect that to happen in a near future.
4.3.4.2 Operational level

At an operational level, further complications were highlighted describing how the workload can be affected by the lack of integration with primary care and municipality care, and the resources and increased costs this could mean in the long run. An operational manager expressed in an example of how politicians demand short waiting times and the negative effects this could have if not utilized in an efficient manner.

“If a patient seeks help for coughs at a primary care centre, this may not always be lung cancer, but if it initiates an investigation of lung cancer, then it will take a huge amount of resources for the community, and it will be huge displacement effects for the hospital in the end.”

They therefore see the benefits of integrating different healthcare providers, but express concerns regarding the applicability of this aspect in the Swedish healthcare sector.

4.3.5 Expand excellent services across geography

The fifth component relates to healthcare providers expanding their services through specializing in areas in which they excel. This aspect of VBHC relates very much to the fact that the concept was developed primarily for the US market. In Sweden, the conditions are quite different but for Uppsala University Hospital, the need to specialize in specific areas to stay competitive is no new occurrence in relation to VBHC. This has rather been a necessary adaptation for years. Something that is well illustrated in the following statement:

“This is how health care more and more is provided, we need to ensure that the patients come to us and our hospitals, this simply because they are a source of income. Uppsala University Hospital would not have survived without non-county patients; you cannot have a university hospital in such a small town like Uppsala. Karolinska never had to think about this since there are 2 million people in Stockholm.”

This aspect of VBHC therefore varies substantially between different healthcare organisations depending on their specific contextual factors.
4.3.5.1 Senior management

Senior management emphasized the importance of attracting non-county patients since the hospital relies financially on them. The CFO stated:

“Our core base of patients is county residents, and they account for just over 5 billion of our annual turnover, but then we also have 2.2 billion that are healthcare sold to the region”

One way of attracting patients is to specialize into specific areas, and one area where this has been done is the treatment for burn injuries, were Uppsala University Hospital is one of two hospitals in Sweden that treat these type of injuries. This is according to the CFO regulated at national level for several core competences where the market in Sweden is too scarce. These type of treatments become a national specialization that hospitals apply for. Being granted national specialities such as burn injuries is therefore of importance for Uppsala University hospital as the patients constitutes a great source of income. VBHC is thus in this context rather seen by senior management as a tool to increase value that enables the hospital to attract more patients and specialise on a national level.

4.3.5.2 Operational level

The reliance on non-county patients have also been comprehended on the operational levels in the hospital and has been interpreted as the hospital prioritizing non-county patients as a mean for obtaining additional funds that are absolutely necessary for the hospital.

“The hospital has always prioritized non-county patients. Because that means new and fresh money”

This was however, not considered as something controversial, rather as a necessary adaption to meet the needs of the organisation.

4.3.6 Build an enabling Information Technology (IT) platform

As an enabler of the previous five mentioned strategic components of VBHC, Porter and Teisberg (2006) advocates the need to support these components with a well-developed IT platform. In Sweden, medical data has for a long time been registered in various quality registers, but VBHC was described to demand an IT system that has the ability to integrate all of these data
and also to provide new outcome measurements. Uppsala University Hospital is in the process of registering new outcome specific data related to VBHC and has recently implemented a new medical decision support system.

**4.3.6.1 Senior management**

Senior management are working hard to get the new medical decision support system to be able to provide data relevant for the work with VBHC. In order to do so, new VBHC related outcome data is needed and resources have been put aside to enable this. However, this work was expressed by senior management as a difficult task and the CFO stated:

“We have a new medical decision support system but the introduction has been a bit shaky, we have however now dedicated resources in the form of a decision-making group that are working actively to support Value Based Health Care”

The goal of the new medical decision support system is to incorporate process related as well as outcome related data and present them real time for physicians to enable them to base their decision on comprehensive data. However, getting physicians to put aside time to register data has proven to be a difficult task.

**4.3.6.2 Operational level**

Several members at the operational level described a frustration of the time consuming task of registering data, especially since they have not yet retrieved any data and addressed this as one of the main challenges facing VBHC work in the organisation. One of the process leaders exemplified this frustration by stating that:

“it has been difficult or it is extremely difficult to get the data from our computer systems”

Another process leader further elaborated on the idea and explained how this has had a negative impact on the work with VBHC.

“When working a long time without having any data at all, then it is very difficult to enthuse people to register data, so in retrospect, I have had a very hard time to understand how they [senior management] imagined it at all.”
As such, registering and retrieving data was expressed as a time consuming process with no perceived value at the operational level.

4.4 Summary of empirical results

The empirical results presented above has been summarized in the following table, the views of senior management and operational level have been divided for each strategic component of VBHC.

<table>
<thead>
<tr>
<th>Strategic component</th>
<th>Senior management</th>
<th>Operational level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organize into Integrated Practice Units (IPUs)</td>
<td>Create and support an environment for operational level to self-develop VBHC.</td>
<td>Positive, enables exchange, are in control. Time consuming.</td>
</tr>
<tr>
<td>Measure outcomes and costs for every patient</td>
<td>Consciously neglected costs to encourage outcome during the development of VBHC.</td>
<td>Positive to cost not being in focus during the development process. Helped members of the organisations to embrace VBHC. Outcome measurements not clear.</td>
</tr>
<tr>
<td>Move to bundled payments for care cycles</td>
<td>Like cost, purposely neglected reimbursement systems during the development. Current system neither support nor punish VBHC.</td>
<td>Positive since it lets them focus on what they consider truly relevant in their profession</td>
</tr>
<tr>
<td>Integrate care delivery across separate facilities</td>
<td>Recognized problem but out of their control, county level decisions needed.</td>
<td>Perceived as a problem that could increase both costs and workload.</td>
</tr>
<tr>
<td>Expand excellent services across geography</td>
<td>Enable specialization due to financial dependency on non-county patients.</td>
<td>Awareness of the financial need.</td>
</tr>
<tr>
<td>Build an enabling Information Technology (IT) platform</td>
<td>Clinical decision support system is under development. Data is needed and they are enforcing operational staff to register data</td>
<td>Frustrating due to difficulties to retrieve relevant data from the systems. Time consuming to register data.</td>
</tr>
</tbody>
</table>

Table 2: Summary empirical results
5. Analysis

In this chapter, the empirical results will be analysed in relation to previous research and structured in accordance with the conceptual framework. The chapter will therefore first analyse the different controls systems applied from the package and how these are used to support VBHC. After identifying the control package used in the VBHC strategy formulation process, the chapter proceeds by analysing the different roles of control systems identified.

5.1 The VBHC management control systems package

By applying the conceptual framework which is initiated from the management control systems package as presented by Malmi and Brown (2008), a control package specifically directed towards VBHC can be identified. These control systems will be further presented and divided between already deployed controls and controls that are yet under development in the following sections.

5.1.1 Deployed controls

Clans has been identified through senior management and operational level emphasizing the importance of a strong professional culture for the success of VBHC. A strong professional culture has been experienced as key as it has guided the operational level work in an organisational structure that did not provide any strict guidelines. VBHC appears to be more consistent with the professional culture and values than earlier strategic concepts which has helped the formulation process. Even though senior management do not explicitly shape values to support VBHC, values, rituals and beliefs have been developed within the profession (hence the clan) that senior management has taken advantage of in the introduction of VBHC to fit the profession (the clan), this in accordance with how Ouchi (1979) described how clans can be used as a control system. Senior management’s decision to neglect financial measurements suggests that the formulation process of VBHC seem to have been adapted in a way more consistent with the values of the profession, which is in line with Malmi and Brown’s (2008) view of informal controls as an overarching yet sharp form of control.

Non-financial measurements refer to the focus on outcome measurements rather than cost. This form of control can be identified through the measurements related to the care process intended to increase the quality of healthcare and by extension the perceived value for the patients.
Governance structure has been identified as an important control in the implementation through the commitment by senior management to put in place continuous meetings (Malmi & Brown, 2008) with operational staff in order to follow the progress of VBHC and illustrate the importance of VBHC for the organisation. Even though operational members described the relationship as them controlling senior management in terms of how VBHC is to be developed, governance structure as a control system can still be identified as senior management commitment is seen as key by the organisation for the success of VBHC. Members in the organisation working with VBHC at an operational level would be unlikely to commit to VBHC and spend the vast amount of time and resources that they do to develop and improve the idea of VBHC if senior management had not shown any interest for their contribution.

Organisational structure as a control system has been central for embracing VBHC at Uppsala University Hospital. This since a specific structural type can be used as a control system in order to encourage certain types of contacts and relationships within the organisation that help direct efforts and behaviour (Abernethy & Chua, 1996). This has been achieved through the structuring of process groups that encourage exchange between employees from different functions in the care process. Organisational structure has also been used in a larger perspective through restructuring of the previous divisions in the organisation, moving from a vertical structure towards a more horizontal organisational structure.

Even though the respondents could not specifically identify any policies and procedures implemented that are specifically related to encourage the work with VBHC, policies and procedures have still been identified through the organization's perceived priority of non-county patients and their continuous work of registering data that are meant to contribute to a decision support system that is better suited to support VBHC. Most importantly is however that the hospitals have been prioritizing VBHC patients which was expressed at both senior management as well as at the operational level.

5.1.2 Controls under development
Apart from the identified control systems there are additional controls that are considered a fundamental part of reinforcing the VBHC strategy as presented by Porter and Teisberg (2006). Several of which are under development at Uppsala University Hospital as they in some cases have been consciously neglected in the early stages of the formulation process. These are
primarily financial measurement systems, that are embodied through the use of comprehensive cost measurements as well as a lack of reward and compensation controls that in the context of VBHC is a reimbursement system designed to support the strategy.

Malmi and Brown (2008) describes financial measurement systems as mainly a performance indicator that help organisations to follow up and hold employees accountable for specific measurements. Porter and Teisberg (2006) advocate the need to measure outcome and cost for each patient but as illustrated in the empirical results, this has proven to be a tremendous challenge for the hospital. The other component in the VBHC strategy, i.e. the reimbursement system, was withheld in the earlier stages of the formulation process due to a fear that it would have too great of an influence in shaping VBHC and stealing focus from the primary aspect of improving the quality of healthcare. Empirical results however show that an objective to later reinforce VBHC with a supporting reimbursement system was expressed and such a system is now under development.

Figure 5: Identifying the management control systems package designed to support VBHC
5.2 The role of management control systems in the VBHC strategy formulation process

As illustrated in the empirical section of the study, Uppsala University Hospital has primarily focused on enabling a strategy formation process rather than on enforcing VBHC through strategy implementation. The controls deployed, hence identified as being used actively to date are therefore further categorized as having an interactive characteristic (Simons, 1990). The controls under development are primarily focusing on measuring and evaluating performance in monetary terms and are therefore characterized as being of a diagnostic character. This in accordance with the conceptual framework presented in section 2.5 which distinguish between how the different roles of management control systems are used in a strategy formulation process. As presented earlier in the theoretical chapter of the study, the view of the relationship between management control systems and strategy has evolved from research historically considering management control systems to be a response to an already implemented strategy (Simons, 1987; Langfield-Smith, 1997) to more recent studies rather recognizing that management control systems also have the ability to shape an organisational strategy (Kober et al. 2007; Skærbæk & Tryggestad 2010; Jørgensen & Messner, 2010).

In accordance with the earlier studies in the field emphasizing how management control systems are implemented as a result of an already existing strategy in order to reinforce this strategy (Simons, 1987; Langfield-Smith, 1997), similar results can be found for some control systems in this study. Earlier research focusing on management control systems has often been directed towards formal controls such as management accounting systems. As illustrated in the study, a majority of accounting controls related to VBHC such as budgeting, financial measures and reimbursement systems have been neglected with the ambition to form these at a later stage for reinforcing the VBHC strategy. When studying the role of management control systems from a package perspective, the study was however also able to capture elements of control systems implemented with the purpose of shaping and improving the strategic direction of VBHC.

5.2.1 Interactive controls

Similar to what Simons (1990) refers to as interactive controls and what Ahrens and Chapman (2004) referred to as enabling controls, this study identifies several control systems in the package used for the formation of the VBHC strategy. One example of the use of interactive controls is how organisational structure was restructured to create an environment that advocated VBHC and yet allowed the members of the organisation to evolve the strategy to be suited in
accordance with the conditions of Uppsala University Hospital. The use of the interactive
controls in the study aided in the formulation of VBHC as they helped encourage the members’
commitment to the concept. These results are similar to how Ahrens and Chapman (2004)
described enabling controls as an efficient tool for helping employees becoming more effective
as well as reinforcing their commitment. Simons (1990) further described how management
should focus on providing guidance, resources and incentives to motivate the members and allow
them to evolve strategies in the organisation. Uppsala University Hospital’s use of interactive
controls are as such also similar to notions of Simon (1990) as their neglect of diagnostic
controls in the initial stages of the formulation process has allowed VBHC to be developed to
suit their specific context. Hence, senior management clearly chose to adopt VBHC using a
bottom-up formation process to formulate VBHC to fit Uppsala University Hospital.

5.2.2 Diagnostic controls
Simons (1990) and Ahrens and Chapman (2004) advocates that as a counterpart to
interactive/enabling controls there are diagnostic/coercive controls that are used for monitoring
and evaluating performance. Like Simons (1990) definition of diagnostic controls, similar
features can be observed in the controls identified in this study as controls under development.
However, Simons (1990) distinction between interactive and diagnostic controls is limited as it
views the role of management control systems in a strategy formulation process as used for
either a strategy formation or implementation, hence neglecting the importance of diagnostic
controls in a bottom-up strategy formation process. Simons (1990) advocate the need to
distinguish the role of control systems as either interactive or diagnostic controls in the
formulation process and use them accordingly, but does not consider the use of further controls
for reinforcing a strategy. This is evident in the case of Uppsala University Hospital, where
diagnostic/coercive controls still had a central part in their bottom-up strategy formation, despite
being described as a tool for top-down strategy implementation. However, since these controls
were withheld at the early stages in the formulation process in order to avoid a negative
interference with the use of interactive controls, empirical results suggest that the timing of
deployed control systems also are of key importance for understanding the role of management
control systems in the strategy formulation process.

As Uppsala University Hospital formulated VBHC using interactive controls, they consciously
neglected the use of controls meant for specific financially related measurements. As such,
diagnostic controls as defined by Simons (1990) were not used in the initial formulation process, yet they were continuously developed to be used for strategy reinforcement at a later stage. Therefore, the trade-off of how to use interactive controls for bottom-up strategy formation and diagnostic controls for top-down management implementation is not limited in terms of which controls to be used. Rather these controls should be further classified in terms of when they are used in the process. This can be explained in terms of how Otley (1980) advocated the need to view management control systems as a package, due the effects of separate controls being difficult to isolate. In this case, this was exemplified from a fear of how cost measurement and reimbursement systems would have a negative effect on the outcome perspective focus on VBHC thus counteracting their efforts of reforming their organisational structure and their use of administrative controls. This led to a need to withhold specific control systems at an early stage, controls that yet were considered vital for reinforcing and strengthening the strategy at a later stage in the formulation process. Indicating that classifying and using controls as interactive or diagnostic in the process is not enough. Rather, it is important to understand how these diagnostic controls can be used in both an enforcing role for top-down strategy implementation, as well as in a reinforcing role for bottom-up strategy formation but at a different stage in the formulation process.

Simons (1990) definition of diagnostic controls as control systems used for evaluating and monitoring performance also suggest that specific components in the package by Malmi and Brown (2008) are by definition classified as diagnostic controls. However, results by Skærbæck and Tryggestad (2010) and Jørgensen and Messner (2010) illustrated how management accounting systems have the ability to shape the strategy of an organisation. Similar findings are also well illustrated in this study, although financial measurement systems were neglected, non-financial measurement systems were a vital part of developing the VBHC strategy, hence, these form of controls rather adopted an interactive role in the strategy formulation process. This use of a control system characterized by evaluation and monitoring in an interactive role suggests that the role of the different controls as presented in the package by Malmi and Brown (2008) is not dependent on the characteristics of the specific control system but that control systems can rather change and be used for different roles depending on the context of which they are applied.
6. Conclusion

This section first presents the conclusions that can be drawn from the results of this study which is followed by suggestions for future research.

The aim of the study was to develop an increased understanding for the role of management control systems in a strategy formulation process as well as an increased understanding for how these roles are influenced, this by viewing management control systems as a package and addressing its relationship with the strategy of Value Based Health Care (VBHC). The first part of the research question addressed the role of management control systems in the VBHC strategy formulation process. By viewing management control systems as a package the study can conclude that in a strategy formulation process, the control package consists of both interactive as well as diagnostics control systems where diagnostic controls can be both reinforcing as well as enforcing. Therefore, the result of this study suggests that diagnostic controls should be further divided into reinforcing and enforcing controls. Enforcing controls are those used for top-down strategy implementation, where a strategic direction is enforced on the members of an organisation. Reinforcing controls on the other hand is when diagnostic controls consisting of the monitoring and evaluation of performance are used for reinforcing a bottom up strategy formation that has been developed through the use of interactive controls. When using diagnostic controls for reinforcing a strategy that has been formatted at an operational level, the reinforcing controls are developed simultaneously with the strategy formation taking place through the use of interactive controls. Hence, the design and use of the reinforcing controls are dependent on how the strategy is formatted and central for the use of reinforcing controls are therefore the timing of when they are put in use in the formation process.

The second part of the research question addressed the factors influencing the nature of the roles described in the first part of the conclusion. As described, the role of a control system can be interactive, enforcing as well as reinforcing, where a control package can consist of control systems that embrace different roles depending on the purpose of their use. The result of the study suggests that the role of a control system is not characterized by the type of control, but that it is rather a result of the context of which the control system is used as well as the purpose it is designed to support.
6.1 Future research
Future research could benefit from further exploring the role of management control systems over a longer time period following the use of the different control systems in the package in the different stages of a formulation process. As this case study was conducted at an organisation focusing on the use of management control systems in the strategy formation process of VBHC, the study is limited in terms of the conclusions that can be drawn regarding the role of interactive control systems in a top-down strategy implementation process primarily characterised by the use of diagnostic controls. It would therefore be interesting to conduct a study at an organisation focusing on using management control systems in an enforcing role for VBHC implementation and how the role of management control systems differs in such a formulation of VBHC and how this affects the interpretation of the VBHC strategy. Such a research approach would further enhance our understanding of the different roles management control systems have and the interplay of timing and contextual factors in the role adaption process.
References


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Appendix A: Interview questions at senior management level

A 1: Questions regarding VBHC

1. The hospital has set an objective to work in accordance with VBHC, can you describe what VBHC means for you?

2. Has this view of VBHC been consistent or has it evolved over time?

3. Can you describe your own role in the work with VBHC at the hospital?

4. Where do you feel that the development of VBHC is taking place, is it at senior management level or at operational level?

5. How is VBHC different from previous concepts that you have worked in accordance with?

6. How does senior management work actively to enable VBHC at the departments?

7. What do you consider to be the main challenges for enabling VBHC?

8. Are there any other interests that may hinder efforts to promote VBHC?

A 2: Questions regarding Management Control Systems

Planning:

9. What kind of long respectively short term objectives have been set out in the work related to VBHC? Is goal formulation used to control / direct work at operational level? Are objectives set together with the departments or solely by senior management?

10. What are your thoughts on flexibility versus planning in the work with VBHC? What are the potentials to deviate from a pre-established plan?

Cybernetic controls

11. Is VBHC part of the design of the budget? What role do budgets have in the work with VBHC?

12. What is the role of financial and non-financial measurements in the work with VBHC? Is it a central part of enabling VBHC?
13. Is VBHC incorporated into the balanced scorecard? If so, how and at what level?

**Reward and compensation**

14. How is the hospital working with reimbursement systems to encourage VBHC?

15. Are there any performance-related compensations such as bonuses to the departments or to individuals associated with the work with VBHC?

**Administrative controls:**

16. Are senior management working explicitly with rules and policies to promote the work with VBHC?

17. How is the hospital organized to ensure accountability for working in accordance with VBHC?

**Cultural controls:**

18. How do you think that the culture at the hospital affects the ability to work with VBHC? Has the culture changed since the introduction of VBHC?

19. What are your thoughts on culture as a control system? Is it something that the hospital is working actively with to promote VBHC?

**A 3: Additional questions**

20. Is there a conscious connection in how the hospital design its control systems to promote VBHC? i.e. are they designed as a package or individually?

21. Are there any controls that are more or less central to promote VBHC? Do you think there is or could be a conflict between different controls?

22. Are there any controls that you believe has been of particular importance in the early stages of the work with VBHC?

23. Is there anything you feel that we have forgotten to ask you that may be relevant for the discussion?
Appendix B: Interview questions at operational level

1. The hospital has a set objective to work in accordance with VBHC, can you describe what VBHC means for you?

2. How is VBHC different from previous concepts you have worked with?

3. Do you feel that VBHC is prioritized within the organization? How do you notice this?

4. How do you feel that you are being controlled by senior management to work in accordance with VBHC? Are there any specific policies or procedures you have to follow? How are you evaluated or monitored that you work in accordance with VBHC?

5. How do you in your professional role work to spread VBHC among your colleagues/employees? What control systems do you feel has the greatest influence on them?

6. Do you feel that VBHC has changed/evolved since the introduction? If so, How? Where does the development take place, at the operational level or at the senior management level?

7. What do you consider the main challenges to be for enabling a successful VBHC environment? Are there any other interests that may counteract efforts to promote VBHC?

8. How have the integrated practice groups contributed to the work with VBHC? Do you feel that the integrated practice groups have the opportunity to influence VBHC?

9. What role do you feel that the culture at the hospital/profession has meant to the introduction and development of VBHC?

10. Is there anything you feel that we have forgotten to ask you that may be relevant for the discussion?