Alliance contracting, prime contracting and outcome based contracting: What can the NHS learn from elsewhere? A literature review

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Executive Summary

Introduction

This report is part of the research of the Policy Research Unit in Commissioning and the Health Care System (PRUCcomm) on new models of contracting in the NHS, commissioned by the Department of Health.

Over the past few years the need to find new ways to integrate services has become an important policy priority in the English NHS. The formation of new organisational configurations in local health economies announced in the Five Year Forward View entails separate organisations working closely together to improve the integration of local services and allow the better use of resources. One way to achieve collaboration across organisational boundaries is through the adoption of new models of contracting, such as alliance contracting, prime provider contracting and outcome based contracting.

Despite their relative novelty in the English NHS, these models have a history of use in other sectors such as construction and defence, as well as in the commissioning of public services in the UK and overseas. This report summarises the findings of a literature review of the available evidence concerning the characteristics of these new contractual models and their implementation in other sectors. The available evidence is considered in order to draw out the lessons which may be learnt to aid the implementation of these models in the English NHS.

Defining the new contractual models

Although the models are conceptually distinct, they share defining characteristics. They all, to a degree, shift risk from the commissioner to the provider, and in doing so, seek to incentivise providers to seek innovative ways to achieve the aims of the principal, such as to improve integration, value for money or particular outcomes. The literature indicated the defining characteristics of each model as follows.

<table>
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<tr>
<th>Model</th>
<th>Defining characteristics</th>
<th>Sectors from which literature drawn</th>
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| Alliance contracting   | • Single alliance contract between the commissioner of the service and the organisations delivering the project  
                        | • Risk/reward incentive structure shared across alliance partners giving collective ownership of risks (win together/lose together model)  
                        | • Recruitment of alliance partners without competitive tender process  
                        | • Emphasis on coproduction, facilitated by governance structures and relationship | • Construction, public services, aerospace                 |
| **Prime Provider contracting** | • Commissioner contracts with a single (prime) provider for the delivery of a service likely to span a number of organisations  
• Prime contractor has responsibility for managing the supply chain, including the commissioning sub contractors  
• Prime contractor may also provide some services  
• Prime contractor often paid on an outcome based model | • Defence, construction, public services, health |
| **Outcome based contracting** | • Contract pays on the achievement of outcomes (or proxy measure)  
• Commonly use risk/reward structure to reward parties in accordance with their efforts  
• May be used in conjunction with other contractual models such as alliance contracting and prime contracting | • Defence, construction, ICT, welfare services, health services |

**Overall impact of the models**

The literature suggests that whilst alliance contracting, prime contracting and outcome based contracting are popular models which have a history of use in other sectors they are undertheorised in the literature, and there is a lack of empirical evidence particularly regarding the benefits of the approaches.

The capacity of these models to improve integration is taken for granted in much of the literature. A small number of prime provider studies suggest increased sharing of good practice and better coordination of services.

There is more evidence that alliance contracting and prime contracting may result in cost savings including a reduction in capital costs, the development of innovations and benefits in relation to time. The evidence base regarding improvements in the quality of services is not convincing.

A key aim of these new contractual models is a reduce opportunism. Evidence suggests that opportunistic behaviour has been observed in relation to outcome based contracting. However there is some evidence that opportunistic behaviour is reduced in alliance contracting.
Contract negotiation and specification

The literature suggests the existence of high transaction costs in relation to the process of contract negotiation and specification.

The introduction of an outcome based contract has been found to demand a rigorous contract specification. The establishment of measurement systems for outcome measurement requires investment in data collection and analysis, measurement methodologies and monitoring systems. Staff may need training.

In alliance contracting costs are likely to relate the ‘pre-alliance’ phase where alliance partners work together to agree the target out-turn cost, and undertake activities to build relationships.

Prime provider models may reduce administrative and monitoring costs for the commissioner by transferring these costs to the prime contractor.

In relation to all models the specification of performance is an ongoing process beyond the agreement of the contract, and commissioners and providers should expect to work together throughout the life of the contract to revisit and refine targets. Due to the ongoing nature of this process contracts are more appropriate for long term horizons.

Relationship management

An important element of all three models is the relationships between providers and between providers and commissioners. Close relationships are thought to develop shared identity and values and to build trust with which to embrace shared goals. Close relationships between commissioners and providers are thought to be important in terms of agreeing, refining and measuring outcomes, and in realising opportunities for innovations. Alliance contracting entails a lengthy ‘pre alliance’ period in which partners work together to establish an ‘alliance perspective’ undertaking activities to enhance goodwill trust. It is common in alliance contracting to establish a dedicated governance structure. Part of this is the establishment of a co-located integrated project management team, and this approach has also been adopted in prime contracting. Other measures adopted include relationship building workshops and recruitment of shared personnel.

New contractual models and public service governance

These models carry with them a number of potential governance issues in relation to their implementation in the NHS, and are at risk of not satisfying public sector governance objectives including accountability, integrity and transparency. Particular issues relate to the transfer of risk and responsibility from commissioners in the light of service failure, accountability for poor performance.
under the alliance contracting model, transparency in relation to procurement and demonstration of value for money.

Conclusions and lessons for policy

Whilst there is a great deal of enthusiasm about the potential of these new contractual models to improve the integration of services and allow better use of resources in the English NHS, the literature suggests that caution must be exercised in their implementation. To succeed, prime contracting, alliance contracting and outcome based contracting require investment of both time and resources to both ensure their robust implementation and on an ongoing basis. Furthermore, the evidence base regarding value for money and improving quality should not be over estimated. Issues which currently underlie more traditional contractual arrangements in the NHS such as how to measure performance and sustain relational aspects remain central to the success of these new models.
1. **Introduction**

This report is part of the research of the Policy Research Unit in Commissioning and the Health Care System (PRUComm) on new models of contracting in the NHS, commissioned by the Department of Health.

Over the past few years there has been increasing interest among healthcare policy makers in new models of contracting, which, it is thought, may have the potential to improve the integration of services and allow better use of resources (Ricketts, 2014). Following the publication of the *Five Year Forward View* (NHS England, 2014), the need to find ways to integrate services has become an important policy priority. The *Five Year Forward View* envisages that there will be a series of new provider organisational configurations in local health economies. Many of these configurations (as well as other attempts to reconfigure services) will entail separate organisations working closely together, and one of the ways in which this can be facilitated is by the use of different models of contract.

This drive has led to an interest in the potential offered by models of contract which exist in other industries which have potential to improve the integration of services and the use of resources. Three of these, alliance contracting, prime contracting and outcome based contracting, are the subject of this paper. Alliance and prime contracting models seek to share (some or all) financial risk between a group of providers (and, in the case of alliancing, also commissioners), in order to align financial incentives to encourage a set of agreed goals, such as, in relation to health services, population health outcomes or the integration of care. Outcome based contracts may be put into place in conjunction with forms of alliancing or other models mentioned above, or may, in principle, be used in a contract with a single provider. The salient aspect of outcome based contracts is that, in addition to processes, outcomes of care for patients are also specified. A proportion of the payment to the provider will be dependent on achieving the specified outcomes.

Interest in the use of these new models of contract in the provision of NHS services is relatively recent, and whilst commissioners of NHS services are beginning to implement them when commissioning services, these initiatives are too recent to have generated any substantial evidence (Addicott, 2014). There is a substantial literature relating to the use of outcome based ‘pay-for-performance’ models in health care internationally, however not only does it appear that the evidence relating to these studies is limited and inconclusive (de Vos et al., 2009, Mehrotra et al., 2009, Van Herck et al., 2010, Emmert et al., 2012, Lagarde et al., 2013), but, as will be explored later in this paper, the outcome based contracting model is in some respects conceptually distinct from pay for performance models.
Despite their relative novelty in the NHS, and health care more generally, these models have a history of use in other sectors such as construction and defence, as well as in relation to the commissioning of public services both in the UK and overseas. The purpose of this literature review is to establish what is known about the characteristics of these models of contracting and their implementation through a review of the published literature concerning alliance contracting, prime provider contracting and outcome based contracting. This review explores the theoretical and empirical academic papers which deal with the use of these contractual models across the spectrum of sectors including health care, in order to draw out the specific implications for their implementation in an NHS setting.

2. Methodology

The literature review takes the form of a ‘critical interpretive synthesis’ (Dixon-Woods et al., 2006), a method which takes an iterative approach to refining the research question and selecting from the literature. Literature is selected for inclusion based on relevance rather than methodological characteristics. The evidence synthesis brings together existing reviews of relevant evidence (where available) and includes new searches on the topic areas. We searched four databases selected in order to capture relevant literature across a range of disciplines for a combination of keywords based on the terms ‘alliance based contracting’, ‘prime provider contracting’ and ‘outcome based contracting’. Google Scholar was also used as an initial search source to identify existing articles from which key articles and reference lists could be accessed and snowballed. The purpose of the database review was not to exhaust the literature but to identify relevant evidence, and to use this as a base to identify further literature using a ‘snowballing’ technique consisting of hand searches using the references of the retrieved literature. Figure 1 below shows the process through which documents were identified, and more details about the search strategy are given in Appendix 1. The search was not restricted to specific dates, or sectors. Titles and abstracts were reviewed. The inclusion criteria consisted of primary quantitative and qualitative research published studies, or reviews of primary quantitative and qualitative research published studies, and theoretical literature, written in the English language, for which the full text is available. Alongside academic papers, the review included ‘grey’ literature encompassing documents and reports from bodies reviewing the literature, and reporting details of relevant policy initiatives, and unpublished doctoral theses, where these were felt to be particularly relevant. Grey literature has been excluded when judged to contain predominantly narrative practice-oriented information.
Figure 1: Flowchart showing the literature search

Given the existence of a number of ‘review of reviews’ relating to the use of pay-for-performance models in healthcare, and the conceptual distinction made between pay-for-performance and outcome-based contracting. Literature relating to pay for performance was not included, although key messages from reviews of the literature concerning pay for performance in healthcare have been included. Literature reviews relating to the use of the contractual models in industry were identified (Selviaridis and Wynstra, 2015, Chen et al., 2012, Hypko et al., 2010). These are useful sources of information for this literature review, however they do not fully address the issues of concern as they either focus on one particular model of contracting and industry (Chen et al., 2012, Hypko et al., 2010) or approach the literature from a different perspective (Selviaridis and Wynstra, 2015). Where the literature review presented findings which were relevant to this review these have been cited as the literature review itself, and individual papers have not been accessed.

3. Theory of contracts

In order to understand and evaluate these new contractual models it is necessary to consider them in the light of the theory of contracts. The theory of contracts is based in the context of neo-classical economics, and it is also possible to look at contracts in socio-legal and socio-economic contexts. The three main approaches to the theory of contracts which are used in this literature review are principal-agency theory, transaction cost economics and relational contracting.

Principal-agency theory concentrates on the problem of the agency relationship, which is fundamental to any examination of contracts. A contract is put in place when one party (a principal) desires an outcome but the activities to achieve this must be undertaken by another party (an agent). It is expected that the agent will not always act in the best interests of the principal, and it is suggested that, as the actions of the agent are not necessarily observable by the principal due to information asymmetry, the principal should try to limit divergences from his or her interests (Jensen and Meckling, 1976). This may be achieved by monitoring of behaviour to ensure that the agent is undertaking the required processes and activities, and/or by establishing incentives for the agent which align his/her interests more closely with the outcomes which the principal desires.
Whilst many contracts use monitoring of agent performance against the contract to ensure the agent is acting in the principal’s interests (known as a behaviour based contract), the contractual models under discussion in this paper use incentives to encourage the agent to achieve the outcome desired by the principal. The models aim to achieve the alignment of the agents’ incentives with those of the principal, through the sharing of risk between principal and agent(s) or the complete transfer of risk to the agent. In these arrangements the principal rewards or punishes the agent for their performance in relation to the outcome the principal wishes to achieve.

However, certain characteristics of the product, the organisations involved and the market itself can make the use of incentives to achieve the alignment of principal/agent objectives problematic. This is particularly in the case of public services such as the NHS. It is to be expected that the providers and commissioners of NHS services, as a public service, have a number of objectives which they pursue, including improving the long term care of populations. Objectives may also differ (or conflict) between the various stakeholders who exist in relation to public services (e.g. the public, service users, service commissioners). The provision of public services such as health services is complex, and some objectives may be more or less easy to identify and measure than others. In some case for example, the way to achieve the objective might not be clear as the link between action and outcomes is not clear, or because the achievement of outcomes may be out of the direct control of agents. The risk, which will be explored further in relation to the evidence relating to outcome based contracting, is that outcome measures will not be effective or that outcomes which are hard to measure will not be incentivised.

An additional associated economic theory relating to neo-institutional economics which is used to analyse contracting is transaction cost economics (Coase, 1937, Williamson, 1985). Transaction costs refer to the cost of making exchanges, and consist of the costs of firstly, negotiating, specifying and drafting a contract (ex ante costs) and then secondly, monitoring and enforcing compliance with that contract (ex post costs).

Transaction costs vary according to both economic actors’ behavioural assumptions, and also transaction characteristics. In relation to behavioural assumptions, transaction cost analysis encapsulates two important notions about behaviour. Firstly, transaction cost analysis encapsulates the notion of ‘bounded rationality’, which refers to the limits of the capacity of individuals to process information when they are making decisions (Simon, 1957). Secondly, opportunism, defined by Williamson (1975) as ‘self interest seeking with guile’ relates to the possibility that individuals will take advantage of circumstances, such as a lack of knowledge in the other party, in order dishonestly to improve their position. Opportunistic behaviour may include withholding or distorting information.
(gaming), shirking, failing to fulfil promises and appropriation of others’ assets (Parkhe, 1993). Opportunism is thought to be particularly relevant in the NHS where there may be ‘information asymmetry’, knowledge that agents possess which the principal does not, meaning that the agent has more scope for acting opportunistically. These behavioural assumptions necessitate the agreement of governance mechanisms between contracting parties to ‘economise’ on the impact of bounded rationality and guard against opportunism (Williamson, 1975).

Transaction cost theory identifies three factors relating to characteristics of the environment in which the transaction takes place which affect costs: uncertainty, asset specificity and frequency of exchange. Uncertainty relates to the difficulty of predicting all eventualities or possible problems which might occur during the exchange. If the environment in which the contract exists is uncertain (e.g. volatile), contracts specify contingencies to address these uncertainties. When the limits of the written contract to address uncertainties is reached, contracts need to be flexible in order to grant experts flexibility in decision making (Malatesta and Smith, 2014). Asset specificity refers to whether the assets being used in the transaction can be redeployed. High asset specificity (where assets cannot be used for purposes other than the contract in question) creates interdependencies between the contracting parties. Frequency of exchange refers to the existence of other transactions between the same parties, and high frequency transactions incentivise the creation of specific governance arrangements.

Health care tends to encapsulate a number of factors which lead to high transaction costs. It has a tendency for physical asset specificity (e.g. expensive equipment which is used for very particular purposes) and human asset specificity (e.g. consultant expertise) which require the agreement of compensatory arrangements between the principal and agent should the transaction not complete (Goddard and Mannion, 1998). It might be expected that the level of specialist knowledge required and the uniqueness of resources would lead to bargaining in which there were potentially very few or indeed only one buyer or seller. This means that in this environment there is a higher potential for opportunism. In order to avoid opportunism in this case, a much more detailed or costly contract would need to be in place which, for example, contained more elements of monitoring and control. A further factor increasing the contract complexity, and therefore cost, required to secure co-operation through a contract, relates to the nature of the principal-agent relationship. The high level of expertise and specialisation in the delivery of health services makes it difficult for the principal to know that the agent is fulfilling the terms of the contract. It is possible that due to ‘information impactedness’
(Williamson, 1975) where one party, in this case the agent, has more technical knowledge, opportunism may occur.

A consideration of transaction costs in relation to alliance contracting, prime provider arrangements and outcome based contracting suggests there may be numerous issues to be explored. The models involve the transfer of risk, either fully or partially from principal to agent. Unlike traditional contractual models which have an emphasis on the ex post monitoring of agent performance against the contract, these contractual models emphasise the ex-ante elements of the contractual process, namely the agreement of the arrangements to share risk between the principal and agents. It is therefore likely that the ex-ante process in relation to these models will incur high transaction costs. In order to align incentives the principal needs to be able to specify current and future requirements, and quantify the performance targets and the appropriate payment structure, and the agent needs to ensure that the targets are reasonable and achievable. Due to the problems of multiple potentially unclear objectives and outcomes already outlined, it is likely that the identification of these targets will be a complex process.

The third aspect of contract theory is relational contracting. Whilst the contract document endeavours to deal with future arrangements, it is impossible to foresee all possible contingencies and eventualities at the outset due to bounded rationality (Simon, 1957). As it is therefore difficult to specify and measure all aspects of agent performance, the contract cannot be ‘complete’ (Williamson, 1985) or entirely ‘discrete’ (MacNeil, 1978, Vincent-Jones, 2006). Every contract is, to a degree, a balance between discrete and relational norms. In contrast with the discrete nature of the complete contract, which is characterised as impersonal, written, specified and measurable, relational contractual elements are not discrete – they are untransferable, informal arrangements, which are subject to ongoing planning and adjustments (Allen, 2002). In the relational element of the contract, parties rely on ‘relational’ norms such as flexibility, solidarity and reciprocity to sustain the contractual relationship. In situations where the contract encounters high levels of uncertainty regarding the future, reliance on the relational elements of the contract is likely to increase (Macneil, 1978, Williamson, 1985).

Trust in particular is acknowledged to be important to partnership working, as a mechanism which enables the management of risk (Luhmann, 1979, Sako, 1998, Nooteboom, 2002). It has been noted that in arrangements such as strategic alliances where organisations need to agree action based on common goals while having separate overall objectives, trust is needed to stabilise the relationship.
but it is also threatened by the inherent instability of the relationship between the two parties (Child, 1998). Trust is strengthened by action and it might be expected to exist where there is familiarity through repeated interactions, when the other party is not considered to be incentivised to act opportunistically and where there are coinciding values and norms (Gambetta, 1988), and may be impeded by ‘adversarial’ or ‘hard’ contract relations (Vincent-Jones, 2006). Sako (1998) distinguishes between three types of trust: contractual trust, competence trust and good-will trust. Contractual trust is a rational model of trust and exists when governance mechanisms stop opportunism and when parties have faith in these mechanisms. Competence trust occurs when a party believes that the other is capable of performing their role. Good-will trust is defined as the confidence a party has in the commitment of the other party to continuing the co-operative relationship. These three types of trust are commonly envisaged as a hierarchy in which the first two are necessary for exchange to take place, and the third enhances the quality of the exchange.

Relational norms have been found to be vital in NHS contracting (Allen, 2002, Hughes et al., 1996). These relational norms may well entail changes in the terms of the contractual relationship which are at odds with the written document signed by the parties.

These concepts will inform the analysis of the literature relating the new contractual models, and will form the framework against which the applicability of these models to the NHS will be explored.

4. **Defining new contractual models**

This section describes the main characteristics of alliance contracting, prime contracting and outcome based contracting models. Although the models are conceptually distinct, they share certain defining characteristics. They all, to a degree, shift risk from the commissioner to the provider, and in doing so, seek to incentivise providers to seek innovative ways to achieve the aims of the principal, such as to improve integration, value for money or particular outcomes.

4.1 **Alliance contracting**

Approaches which aim to overcome the ‘adversarial nature’ of traditional contracting (Jefferies et al., 2014) such as partnering, alliancing and public/private partnerships have been prominent in industry, most specifically the construction industry, since the 1990s. These approaches focus on the creation of unity of purpose between two or more parties, who agree to work co-operatively ‘as an integrated team to deliver a specific project under a contractual framework where their commercial interests are aligned with actual project outcomes’ (Jefferies et al., 2006). The approach of alliance contracting is thought to have been introduced to the North Sea offshore oil industry in the early 1990s as ‘a vehicle to share the risk of complex, costly projects among all the stakeholders’ (Gransberg and
Scheepbouwer, 2015). The approach is now used in the construction industry across a variety of countries, and is particularly prominent in Australia (Chen et al., 2012).

Alliance contracting, also known as ‘alliance partnering’, ‘pure alliance’, or ‘project alliance’, is distinguishable from other partnership approaches due to the use of a single alliance contract between the commissioner of the service, and the organisation(s) delivering the project. The key element of alliancing which differentiates it from other partnership approaches is the use of a legally enforceable contract to achieve unity of purpose between parties (Chen et al., 2012), which includes a risk/reward shared incentive structure (which states the division of financial rewards and penalties according to a fixed preagreed ratio between parties to reflect performance against targets). It is common for the commissioner to pay alliance partners for their project costs and overheads, and then to implement a pain/gain share incentive structure (Chew, 2004). This means that, rather than an individual alliance partner being rewarded or penalised for individual performance, the performance of alliance partners is judged collectively, so partners all win together or all lose together through a shared ‘collective ownership of risks’ (Rowlinson et al., 2006). In effect, alliance contracting creates a joint accountability among alliance partners for the performance of the alliance.

It is common when the alliance contracting approach is used in the construction industry for the commissioner to recruit alliance partners without a competitive tender process, on the basis of factors such as of experience, capability and attitude but not price (Gransberg and Scheepbouwer, 2015). This approach is known as ‘pure’ alliancing. An alternative approach of ‘price competitive’ alliances has been developed in which two teams of organisations are selected and then compete on the basis of price, however this approach appears a deviation from the norm (Davies, 2008). Once the alliance partners have been selected, all parties work together to establish a commercial framework of risk and rewards, performance indicators and costs (Davies, 2008, Jeffries et al., 2014).

In addition to the mechanisms contained within the written contract, alliance contracting has an emphasis on co-production and relationship-building between the commissioner and the alliance partners, in which all parties are collectively responsible for the project work. The combined emphasis in alliance contracting on a contractual approach and the development of partnership working, means that alliance contracting is a mode of governance which overtly combines ‘hard’ (i.e. discrete) elements (formal contract, pain/gain share) with ‘soft’ (i.e. relational) elements based on building trusting relationships (Chen et al., 2012). The development of the relationship between alliance partners is an important element of alliance contracting. In place of recourse to the written contract to resolve disputes, alliance partners are expected to resolve issues without recourse to the courts for dispute resolution, and contracts may include a no blame/no dispute clause, which excludes recourse.
to litigation (Rowlinson et al., 2006, Gransberg and Scheepbouwer, 2015, Chew, 2004, Chew, 2007), and unanimous decision making protocols (Davies, 2008). Insurances and indemnities may be altered to waive parties’ rights to pursue legal action against one another, except for in cases of ‘wilful default’ (Koolwijk, 2006).

Additionally the alliance develops its own governance structures to deal with issues arising during the course of the contract. Commonly, the project is governed by a joint body (Alliance Board) which consists of representatives of all organisations, and day to day issues are dealt with by an integrated project team (Rowlinson et al., 2006). It is common practice for alliance members to partake in specific activities and instigate arrangements aimed to encourage the development of co-operative relationships between parties. These include workshops focused on building relations, colocation in a single office, a dedicated third party facilitator, an alliance psychologist and an innovation manager (Love et al., 2010, Jefferies et al., 2014, Rowlinson et al., 2006).

4.2 Prime contracting models

In prime contracting models (also known as ‘lead’ contracting), the commissioner contracts with a provider for the delivery of a contract which is likely to span a number of providers. The prime contracting agent has responsibility for managing the supply chain and delivering the outcome specified by the principal. The model is based on the belief that commissioners should move away from micro managing complex supply chains, and that moving this responsibility to a lead provider will result in better integrated services (Corrigan and Laitner, 2012). Prime contracting is commonly used in conjunction with an outcome based approach. There is a lack of literature relating to prime contracting as a specific approach, and few research studies which focus on the effectiveness of the prime provider contractual model in isolation (Gallet et al., 2015). It is possible that the issues inherent in prime contracting, such as the co-ordination of the supply chain by a lead provider are dealt with in more general terms in the literature relating to supply chain management. Prime contracting originated as an approach in the construction and defence industries in the 1990s (Ndekugri and Corbett, 2004). There is evidence of the use of prime contracting in Ministry of Defence contracts in the UK (Matthews and Parker, 1999, Pryke, 2006, Kebede, 2011), the construction industry (Bemelmans et al., 2012, Voordijk et al., 2000, Burtonshaw-Gunn and Ritchie, 2004, Rojas, 2008), and contracts for the provision of welfare services (most commonly the employment services contracts of the UK Department of Work and Pensions) (Finn, 2011, Finn, 2012, Hudson et al., 2010, Gallet et al., 2015).

The characteristics of prime provider models are not well defined by the literature. In their review of the literature Gallet et al (2015) conclude that the model is hard to classify, it emerges for different
reasons, and can vary in terms of ownership types, national or local focus, funding sources payment structures and governance structures.

Prime contracting is described by the HM Treasury as ‘the requirement for there to be a single point of responsibility (the Prime Contractor) between the client and the supply chain’ (HM Treasury, 2000). It is an approach which gives external organisations the role of both the commissioner and manager of public services (Gallet et al., 2015). Two variations exist within this model. Firstly, in the ‘prime contractor’ model, the principal contracts with a single agent for the delivery of the contract, who then subcontracts with the necessary agents within the supply chain. Secondly, in the ‘prime provider’ model the contracted organisation provides some of the services directly themselves, and then subcontracts the remainder (Addicott, 2014, Finn, 2012). The model is intended to place the onus on the prime contractor to integrate the supply chain (Matthews and Parker, 1999), to develop entire systems or solutions to address particular requirements (ibid.), or specifically to address fragmentation in delivery (O’Flynn et al., 2014). The model is also used with the aim of ensuring greater co-operation between providers (Gallet et al., 2015), and to replace adversarial inter-company relationships with ‘long-term multiple project relationships based on trust and co-operation’ (Finn, 2012, p5). Further objectives cited in the prime contracting literature are the achievement of better long term value for money through improved supply chain management, incentivised payment mechanisms, continuous improvement, economies of scale and partnership (Defence Estates and Ministry of Defence, 2003). It has been used to rationalise a multiplicity of contracts thereby reducing associated high transaction costs (Finn, 2011). An element of flexibility noted by Finn (2011) is that private contractors are not subject to the same tendering rules that apply in the public sector.

A key characteristic of prime contracting is its incorporation of outcome based contracting whereby the client specifies the outcome rather than the approach to be taken (Defence Estates and Ministry of Defence, 2003). In relation to the use of prime contracting by the Department for Work and Pensions in their employment services contracts the emphasis on outcomes is termed a ‘black box’ commissioning approach in which the prime contract only specifies the outcomes which are required to be delivered rather than the approach to be taken to achieve this. This approach is thought to allow providers greater flexibility and freedom in how they design and implement service pathways (Finn, 2011).

Payment structures for the prime organisation tend to relate to the achievement of outcomes. For example, in relation to the contracting of the Department for Work and Pensions (the Pathways to Work programme), prime providers were paid 30% of contract value for taking referrals, and then
further payments were made based on outcomes (Hudson et al., 2010). Subcontractors are usually paid on a fixed or firm price basis (Matthews and Parker, 1999).

Some models, such as those used in the UK defence and welfare sectors, place an emphasis on partnering and collaborative working between the client and the prime contractor. Close relationships are enhanced initiatives such as the co-location of an integrated project team (Defence Estates and Ministry of Defence, 2003, Kebede, 2011). The literature relating to the UK defence sector prime provider contracts refers to a ‘whole life’ approach in which the integrated project team work closely with prime contractors throughout the life of the contract to identify ‘gain share’ opportunities, possible savings which can then be inserted into the contract agreement (Kebede, 2011).

4.3 Outcome based contracting

Outcome based contracting (also known as ‘performance based contracting’, ‘performance based logistics’, and ‘payment by results’ and ‘pay for performance’, particularly in relation to the provision of public services in the UK) is a contractual form which emphasises performance outcomes rather than specifying the processes by which outcomes are to be achieved (Caldwell and Howard, 2014). Outcome based contracting can be differentiated from other forms of contracting due to: the focus on outcomes rather than processes, resulting in the alignment of goals and incentives across supply chains; increased risk and rewards for suppliers as performance achievement is related to financial bonuses and penalties; an emphasis on the co-production of outcomes through customer/supplier interactions (Selviaridis and Wynstra, 2015).

In the outcome based contract approach, payment and/or contract extension depends to an agreed extent on the achievements of outcomes (Hannah et al., 2010). Contracting for performance is an approach which shifts responsibility and risk from the commissioner to the provider. It is theorised that the provider will be incentivised to innovate (e.g. in relation to construction and maintenance contracts to design more reliable products), thus reducing the cost in the longer term for the customer (Ng et al., 2009). It is common for outcome based contracts to use a risk/reward payment structure, to reward parties in accordance with their efforts (Caldwell and Howard, 2014). Outcome based contracting can be used to facilitate co-ordination and collaboration within a supply chain by aligning incentives through shared risk and reward structures among a number of providers (Randall and Pohlen, 2010). Outcome based contracting is often used in conjunction with other contractual models, such as alliance contracting and prime contracting models, and may have varying degrees of relative importance within the contract dependent on the proportion of the overall payment which is dedicated to performance in relation to outcomes.
Outcome based contracting is an approach which has been widely adopted across sectors. It is a common approach for ‘business to government’ contracts such as defence and infrastructure maintenance (Ng et al., 2009, Selviaridis and Wynstra, 2015), but is also a growing approach in ‘business to business’ contracting (Ng et al., 2009). It is often used in relation to contracts involving the supply and ongoing maintenance of equipment. A well-known example of the outcome based contracting approach is the Rolls Royce ‘Power by the Hour’ model in which the contractor responsible for aero-engine maintenance is paid on the basis of engine availability (flight hours) rather than the cost of labour or consumables. However, it is also used in relation to services. In the USA, for example in 1994 the Office of Federal Procurement Policy encouraged 27 federal agencies to apply it to contracts (drug testing, air traffic control, janitorial services, telephone hotlines, data entry) (Laurent, 1998).

An associated approach, pay-for-performance (also known as payment by results) has been developed in relation to health services (de Vos et al., 2009, Mehrotra et al., 2009, Van Herck et al., 2010, Emmert et al., 2012, Lagarde et al., 2013). These payment systems share similarities with the outcome based contract model in their use of additional performance related payments to incentivise certain agent behaviour. Examples of pay-for-performance in the NHS are the Commissioning for Quality and Innovation (CQUIN) payment framework which links a proportion of providers’ income to the achievement of local quality improvement goals, and the Advancing Quality (AQ) programme in the north-west of England which provides financial incentives to health care providers for improvement in the quality of care provided to patients (McDonald et al., 2015). These approaches significantly differ from outcome based contracting as, whilst outcome based contracting concerns an approach to the commissioning of an entire service, pay-for-performance focuses on specific behaviours. Given this important difference in emphasis, it is suggested that caution should be used when applying findings related to pay-for-performance as a general approach to an analysis of outcome based contracting.

5. Defining the literature

Alliance contracting, prime contracting and outcome based contracting are undertheorised areas. The literature in relation to alliances consists of government guides (e.g. Department of Infrastructure and Transport, 2011), literature from alliance facilitators (e.g. Jefferies et al., 2014, Love et al., 2010), analysis from legal commentators (e.g. Chew, 2004, McInnis, 2003, Van Den Berg and Kamminga, 2006, Thomas, 2007) in addition to academic literature (e.g. Chen et al., 2012, Langfield-Smith, 2008). Much of the literature relating to alliance contracting is normative in basis, and does not consider issues from a theoretical perspective such as a contracting perspective (Chen et al., 2012). Similarly
the literature relating to prime contracting has been found to be largely normative, and does not give empirical evidence regarding the impact of the model (Gallet et al., 2015, O’Flynn et al., 2014). A similar scarcity of academic publications directly concerning outcome based contracting has also been noted (Buchanan and Klinger, 2007). In their review of performance based contracting literature, Selviaridis and Wynstra (2015) found that over half of the literature identified applied no theory. A growing literature is concerned with identifying the applicability of these models to the NHS in the light of the current policy literature (e.g. Billings and Weger, 2015, Addicott, 2014).

A particular issue requiring resolution when reviewing the evidence regarding alliance contracting is the definition of the term. It has been noted that the literature suffers from a lack of conceptual clarity regarding distinctions between alliance contracting and other approaches to partnership working, (Chen et al., 2012, Mayer and Teece, 2008) resulting in a conflation of evidence concerning alliance contracting with that of other types of partnership working. There is an expansive separate literature concerning alliance-type partnership working within business, relationships which are referred to as strategic alliances, joint working, partnership working etc. The literature relating to these partnership arrangements refers to a number of concepts, such as the role of trust in organisational relationships, which are also important concepts in relation to alliance contracting. However, it is argued here that alliance contracting is a sufficiently different and distinguishable approach, which should be explored separately to other modes of partnership working. Therefore empirical evidence was only included in this literature review when it was found to relate specifically to the contractual approach to alliance relationships known as ‘alliance contracting’ or ‘project alliancing’, as described in section 4 above.

Whilst alliance contracting, prime provider contracting and outcome based contracting are separate conceptually, they are often combined in practice. For example the empirical literature may describe alliance contracts which included an outcome based element and a prime provider arrangement such as Caldwell and Howard’s study of contracts for the maintenance of UK RAF fighter jet fleets, consisting of a prime provider long term output based incentivised contract (an incentivised gainshare arrangement with multiple parties) (Caldwell and Howard, 2014).

6. Reviewing the literature

The empirical and theoretical papers relating to alliance contracting, prime contracting models and outcome based contracting are reviewed here in the light of the current policy environment in the NHS. A summary of the key issues raised in relation to the contractual types is given in Table 1 below.
Table 1: Key conceptual issues summarised by contractual model

<table>
<thead>
<tr>
<th>Conceptual category</th>
<th>Alliance contracting</th>
<th>Prime provider contracting</th>
<th>Outcome based contracting (OBC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk</td>
<td>Shared between commissioner and alliance partners</td>
<td>Transferred to lead provider.</td>
<td>Transferred to provider for OBC element of contract.</td>
</tr>
</tbody>
</table>
| Governance issues   | - Individual provider accountability  
|                     | - Ability of providers to manage risk  
|                     | - Selection process for partners  
|                     | - Demonstration of value for money. | - Ability of providers to manage risk  
|                     | - Selection process for subcontractors.  
|                     | - Increased remoteness of commissioner | - Ability of providers to manage risk  
| Contract Negotiation and Specification | Resources required to support ‘pre-alliance’ period.  
|                     | May involve agreement of OBC element. | Transaction costs may be transferred from commissioner to lead provider. | High cost associated with specification and measurement of outcomes. |
| Relational contracting | Strong emphasis on relational norms.  
|                     | Investment required in ‘pre-alliance’ relationship building and establishment of governance structures | Close relationships between commissioner/provider and provider/subcontractor seen as beneficial | Need for ongoing commissioner/provider collaboration to refine outcome measures |
| Incentives | Opportunistic behaviour may be reduced | Opportunistic behaviour may be increased due to remote presence of commissioner | Strength of incentives dependent on proportion of payment linked to outcomes.  
|                     | | | May encourage opportunistic behaviour. |

6.1 New contractual models – features of the product and the environment

In considering the transferability of these new contractual models to the NHS, it is helpful to consider what the literature from other sectors indicates about the contexts in which these models are commonly used. Transaction cost economics suggests that the characteristics of the environment in which the transaction takes place affect the cost of transactions, and therefore the type of governance model which should be used. These environmental characteristics may relate to the market environment in which transactions take place, and they may also relate to the nature of the product or service which is the object of the transaction. As Lagarde et al. (2013) observe in relation to pay for performance schemes in health services, any generalisations of such systems must be cautious in the conclusions they draw:

‘...since the performance of each scheme is likely to be the product of the interaction between the detail of its design, the specifics of the setting, and the particulars of the provider and the service being delivered’ (p2).
The complexities of interaction between specific elements make it difficult to draw hard and fast conclusions, however studies of the use of these contractual mechanisms in other settings indicate they have been previously deployed in systems which share similarities with the English NHS. In the construction industry the alliance contract model is a common approach in relation to complex, high risk projects where there is a number of stakeholders whose integrated performance is necessary to achieve the project aims (Gransberg and Scheepbouwer, 2015). Commissioners are motivated to use alliance mechanisms where there are tight costs and/or time constraints (Chen et al., 2012). ‘Stand alone’ governance structures, such as alliance contracting, are thought to be deployed when the characteristics of the product and the environment lead to high asset specificity, high uncertainty and frequent interactions (Langfield-Smith, 2008). Alliance contracting is also considered to be an appropriate choice when process uncertainty and product uncertainty are high, and particularly so when the principal has some knowledge of the situation to help the agents to directly to reduce the contract cost (Turner and Simister, 2001).

When models such as prime contracting and outcome based contracting and are used to commission complex performance they are by their nature more in the interest of the commissioner than the provider (Caldwell and Howard, 2014, Matthews and Parker, 1999), and therefore suit markets such as the NHS where the commissioner is in a dominant position. For example, agents may be more willing to take on the risk transfer inherent in these new contractual models when there are only a limited number of commissioners they can contract with, leading to a lack of alternative buyers. It appears reasonable to assume, particularly in relation to prime contracting, that it is only larger organisations with high levels of capital, such as multinational commercial companies, which will be willing to assume the risk and responsibilities inherent in the role (Gallet et al., 2015).

These environmental characteristics suggest that alliance contracting, prime contracting and outcome based contracting models may be beneficial commissioning approaches in the public sector. Certainly public services are often complex and span a variety of organisations. The market for public services in the UK is one in which there is often a very limited number of commissioners of services for providers to contract with, suggesting that providers may be open to accepting contracts which transfer risk to providers. Whilst these models are utilised in relation to public services in other countries (e.g. alliance contracting is used in public sector infrastructure projects in Australia, and outcome based contracting has been used extensively in relation to public services particularly in the USA) or other sectors (prime contracting models are used in the UK in relation to defence and employment services) notions of direct transferability need to be treated with caution. For example,
it should be noted that the Australian construction alliance projects are between public and private organisations (Rowlinson et al., 2006), in which the public bodies use the alliance contracting model to transfer risk from the public to the private sector. In contrast, when these contractual models are deployed in the NHS, the risk is largely redistributed within the public system (with the exception of contracts involving independent sector organisations providing NHS services). For example, in Salford an alliance contract has been established to deliver integrated health and social care between public sector organisations (the council, the NHS commissioning organisation and two Foundation Trusts) (Salford Clinical Commissioning Group et al., 2015).

Transaction cost theory suggests that the nature of the product or service will also have an impact on the mode of governance which should be used. In their review of the performance based contracting literature, Selviaridis and Wynstra (2015) concluded that outcome based payment structures are more appropriate in complex and knowledge intensive contexts when it is hard to evaluate quality ex ante (Selviaridis and Wynstra, 2015). It is thought that suppliers’ willingness to bear the risk induced by outcome based payment is influenced by performance attributability in the supply chain, relational governance, risk and reward balancing and the ability of the provider to transfer risk onto other subcontractors (Selviaridis and Normann, 2014). However, for outcome based contracting to be an appropriate mechanism the service or product should have certain characteristics. Most importantly, the service or product should have outcomes that are measurable and that are attributable to the actions of the agents. Due to the complexity of attributing and measuring in relation to public services (as discussed in section 3 above), there are concerns regarding the possibility and practicality of using outcome based payment in relation to public services (Lagarde et al., 2013, Perrins, 2008).

Firstly, there may be problems relating to attribution where service providers may have control over inputs and outputs, but may not have control over outcomes themselves. It is clear this is a relevant issue in attribution of health outcomes, where the actions of health providers is one input of many which may affect an individuals’ health, ranging from the inputs of other health professionals to factors in the wider environment. There are further issues affecting attribution: the complexity of some health interventions means it may not be possible to link inputs to outcomes; there may be a significant time lag between a health professional’s input and the outcome for the individual. A second issue relates to difficulty measuring outcomes. Some objectives in health services can be difficult to define, and subsequently are hard to measure. However, even those outcomes which are relatively easy to define may be challenging and/or expensive to measure.

It has been suggested that, in relation to public services, outcome based contracts should not be used when the link between inputs and outcomes is already well understood (as in that case it would be
simpler to measure the inputs themselves), but equally cannot be used where there is no agreement about the link between inputs and outcomes:

‘Under such conditions, providers might just as easily be penalised for failings over which they had no control, or rewarded for successes to which they made only a small contribution’ (Sturgess et al., 2011, p9).

In such cases it is suggested that adjustments should be made both to the nature of the measures and to the proportion of overall payment which relates to the measure. The outcome based contracting literature suggests that the harder it becomes to measure outcomes, the more likely it is that performance is specified in terms of output processes and inputs, rather than outcomes themselves (Selviaridis and Wynstra, 2015).

6.2 New contractual models and public service governance

Whilst risk transfer or sharing may be effective at incentivising agent behaviour in a beneficial way, it may also, in the context of public services, lead to governance issues (Davies, 2008). These issues particularly relate to the transfer of risk away from the principal to the agent in both alliance contracting and prime provider models. There are concerns in the literature that in some instances alliance and prime contracts, whilst a popular vehicle for public sector provision, do not satisfy public sector governance objectives including accountability, integrity and transparency (Davies, 2008, O’Flynn et al., 2014, Gallet et al., 2015). The literature indicates a number of issues which relate specifically to the use of these contractual models in relation to contracting for public services such as NHS services.

Firstly, the notion that risk can really be transferred from principal to agent in any context is itself subject to debate, as responsibility for the contract reverts to the principal should the agent fail mid programme (Caldwell and Howard, 2014). This concern is particularly accentuated in relation to public services where principals have a statutory responsibility for the provision of services to the population, and therefore retain ultimate accountability for service failures (Doerr et al., 2005). These concerns appear particularly apt in relation to prime contracting models, in the light of the transfer of responsibility for the management and sub-contracting of a complex contract from the principal to the agent, where the principal appears to be less involved in the ongoing delivery of the service than in the ‘partner’ model espoused by alliance contracting.
The literature raises questions concerning the ability of a provider organisation to manage the risk transferred to it, whether provider organisations have the governance structures and expertise to undertake the co-ordination of the activities of other organisations and administer public funds (Gallet et al., 2015, O’Flynn et al., 2014). A separate, but related, question concerns the appropriateness of private sector organisations taking on a quasi-government role (ibid.). Concerns have also been raised that the prime contractor model can serve to degrade the expertise of the principal in the area subject to the prime contract, thereby weakening its ability to regain ownership and control of the contract should the prime contractor fail (Kebede, 2011, Finn, 2011). Kebede (2009), in considering the use of prime providers in UK Ministry of Defence contracting, notes that the Ministry of Defence risks becoming highly dependent on the prime contractor through a transfer of assets and skills to industry, creating a lack of knowledge and skills on the buyer side. The transfer of responsibility from the principal is thought not only to have the potential to weaken the principal’s ability to resume responsibility for the project should the prime contractor fail, but also to identify shortcomings in the prime contractor’s performance in the first place. There is a further associated risk that the principal becomes over reliant on a limited number of organisations to act as prime providers, resulting in a ‘hostage’ situation (O’Flynn et al., 2014, Kebede, 2011). Concerns are also raised in the prime contractor literature regarding the selection of subcontractors, where there is perceived to be a need for the principal to retain an oversight of and control over the subcontractors who are selected for reasons of security (Matthews and Parker, 1999), or to maintain a diverse delivery network (Finn, 2012).

These risks do not have an evidential grounding in the literature, and indeed there appear to be safeguards which have been established to strengthen the links between prime contractors and the commissioners. The Department for Work and Pensions is reported to build in contractual safeguards to allow it to intervene during the contractual period if the prime contractor fails to meet the minimum performance standards (Finn, 2011). Both the Department for Work and Pensions and the Ministry of Defence are reported to have instigated arrangements to encourage ongoing close relations with the prime contractor post procurement such as the recruitment of performance managers, account managers, compliance monitoring officers, provider assurance teams and risk assurance division (Finn, 2012), and the establishment of co-located Integrated Project Teams (Kebede, 2011, Defence Estates and Ministry of Defence, 2003, Finn, 2011, Finn, 2012).

Secondly, in relation to alliance models, the notion of shared risk between providers is also problematic in the light of accountability in the event of under or poor performance of a single alliance.
partner (Davies, 2008). Under a traditional contract, specific responsibility and risk is allocated to individual parties, together with the legal consequences for individual failure (Langfield-Smith, 2008). However, the alliance contract suggests a collective ownership of the alliance project among partners, and a jointly shared risk. This creates potential problems, for example in relation to clinical governance, where important lines of accountability and responsibility by which organisations are held responsible for individual performance are blurred. The nature of public services suggest that the individual organisation within the alliance should be held to account for their poor performance, and it appears inappropriate, given the scarcity of financial resources, that an organisation should be unduly penalised for another’s poor performance. The ‘no-dispute’ clause commonly included in alliance contracts appears to remove an important contractual mechanism which would in other contracts be used to signal when one party in a contract had serious concerns for instance relating to clinical performance.

Thirdly, there are governance issues in relation to the selection of both alliance partners and subcontractors in the prime provider model. The procurement of public services should adhere to principles of transparency to ensure appropriate use of resources and value for money. These principles are in potential tension with the common approach of the selection of alliance partners without price competition, and on the basis of criteria such as previous working relationships. Although the lack of competitive procurement processes is not forbidden in the selection of service providers, there would need to be reasonable assurances regarding the processes which had been followed to satisfy regulatory bodies that the most suitable provider had been chosen. Indeed a complaint of this nature has been made in relation to the commissioning of NHS contracts previously, when North Devon Healthcare NHS Trust, alleged that Northern, Eastern and Western Devon CCG had breached its regulatory obligations when it selected the Royal Devon and Exeter NHS Foundation Trust as the provider of complex adult services for part of the CCG area. The complaint was that the CCG had not undergone a rigorous competitive procurement process, choosing instead to select a preferred provider and work with them to develop a detailed service proposal. Whilst the complaint was not upheld, it was clear that the commissioner was required to undergo a rigorous due diligence process to ensure that the selected provider would provide value for money (Sanderson et al., 2016). Further issues may result as it is suggested that prime contractors (when they are private sector organisations) are not subject to the same procurement rules as public sector commissioners (Finn, 2011). The rules regarding procurement in the NHS have been subject to further legislation from April 2016 when the Public Procurement (Amendments, Repeals and Revocations) Regulations 2016 amended several pieces of legislation including the Public Contracts Regulations 2015 (PCR 2015).
Whilst the implications of these amendments for the NHS are not yet clear, it appears likely that they will further tighten the current requirements for competitive procurement.

Further issues concerning poor demonstration of value for money are raised by the alliance contracting practice of alliance partners working together to agree the target cost of the contract after partner selection (Love et al., 2010). These issues are described more fully in section 6.6 below. Some alliances use independent auditors and probity auditors to validate the quantities and costs which are put forward (Davies, 2008), however it has been questioned whether this practice is sufficiently challenging and rigorous (Langfield-Smith, 2008).

Despite these issues, alliance and prime contracting models are used in relation to public services. It is possible that amendments are made to the approaches adopted when the models are used in relation to public services. In addition to the amendments already suggested, there are further examples in the literature relating to alliance contracting such as the introduction of price competition, maintaining a regime of liability between alliance participants to facilitate the acquisition of project insurance, the inclusion of deadlock breaking mechanisms, and allocating specific risks to specific alliance partners (Davies, 2008). Whilst the introduction of these changes would do much to improve the governance of alliance contracting in the public sector, they also, of course weaken the aspects of alliance contracting which build the unanimity between alliance partners, and are held to be the critical factors leading to successful alliances.

6.3 Contract negotiation and specification

The negotiation and specification of these new contractual forms is expected to involve significant effort on the part of both the principal and agents. Whilst this aspect of the new contractual models is not dealt with in particular depth by the literature, where there is evidence, this suggests the existence of high ex-ante transaction costs for these new contractual models, in relation to the agreement of appropriate outcomes, the establishment of information systems, and the cost of ongoing monitoring, and the cost of relationship building (Whipple and Roh, 2010).

This section will examine the negotiation and specification process separately for each of the three contractual models.

In outcome based contracting (including the use of outcome based payments within alliance contracting and prime contractor arrangements) the process of contract negotiation and specification is complex on a number of fronts. The development of an incentive structure to reward parties in
accordance with effort appears a significant challenge requiring considerable additional time and resources (Hannah et al., 2010, Laurent, 1998).

Firstly, evidence suggests that significant effort is required when outcome-based contracting is implemented in an area where there had previously been a traditional, behaviour-based contract. The introduction of a new outcome-based contract has been found to demand a more rigorous contract specification and therefore highlight issues concerning contract quality in the previous contract (Hannah et al., 2010). An initial stage of ‘clarifying expectations’ may be necessary to resolve ambiguity in the lower level definitions of the contract (Arthur and Kennedy, 2014), and an analysis of what services and outputs are really needed from contractors (Laurent, 1998).

Secondly, significant investment is required when the establishment of outcome-based measurement necessitates new information systems. The identification and measurement of outcomes requires investment in data collection and analysis, together with measurement methodologies and monitoring systems which may also entail a high administrative cost. (Selviaridis and Wynstra, 2015). The process of contract negotiation and specification may be high risk due to staff inexperience, and therefore require investment in staff time (Laurent, 1998, Hannah et al., 2010). If this investment is not sufficient there is the risk of the development of out of proportion incentives due to hurried efforts to put new contracts in place (Laurent, 1998).

However, it is argued that the transaction costs incurred in establishing outcome-based contracts can be balanced against cost savings resulting from efforts to clean up the contract and identify what services and outputs are really needed from providers (Laurent, 1998).

There is some evidence that issues of this nature concerning the contract specification for outcome-based contracts are being experienced in the NHS. The implementation of an outcome-based contract at Cambridgeshire and Peterborough Clinical Commissioning Group was reported to have failed, partly due to the fact that information costs and the contract value were not clear when the contract commenced, and the contract was not delayed until these issues had been resolved (NHS England, 2016).

Alliance contracting also appears to require significant investment in order to negotiate and specify the contract. In some cases of course these contracts will contain outcome-based measures, thereby encountering the issues referred to above. However, quite apart from the issues associated with outcome measures, alliance contracting requires additional resources ex-ante. On one hand, in pure alliance contracting there is an absence of price competition, so tendering can be fast and cheap (Davies, 2008). However, significant resources are needed for the ‘pre-alliance’ phase which occurs
after the alliance partners have been selected. During this period alliance partners work together to agree the target out-turn cost (the estimated total cost of undertaking a project, including direct costs (e.g. design, construction, and commissioning, overheads, and profit margins), which takes into account performance and quality specifications. The core of the contract is a commitment to behave in the spirit of the alliance principles, such as to share information and work together to resolve disputes without litigious action. Additional costs in alliance contracting relate to the relational elements of the contractual relationship, as the alliance partners undertake activities to build relationships to support integrated working. These relational elements are described in section 6.3 below.

The prime provider literature does not address the issue of transaction costs in any great depth. It is noted however that one of the perceived advantages of the prime provider model is that it can reduce administrative and monitoring costs for government, as this activity is transferred to the prime contractors. As with alliance contracting, this reduction is balanced against costs incurred in relationship building activities between the principal and the prime contractor.

As was the case with outcome based contracting, it can be argued that the time spent developing agreement at this point has advantages, such as the development of accurate total costs, the solving of technical challenges, the development of goodwill trust and commitment to targets (Langfield-Smith, 2008).

The empirical literature in relation to all these models suggests that that the specification of performance is an ongoing process, rather than one which is contained in the contract specification process. In part the motivation for this appears to be the need for the agent to continue refining the performance specification in order to manage their increased risk. Examples of the negotiation and specification of performance beyond the contract specification process in the literature include the periodic review and validation of the modelling and assumptions behind the performance specification process (Arthur and Kennedy, 2014) and the revisitation of the target and incentive structure to create a more nuanced scheme in the light of experience (Hannah et al., 2010). It is reported that, in relation to the employment services prime provider contracts, initial success was limited by misunderstandings in the original bidding process, resulting in unrealistically high targets which necessitated the subsequent reprofiling of outcomes (Hudson et al., 2010).

The ongoing process of outcome definition is not a matter for the agent solely, but involves the interaction of both commissioner and provider as they work together to refine the contractual
specification on an ongoing basis. Gelderman et al. (2015) in a case study of the purchasing process for professional ICT services, found that the service definitions were subject to change during the purchasing process (caused by dissatisfaction with the old supplier, new information from the new supplier and the need to clarify specifications), and that the ongoing nature of service definitions beyond the contract necessitated a collaborative arrangement with supplier:

‘The study challenges over optimistic confidence in contracting, particularly performance – based, since specifications (including outcomes) cannot be agreed upon up front’ (p1)

These studies indicate the ongoing rather than complete nature of both outcome based and alliance contracts. The ongoing nature of outcome definition in relation to outcome based contracting suggests that such contracts are more appropriate for long term rather than short term horizons, in order to allow time for the adjustment of outcome measures (Selviaridis and Wynstra, 2015), and therefore contracts need to be flexible to accommodate these changes. It is also possible that the ongoing amendment and review of specifications between the principal and the agent is an advantageous process. The Whole Life approach adopted in relation to some Prime Provider contracts means that the principal continually works with the agents to identify ‘gain share’ opportunities which can then be inserted into the contract agreement (Kebede, 2011).

Reviews of alliance contracts have found evidence of poorly drafted clauses with unclear allocation of responsibility (Davies, 2008) and whilst this may indicate poorly drafted contracts, it is also an indication of the impossibility of specifying and agreeing these elements at the outset, and the reliance in the alliance contracting model on relational norms rather than discrete norms to manage the contractual relationship.

6.4 Relational contracting

As it appears that much of the contractual arrangements alliance, outcome and prime contracting remain unspecified in the contract document, it is expected that these models rely on relational norms to steer the contract.

Alliance contracting is ‘a relationship based contractual arrangement’ (Love et al., 2010) and it is acknowledged that there cannot be a reliance solely on financial incentives to develop collaboration between alliance partners (Koolwijk, 2006). Many of the success factors identified in the alliance contracting literature emphasise the importance of enabling factors such as a leadership enriched culture, top management support, adequate resources, open communications, mutual trust, effective coordination and joint problem solving (Love et al., 2010, Davies, 2008). It is normal practice in the formation of alliance contracts for the alliance partners to participate in a ‘pre-alliance’ period after
the partners are selected and before the contract commences. During this period the terms of the written elements of the contract are agreed but also during this period partners work together to establish an ‘alliance perspective’, undertaking activities which enhance goodwill trust (Langfield-Smith, 2008). Part of this activity is the agreement of a governance structure to manage the contractual relationships when the contract commences: integrated project management team to manage daily issues, an alliance management team to manage the alliance, and a project alliance board to manage the strategy of the alliance (Koolwijk, 2006, Rowlinson et al., 2006). There are also more wide ranging activities which take place both in this period and during the life of the contract such as colocation in a single office, workshops focused on building good relationships and selection of the ‘right’ personnel with a shared past working relationship (Jefferies et al., 2014). In a case study of upgrades to Australian wastewater treatment plants, Rowlinson (2006) identified transaction costs accrued through a relationship manager, an alliance psychologist, a team manager and an innovation manager, which totalled 5% of the total project manpower budget was set aside for relationship management issues.

The development of close relationship between alliance partners, including the development of shared identity and shared values and encouragement to embrace shared goals is thought to manage the risks which cannot be controlled within the written contract (Langfield-Smith, 2008). Langfield Smith highlights the importance of reputational incentives in ensuring ongoing commitment to the alliance.

Although less emphasis is given to relationship building in prime provider models, the literature relating to the UK defence and employment prime contractor contracts suggest that activity is undertaken on two fronts. Firstly, to build collaborative relationships between the principal and the prime contractor for governance reasons, and to ensure that opportunities for innovations are realised, and secondly to undertake some activities in order to foster productive supply chain relationships between the prime contractor and sub contractors. The relationship between the prime contractor and sub contractors is interesting. A key gain from prime contracting is held to be the improved co-ordination of the supply chain (Corrigan and Laitner, 2012, Defence Estates and Ministry of Defence, 2003). However the literature presents scarce evidence of relationship building activities between the prime contractors and subcontractors, with the exception of some supported networking activities in the employment services contracts (Finn, 2012). This lack of reported relationship building activities is in contrast with the suggestion in some studies that the relationship between prime contractors and subcontractors could be strained due to the incentives in the system (Matthews and Parker, 1999, Gallet et al., 2015, Finn, 2011). The literature indicates that risk and cost pressure can be passed down the supply chain from the prime contractor to subcontractors, resulting in a loss of
trust and co-operation (Matthews and Parker, 1999), and distrust may occur between prime and sub-contractors due to the perception that prime contractors were profiting from the contracts at the expense of sub-contractors (Gallet et al., 2015). The root of this may be the differing payment structures, in which financial incentives experienced by prime contractors were not passed down to subcontractors (Maddock, 2013) and the move by prime providers to shift the risk of delivery onto the subcontractors (Finn, 2011).

Although collaboration appears less structured in relation to outcome based contracting, and indeed the literature places less emphasis in general on the relative importance of relational norms, a close relationship, where customers and suppliers have a relationship which is ‘non-linear and dynamic’ is acknowledged to varying degrees to be an important contributory factor to successful contracting (Ng et al., 2013, Guo and Ng, 2011, Ng et al., 2009). The root of the collaboration between commissioners and providers in outcome based contracting is the need for both providers and commissioners to have input regarding the complexities of measuring outcomes (Hannah et al., 2010, Perrins, 2008). In some cases this need for collaboration is extended to indicate an ongoing and dynamic relationship akin to co-production. However this definition in particular is applied to the relationship between commissioners and providers in the delivery of maintenance contracts, which necessitate a ‘collaborative performance’ of the contract (Ng et al., 2013).

The literature relating to alliance contracting and outcome based contracting draws a distinction between organisational and individual relationships, and although this issue is not directly addressed in the prime contracting literature, it is probably equally relevant, given the similarities between the models. Whilst the financial incentives such as gain and pain share are commonly aimed at the organisational level, it is thought that social relationships between individuals are crucial to overall service performance and can ‘safeguard against hazards poorly protected by the contract’ (Guo and Ng, 2011). Whilst alliance contracting often assigns roles to people for the duration of the contract, boundaries and rules tend to be less well defined in relation to outcome based contracts, and it is argued that this further increases the dependencies on relationships which are required (ibid).

Whilst every contract contains a balance between discrete and relational norms (Vincent-Jones, 2006), the alliance contracting literature suggests that the relational norms may be put at risk by the discrete elements. Van Den Berg and Kamminga (2006) note ‘the loss of the concept’s strong points when it is translated into a legal document’, suggesting that there is an ‘essential mismatch’ between the idea of close working and partnership, with its emphasis on relationships, and the way in which legal contracts and thinking are structured. Similar concerns have been raised in the outcome based contracting literature, in relation to the tension between competitive tendering and the development
of collaborative relations required to implement successful PBC (Selviaridis and Wynstra, 2015), and in prime provider contracting in relation to the need for the prime contractor to performance manage the supply chain in addition to encouraging collaborative working (Gallet et al., 2015).

The emphasis on the importance of relational norms in the literature, particularly in relation to alliance contracting has important resonance when considered in relation to the use of the models in public services in general, and the NHS in particular. Studies of other models of contracting have shown the importance of relational norms in general in the NHS (i.e. Allen, 2002, Hughes et al., 1996, Petsoulas et al., 2011), and this may suggest that in so far as these new modes of contracting also rely strongly on relational norms, they may represent a good fit with contracting for NHS services. As NHS services are largely planned and provided in an environment in which there is a limited number of providers and commissioners, who are likely to be entrenched in geographically bound pre-existing networks, it may be expected that in many cases of outcome based contracting or the formation of alliance contracts, that the contracting parties, both at an organisational, team and individual level, will have pre-existing relationships. The literature reviewed here, especially that relating to alliance contracting, suggests that pre-existing relationships are a strength in alliance formation. However, it may also be the case (although this is not examined in the empirical studies reviewed for this paper) that pre-existing relationships also bring tension to relationships, for example when parties have been involved in previous failed joint ventures. Furthermore, the ongoing relationships between individuals, teams and NHS organisations provide a context which extends beyond the outcome based, prime contractor or alliance contract, and may be a strong influence on behaviour. For example, wider relationships may lead to an unbalanced power dynamic between alliance partners (for example if one organisation is heavily reliant on another for patient referral), or may lead to an unwillingness to share sensitive financial information (for example if two organisations are in direct competition with each other in relation to a tender for the provision of services in relation to a different service).

6.5 The alignment of incentives and the risk of opportunism

A key aim of these new contractual models is to align the incentives of the agents with the principal, thereby reducing the risk of opportunism.

Any use of incentives depends upon the accurate setting of thresholds, which may always remain unclear to a degree (Caldwell and Howard, 2014). In theory the transfer of risk is a significant motivator of behaviour, and evidence suggests that risk transfer is significant when pure outcome based contracts are deployed (Martin, 2007). However, it is often the case that outcome based payments are only partial as suppliers may well be reluctant to agree to contracts fully linking payment to performance due to the risk of non-payment (Selviaridis and Wynstra, 2015). Alternatively risk
premium payments and rewards linked to milestones may be needed to overcome this. The problems regarding specifying outcomes, particularly in relation to public services, may further weaken the incentive structure.

A likely negative effect of incentive payments for performance is the encouragement of gaming (Frumkin, 2001, Jacob and Levitt, 2003). Some studies of outcome based contracting, including models which combine prime and outcome contracting, do indicate gaming activities such as ‘cherry picking’ of easier clients (Hudson et al., 2010), data recording irregularities (over/under reporting) (Lu and Ching-to Albert, 2006, Caldwell and Howard, 2014), poor quality service (Hannah et al., 2010) and the skimping of service provision (ibid).

Studies of alliances generally (rather than of alliance contracting specifically) suggest that opportunistic behaviour is also prevalent in alliance relationships (e.g. Inkpen and Ross, 2001, Judge and Ryman, 2001). While some academics use these studies as evidence that alliance contracting will also be subject to opportunistic behaviour (e.g. Love et al., 2010), it is arguable that the aspects of alliance contracting which set it apart from other types of partnership working (i.e. the emphasis on risk sharing rather than risk transfer, and collaborative working) may reduce the scope for opportunistic behaviour. There is some evidence that this is successful. Laan et al. (2011) drawing on a longitudinal case study of a construction project found that opportunistic behaviour was reduced when there was a project alliance incentive structure. However, the study also noted that the financial incentive structure alone was not sufficient to achieve this reduction, and the parties needed also to work to reduce the inclination of parties to make use of opportunism, by selecting the right staff and offering them support. Whilst there may be less opportunistic behaviour within the alliance contracting relationship, concerns have been raised, in the light of project underruns against the target outturn cost, that there is a temptation at the start of the contractual process for agents to overestimate the costs involved (Love et al., 2010).

In relation to the prime contracting literature, there are general concerns that prime contractors have scope for opportunistic behaviour due to the ‘hands off’ approach adopted by the principal when they transfer the responsibility for an entire supply chain. However, the literature did not include any empirical observations relating to this concern.

6.6 Overall advantages of alliance contracting, outcome based contracting and prime contracting

The literature is surprisingly light on evidence relating to the benefits of these approaches, although there are many normative claims which are made. One explanation for this may be that the complexity
of these contractual models, and of the environment in which they are deployed mean that it is
difficult to distinguish changes in performance which can be directly attributable to these models. It
is also suggested that some of the improvements achieved as a result of these contractual models
such as the financial benefits of improved risk management are difficult to quantify (Matthews and
Parker, 1999).

A benefit which is anticipated in relation to the use of these new contractual models in health services
is increased integration of services. Interestingly, the literature relating to these contractual models
does not seek to address the issue of whether integration is increased. Selviaridis and Wynstra (2015)
review performance based contracting literature from a supply chain perspective, and conclude that
the literature ‘appears to take supply chain incentive alignment largely for granted’. In relation to their
review of alliance contracting literature Chen et al. (2012) found there was evidence that alliance
contracting led to a reduction in capital costs, the development of innovations, benefits in relation to
time, safety, relationships, learning benefits, enthusiasm and engagement of partners, demonstrable
ability to avoid disputes and improvement in non-cost outcomes, such as enhanced reputations and
improvement of competitive advantage. All these benefits may be related to improved integration,
however they are not synonymous with it. The prime provider literature includes a small number of
studies that suggest sharing of good practice occurs amongst supply chain members (Lane et al., 2013)
and that there is better co-ordination of services as a result of the prime provider approach (Muir et
al., 2010), however equally this literature refers to tension and mistrust between prime and sub
contractors. On balance, given that improved integration is a key perceived benefit for both alliance
contracting and prime provider contracting, there is currently a lack of empirical evidence to support
this. Indeed Caldwell and Howard (2014), in their review of procuring for outcomes in the UK defence
sector (including alliance arrangements) specifically warn against the implication that contracting for
performance does away with intra- and inter organisational silos, such as budgetary silos and lack of
inter service information sharing.

The literature also suggests that the evidence base for other advantages of the new contractual
models may also be under-developed. The models are thought to result in cost savings for
commissioners. Evidence from the first two pilot prime contractor construction projects led by the
Ministry of Defence suggested benefits of over 70% increase in labour productivity, a 25% reduction
in construction time, reduced materials wastage and a reduction in through life costs (Holtt et al.,
2000), however these results have not since been matched by other studies. A number of studies
conclude that it is difficult to draw any conclusions in this regard due to difficulties with attribution
and measurement (Caldwell and Howard, 2014, Buchanan and Klinger, 2007, Henneveld, 2006,
Bresnen and Marshall, 2000, Love et al., 2010). The alliance contracting literature from the
construction industry reports that many construction projects were completed within the target costs and timescales using alliance contracting principles (Gransberg and Scheepbouwer, 2015). However, it should be noted that there is scepticism regarding cost savings in particular in the alliance contracting literature relating to construction due to the practice of alliance partners (over) estimating their capital expenditure requirements (Love et al., 2010, Chen et al., 2012). A further salient point in this regard is that any benefits may be due to the implementation of good practice project delivery methods and the identification of good quality contractors rather than any elements inherent in the contractual models themselves (Bresnen and Marshall, 2000, Buchanan and Klinger, 2007, Davies, 2008).

A further benefit cited for these new contractual models is that they lead to improvements in the quality of services, and again the evidence base in this regard is not convincing. There is some evidence concerning instances of opportunism and gaming (detailed in section 6.4) which suggest that the quality of services may not be consistent. One route to improving service quality anticipated for these models was the development of innovative approaches by providers. Whilst the Department for Work and Pensions prime provider contracts were intended to encourage innovation, evidence suggests that the prime providers were limited in their scope for innovation because they lacked the resources to do much beyond efficiency savings (Hudson et al., 2010). Langfield Smith (2008) found in relation to an alliance contracting case study that there were relatively few incentives for innovation.

7. Discussion

The purpose of this literature review is to establish what is known about the characteristics and implementation of alliance contracting, prime contracting and outcome based contracting models in order to draw out the specific implications for their implementation in an NHS setting using the theory of contracts.

The literature review indicates that these models, which are now being considered for use in relation to the commissioning and provision of NHS services, have a history of use in other sectors, particularly in the commissioning of public services both in the UK and overseas. However, in line with other reviews of these contractual models (Gallet et al., 2015, O’Flynn et al., 2014, Selviaridis and Wynstra, 2015, Chen et al., 2012, Billings and Weger, 2015), this review has found that the models are under-researched and under-theorised, and evidence relating to their impact is limited. Much of the literature relating to these models is normative in nature and takes as a given that the models, if correctly implemented, will result in significant gains in terms of cost savings, integration, service improvement and innovation. Whilst the literature commonly describes the implementation of the contractual arrangements (which is indeed useful transferable learning to aid the introduction of such
arrangements to the NHS), it is less helpful in terms of the identification of firm and attributable evidence in relation to the performance of these contractual models. Consequently, whilst there is a great deal of enthusiasm for the potential of these models to address some of the issues facing the NHS, such as the need to improve the integration of services across organisations, there is as yet a lack of substantial evidence on which to base many of the claims regarding their effectiveness.

The literature suggests the models are suited to commissioning in the environment associated with public services, where there are complex services, which are hard to co-ordinate, with high risk and high uncertainty. A key issue to be addressed when the models are implemented in the NHS is the governance issues raised by the alliance and prime contracting models. There is clearly a balance to be struck between enabling the transfer of risk from commissioner to provider, and thereby achieving the benefits which are thought to be gained from such a move, and ensuring that the standards of accountability and transparency that are required of public services are maintained. Some of the governance issues raised by the use of the models in the planning and delivery of public services appear problematic when considered in relation to the characteristics of the NHS environment. In particular the transfer of risk from principal to agent is problematic in the NHS where risk may simply be shifted within the public sector, instead of from public to private. Additionally, issues of information asymmetry, which are already acknowledged to exist in the principal/agent relationship in the commissioning and provision of NHS services, may be exacerbated further by distance between principal and service delivery in the prime provider model, thus increasing the risk of opportunism.

Whilst the case studies included in this review indicate safeguards which have been introduced to address some of these issues when they arise in other public services, the introduction of such safeguards risks weakening the effectiveness of the models. For example, an increased stewardship role for the principal in relation to prime contracting may weaken the prime contractor’s ‘ownership’ of the supply chain, thereby reducing their incentive to innovate. For these reasons, the repercussions of any such changes made in order to improve the governance of the models in the NHS need to be carefully considered.

The literature suggests that issues of measurement and of relational governance which have been found to be central to other models of contracting in the NHS remain fundamental issues to the operation of these new models of contracting. The difficulties in measuring complex performance are already well documented in relation to pay for performance initiatives (Lagarde et al., 2013). The literature considered here suggests that getting outcome measures right takes time, effort and investment and is an iterative process, continuing after the contract commences. What little experience there is of outcome based contracting in the NHS to date, and specifically the experience
of the Cambridgeshire and Peterborough CCG/Uniting Care contract (NHS England, 2016), reflects some of the pitfalls of this approach if sufficient time and resources are not dedicated to refining measures. It is also clear that, to be successful, the models rely heavily on relational norms. In the case of alliance contracting mechanisms to establish norms such as solidarity, reciprocity and trust between principals and agents are formal elements of the model, however it appears that efforts to establish these norms are also equally important to the success of prime contracting and outcome based contracting. Therefore it is to be expected that resources should be dedicated to the development of provider/provider and commissioner/provider relationships within all three models.

The current policy environment in the NHS presents a complicated backdrop for the introduction of these new contractual models. The emphasis on partnership working between groups of providers to achieve a particular project in alliance and prime contracting resonates strongly with the move announced in the Five Year Forward View to create a series of new provider organisational configurations in local health economies. Organisations providing NHS services are required to work collaboratively in local ‘footprints’ to deliver ‘Sustainability and Transformation Plans’, centred on ‘place based’ care delivered across organisational boundaries. Models such as alliance, prime and outcome based contracting offer formal contractual mechanisms to achieve this, however organisational collaboration may equally be delivered without formal contractual mechanisms. Whatever arrangements local ‘footprints’ put in place for cross organisational working, the method of collaboration will need to adhere to the rules and regulations governing competitive behaviour in the English NHS. A difficulty in this regard in likely to be the rules regarding the procurement of NHS services which are unclear (Sanderson et al., 2016, Allen et al., 2015). A further complication is the imminent introduction of further regulation (Public Contract Regulations 2015: The Concession Contracts Regulation 2016 and The Public Procurement (Amendments, Repeals and Revocations) Regulations 2016 (HSJ, 2016b), which is feared to make it more difficult for commissioners to avoid using competitive procurement processes (HSJ, 2016a).

8. Conclusion

Whilst there is, understandably, a great deal of enthusiasm about the potential of these new contractual models to improve the integration of services and allow better use of resources in the English NHS, the literature reviewed in this paper suggests that caution must be exercised in their implementation. To succeed alliance contracting, prime contracting, and outcome based contracting require investment of both time and resources to both ensure their robust implementation and on an ongoing basis. Furthermore, the evidence base regarding value for money and improving quality should not be over estimated. Indeed this review suggests that the issues which currently underlie
more traditional contractual arrangements in the NHS, such as how to measure performance and sustain relational aspects, remain central to the success of these new models.
APPENDIX 1

Literature search

Search engines
- ABI-INFORM and the Social Science Citation Index (in Web of Science)
- Web of Science
- Academic Search Complete
- Business Source Premier
- Lexis

Inclusion criteria – Primary quantitative/qualitative research published studies or theoretical studies, English language, full text available. Grey literature included on relevance.

Search terms – Searches were conducted using the terms alliance based contracting, prime provider contracting, outcomes based contracting. Searches were conducted of titles and abstracts of texts.

Outcome based contracts

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Alliance contracting
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RICKETTS, B. 2014. Innovative contracting for integrated care: what are the risks and benefits of various contracting models? *Presentation to King’s Fund conference on contracting for integrated care*.


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