An Exploration of Valuation Practices in Complex Case Reviews in Healthcare

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Abstract
Purpose
The purpose of this paper is to explore valuation practices in a complex case setting in healthcare. Value based healthcare is an important theme in contemporary health management, particularly in relation to management of cases with multiple stakeholders. The concept of value co-creation concentrates on value as uniquely (and privately) determined by the beneficiaries. In this context researchers have begun to explore value co-creation styles in relation to health service outcomes. The challenge for value based healthcare however is to also capture an accepted valuation of service benefit that has currency for all stakeholders. In the valuation literature this can be viewed as a collaborative performance. Valuation practice styles have not previously received attention in healthcare research. As a result there is a gap in understanding as to how private co-creation of value by individual participants might relate to their collective valuation of service benefit. Beginning to characterise valuation practices in a series of healthcare case reviews is therefore a fruitful investigatory step.

Design/Methodology/Approach
The documentary record of a series of 20 case reviews was obtained with permission for individuals with complex needs from a hospital Learning Disability service. All were subject to a standard case management system entitled The Care Programme Approach (CPA). This process requires regular collaborative case reviews involving patients, family, clinicians and service commissioners. The records were explored using a thematic template analysis. From combining emerging themes and reference to the valuation literature a template of valuation practices was developed for further analysis. Using techniques from Qualitative Comparative Analysis a range of configurations of valuation practice were identified for discussion.

Findings
For this sample case reviews divided between those that were apparently strongly valuation orientated and those that were not. In addition, within that range there were also a number of possible valuation practice configurations identified. These configurations aligned with four styles of practice: To develop an integrative style of a number of modes of valuation practice; A simple style which might form a stem for other practices; a results orientated style; A style characterised by professional learning.

Originality/Value
This study highlights that a range of co-valuation styles are manifest within case review practice. These configurations may well reflect the underpinning value registries in play amongst participants. Thus, variation in valuation practices is an area to consider for healthcare improvement initiatives. This is a novel perspective to the process of gaining collective ownership of
outcomes by stakeholders in health. Moreover, we extend service theory by raising the question of how co-valuation relates in counterpoint to value co-creation. We consider that valuation practices might be an extension of value co-creation. Alternatively, we consider whether these are parallel processes in service exchange, with an inter-play between individual value co-creation styles and the collective co-valuation style. Our methodological approach provides a useful starting point for further research.

Introduction
Value based healthcare is proposed to be important to the task of improving the management of healthcare (Porter, M. E., Pabo, E. a, & Lee, T. H., 2013; Porter, M., 2010; Porter, M. E., & Teisberg, E. O., 2007). The argument is that it is critical in the way forward to focus on the individual case, and there is much literature that agrees with this stance (Nolte & McKee, 2008; Lillie et al, 2011; Horne, Khan & Corrigan 2013). In this context, for Porter (2010) 'value' is defined as outcomes that matter to patients, relative to service cost. Therefore the clinical project is to organise the delivery of service to those ends. Porter (2010) sets out key areas of benefit they see as arising from this patient orientated perspective. These areas are given a level of stratification of importance, ranging from 'surviving', to improving in function and avoiding harm to including aspects of the service process such as timeliness. It is argued that these indices provide a spectrum of useful outcome measures from which to gauge and reflect on the usefulness of a service.

Despite the advantages of Value Based Healthcare, there are further issues to be addressed to develop it in practice in healthcare. First, there is more to do to clarify the notion of value and its relationship to theories of value creation. Second, Porter and colleagues have used relatively simple scenarios to develop the concept, and there is more work to understand how it might apply in complex healthcare settings. Third, there is more to do to understand how this approach might lead to the valuation question of in practice being able to weigh 'has the service been worth it', particularly in the complex case setting.

In order to explore this question we will first review contemporary thinking on value and value creation in the service literature as it might be applied to healthcare. Next we set out some key ideas from contemporary valuation theory. We provide an introduction to case management in English Learning Disability care. This represents one area where the issue of value from services is particularly topical, and which provides a good exemplar for how in practice valuations might be made in a complex healthcare setting. We then report an empirical exploration of the valuation practices discovered in a series of case management reviews and discuss the implications of our findings.

Value and Value Creation in Healthcare.
Contemporary service literature is focused on the notion of value co-creation, embedded in some form of service logic. Mostly associated with service dominant logic (SDL), as described by Vargo & Lusch (2004; 2008) value is
deemed as experienced uniquely by the customer. In this context, ‘value’, not unlike Porter’s definition, can be defined as that as a result of service the customer perceives they are better off than before (Grönroos, 2008). The process of value co-creation is that knowledge and skills from relevant sources are produced with the customer and integrated for them to be able to create value for themselves. The term value co-creation, introduced by Ramaswamy (2011), at the simplest level reflects the collaborative nature of this exchange. There are though some further technical consideration as to how the term value co-creation is used in the literature which are beyond the scope of this paper (Grönroos, 2008; Grönroos & Gummerus, 2014). What is important is that there is an increasing emphasis on the applicability of this concept to public sector services (Vargo and Lusch, 2011; Hadjikhani and LaPlaca, 2013), and to healthcare in particular (Alves, 2012; McColl-Kennedy et al. 2012; Radnor and Osbourne, 2013; Hardyman, Daunt, and Kitchener 2014).

In this context there has been work to empirically explore value co-creation in healthcare. McColl-Kennedy et al (2012) studied patient practices in an oncology service and described variations in patient co-creation styles, which they have tentatively linked to some aspects of service outcome. There has been further work to extend the study of co-creation styles to other areas of chronic healthcare such as chronic respiratory or cardiac disorders (Sweeney, Danaher & McColl-Kennedy, 2015). Frow, McColl-Kennedy & Payne (2016) have deepened the theoretical framework for understanding value creation in healthcare. One element to their framework is the embedding of this value co-creation process in the stakeholder network context. The authors also draw on Payne, Storbacka, & Frow (2008) to argue that the enactment of practices in these relationships lead to the realisation of co-created value, and they call for more empirical research.

Frow, McColl-Kennedy & Payne (2016) agree with Baron & Harris who point out that there are particular complexities and constraints in health and public service settings, with the involvement of multiple parties and perhaps differing views as to the outcomes that might be desired (Baron & Harris, 2008). In this context, Korkman, Storbacka & Harald (2010, p. 238) assert that there have been few attempts “to understand the actual practical process of resource integration, and how value stems from integration”. In Payne, Storbacka, & Frow ‘s (2008) model of the management of value co-creation that Frow, McColl-Kennedy & Payne refer to, it is not explicit what value is realised. In fact much of the literature has followed Vargo & Lusch (2008) in seeing value as privately, uniquely determined by the beneficiary. The issue of understanding an agreed sense of collective value of a service that might be negotiated between stakeholders has received less attention. The perspective of Porter and colleagues is to anticipate that patient value should be externally accessible for wider stakeholders. Healthcare services are embedded in the context of a network of stakeholders (Provan & Milward, 1999; Zolkiewski & Turnbull, 2002). These might be understood as the patient and their supporters, the clinicians and their professional systems and the commissioners and other regulatory bodies (cf Spurrell, Araujo & Proudlove, 2014). All these stakeholders need to see that their own value
needs are met, and that each other’s are too. For example, clinicians and commissioners want to know a patient is getting better to justify their continued activities and funding. Patients need to understand that their clinicians and commissioners are happy in order to be sure that they are receiving the right care. Therefore how such a collective valuation might be enacted, and how it relates to the process of value co-creation is a key element in the development of value based healthcare which is missed in the co-creation literature.

**Approaches to valuation**
The classical approach in the valuation literature is to understand collective value as consisting of two aspects. First there is a process of **Valorising**, which refers to arranging for value to be created. There does not seem to be any reason not to link this to the process of value co-creation, although the concept was not developed with this in mind. The second aspect is the process of **Evaluation**, which is the identification of value as it is created (Vatin, 2013). Although in these terms the focus of the co-creation literature has been on valorising, there has been some attention paid to evaluation. For example after game theory Spohrer & Maghlio (2008) propose that there should be a process of identification of an outcome scenario following service. This might be one of a series of combinations such as win/win, win/lose, lose/lose etc. that can categorise whether the service need was met or not. Of course this model does not account for multiple stakeholders, as might be found in health. Moreover, it assumes a simple time limited intervention, whereas healthcare is more usually extended and complex. Payne, Storbacka, & Frow (2008) include a final step of evaluation in terms of customer satisfaction as part of their model of the value co-creation management highlighted above. However, again the approach is rather simplistic for the more continuous, mulit-layered, multi-stakeholder perspective that more usually applies in healthcare. Moreover, in the Payne and colleagues model the process of evaluation they describe is not a collaborative one. In recent valuation literature, there has been further development of how the process is seen, and there has been recognition of the inextricable interplay between valorising and evaluation. Vatin (2013) argues that an ongoing process of evaluation is integral to the process of making value. Further, in exploring the process of valuation empirically, some argue that in practice the distinction becomes rather blurred (Heuts & Mol, 2013). Therefore there is yet further ground to cover to understand collective value making in healthcare.

The issue of the collective perspective of value in healthcare has been the subject of particular recent attention (Dussauge et al, 2015). In the introduction to a collection of work on the subject, the authors make the point that instead of proceeding from a perspective of trying to define what say valorising and evaluation means, we can draw on the pragmatist insight of rather asking the question as to ‘how are values made?’ (p2). Drawing on Dewey (1913), the argument is in essence that there are two components to how values are made, the making of participant stakeholders and the systems of value (the value registries) that are deployed.
To clarify further, adopting this pragmatic vantage point, Dussauge et al argue that participants in healthcare are dynamically engaged in a process of stake making, where they can be more or less pulled into fulfilling the role of stakeholders, with investment in the desirable outcome as they see it. Here they blend the classical distinction between the term ‘value’ as might be articulated by economists, and ‘values’ as might be associated with sociological discourse. For the authors, value(s) denote and produce the desirable. In adopting the stance of stakeholders, participants will have their particular ways of ordering what they see as desirable, which form their value registries. The enactment of competing desirabilities amongst stakeholders is then how the valuation is performed (p19). In this context the authors propose the notion of valuographic research, which concerns itself with studying the practices involved in such valuation performances.

In a further paper, Dussauge, Helgesson & Lee (2015, p281) develop the potential of valuographic research further. They propose that valuographic studies might usefully capture, describe and compare valuation practices between cases, and from this they envisage a number of potential modes of intervention: Re-balancing, Caring, Interfering and Inspiring. First, from studying and identifying persistent critical issues where valuations are performed there can be opportunities for re-balancing the interactions between participants to improve the valuation performance (p282). For the caring mode of intervention there is similarly attention to emerging critical issues in how valuations are performed, but it might be considered that a nurturing of some contribution is required. For example it might be considered whether more emphasis on the patient value registry in the performance would improve the valuation.

For the activist mode of intervention the authors envisage a more specific project to start from a working position, collectively review the valuation, and then more pro-actively make an alteration, as might be found in an action research project for example. Meanwhile for the inspiring approach, the purpose of eliciting variation in valuation practice across cases would be to activate interest in considering how the world might be otherwise. Therefore, this enables scope for shaping alternatives or focusing choice. It is this mode of valuographic research, with an emphasis on exploring the collective making of value, which we propose to develop in this paper.

**Opportunities for Valuation and Valuographic Research in Healthcare.**

We have argued that value based healthcare is a concept that offers promise, but which depends on being able to arrive at a collective view on value. From the valuation literature we are able to conceptualise that this can be achieved through the performances of valuations. Further, through the adoption of a valuographic methodology, it is possible to study variation in valuation practices across cases in order to gain insight into how to develop this aspect of value based healthcare. The next task is to identify how the broad scope of healthcare practice might be usefully approached to investigate the
phenomenon of valuation further. We propose that such a focus can be found through an investigation into case management in healthcare.

Case management refers to a collaborative, integrative approach to evaluating and planning care (Nolte & McKee, 2008; Lorig, 1993). It is often associated with cases of multiple complex needs (Krumholz et al, 2006). Goodwin & Lawton-Smith (2010) distinguish between two forms of case management approach. The first is a hierarchical approach from the vantage point of commissioners, say, overseeing services for patients. The second approach, case co-ordination, is from the vantage point of a structured collaboration of service users and other key stakeholders, patients, families, clinicians and commissioners, “knitting together” care from multiple sources (Goodwin & Lawton-Smith, 2010, p2). A collaborative planning process requires a collaborative evaluation of progress to date, in anticipation of further value creation. Therefore examples of this latter style of case management in particular are likely to be fruitful objects of study for exploring valuation practices. Goodwin & Lawton-Smith single out ‘The Care Programme Approach’ case management in English mental health care as an area where such a form of case management has been long established approach with the potential to function as an exemplar for healthcare more widely.

The Care Programme Approach case management system (CPA) was introduced in England in 1991. CPA provides for a named care co-ordinator and for a person-centred process for assessing, evaluating, planning and reviewing patients with complex conditions. Periodic case management meetings are regularly held for patients and stakeholders to collaboratively conduct such reviews (Department of Health, 1990; 2008). All English Mental Health and Learning Disability service providers are required to deploy CPA in managing complex conditions, and it has general acceptance in clinical use (Kingdon & Amanullah, 2005).

Research into CPA to date has been limited. Where research has been done there is some criticism of the apparent wide variations in practice found (Carpenter et al, 2004; Rose, 2003). There have been examples of a loss of relationship and engagement with the service users, not addressing areas that matter to them and not sufficiently engaging family members (Goodwin & Lawton-Smith, 2010). Simpson, Miller, and Bowers (2003a, 2003b) relate these difficulties to a lack of conceptual underpinning for the CPA process. In a high profile example of service neglect, the failure of the CPA process to evaluate the situation was cited as one factor in the subsequent service review (Flynn & Citarella, 2012). Therefore, whilst CPA case management may be a good focus for exploring valuation practices in healthcare, there are also important issues of practice at stake, for example in Learning Disability care, that suggest that such a focus may also contribute to service improvement.

We have argued that contemporary service literature on value co-creation in healthcare has not gone far enough to support value based healthcare, particularly in relation to the prominent issue of the management of complex cases. In addition to supporting value as benefit uniquely determined by the beneficiary, there is further a necessary dimension of agreeing a collective sense of valuation in order to take stock and further plan the care strategy. The performance of such a valuation is given a particular focus in healthcare case management reviews. In this valuographic study we propose to explore the valuation practices in a series of CPA case reviews in an English Learning Disability service as a suitable exemplar of this phenomenon. Our hypothesis is that using such a valuographic approach we will be able to usefully capture the making of value within cases. Further by studying the range of valuation practices across cases we will shed light on some of the underlying value registries and their interactions between stakeholders. Thus, posing the question of how it might be otherwise, we hypothesise that the patterns of practice that are discovered will usefully inform service improvement, and usefully further extend value creation theory.

Methodology.
For this investigation we were able to collaborate with a UK Learning Disability Trust. The Trust provides in-patient mental healthcare to patients with complex needs associated with learning disability and autism. Services are structured into four service areas: care in a medium-secure setting, care in a low-secure setting, a women’s service and an enhanced-care (or rehabilitation) service. Patients within the services are all subject to CPA case management review and the Trust operates a protocol describing the process, underpinned by patient-centred values. Within that protocol, CPA case reviews take place at least every six months. All relevant stakeholders are invited to attend and participate in CPA case review meetings. These meetings therefore provide a useful focus for exploring stakeholder participation in CPA.

In this study we have adopted a multiple embedded case study methodology. Using template analysis (King, 2012) we explored the valuation practices of a systemic cross sectional sample of 20 cases of CPA case reviews in the Trust. Within the case study literature it is legitimate for the focus of investigation to be a defined entity or phenomenon within an organisation (Woodside & Baxter 2011; Yin, 2014). The investigation sits within the theory-building phase of research (George & Bennett, 2005; Christensen, 2006). Approval was obtained from the Trust’s Research Committee to undertake the study. No direct patient contact was required for the study and the investigation was structured as a service evaluation project and not a clinical study. All records remained confidential and no information was extracted from which an individual patient would be identifiable.
Sample and Data
The sample selected consisted of the first five cases scheduled from each of the four service areas following research approval. This provided a sample to reflect a broad view of CPA across the organisation. As a service-process study, apart from gender and service area, demographic data on patients were not included. For each CPA review, reports are tabled and the attendance and minutes of the meeting are recorded. The data obtained for study consisted of all documentation filed in the electronic case record for the most recent CPA care review for the selected cases. This documentation comprised the minuted record of the CPA review plus additional reports tabled by professionals and patients. This was a study of documentation as distinct from oral information or direct observation. Atkinson and Coffey (2010, p80) argue that “documentary materials should be considered as evidence in their own right”. The construction and conventions associated with documents, in this instance being the official record of the CPA review, are also part of the documentary reality, a version of reality that can be usefully studied. This exploration of the official CPA meeting record with an interpretive approach, supported by the inter-textual consistency across cases, was therefore a valid perspective for investigating the functioning of CPA reviews. The key stakeholders of concern in this analysis are the patient networks, the commissioner networks and the clinician networks as represented in the case review documentation.

The Template
The data obtained from the official CPA documentation was explored using a template analysis (King, 2012). The first step in this methodology is to develop a suitable template, which can be from drawing on relevant literature, by eliciting themes as they emerge in a pilot sample in the data, or from a combination of both. From the literature, Kimbell (2011) describes two principle themes in the quality of value creation processes, which we have drawn on. These are, the extent to which there is collaborative process, and the balance between a problem solving process and a more reflective design orientated practices. In this context, from our sample we used a pilot investigation to identify themes as to how progress was presented for stakeholders, how that was made use of to draw conclusions. Following the template methodology we confirmed that the resultant themes formed a stable pattern across cases and no new themes emerged, resulting in a final template as set out in Table 1.
Table 1. Mature Template for exploring valuation practices in CPA case reviews.

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<tr>
<th>Template Theme</th>
<th>Template Sub-themes and Nature of Evidence</th>
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<tr>
<td>• Overview of Progress</td>
<td>• Whether the status of the patient was established across a broad range of functional areas, and where within those areas there was a more reactive comment or whether there was more methodical, structured detailing of status within that domain</td>
</tr>
<tr>
<td>• Progress along care pathway</td>
<td>• Whether there was a description of trends, either improving or worsening etc. Also, whether trends were reported across a broad range of areas and whether these were structured and methodically reported.</td>
</tr>
<tr>
<td>• Progress with patient engagement</td>
<td>• Whether there was learning developed in the review, linking change in status to possible explanations, leading to likely changes in treatment plan. Whether that reflection actively involved the patient.</td>
</tr>
<tr>
<td>• Progress with symptoms and function</td>
<td>• Whether progress was overall represented as mentions or highlights, or more structured descriptions or supported by a formal measurement tool.</td>
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<tr>
<td>• Progress with social participation</td>
<td>• Whether there was a definitive statement to say since the last review that progress had been made, not made or was unchanged overall.</td>
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<tr>
<td>• Progress with reducing untoward events</td>
<td>• Whether there was inclusion of patient self report progress, and whether this took the form of narrow unstructured comment, or a structured self assessment across broad functional areas.</td>
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Analysis
The data for each case was reviewed for accuracy and completeness. The template themes and subthemes were coded using NVivo version 10 (2014). Each set of case documentation was imported into the NVivo project and the data was examined and coded using the template nodes. As an exploratory investigation, data analysis was undertaken using pattern matching of the coded data, consistent with the cross-case synthesis approach advocated by Yin (2014). A rich picture was developed from the documentary data of the performance of valuations.
as captured by this template. The range and richness of valuation performances across cases was considered and described.

In order to examine the patterns of network participation in a more structured fashion, we drew on the principles of fuzzy set Qualitative Comparative Analysis as described by Ragin, (2008; 2006). This analytic technique makes use of set theory to represent qualitative data in a format whereby case level data can be aggregated and interactions and patterns evaluated. This is a quantitative technique that is able to operate with small case samples and avoids some of the difficulties of using statistical techniques in qualitative research (Ragin, 2008; Ragin & Byrne, 2009). The technique relies on assessing the degree of membership of cases to the defined set of interest in a considered process, termed ‘casing’. In this study the primary set of interest is the set of rich valuation practices for each of the identified themes in the template. We followed a methodology on casing for investigating social phenomena at the micro level (Basurto & Speer, 2012), with definite set membership defined as 1, definite non set membership was defined as 0 and the transition point of equipoise between in and out was 0.5. We used this technique to classify the richness of valuation practices for each of the themes within these cases, and aggregated these to capture an overall representation of the quality and style of valuation performance for each case. From this vantage point we undertook a qualitative evaluation of valuation performances across CPA case reviews.

Findings
The first key finding was that a great deal of variation was found across cases as to how valuation practices were manifest. The first question was to consider how much of that variation was due to variation in the quality of the practices that were enacted and how much was due to different approaches and emphases across the different reviews. In this context we identified a set of core practices that were enacted within the case reviews, to a greater or lesser extent. We consider these set of practices in turn before reporting on how different combinations of these practices were enacted for groups of cases.

Rich Picture of Clinical Status
The most prominent practice was the portrayal of the current status of the patient against the main thematic headings. The current status could be represented by a professional description of say symptoms, function, behaviour and so on at the present time of the review. From the thematic subthemes we were able to identify a range of quality in this practice. The richer descriptions were able to go into some detail across all the main thematic headings, providing breadth and depth to the portrayal. In addition in some cases such a report was underpinned by a more structured, systematic methodology. Some cases deployed a structured, reporting tool. For example one commonly used tool was the Recovery Star (MacKeith & Burns, 2008) which provides for a holistic set of headings around symptoms, function and wellbeing against which the service user and key nurse can together rate
their current status. However, there were no set formats for deploying structured assessments across cases. There was clear range to the extent to which structured evaluative tools and frameworks were used. Therefore, there was a practice dimension of presenting a rich picture, with the richest pictures including breadth and depth of description and some form of structured assessment. Drawing on fsQCA as outlined above, each case was assessed and assigned a degree of set membership for the quality of the status report we elicited and the quality of structured assessment support that we identified. Figure 1 displays the degree of rich set membership for the quality of the status assessment and the structured reporting. A score of 1 is the perfect case, the best cases in our sample reached a threshold of 0.8 for either status report or structured assessment. This was judged a reasonable threshold for good practice, and 9 out of the 20 cases met this criterion. Obversely it can be seen that 3 cases (cases 1, 6 & 14) were found to exhibit a particularly limited rich picture. One case (19) was unusual in presenting a particularly rich picture for a quite narrow area of interest. In subsequent analysis we aggregate these two elements as permitted by fsQCA methodology to form an integrated variand of ‘Providing a Rich Picture’.

Figure 1. Chart of fuzzy set membership for rich practices in representing current status and structured assessment in CPA case reviews

**Elicitation of Progress**
The next practice we identified was the elicitation of progress since the previous review. Again this was found vary in quality across cases. Some reviews did not elicit progress at all, others were either limited in breadth or depth. The richest practice demonstrated a systematic elicitation of progress across a wide spread of themes, supported by structured tools and identification of change. Again drawing fsQCA, as above, we classified cases with a fuzzy set score to reflect set membership of the richest set of elicitation of progress, with 0.8 judged as the threshold for good practice. Figure 2 demonstrates that 7 out of the 20 cases reached this threshold. Meanwhile,
taking 0.4 as the threshold for absent or rather limited elicitation of progress, 8 out of the 20 cases lay within this category.

**Decision made on progress or not.**
A further additional practice that we identified was the clear formation of the view that either progress had been made or not. In other words in some cases there was a definite decision taken on this, but in other cases either no consideration was given to this, or a range of more equivocal inferences were made which did not amount to a decision. In Figure 4, 7 out of 20 cases provided a strong direction on whether progress was made or not. Meanwhile, 6 out of the 20 cases could be classed as not deciding whether progress had been made or not in the review, with the remaining 7 cases presenting a more ambiguous position on progress.

**Reflection**
It was interesting to note (Figure 5) that in 7 out of 20 cases we were able to identify a clear practice of attending to the status and progress reports, linking the data to a working theory and reflecting on the findings. For 8 cases there was very limited or no reflection apparent.

**Patient Involvement**
The practice of involving the patient in the valuation process was a cross cutting theme that also emerged. There were varying levels of eliciting the patient view on status, progress and decision making across the cases. This practice was also cased for reaching the threshold of good practice using fsQCA, as shown in Figure 5. Seven cases could be categorised as having a good level of patient involvement in the valuation process, meanwhile 9 out of 20 cases (<0.4) could be categorised as definitely limited in this regard.

![Figure 2](chart.png)

Figure 2. Chart of fuzzy set membership for rich practices in representing progress, reflection and patient involvement in CPA case reviews
Assembling Valuation Practices
We have identified 5 areas of practice which are being performed in case reviews, as evident in the CPA documentation. There is variation to the richness of practice for each of these across the case series. FsQCA is an ideal technique for this small sample size to investigate further how these 5 variations (‘Variands’) interrelate (Ragin, 2006). By exploring the subset relationships between these variands using QCA techniques it is possible to explore whether there are particular combinations of rich valuation practices found within the sample that are distinct, or whether all these practices are different aspects of a generic valuation process being enacted with greater or lesser quality. In other words are there simply just good quality reviews and limited quality reviews.

Crisp Set Analysis
In order to focus on combinations of rich practices we first converted our table to crisp sets. From our calibration we have determined that a fuzzy set score of greater than 0.8 counts as definitely rich practice. Therefore instances of 0.8 and 1 in our data set can be represented as 1, below that would be 0. There maybe instances where some degree of rich practice is lost by this conversion, but it also reduces the impact of limited quality reviews. As described by Rantala & Hellström (2001), QCA can help explore the hermeneutic characteristics of data for potential patterns of interest. Using this approach we charted the crisp set data onto a set plot where we could consider whether there were particular clusters of practice. We considered groupings of 3 cases or more as of potential interest, since Fiss (2011) suggest this as a reasonable cut off when looking to more detailed analysis. In the resultant plot we identified clusters of practice that fit our criterion (Figure 4).
First there was a clear cluster of 4 cases that lay outside the plot altogether, and these were left out of further analysis as being overall more limited reviews. Therefore there was a cluster of 16 cases that exhibited a rich level of valuation in at least one practice area.

The next cluster was found where all areas of practice were richly enacted (Cases 12, 19 and 20), and leaving aside patient collaboration a further case can be included (Case 8) consisted of cases for which there was a broad integration of several rich practices.

A further cluster was the portrayal of a rich picture of the patient status, with either no interaction with any of the other areas of practice (Cases 2, 5, 7 & 9), or as a combination of Rich Picture and Reflection (including Cases 11 & 17). A rich picture view on status was treated as an aggregation of a broad detailed and methodical status report and the use of structured assessment tools. The calculated fuzzy set coincidence is 0.76. For the cases concerned (2,5,7,9) the fuzzy set scores showed that status report and use of structured tools were closely aligned. Therefore there does appear to be a cluster of valuation practice (N= 6) that concerns itself simply with presenting a rich picture as an end in itself.

Remaining cases were found to be prominent in some combination of a number of practices. Therefore from this analysis we find that there is an overall set of cases where some level of rich valuation is being enacted.

Figure 4. Set Plot of Crisp Set Membership of Rich Valuation Practices across the set of CPA Case Reviews
Within that set there is small set (N=4) where there is clearly rich integration of many practices being enacted, and a set (N=6) where the developing of a Rich Picture appears to be an end in itself.

**Configuration Analysis**

In order to investigate further whether more complex combinations of practices could also be meaningfully described we drew on the argument from service design thinking that makes a distinction between problem-solving, in which the desired state of affairs can be known (i.e “Better or Worse”), and “a process of enquiry during which meaning is constructed with diverse stakeholders” (Kimbell, 2011, p49). We have therefore explored our data first as a problem orientated process leading to a valuation decision (“better or worse”) and secondly as orientated to the elicitation of progress as representing an end in itself for learning purposes. We have also explored our data as not leading to a decision or not leading to the elicitation of progress, as a way of triangulating our analyses.

We investigated these potential combinations with a configuration analysis of fuzzy set membership using fsQCA, as outlined by Fiss (2011). We followed Fiss in using a cut off at least 3 cases per combination in the truth table analysis. Cases of the outcome are coded at a threshold consistency judged by the researcher, but usually within the range of 0.75 (Ragin et al, 2008) to 0.95 (Fiss, 2011). Solutions are calculated in two forms, a parsimonious solution and an intermediate solution. As Fiss, indicates the parsimonious solution provides for a more constrained set of inclusion assumptions for the presence or absence of conditions in the underling set logic used to calculate solutions compared with the intermediate solution. It is not intended that fsQCA makes an absolute determination, rather it provides structured boundaries to what might reasonably be inferred as meaningful combinations. In that spirit a condition that appears in both the parsimonious solution and the intermediate solution is considered to be a core condition. Conditions only appearing in the intermediate are playing a part, but are more peripheral conditions. Conditions that don’t appear at all are not likely to be relevant, which is itself informative. A solution consistency of 0.95 is usually taken to be robust (Fiss, 2011).

Table 2 reports the result of the configuration analysis where the problem solving outcome is the practice of Making a Decision on “better or not”. In this analysis there was only one solution provided, but the consistency of the outcome was high (Cut off 3, Consistency 0.95, N=16). Taking the intermediate solution, there can be a high level of confidence in the important role for the various valuation practices in combination in the process of deciding “better or not” (Coverage .59, Consistency 0.97). From the parsimonious solution though, it can be seen that it is the involvement of the patient that forms the core practice in arriving at this outcome (Coverage 0.73, Consistency 0.95). Both versions are well within the levels of confidence used by Fiss.
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<tr>
<th>Configuration</th>
<th>Solution for Reaching a Decision</th>
<th>Solution for Eliciting Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cut off 3, Consistency 0.95, N=16</td>
<td>Cut off 3, Consistency 0.94, N=16</td>
</tr>
<tr>
<td>Status</td>
<td>Parsimonious</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Structure</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Progress</td>
<td>•</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflection</td>
<td>•</td>
<td>N/A</td>
</tr>
<tr>
<td>Patient</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Involvement</td>
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<td>•</td>
</tr>
<tr>
<td>Raw coverage</td>
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<td>0.89</td>
</tr>
<tr>
<td>Unique coverage</td>
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<td>0.89</td>
</tr>
<tr>
<td>Consistency</td>
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<td>0.82</td>
</tr>
</tbody>
</table>

Black circles indicate presence of a condition. Large circles indicate a core condition and small circles a peripheral condition. N/A is not applicable. Blank cells indicate not relevant.

Table 2: fsQCA Configurations for Making a Decision and Eliciting Progress

Meanwhile, if Eliciting Progress is considered as the outcome in its own right, the picture changes to one where there is again only one solution (Cut off 3, Consistency 0.94) but with a configuration of a rich, structured status report along with reflection forming the key practices (Coverage 0.72, Consistency 0.95). Reflection appears potentially as a core condition, although the relatively low consistency might be a challenge. Interestingly, the Participation of the Patient was not a relevant condition. This configuration might then represent professional reflection and learning.

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Solution for Not Making a Decision</th>
<th>Solution for Not Eliciting Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cut off 3, Consistency 0.95, N=16</td>
<td>Cut off 3, Consistency 0.81, N=16</td>
</tr>
<tr>
<td>Status</td>
<td>Parsimonious</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Structure</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Progress</td>
<td>•</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflection</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Patient</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Involvement</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Raw coverage</td>
<td>0.94</td>
<td>0.63</td>
</tr>
<tr>
<td>Unique coverage</td>
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<td>0.63</td>
</tr>
<tr>
<td>Consistency</td>
<td>0.69</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Black circles indicate presence of a condition. Circles with a cross indicate its absence as a condition. Large circles indicate a core condition and small circles a peripheral condition. N/A is not applicable. Blank cells indicate not relevant.

Table 3: fsQCA Configurations for Not Making a Decision and Not Eliciting Progress

It is instructive also to consider whether there are configurations characterised by the absence of outcomes. Table 3 repeats the configuration analyses with the absence of Making a Decision (Cut off 3, Consistency 0.95) and the absence of Eliciting Progress (Cut off 3, Consistency 0.94) as outcomes.
Both analyses provide a single solution. For Not Making a Decision, there is potentially a modest role for all the other conditions, except for an absence of Patient Involvement (Coverage 0.74, Consistency 0.79). Although the consistency level is low, it supports the importance of Patient Involvement as a key practice in a decision making configuration. Also, the analyses provide evidence that valuation practices identified are involved in more than just a decision making progress. Although not as robust, the analysis for Not Eliciting Progress reinforces the proposition that a process involving professional Reflection, that excludes Patient Involvement, is in operation (Coverage 0.63, Consistency 0.81).

In summary, a rich picture, consisting of Status and Structuring of information provides a common stem to a process of Decision Making on “better or worse” that involves patients, and a process of professional Elicitation of Progress and Reflection without Patient Involvement.

Discussion
This study highlights that case management reviews provide an opportunity for making value. In our sample of CPA case management reviews in a UK Learning Disability care setting it was apparent in 16 out of the 20 cases we explored that there was at some level a rich enactment of valuation practice evident. This provides an opportunity to consider in more depth value creation in healthcare through a valuographic lens. Further, in this discussion we reflect on the differences we found across cases from this perspective and we develop inferences for healthcare improvement and value creation theory.

The making of value
In developing our template we were guided by value based healthcare literature to identify themes that are considered important in healthcare. It is to be expected that this bestows a number of embedded assumptions, and that others might propose competing themes to consider. However, within this particular framework we were interested to know how “what is important” was enacted. To that end we did discover a set of practices that when assembled could be represented as particular styles of making value (Table 4). As indicated above, some theorists argue for a two step process of value creating (valorisation), followed by an evaluation (Vatin, 2013). Dussauge et al (2015) argues rather for the assembling of practices to make value as a more integrative phenomenon. We were able to identify both these patterns within our sample, but with some qualification.

First for the simple style, developing a rich picture, we consider that this sets the stage for the CPA case review itself to be a place where collective value is made. In our sample we found that this first step was a common stem for the other styles of valuation that we found. However, we are left to explain those cases that were represented by the display of a rich picture and no more. One explanation is that this was a study of documentary evidence, so it might have been that the further step of collective evaluation took place in the review, but was not documented. Alternatively, it might be that a simple evocation of the state of play at a point in time for stakeholders to appreciate and evaluate privately can be sufficient. A further possibility was that whilst
CPA case reviews are themselves collective value creating opportunities, not all reviews developed that potential.

<table>
<thead>
<tr>
<th>Valuation Style</th>
<th>Description</th>
<th>Approach to stakemaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrative Style(^a)</td>
<td>Collaborative and multimodal enactment of all practices</td>
<td>Collaborative problem solving with patients, plus possible design for service.</td>
</tr>
<tr>
<td>Simple Style(^b)</td>
<td>Descriptive practice only</td>
<td>Precursor for any approach</td>
</tr>
<tr>
<td>Results orientated(^c)</td>
<td>Sequence of practices leading to “better or not” decision, with Patient Collaboration as key</td>
<td>Collaborative problem solving with patients</td>
</tr>
<tr>
<td>Professional Learning(^d)</td>
<td>Focus on Progress elicitation and Reflection, without Patient Collaboration</td>
<td>Product design for patient.</td>
</tr>
</tbody>
</table>

Table 4. Description of Valuation Styles discovered in CPA case reviews, with links to Kimbell’s (2011) framework of design approaches

Contrasting with the simple style, both the Results Orientated style and the Professional Learning Style appeared to more clearly represent a collective value making process. For the Results Orientated Style the nature of the valuation was whether the patient was “better or worse”. From a service ecosystem perspective this win/lose outcome proposition would also have currency for the wider service system (Spohrer & Maglio, 2008). There is a lot riding on whether patients are making progress or not in healthcare. For the Professional Learning, the valuation was in terms of the meaning and understanding of what was clinically working or not, which contributes to the further evolution of the clinical care strategy. Interestingly, the Results Orientated Style was notably dependent on patient collaboration (valuation with), whilst the Professional Learning was valuation of the patient, without Patient Collaboration. This distinction will be discussed further below.

It might be thought that the evocation of a process of capturing that current state of play and its subsequent evaluation would lend support to the valorisation-evaluation model. Overlaying a linear process is one way of making sense of patterns and configurations in data. QCA and configuration analysis does not necessarily imply a deterministic process within patterns. It is the investigator that brings such assumptions to bear. In the Results Orientated Style and the Professional Learning Styles this was a natural assumption to make. With the integrated Style, however, there was a more complex, rich integration of all forms of valuation practice discovered. With a strong emphasis on the patient perspective, reflection and learning, as well as decision making, the making of collective value here closely fits that of a collaborative performance amongst stakeholders, as envisaged more recently in the literature (Ballantyne et al, 2011).
**Stakeholders and underlying value registries**

From our findings it would appear therefore that there are a range of ways in which service valuation might be manifest, from simply articulating a rich picture, to a process of valorisation and evaluation and to a collaborative performance. Comparing across these styles enables us to identify the role of underlying value registries in use and relationship with stakeholders as important factors in how value emerges.

Value registries capture “what is desired”. Meanwhile, the process of stakemaking is seen by Dussauge et al (2015) as a key component of valuation practice. The valuographic literature is at an early stage in envisaging frameworks to capture these themes in empirical work. We do see there as being a natural alignment however between how value is made and service design literature. In this context Kimbell (2011) argues that for service design there are two areas of tension to consider. The first is the tension between the desire for problem solving and the desire for understanding and meaning. The second tension Kimbell proposes is between service as (goods-like) providing a product for customers and service as collaborative exchange with customers (cf SDL, Vargo & Lusch, 2004). This provides some help in being able to structure the underlying value registries and the approach to stakemaking in our data. From this vantage point it can be seen that each style represents a different balance of emphasis between engineering and design, and between passive and active involvement of stakeholders as envisaged by Kimbell (Table 4). Thus, the Results Orientated Style is problem-solving orientated, but with emphasis on collaboration. The Professional Learning emphasises understanding and design for patients. The integrative Style does also emphasise collaborative problem solving, but also includes a component of collaborative understanding. The simple style however is harder to interpret in this way.

Kimbell’s (2011) framework also describes “Design for Service”. Here what is desired is a collaborative platform for engaging stakeholders in a shared understanding from which future action can be developed. It would be interesting to investigate further whether the Integrative Style shared some of these features. It would also be interesting to widen the enquiry to consider whether through interactions in case reviews (beyond the documentary reality) the network of service participants engaged with the simple, Rich Picture to construct such a Design for Service Platform. This would introduce a helpful way of viewing the process of stakemaking in the value making process, and introduce ‘platform making’ as a new kind of service outcome to be considered as an important outcome for the case review process.

**How it might be otherwise**

In this valuographic exploration we have highlighted a number of themes for further consideration. It is important to note that in activating these themes we have applied a number of different views to the sample data. There may well be themes that we have not highlighted that could also be interesting. Moreover, the styles of valuation that we describe are not necessarily
exclusive, there could well be elements of overlap within cases. The purpose of this enquiry in surfacing key valuation styles and comparing across cases has been to pose the question as to how it might be otherwise. Dussauge, Helgesson & Lee (2015) argue for a range of responses to cross case comparison findings.

It was striking to note the degree of variation across cases and between cases within a sample from a single health provider organisation. The healthcare management implications are considered further below. However, it is clear that there is scope to consider ways of further cultivating valuation practices. On the one hand, there were four cases where there was not strong evidence for collective value making in the care process at all at the review. On the other hand, there were 3 cases that notably engaged in a particularly broad, rich valuation process. Therefore in the first instance, drawing inspiration from these rich cases poses the question as to how it might be otherwise for those other cases where collective value making was less evident (Dussauge, Helgesson & Lee, 2015).

Further, by eliciting a range of co-valuation styles we open the question as to whether different styles have different advantages. It was beyond the scope of this paper to determine whether empirically different styles have particular advantages in terms of objective measures of health outcome at this stage. It may be in fact that different styles might have applicability at different times. For example, the cases with less emphasis on patient collaboration may be a function of their level of wellness at the time of review, in which case the Professional Learning Style would be appropriate. Nevertheless it is also important to consider whether in some cases there might be an opportunity to further nurture patient participation, or to rebalance the emphasis to better incorporate the perspective of patients and other stakeholders in some cases. These strategies further mirror those suggested by Dussauge, Helgesson & Lee as arising from valuographic study insight.

With regard to rebalancing in particular, this study is based on the documentary reality of CPA case reviews. It can be imagined that additional interactions occurred in the review discussions, and outside the review, that were not recorded, but which might also be relevant. However, as far as these reviews were concerned, the variation to the quality of collaborative input from patients poses questions specifically about rebalancing of “stakemaking”, as Dussauge, Helgesson & Lee (2015) would envisage it. It might be further noted that others who were not evidently such active contributors, such as family and commissioners might also be viewed as important stakeholders. The constellation of stakeholders close to the service process, patients, family, clinical professionals, commissioners and so on, can be thought of as a unique service delivery network (SDN) for each case (Spurrell, Araujo & Proudlove, 2016). Network context is a key aspect of value creation in the literature (Edvardsson, Tronvoll & Gruber, 2010). Therefore, a further dimension to interact with the collective making of value would be to consider the role played by the particular SDN context. An exploration of the interaction between valuation style and SDN in the optimisation of making value would be important further investigation.
**Patterns of practice inform healthcare and Extend value creation theory**

The advantage of exploring healthcare is that at its best it exemplifies how a combination of service practices can support the flourishing of an individual service user. It is a natural series of experiments, rooted in a long tradition of practice and thought. On the other hand, where outcomes are not as hoped for, conceptual frameworks from contemporary service thinking are increasingly proving valuable routes to improved understanding. From this study we can both inform healthcare practice improvement, and critique the application of value co-creation as it has been previously been conceptualised.

For healthcare, our finding of marked variation between cases on practice performance in CPA case reviews adds to concerns already expressed in the literature on the functioning of CPA in England (Simpson, Miller & Bowers, 2003a; Simpson, Miller & Bowers, 2003b). A similar marked variation was found for service delivery network functioning in CPA case reviews in an earlier, related study (Spurrell, Araujo & Proudlove, 2016). First this suggests that our sample’s variation represents a common phenomenon in CPA case review practice, and quite possibly in case management review more generally, accepting CPA as a good exemplar of case management (Goodwin & Lawton-Smith, 2010). Second, we agree with others that there is a need for the development of concepts and frameworks to better capture and explain case management functioning in healthcare (Goodwin & Lawton-Smith, 2010).

A particular contribution we make in this investigation is that variation is not just a function of quality of the review process, but also a function of adopting different valuation styles within the stakeholder context. The present dominant focus of healthcare improvement is to look for standardisation across healthcare practices. Whilst this is no doubt important Swinglehurst et al (2014) have argued that a degree of customisation of practice to particular cases is also required. Therefore it is important to recognise and classify styles of interactions as a part of the health improvement agenda with a view to better understanding how to optimise outcomes. We would see our ‘co-valuation styles’ as a similar feature to the co-creation styles that were elicited by McColl-Kennedy et al’s (2012) study of a different aspect of service functioning. As indicated above there may well be good reason for it to take time to build up the confidence of patients and other stakeholders to be able to collaborate as fully as might be liked, therefore there may be a process of maturation of style to be supported as care progresses.

For value creation theory we have argued that the trend to limit conceptualisation to value co-creation misses out an important further step in being able to frame healthcare, and other complex service environments. The emergence in our study of styles of collective value making (‘co-valuation’), echoing earlier work on styles of value co-creation (ibid), highlights the need to span the individual-collective boundaries in capturing service exchange. There appear to be two possible routes to link this insight with the literature. First it might be that what is being captured is simply a further step in a linear process of value creation, providing a richer view of the follow-up phase of the
service encounter experiences described in Payne, Storbacka & Frow’s (2008) process model of value creation management. Alternatively, there are reasons for seeing value co-creation and co-valuation as continuous related, but parallel processes. This would rather match the value network perspective (Norman & Ramirez, 1993), and perhaps provide some structuring to how the making of value might be enacted across the micro-macro levels in the service eco-system model that is currently gaining prominence (Frow, McColl-Kennedy & Payne, 2016; Akaka, Vargo & Lusch, 2013).

Conclusion
In this study we have taken steps to bridge the gap between the proposed importance of value based healthcare, and how the making of healthcare value might be enacted in practice in a Learning Disability care setting. From this valuographic perspective we have highlighted that case management reviews in healthcare can be opportunities for service valuations. From this vantage point a collective assessment of value can be made available for service adjustment and service management purposes. In this context, we have extended other work that shows that there is a notable degree variation in case management practice in mental health and Learning Disability care in England. However, we have demonstrated that at the case level there are different co-valuation practice styles being enacted, which need taking account of when considering practice variation. We would argue that different styles of co-valuation may reflect different stages of care evolution and the different valuographic perspectives prevailing amongst service participants. The relationship between co-valuation style, the service network interactions and the emergence of optimal valued outcomes are important themes for future research.

In adopting this valuographic perspective we have raised important questions for contemporary value creation theory as it has been applied in healthcare. We argue that whilst there has been attention paid to value creation as uniquely determined by the beneficiary, theoretical models need to also take more account of how collective value is made. From our findings there might be merit in seeing a final step of ‘evaluation’ as part of a value generating process. Alternatively, private value creation and collective valuation might be separate but interactive processes to be modeled together more holistically within the service network context. This is an important distinction which can usefully inform further service research and service design. It has very practical implications for making case level service experience in more accessible for healthcare management and improvement.
References


