Five Principles for Supporting Value Based Healthcare

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Abstract

Commentators have challenged healthcare to put the idea of "value generation" at the heart of service. There is a gap between that ideal and a workable conceptualisation of that, and how practitioners might be supported. To be convincing, any proposed system has to work for complex cases, which are at the heart of the improving healthcare challenge. The purpose of this paper is to review the conceptual landscape and, after empirical explorations of patterns of practice in a case series, to propose fresh ideas for developing service platforms to support complex case management.

In the context of "value generation", the paper amends the widely used Wagner's Chronic Care Model (CCM). Adopting a pragmatic stance, the revised framework is explored using empirical data from a series of complex case reviews. The emergent findings are considered again in the light of contemporary service literature, and further revisions are proposed.

Five principles inform the design of more pertinent service platforms. First the individual case should be the project of interest. Second, the care project is contextualised by a unique service delivery network (SDN). Third, case management reviews are episodes of co-valuation, within a chosen style. Fourth, "what matters to us" is an emergent valued outcome which, fifth, can be aggregated to have wider currency for healthcare management.

This work proposes a more refined framework for practically enstructuring value based healthcare. The work contributes to the applicability of service theory to healthcare, and introduces "what matters to us" as a new perspective to consider.

Introduction

The purpose of this paper is to re-conceptualise the framing of value based healthcare for the complex case. Within a pragmatic stance, the paper looks at the capabilities of the Chronic Care Model (CCM), together with a perspective on 'value' in the healthcare landscape. The paper considers findings from three explorations of aspects of value making practices in a series of case reviews in a specialist learning disability service. From this inquiry, a number of principles are elucidated that bring a

fresh perspective to how to support complex case management in healthcare to best effect. This work includes a number of shifts in perspective that offer some fresh lines of research.

The management of the chronic complex case in healthcare is a suitable and important troubled area of practice to consider for a number of reasons. First, it is increasingly recognised that this is an area of practice that warrants more attention in healthcare research (Coleman et al, 2009; De Bruin et al, 2012; Nolte & McKee, 2008). Second, it is reported that there are shortcomings in the conceptual supports available for case management work in healthcare (Goodwin & Lawton-Smith, 2010). Third, commentators point out that there is a gap between the rhetoric of aspiring to collaborative, individualised care for patients, and the availability of systems that put it into practice (Edwards, 2011). In particular Bohmer & Lawrence (2008) argue for the need for service platforms to support practitioners in enabling best practice to be delivered.

In this context, it is important to assess the potential contribution of the Chronic Care Model (CCM). Developed by Wagner and colleagues (Wagner, 1998; Wagner et al, 2001), this is the most prominently considered conceptualisation for framing the management of longer term conditions. Meanwhile, it is important to explore different approaches to the concept of 'value' in the healthcare landscape. This is relevant because the idea of value based healthcare (VBH) is gaining traction in healthcare thinking. The principle of VBH is that by making the organisation of care around generating valued outcomes for patients, the rest of the health system falls into place (Ciasullo et al, 2017; Porter, Pabo & Lee, 2013). However, as highlighted below, both of these themes have important shortcomings to be overcome.

In terms of an empirical focus, there is no agreed operationalisation of 'the complex case' as such. It is helpful in this context, therefore, to choose a focus of study where cases are indisputably complex, and from an angle where the complexities of practice can become apparent. To that end the phenomenon of case reviews within the complex case management system of a specialist learning disability service has been identified as fulfilling these criteria.

In order to structure this conceptual inquiry, this paper appropriates a pragmatic stance. A pragmatic inquiry is ideal where there is not a generally accepted theoretical framework to draw on. A pragmatic stance is an approach which focusses on improving a troubled area of practice (cf. Dewey (1938, in Thayer, 1982, p332). This mode of inquiry does not adopt an *a priori* theoretical stance, nor try to dichotomise the field of inquiry (Ansell & Geyer, 2003). Rather the investigation proceeds by clarifying the focus of practical interest. Next, drawing on available relevant conceptual tools that might be available (Ansell & Geyer, 2003; Popa, Guillermin & Dedeurwaerdere, 2015), there is an exploration of the interplay between these conceptualisations and an empirical focus on the phenomenon of interest. The aim is to seek a suitable shift, or re-framing of the area of interest such that a fresh impetus is given to helpful practice and theory development (Dewey, 1938, in Thayer, 1982; Miller, Fins & Bacchetta, 1996). This ideally sets the stage for a further programme of work (James, 1907a; 1907b, in Thayer, 1982).

The structure of this paper is therefore first to consider the literature relating to the idea of the complex case and the capability of the CCM to support practice. Then the landscape relating to the concept of value in healthcare is outlined. Next, based on documentary data, the findings of the exploration of 3 aspects of value making for a series of complex case reviews in a specialist Learning Disability setting are outlined. In the discussion, 5 principles for framing value based healthcare are proposed, with reference to themes within the broader service literature. The paper contributes a framework to support collaborative service platform development for complex care. It offers some fresh research perspectives for case level value generation and transformative service design.

What is the Complex Case
Given the emerging prominence of the case based view for health service improvement and design, particularly for complex healthcare, it is important to be able to bring the complex case into focus. There does not appear to be a uniformly agreed approach to defining the complex case in the literature. In fact, the most prominent emphasis in the literature to date has been on care of patients with single long-term conditions (Coleman et al, 2009; De Bruin et al, 2012; Nolte & McKee, 2008). This is a relatively narrow focus on care of patients with conditions such as

diabetes and chronic vascular disease, for example, although there is some recognition that factors such as additional complicating disorders and social difficulties need taking into account. Indeed, there is now a broader, more functional view of cases starting to emerge particularly in projects concerned with old age care (Sendall, McCosker & Crossley, 2016), but which is not yet readily operationalised for widespread use.   One alternative is to develop small clusters of cases with similar characteristics as a focus of interest (Porter, Pabo & Lee, 2013). However, this sidesteps the question of what elements go to make up the complex case. It does not address the increasingly important issue of being able to individualise care (Horne, Khan & Corrigan, 2013).

Nevertheless, aside from the longevity of a particular condition and the issue of service individualisation, there are a number of potentially important characterising themes that can be found in the literature (Ewert & Evers, 2014; Barile, Saviano & Polese, 2014). There is reference, for example, to the difficulties engendered by having multiple health conditions, along with sources of stress or social difficulty. There is complexity that arises from difficulty with agency for patients, which may arise where factors impair the capacity of patients to make decisions for themselves, or where other wider system imperatives impose constraints. Meanwhile, further account needs to be taken of patient disposition to the service, which might range from being pro-actively committed to being disinclined to engage (cf. Batalden et al, 2016), or even to being unwilling participants (Osborne & Strokosch, 2013). Therefore, there is a diverse range of important health, social and institutional factors to be managed that make it difficult to develop a generic view of the complex case.

An alternative approach to defining the complex case is to represent cases on a dimension of complexity. On the one hand, there is planning person centred care to the single long-term condition cases (eg Ahmad et al, 2014). On the other hand, there are cases associated with multiple conditions, along with a multiplicity of the other themes highlighted above (eg. Haggerty, 2012; Johnson, 2013). In this context, it is pragmatic to propose the case that is indisputably complex as a focus of inquiry. For English mental health and learning disability services the Care Programme Approach (CPA) is a case management system that specifically aims to support the management of complex cases within the sector (Department of Health, 1998;

2008). Under this policy, there is a pragmatic capturing of the complex case for eligibility for CPA case management based on practitioner judgement (cf. Johnson, 2013). CPA is itself considered to be an area of service practice that calls for more research, and which can be considered as a good exemplar for better understanding case management more generally (Goodwin & Lawton-Smith, 2010). Thus, cases within CPA are a convenient categorisation of the complex case which is used as the focus of interest in this paper.

Reviewing the Chronic Care Model (CCM)

In terms of being able to frame 'the case', the most widely adopted perspective is that of the Chronic Care Model (CCM: Nolte & McKee, 2008). The CCM was developed by Wagner and colleagues to address the gap in support for the management of a relatively narrow range of ambulatory, long term conditions in healthcare (Wagner, 1998; Wagner et al, 2001). Although not intended as such, it might have some applicability for patients with complex, multiple conditions (De Bruin et al, 2012; Sendall, McCosker & Crossley, 2016). Wagner and colleagues were early advocates of the view that how care was organised was a critical factor for good outcomes (Wagner, 1998, Wagner et al, 2001). The CCM was developed to reflect that care had to be provided *with* patients rather than *to* patients, and that for this to happen there needed to be a system change: "patients must be the pilot" (Coleman et al 2001, p66).   On this basis, the CCM comprises two key components. First, the service process is framed by a range of elements that provide background support. Second, in that supportive context, productive interactions between activated patients and informed pro-active clinicians form a service process leading to improved health outcomes (Figure 1).

At a practical level, there are mixed findings as to whether implementing the CCM improves outcomes (De Bruin et al, 2012). Some argue that it may be the influence of key motivated individuals rather than the CCM itself which engenders benefit from using it (Holm & Severinsson, 2014). Others see it as more helpful, but in terms of selected elements that might be usefully taken from it, rather than as necessarily a coherent framing of a service process (Stellefson, Dipnarine & Stopka, 2013). In other words, the CCM is "a synthesis of system changes to guide quality improvement" (Wagner et al, 2001, p76). It does not directly support care practice,

and expects for there to be practice variation from organisation to organisation as the local circumstances might determine (Coleman et al, 2009, p81). Its limitation for small scale application has also been noted (Coleman et al, 2009).
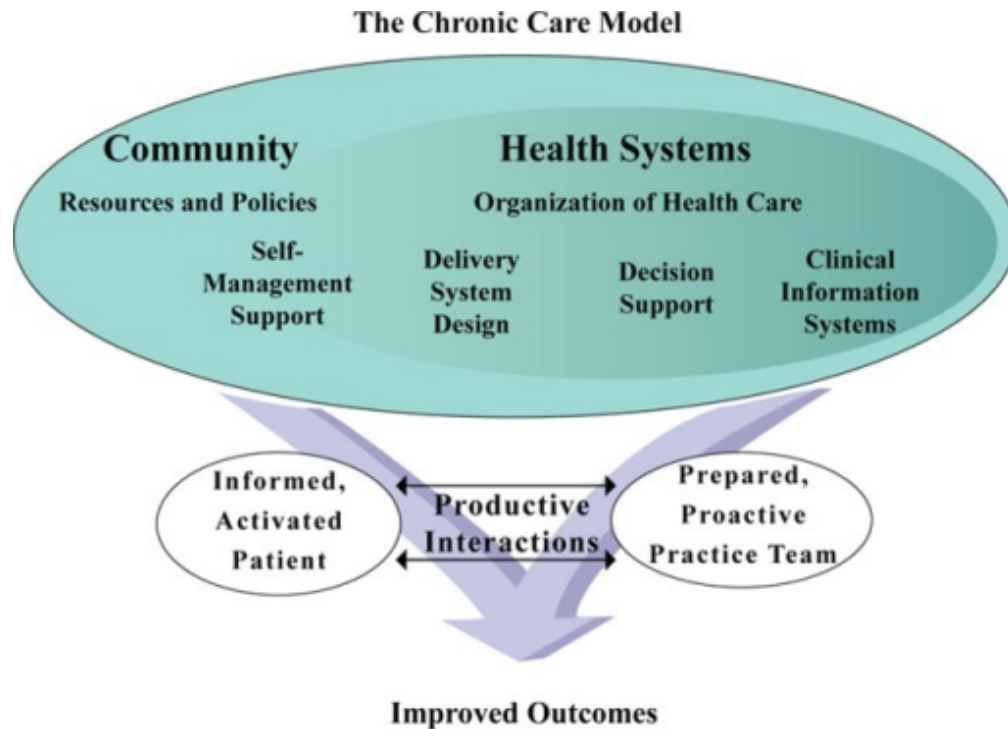
The Chronic Care Model

Figure 1The Chronic Care Model (CCM)

Notwithstanding these concerns, there are parallels to be drawn between the aspiration of the CCM, and contemporary service literature on value creation, such as service dominant logic (SDL: Vargo & Lusch, 2004; 2008; 2016). There is a growing emphasis on the potential applicability of this literature to public services (Hardyman, Daunt & Kitchener, 2014; Radnor & Osborne, 2013; Osborne, Radnor & Nasi, 2012). In this context, it can be considered that there are two dimensions framing the care project. The first is identifying the network of support to the service process. The second is the quality of interaction between participants that gives rise to outcomes.

For the network of support, Batalden et al (2016) sought to more firmly ground the CCM in the contemporary, multi-party service view. However, it can be argued that they did not go far enough. Spurrell, Araujo & Proudlove (2019) reframed the network of support in terms of the agency that derives from the patient and their network of supporters, the clinician network and a network of other interested parties, which together can be practically thought of as the service delivery network (SDN: Tax, McCutcheon & Wilkinson, 2013). It was proposed that the SDN was formed by the intersection of patient, clinician and commissioner participating networks (Spurrell, Araujo & Proudlove, 2019).

For the process of developing outcomes, Batalden et al (2016) helpfully suggest this could be reframed as a process of co-production. However, from service theory, co-production in the service process is only a preliminary step. It is a focus on value and value co-creation within a broader process of resource integration and value generation that forms a more encompassing set of conceptualisations within the literature (Grönroos & Gummerus, 2014; Grönroos, 2011; Vargo & Lusch, 2004; 2008; 2016). It is this broader view that characterises the developing literature on applying service logic to healthcare (Spurrell, Araujo & Proudlove, 2017; Frow, McColl-Kennedy & Payne, 2016; Hardyman, Daunt & Kitchener, 2014; Payne, Storbacka & Frow, 2008). The scope for conceptualising value generation in the healthcare landscape is explored further in the next section.

In summary, The CCM has clearly been an influential framework for helping services to better structure case management efforts. However, there is more work to do to bring it into alignment with the complex case. There is more work to do to capture the multi-party perspective that characterises complex healthcare. There is more work to do to develop a framework that more cogently aligns with contemporary thinking on value generation and the collaborative realisation of valued outcomes.

Value Realisation in the Healthcare Landscape
As indicated above, there is a growing body of work interested in adapting contemporary service thinking on value to support public sector services such as healthcare (Osborne, Radnor & Nasi, 2012; Radnor & Osborne, 2013; Osbourne & Strokosch, 2013;). Although for healthcare this interest has tended not to focus on

the micro-level of service, and has been largely conducted conceptually (Hardyman, Daunt & Kitchener, 2014), more recent empirical work on value co-creation in healthcare has emerged (McColl-Kennedy et al, 2017; Sweeney, Danaher & McColl-Kennedy, 2015; McColl-Kennedy et al, 2012). However, there is yet more work to do. There continues to be conceptual uncertainty regarding the notion of value and value creation (Grönroos & Voima, 2012), and there are concerns as to how the particular care setting studied by for example, McColl-Kennedy et al (2012) might be representative of complex cases in the public health sector (Spurrell Araujo & Proudlove, 2017; Hardyman, Daunt & Kitchener, 2014). Further, along with others (Hardyman, Daunt & Kitchener, 2014; Osborne & Strokosch, 2013; Radnor & Osborne, 2013), the move by Osborne, Radnor & Nash (2012) towards revising the theoretical support for public sector management draws on two particular bodies of work, that of Service Dominant Logic (SDL), associated with Vargo & Lusch (2004; 2008; 2016), and Value Based Healthcare (VBH), associated with Porter and colleagues (Porter, 2010, Porter & Teisberg, 2007; Porter, Pabo & Lee, 2013). These are distinct, contrasting vantage points that capture, respectively, value as uniquely determined by the beneficiary (Vargo & Lusch, 2004; 2008; 2016) and value as measuring the outcomes of treatment that patients most care about (Porter & Teisberg, 2007). Therefore, value associated with SDL has currency for the individual beneficiary, and for VBH value has currency for the wider health care system. Each approach merits further empirical exploration, both in themselves, and when being brought together as Hardyman, Daunt & Kitchener (2014) and others propose (Ciasullo et al, 2017).

From another perspective, the determination of valued outcomes is an exercise in valuation, a valuographic view that is freshly emerging in healthcare (Hauge, 2017; Spurrell, Araujo & Proudlove, 2017, Dussauge et al, 2015; Dussauge, Helgesen & Lee, 2015). By framing value realisation in these terms there is an emphasis on the performative nature of value realisation (Dussauge et al, 2015; Dussauge, Helgesen & Lee, 2015; Roscoe & Townley, 2016). What counts as valued outcome involves a pragmatic focus on the whole process of making and discovering what matters together. Participants have both a private view of what matters to them, but also through the valuation process represent a public view of what matters to the stakeholder group collectively. We therefore argue that there is an additional,

pragmatic perspective in discovering 'what matters to us,' 'us' being all the direct participants in the care project in focus. There is evidence that this valuation practice perspective might prove helpful in understanding case level value generation (Spurrell, Araujo & Proudlove, 2017; Hauge, 2017; Dussauge et al, 2015; Dussauge, Helgesen & Lee, 2015).

Amidst these differing perspectives on the notion of value in healthcare, value realisation might be thought of as having two aspects: the value generating system, which different approaches may conceptualise differently, and valued outcome, which is how value realisation is embodied to have currency amongst stakeholders. Figure 2 sets out to illustrate this landscape with a view to orientating this exploration.

Figure 2 represents a particular care project in principle, for which the participant context has yet to be defined. Porter, Pabo & Lee (2013) argue that care is based on a project that encompasses all the relevant participants and is not constrained to a conventional view of health service structure. Porter anchors the concept of value in the phrase "what matters to patients" (Porter 2010, p2477). We therefore have used the phrase "what matters" to help frame the process of value realisation from other vantage points. Three vantage points are described: what matters to the individual service user, what matters to the wider service system, and what matters to the participants in the particular care project ("Us"). Each of these represents a position that gives rise to a distinct valuographic outcome, with different purposes and meanings. As argued by Kimbell (2011) from a design tradition, there is a tension between what matters as solving problems, and what matters as exploring meaning and understandings. Therefore, this represents a further dimension of quality to the value realisation process for each vantage point. Each vantage point will likely interact with and influence others, for example what is meaningful to the individual would be influential in what is seen as important in the wider health system. In this landscape, there are three routes to valued outcome that are represented in the literature, involving what is taken to be value, and how it is constructed.
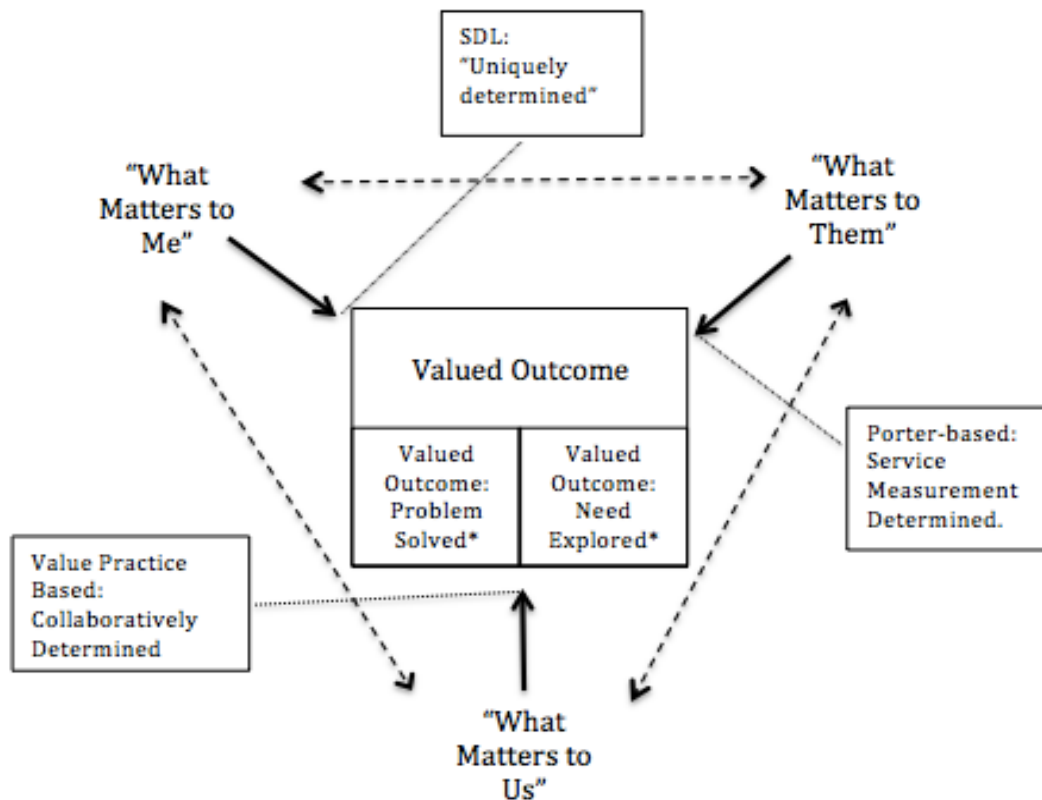
*In design terms, the realisation of valued outcome can be represented as problem solving or an exploratory enquiry (Kimbell, 2011, p 45)

Figure 2: Valued Outcome Realisation in Healthcare

(Sourced: Spurrell, 2019)

"What matters to them" aligns with the VBH approach associated with Porter and colleagues (Porter, 2010; Porter & Teisberg, 2007; Porter, Pabo & Lee, 2013). From this vantage point, what matters are health outcomes that can be objectively measured so that they can have currency in the wider health system. A normative framework of what matters to patients is proposed (Porter, 2010, Porter & Teisberg, 2007), and valuation is the process of determining the benefit to the patient relative to cost, in which the patient remains passive (Porter 2010, Porter & Teisberg, 2007). By contrast, within SDL value co-creation is concerned with a subjective and idiographic vantage point of view (Hardyman, Daunt & Kitchener, 2014). Here "what matters to me" is uniquely and privately determined by the service beneficiary (Hardyman, Daunt & Kitchener, 2014, Vargo & Lusch, 2008, McColl-Kenedy et al, 2012). Other stakeholders are passive in this determination, and there is not a direct link with how this valuation might have wider currency. This perspective is the remit

of the individual case study. Indirectly, wider inferences might be drawn where subjective experience and sense making can be usefully interpreted (Helkkula, Kelleher & Philström, 2012; Jaakola, Helkkula & Aarikka-Stenroos, 2015). Alternatively, wider inferences about value might become accessible through aspects of the service user value creation practices that can be observed (cf. McColl-Kennedy et al, 2012), or through obtaining feedback obtained in the context of a proposed value co-creation model (cf. Payne Storbacka & Frow, 2008). There is also a collective perspective, which in complex healthcare is the case as a multi-party collaborative project (Spurrell, Araujo & Proudlove, 2019). In principle, this is recognised by Porter and colleagues (Porter, 2010; Porter & Teisberg, 2007). It has conceptual support in the services marketing literature (Ballantyne et al, 2011), and as 'a joint sphere' in the value co-creation literature (Grönroos & Gummerus, 2014). Furthermore, in healthcare, particularly in chronic and complex cases, the collaborative space exists as an extended reality for service users and others, where the continuity of care and benefit and response are tightly interwoven constants for all. Therefore "what matters to us" is a necessary consideration as a route to determining valued outcomes, which has so far received little attention in the literature (Spurrell, Araujo & Proudlove, 2017; Spurrell, Araujo & Proudlove, 2019). However, Spurrell and colleagues have argued that such a multiparty service project can be defined as service entity (Freund & Spohrer, 2008), and that a study of valuation practices within such a project offers a means of capturing how the collaborative perspective on value might be realised. It is this collaborative perspective on value realisation that is adopted in the remainder of this paper.

The Research Question
From the discussion above, three conceptual areas have been explored around the issue of supporting complex case management. In each case there has been concern to bring ideas close to a world of case level practice, which is both collaborative, individualised and flexible enough to cope with the complexity of factors to be grasped (cf. Swinglehurst et al, 2014; Horne, Khan & Corrigan, 2013). In this context, the suggestion is that it is the activation of network support and the structuring of the value generating process that are the critical features that need further attention. The research question for this paper is what conceptual tools can be brought into case level practice, such that the participants can be better

supported in generating valued outcomes? Further, how close is it possible to come to being able to operationalise a service platform for general use that better frames value based healthcare for the complex case?

The proposition is that a focus on value generation in an empirical, complex case management setting would be a source of useful insight for addressing the research questions. In the next section, an overview is provided of three explorations of case level complex case management reviews in a specialist learning disability service. These explorations focus respectively on the network context, how value is made within complex case reviews and the structuring of the relationship between activation of the network context and the realisation of value. These investigations have been described in detail elsewhere (Spurrell, 2019; Spurrell, Araujo & Proudlove, 2019; Spurrell, Araujo & Proudlove, 2017). The focus of this paper is to explore these from a high-level view, and to distil the insights gained in order to develop potential conceptual tools for framing value based healthcare for the complex case.

The Three Investigations

Three investigations were undertaken of a series of 20 complex case reviews in a specialist learning disability service, based on the documentary record (cf. Atkinson & Coffey, 2010). Each investigation represents an exploration of this service phenomenon from a different angle. *Investigation 1* explores the capturing of context in this window onto the service process (Spurrell, Araujo & Proudlove, 2019). *Investigation 2* explores the making and realising of collaborative, valued outcomes in the service process (Spurrell, Araujo & Proudlove, 2017). *Investigation 3* explores the relationship between capturing context and the making value, building on the constructs developed in the previous investigations (Spurrell, 2019).

The cases formed a systemic sample, representing the spread of practice across the local service, and embedded in the case management system that has currency across the wider service sector. This allows for findings to have applicability and inferences across systems more widely. The data was explored using a relevant template (King, 2012), with further analysis drawing on techniques from Qualitative Comparative Analysis (QCA: Ragin, 2008; Fiss, 2007; Ragin et al, 2008; Fiss, 2011).

Investigation 1: "Capturing context: An exploration of service delivery networks in complex case management"

For *Investigation 1*, in order to capture and represent the functioning of service context for CPA case reviews, the concept of the service delivery network (SDN) was employed and adapted. The SDN represents a relatively simple service network view of the participants in service exchange (Tax, McCutcheon & Wilkinson, 2013). In order to capture the many to many interactions that characterise complex healthcare, this was adapted to accommodate and frame the multi-party interactions involved in these complex case reviews (Spurrell, Araujo & Proudlove, 2019). Thus, an operationalisation of context was drawn from the profile of the attendants from respective participant networks (Patient, Commissioner and Clinician), along with the emergent participation practices that were found. The details of the investigation are described elsewhere (Spurrell, Araujo & Proudlove, 2019). The key findings were that there was a marked variation in SDN participation profile across the case series, which could not be explained simply in terms of variance in generic practice consistency between cases. Figure 3 illustrates the differing richness of activation from each participant network for each case, as represented by degree of set membership of rich participation.

The view developed in the investigation was that the SDN for each case forms at the intersection of the key participant networks: patient, service commissioner and clinician. For each case, the SDN represented a distinct profile of activation, blended from the contributions from the respective participant networks, and their varying degrees of co-activation. This operationalisation opened up the scope to consider how in practice SDN profiles for complex case reviews might be supported to improve. It also set the stage to consider and investigate further whether different SDN profiles had different effects on the value generating process within complex case management.
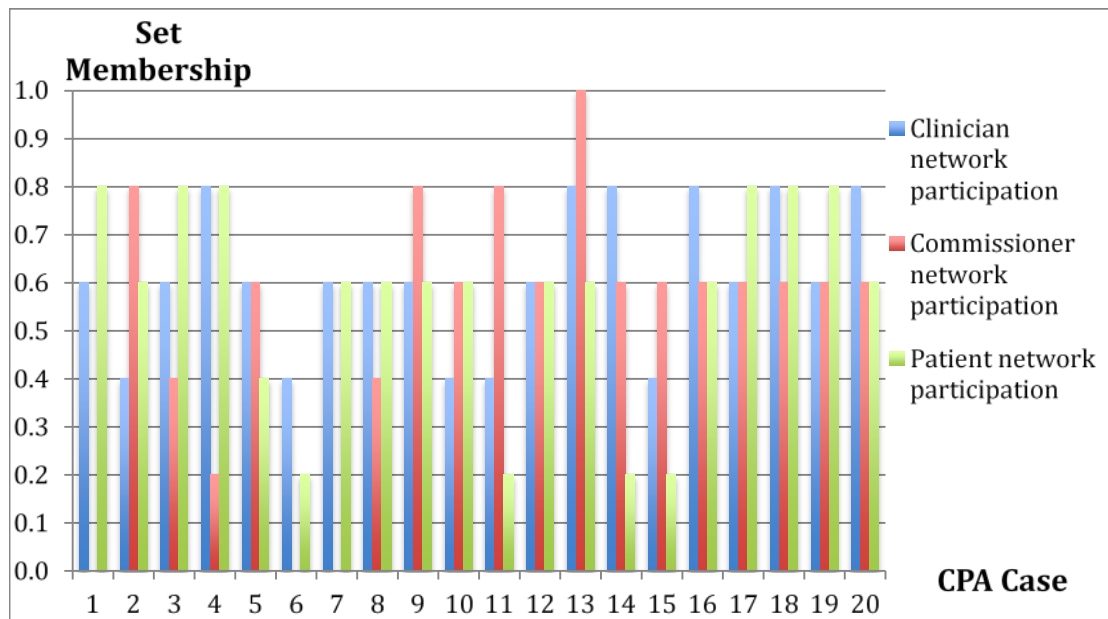
Figure 3. Chart of fuzzy set membership of rich network participation for each patient, commissioner and clinician networks for a sample of CPA case reviews (Source: Spurrell, Araujo & Proudlove, 2019)

Investigation 2: An Exploration of Valuation Practices in Complex Case Reviews in Healthcare

For *investigation 2*, in order to capture the process of value realisation, a valuographic stance was adopted, as outlined above. Adopting a collective perspective, 'what mattered to us' was operationalised in terms of the value making practices discovered within the case review based valuation process. In this context, the value practices that emerged were grouped as the following themes: Whether there was an overall focus on progress; whether that progress was in terms of patient engagement, symptoms and function, social participation, progress in reducing untoward events; and whether there was progress towards moving on in the care process (towards being discharged). What was important to discover was that, in pursuit of the value making themes from case to case, the diverse range of valuation practices that were elicited represented a complex picture. Adopting a set based approach, Figure 4 represents this.
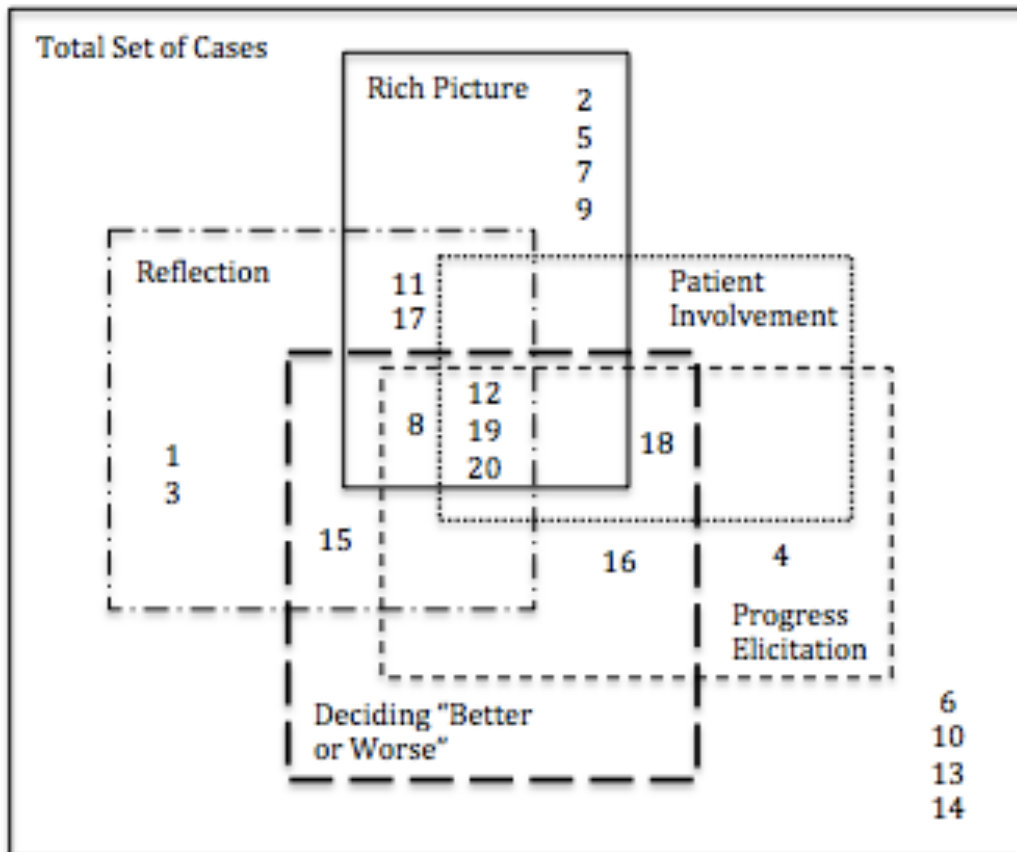
Figure 4. Set Plot of Crisp Set Membership of Rich Valuation Practices across the Set of CPA Case Reviews. (Source: Spurrell, Araujo & Proudlove, 2017)

Figure 4 represents the crisp set of the valuation practice themes that emerged from across the set of cases. In further exploring the data from a design versus problem solving view, drawing on an analysis using QCA, it was argued that overall 5 distinct styles of valuation style that could be articulated. These were:

- The Integrated Style (a combination of all value making styles in use)
- The Rich Picture Style (the elicitation of a rich description as an end in itself)
- Results Orientated Style (with a focus on problem solving)
- Professional Reflection (with a focus on exploring and understanding)
- No Value Making (where there is an absence of focus on realising value)

Where there is a focus on value, the diversity of value making practice is manifest without *a priori* judgement as to the advantages or otherwise of each of these styles. However, it is a dimension that has not previously been explored in value based

healthcare, and which invites further consideration. There is, therefore, a question to explore as to what advantages or disadvantages these styles of value practice might offer, and whether they may offer a focus for service improvement. Second, there is a question as to whether different styles reflect different purposes to the care project. Examples of issues to consider might include whether these reflect different stages in the evolution of the care process, from engagement and assessment, to optimisation of care and then looking forward to moving on from care

Investigation 3: The Complex Case Management Framework: Structuring the Relationship Between Stakeholder Activation and Value Realisation in Complex Healthcare.

As highlighted above for the CCM, there appear to be two dimension to consider for framing case management for the individual case level. These are the capturing of the supporting network involved in the case, and capturing the value generating process. From investigation one, the supporting networks for the case under investigation was operationalised as their distinct co-activation SDN profile. From *investigation 2*, the value generating process was operationalised as the distinctive valuation styles that emerged from case review practices. For *investigation 3*, the relationship between the supporting network profile and the style of valuation practice being used was explored. From Wagner et al's (2001) perspective, the activation of the supporting network was seen as a key factor for the realisation of valued outcomes. Therefore, the relationship between the SDN co-activation profile and the valuation style was explored across the series of case reviews, supported by techniques from QCA, reported in detail elsewhere (Spurrell, 2019). Table 1 summarises the principal findings.

Style of Valuation Practice	Description of Value Making Style	Comment on Associated Network Activation Profile
Integrated	A rich combination of all identified elements of value making practice were seen	There was a suggestion that this style was most likely to correspond with co-activation of *all* participant networks
Rich Picture	Simply a broad and detailed account of the current status of the patient was made, often supported with structured assessment tools. No notable further development of value making evident.	Corresponds with just commissioner network activation alone A suggestion of correspondence also with either patient & clinician network co-activation, or commissioner & clinician network co-activation.
Results Orientated Style	A set of practices where a level of Rich Picture is elicited and followed by a focus on deciding whether progress is being made or not. This may involve other value making practices, but to a modest and varying extent, but definitely with a rich focus on patient involvement	Corresponds with prominent clinician network activation. A suggestion of correspondence with patient and clinician network co-activation
Professional Reflection	A set of practices where a level of Rich Picture is elicited and followed by a focus on reflecting (for example on diagnosis and formulation). Definitely without patient involvement	Diffusely associated with stakeholder activation, and no particular activation profile implicated
No Value Making	The evidence for value making practices within the review was limited	Definitely some participant network activation can be found, despite not giving rise to value making.
Overall	Any value making from across the different Styles, excluding 'no value making' cases.	There is broadly activation originating fluidly across the three participant networks, corresponding with one form of value making or another.

Table 1. Summary of the styles of valuation practice, with associated comments on relationship with the respective stakeholder network activation profile. (Source: Spurrell, 2019)

From these results, it was the case that there was an overall correspondence

between the emergence of a value making process in one style or another and the

activation of participants in a general sense. However, there were further complexities that emerged. First, there was evidence that different styles of value making appeared to correspond, to varying degrees, with different SDN co-activation profiles. Second, there was evidence that an activated SDN profile in itself was not sufficient for there to be a value making process. Therefore, there seems to be a more complex relationship between participant activation and the realisation of valued outcomes than might have been expected, which requires further research. It can be argued that a further factor is needed to mediate between activated participants and the value generating process. Referencing Ehn (2008), Storbacka et al (2016) highlight that the enstructuring of the service process within the service platform can be seen as a factor within the micro level service systems. This point introduces the importance of understanding the underlying principles in choosing service platform designs.

Discussion

In summary, this empirical work highlights a number of features that are germane to pulling available frameworks for supporting case management, such as the CCM, closer to the needs of complex case management. At the same time a number of themes have emerged which this work, together with the empirical investigations, suggests ought to be key principles for framing a value based approach to complex case management. These important themes are set out as 5 key principles below, and which culminate in a view on how to develop local, collaborative service platforms in practice.

Principle 1 The Individual Case is the focus of interest

The first principle relates to operationalising the case as the focus of interest. The key issue here is to consider how the case is made a focus of interest. The predicament for healthcare is that there is no *a priori* determination of what a complex case is in healthcare. However, a project to engender supportive practice platforms requires 'the case' to be operationalised. The resolution in this paper has been to frame the case as an emergent organisational entity. In this investigation series on the one hand, cases emerged as a function of their positioning at the interface between patient, commissioner and clinician networks, within the service space between these wider organisation forms. A similar view on framing service

focus has been argued by others (Törnroos, Halinen& Medlin, 2016). On the other hand, the case also represents an exemplar project within a nationally instituted CPA case management system. Moreover, as such, it is a project which has authority within itself to make and keep promises. Thus, the view of the case as an emergent collaborative project, with agency within service networks offers a suitable and useful means of capturing the case as a focus of interest.

Importantly this vantage point is quite distinct from that of others. It contrasts with the perspective of the case as the patient nested within a service eco-system (Frow, McColl-Kennedy & Payne, 2016; Ciasullo et al, 2017). It contrasts with the traditional health service approach of viewing cases as sub-population segments, based on statistical clusters within services (cf Porter, Pabo & Lee, 2013). However, given that there is interest in more intensively exploring the value generating processes at the service micro level (Storbacka et al, 2016; Hardyman, Daunt & Kitchener, 2014), this emergent view offers a helpful perspective on the diversity and individuality of what complex cases look like in practice. Meanwhile, the case as an emergent entity enables the process of value realisation to be brought into focus in terms that make sense to the participants.

Principle 2: The Individualised Service Delivery Network (SDN)
The second issue relates to how cases, as value orientated service entities, are contextualised. For this principle, the argument is that having determined a focus on the emergent case as the service entity, a specific service delivery network (SDN) is formed at the interface between respective participant networks (eg. Patients and Carers, Clinicians, Commissioners: Spurrell, Araujo & Proudlove, 2019). An understanding of the shape and functioning of the individualised SDN is key for optimising value based healthcare.

The first component of this principle is the shift from seeing healthcare from a dyadic exchange to a multi-party project. This is a shift that others have called for (Patricio, Gustafsson & Fisk, 2018). Although this shift is starting to emerge in some work (eg Batalden et al, 2016), it is not as yet widely seen. For example, otherwise progressive literature into value co-creation in healthcare adopts a dyadic perspective (McKoll-Kennedy et al, 2012). Further, from the case study work, there

are further nuances to the multi-party SDN concept. These include more detail into the specific collaborative styles that might be seen (Spurrell, Araujo & Proudlove, 2019). It includes consideration of how SDNs might evolve across the case journey, and the potential for collective agency in taking everyone forwards in terms of what matters collaboratively (Spurrell, 2019). A more developed understanding of the configuration of participants in healthcare is seen as a growing focus of interest for researchers into transformative service design (Anderson, Nasr & Rayburn, 2018)

As has previously been discussed (Spurrell, Araujo & Proudlove, 2019), the advantage of this more sophisticated operationalisation of service context is that it brings a fresh and richer focus to managing and improving the profile of the SDN for the complex case. In a complex world, with the efforts of the various service participants likely to ebb and flow, an optimised and coherent SDN offers a pragmatic means of engendering some stability of purpose towards the realisation of value within the project. Thus, it forms the basis of a second founding principle to support value based healthcare for the complex case.

Principle 3

The third issue is that 'what matters to us' (as collaborators in the case project) is an important, relevant and distinct perspective to value based healthcare. This third principle argues from a valuographic stance that making value is a collaborative performance. Different styles of valued outcome might well emerge at different times. In these terms, performances such as case reviews can be seen as co-valuation exercises (Spurrell, Araujo & Proudlove, 2017).

This is a distinct but complementary perspective on value generation for healthcare, compared with more conventional views of either patient subjective report, or objectively measured outcome, as highlighted above. What is important to the distinction is that it does not entail an *a priori* view as to what is important. It allows for flexibility, whether what is important is seen more as problem solving, or exploring uncertainty and finding new paths to recovery (cf. Kimbell, 2011). It allows for the participants to adapt focus as the case progresses over time, and to reconcile the multiple orders of value between the participants. Further, it may even be

empowering of the voices of more vulnerable contributors in the care (cf. Gallan et al, 2013).

The process of exploring value making in the case series did affirm the importance of some key themes from the value based health literature (Porter, 2010). Thus, the themes of engagement around a shared understanding, improving symptoms and function, developing social experience and avoiding harm all emerged as being given more or less attention. This offers a broader spectrum of domains for progress to be recognised against. Indeed, the emergence of progress recognition out of each review for each theme was an important dimension within the value realisation process in the case series (Spurrell, Araujo & Proudlove, 2017). This is important as deciding progress ('are we winning or not') is seen as key feature of service systems (Spohrer & Maglio, 2008). In summary, the valued outcome that might be realised is a composite of a qualitative understanding of the development of the case, and a greater or lesser determination of whether progress against the key themes that matter has been made or not.

Meanwhile, the range of co-valuation styles that emerged from the empirical work (Spurrell, Araujo & Proudlove, 2017) is a further source of reflection. It has been considered that some variation may relate to difference in quality of case review performances, and some may relate to different styles of co-valuation better capturing different stages in the evolution of the care project (Spurrell, Araujo & Proudlove, 2017). A further consideration is the blending of approaches to reflect a balance between a design focused process and a problem solving process, as envisaged by Kimbell (2011). Again, this is relevant in the context of recent emphasis on the role of service design in transforming healthcare (Anderson et al, 2013; Anderson, Nasr & Rayburn, 2018; Ostrom et al, 2015). Thus, there is further work needed to investigate the generation of valued outcomes from case reviews to understand and model the relationship between the SDN profile, the quality and style of valuation practices, the evolution of the case, and the interplay between problem solving and collaborative design as organising precepts.

Principle 4: Aggregation of valued outcomes

The fourth issue to consider is the aggregation of valued outcomes. This fourth principle argues that whilst different kinds of value might be realised at different moments within complex case management, there is an overarching principle that, structured within a case management process, valued outcomes realised through regular case reviews need to be aggregated. Through that process, they gain currency with the participants as a means of reflecting and learning and developing the case. They gain currency within the wider service system as being able to give weight to understanding whether cases are progressing or not.

The development of principle 4 stems from two sources. First from the empirical work, although it was conducted from a cross-sectional perspective, the cases collectively did represent a range of stages in care across a case management process over time (Spurrell, 2019). Second, within a case management process, with iterative case management reviews, each case review offers the opportunity for a collaborative valuation (Principle 3). Putting together the inference that cases evolve over time, along with regular valuation performances through case reviews, sets the stage to being able to aggregate a longitudinal view of value generation within complex case projects. The next step is to understand how such iterative valuations gain currency.

There are two perspectives to gaining currency. The first perspective is to consider the aggregation of valued outcomes for the particular case. This is akin to developing an understanding of case progress over the service journey, via a series of service touchpoints (Patrício, Gustafsson & Fisk, 2018). The second aspect to consider is the aggregation of valued outcomes across a series of cases, say within a particular service line of interest. The case participants themselves would be invested in the first perspective. Both perspectives are of interest to service managers and wider observers. Each of these perspectives, individual case focus or service of interest, relies on working with the nature of the outcome from each review. It has been suggested that collating proxy measures such as satisfaction or outcome measures are appropriate means for aggregating value in healthcare (eg Payne, Storbacka & Frow, 2008; Ciasullo et al, 2017). An alternative to such indirect approaches has been to rely successive qualitative descriptions of service experience to build a

picture (e.g. Pinho, Beirão & Patrício, 2014). However, whilst individual stories are powerful, it is difficult for these to be readily amenable to aggregation. Instead, building on Principle 3, the valued outcome from case reviews is a composite of a qualitative understanding, and, ideally, an agreed determination as to whether progress has been made or not against the domains of what matters for the participants. This latter component can be coded as a categorical outcome, 'are we winning or not', as envisaged by Spohrer & Maglio (2008). Thus, whilst the qualitative aspect is important for those concerned with more intimate sense making of the case, the broader picture of a profile of the case making progress or not is available for wider system evaluation. This more complex conceptualisation straddles the boundary between the case and the wider stakeholder context. This feature would be an interesting focus of study for the institutional positioning of cases (cf Sabel, 2012; Akaka et al, 2013; Vargo & Lusch, 2016; Vargo et al, 2017) and for exploring multi-level service design (Patrício et al, 2011.

Principle 4, therefore, represents a novel approach to collating valued outcomes, and for anchoring value based healthcare outcomes within the wider system. There is more to do to elucidate this conceptualisation further, and to understand it in relation to the more usual approaches to service evaluation. There is more to do to understand how to operationalise Principle 4. However, a helpful metaphor is to see the case reviews as each potentially realising distinct pieces of a jig-saw. These can then be incrementally assembled over the case story for all to see. This dynamic is presented at the heart of figure 5 below as an integral feature for service platform development.

Principle 5
The fifth principle is that to best support complex case management requires a collaborative service platform. In the discussion above, a number of key principles have featured, which taken together offer a potential framework for achieving this. In keeping with the spirit of co-activation of network support, and individualised co-valuation styles, this principle argues that it is for the service participants to co-design the specific service platform that suits their circumstance. In order to support this process, taking a lead from the work of the CCM and others (Wagner, 1998;

Wagner et al, 2001; Batalden et al 2016), Figure 5 represents a proposed framework for supporting practitioners to organise service platform co-development.
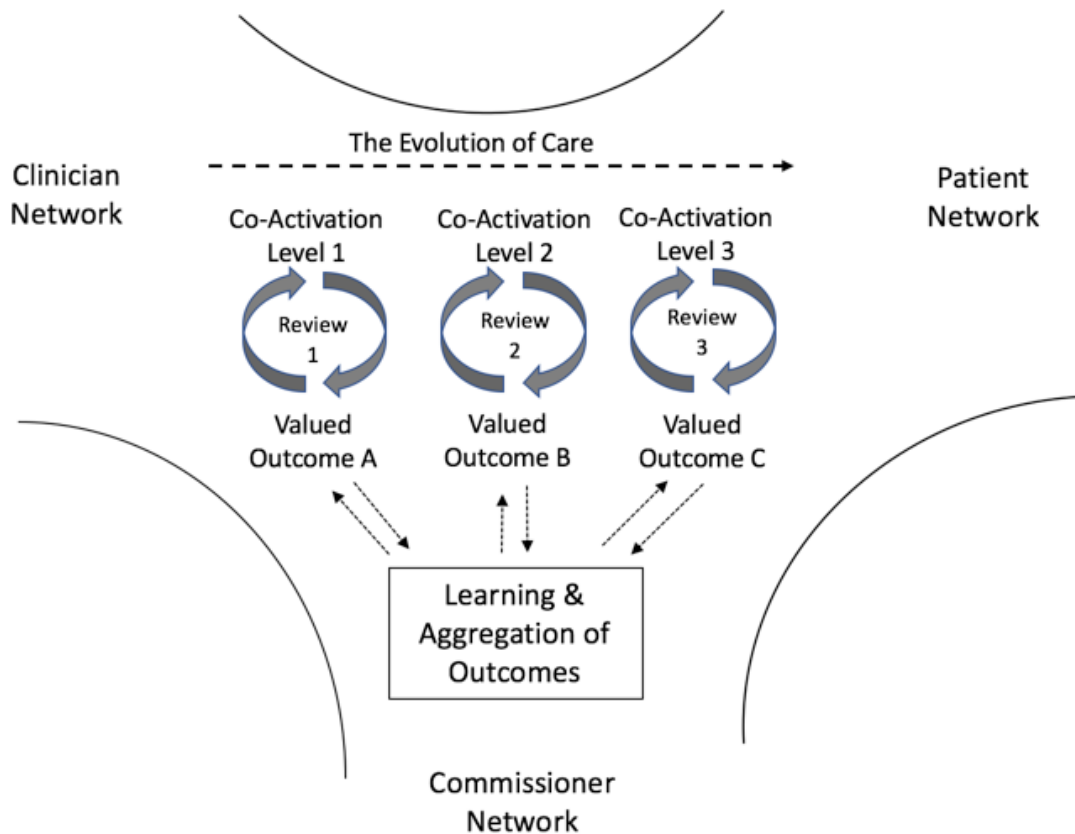

Figure 5. The Complex Case Management Framework (Complex CMF)

(Source: Spurrell, 2019)

Building on the principles above, Figure 5 illustrates in general terms the complex case, contextualised by its specific service delivery network, formed at the interface of participant networks (eg. patient, clinician, commissioner). At the centre of the diagram a series of case reviews are represented. Each reflects the specific level of co-activation of the SDN for that review, and each explores and develops a collaborative realisation of value. Looking forwards, and looking back the nature of these valuations, and whether this represents progress or not, emerges for consideration and reflection both within the case level service process, and for the interest of wider service management. The next step would be to explore how to draw on these framing principles to operationalise practice for the particular case.

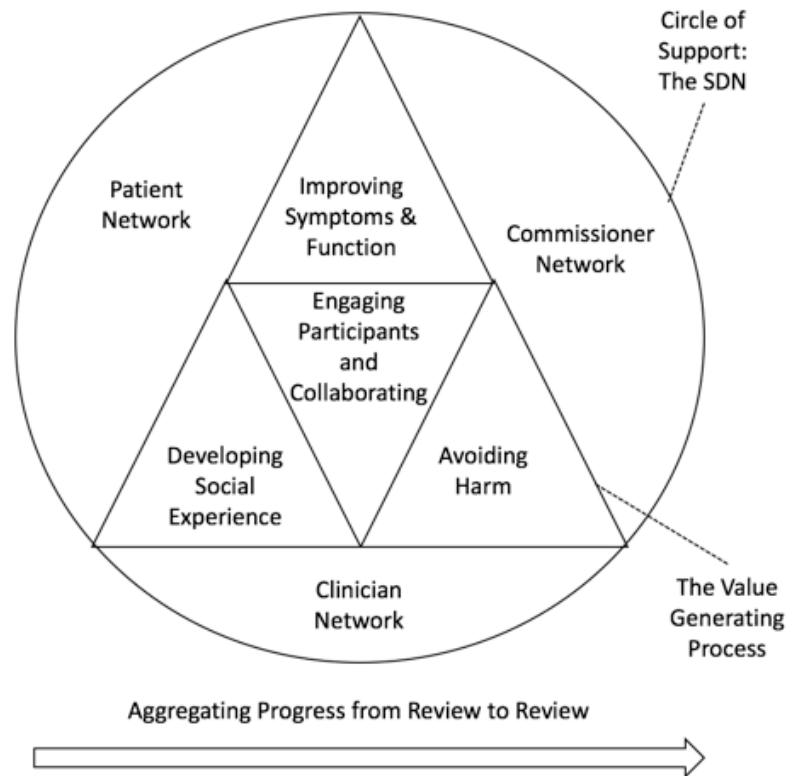Such co-produced platforms would be consistent with Kimbell's (2012) concept of 'a platform for service'.

Figure 6. Service Platform Development Tool (Source: Spurrell, 2019).

It is the responsibility of the service provider to lead on the development and co-ordination of the service platform (Tax, McCutcheon & Wilkinson, 2013; Grönroos, 2011). From a value based design perspective the options are that, the service provider either determines the configuration *for* the other service participants, or the service provider develops the configuration *with* the participants (Kimbell, 2011). Figure 6 represents a tool that was developed from the Complex CMF above as means of exploring further the process of collaborative platform formation within the specialist learning disability service that hosted the above research. Thus, arising from a collaborative design process based on these 5 principles, supported by the tool illustrated in Figure 6, the Complex Case and Recovery Management Framework ('The CCaRM', Figure 7) was developed as an accessible version for clinicians and patients to use in mapping out and instantiating

service platforms that made sense to them (Spurrell et al, 2017). Although a detailed description of the CCaRM is beyond the scope of this paper, it is interesting to note that this work has been well received in the local service. Thus, responding to concerns raised at the outset (Bohmer & Lawrence, 2008), this work serves to illustrate how a pathway to developing service platforms for complex case management might be forged in practice.
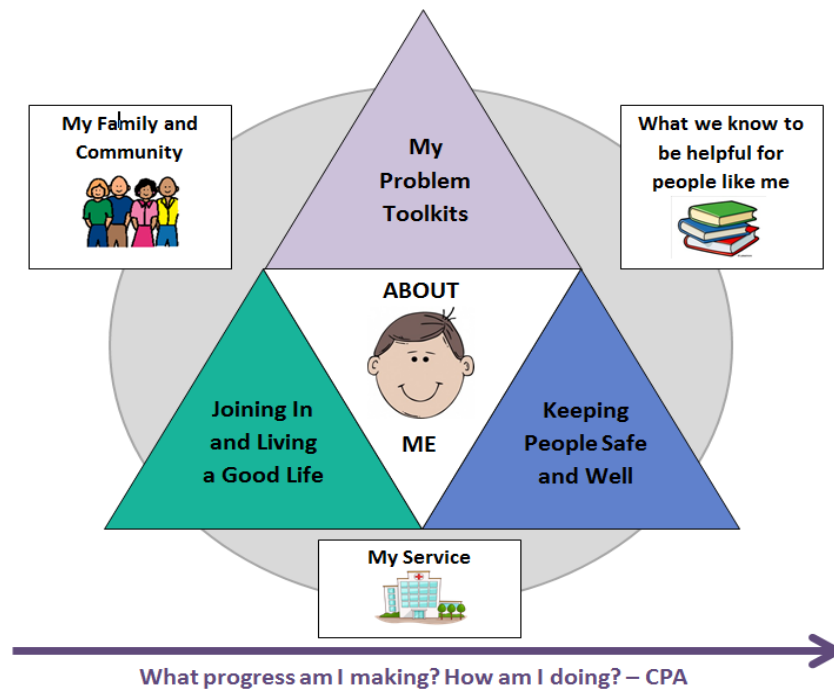

Figure 7. The Complex Case and Recovery Framework ("The CCaRM"): Easy Read Version (Source: Spurrell et al, 2017).

There are differing perspectives on the concept of a service platform in the literature (Storbacka et al, 2016). What is being proposed here is that a service platform is an organisational form that provides a template for structuring the service process, including the role of participants, their interactions, and the service process (Greenwood & Hinings, 1996; Myhren et al 2018). Service platforms are seen as a means of enhancing service exchange, and opening up opportunities for innovation (Lusch & Nambisan, 2015). What is novel here is that Figure 5 describes a 'Complex Case Management Framework', with the configuration for the specific service platform remaining to be collaboratively determined in use at the individual case level. Citing Ehn (2008), Sangiorgi argues for the importance of 'design in use' for

service platform development. Moreover, the designing of infrastructures and enabling platforms is a key ingredient in transformative service co-design for the public sector (Sangiorgi, 2011). Meanwhile, emergent service platforms for complex service settings with many to many interactions is in fact highlighted as being highly relevant and important in contemporary service innovation and design literature more generally (Patrício, Gustafsson and Fisk, 2018; Lusch & Nambusan, 2015). However, this is a first attempt to make this relevant at the case level in healthcare.

Conclusion

In conclusion, this paper makes an important contribution in understanding how to frame the complex case within value based healthcare. At the same time, it makes an important contribution in shifting the ground for how value based healthcare might be conceptualised, which in turn has important implications for service literature more widely. In this context, in keeping with the aims of a pragmatic inquiry, a number of important programmes for further work have been identified. Meanwhile, there is room to see this work as not just practically useful to healthcare and service thinking, but also potentially transformative.

The contribution to healthcare has been to offer an improved reconciliation between the idea of needing to better frame complex case management, and how that might be operationalised in practice. Importantly, although the focus of investigation has been the very particular phenomenon of CPA case management reviews in a particular specialist Learning Disability service, this focus has been a suitable exemplar from which inferences can be drawn to other healthcare settings. In this context, the 5 principles comprise an exercise in theory building from which further work can be developed. In this context, it is for these principles to be further explored in diverse care settings that will ultimately justify their usefulness and applicability. To that end, the service platform development tool forms a particularly important contribution, which has already had some encouraging impact on healthcare practice.

The contribution to conceptualising value based healthcare, as befits a pragmatic endeavour, has been to smooth out important tensions in the conceptual landscape. Thus, within the 5 principles developed, there is a bridging between the predicament

of the specific case, and the need to hold cases within service systems. The emphasis has very much been on discovering the emergent view, without *a priori* conceptualisations. As such, this work adds a refreshing of a service concept that focuses at the interface of organisational structures, and at the interface between the case and the wider environment. In this context, this work offers a fresh perspective on the aggregation of value as a composite of qualitative features and progress made. It further adds to interest in adopting valuographic approaches in healthcare. This evolution in perspective opens the way for new research approaches to investigating case level value generation. First, it would be interesting to further model empirically the relationship between service network functioning and the value generating process within service, triangulating a valuographic perspective with a service co-system paradigm. Second, it would be interesting to further empirically compare and contrast a micro-service perspective and a case level perspective as related, but distinct phenomenological foci. This work suggests that it is through the thoughtful blending of these approaches that fresh service practices will emerge.

Finally, as this paper has progressed, it has demonstrated an increasing convergence with emerging thinking in transformative service design. The nature of this work as a pragmatic investigation is that it should evolve and bring new areas of thought into play. This work therefore adds to the growing interplay between service research and design thinking. In this context, it can be argued that further work lies in exploring whether co-designing meaningful case level coherence is one route to engendering service transformation.

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