Evaluating Learning Disability Case Management From a Service Delivery Network Perspective

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Service Delivery Networks (SDN) have not been widely considered in complex service environments such as healthcare. There is reported concern for service network functioning of Care Programme Approach (CPA) Case Management in UK Mental Health and Learning Disability services. In this study we adapted the concept of the SDN for an exploratory investigation of a series of CPA case reviews in a Learning Disability Service. Based on a template analysis, we described a SDN at the intersection of patient, commissioner and clinician network participation. From this vantage point we elicited a marked variation in SDN participation quality, giving rise to suggestions for service improvement and further research.

Introduction

Important themes in contemporary healthcare are the importance of empowered patient centred approaches,andimproving the management of long term complex conditions. The notion of users of health services being empowered has been an embedded ideal for a long time (cf. WHO 1986). Some commentators have pointed out that it is one thing to advocate patient centred care approaches, another to put it into practice (Edwards, 2011), and point out a lack of clarity as to how to operationalise empowerment (Laverack; Labonte, 2000, Brandsetter et al, 2014). However, following a systematicreview of the literature, one of the key themes in evaluating empowerment is service users participation in the care process (Cyril; Smith; Renzaho, 2015). Therefore the notion of participation in the process of complex case management is an interesting area of study.

In the UK, in practical terms there are some pressing reasons to explore this theme further. First, there are conspicuous recent examples of case management failure, where dis-empowered patients have suffered poor care both in a general health setting (Francis, 2013), and in a Learning Disability hospital setting (Flynn; Citarella, 2012). Second, standard approaches to case management are still in development, but for UK mental health with a longer track record in this than other specialist areas there are reported variations in quality of participation practice (Goodwin; Lawton-Smith, 2010). Third, there are emerging insights from the wider, mainstream service literature that might be usefully applied in healthcare(Osbourne; Radnor; Nasi, 2012),anchored by concepts such as valuein healthcare, defined as the patient feels they are better off than before as a result of service (Porter, 2010, Porter; Lee, 2013).

With regard to value in healthcare, Porter's original modelling of the value creation process as value chain to healthcare has been supplanted by more service logic based models, including value networks (Normann; Rairez, 1993, Stabell;

Fjelstadt, 1998) and value co-creation in a network context (Edvardsson; Tronvoll; Gruber, 2010). In an empirical example, McColl-Kennedy et al (2012) adopt a customer service network perspective to study value co-creation styles in patients participating in care in a cancer clinic. Meanwhile the case management literature is redolent with service network implications (Nolte; McKee, 2008). Therefore, building on this work, we argue that it is useful to apply a contemporary service network perspective to participation and value creation in health. We further argue that it is particularly topical to explore this theme in a UK Learning Disability setting. In the example of service failure at Winterbourne View Hospital cited above (Flynn; Citarella, 2012), the poor quality of participation of the stakeholder network in the case management reviews was directly implicated.

Research Questions.

In this paper, we further explore in the literature the network theme in case management, and the case management system in UK mental health care, the Care Programme Approach (CPA). We investigate the concept of the Service Delivery Network (SDN) as a necessary condition for value co-creation (Tax et al, 2013), and how it might be applied in complex service settings such as healthcare. In the light of that exploration we conduct acase study based investigation of the quality of participation making upthe SDN in a series of CPA case reviews in a UK Learning Disability Hospital.

The proposed research questions are:

i. What is the apparent SDN configuration for a series of CPA case management reviews within a specialist Learning Disability Service?

ii. What implications for service improvement, service management and case management development arise from this application of the SDN concept to CPA case management reviews?

iii. What implications for mainstream service management and service network theory flow from an application of SDN to this complex service area?

In order to assist with exploring the patterns of interactions across participant networks, techniques from Qualitative Comparative Analysis (QCA) were used to support the cross case comparisons (Ragin, 2008; Ragin; Byrne, 2009). We will argue that the SDN can be viewed as the intersection of participant networks, and from that vantage point it is the optimal participation and alignment from all stakeholder networks, not just the individual service user, that drives the quality of the SDN in these complex service areas. Suggestions for further practice and investigation are discussed.

Case Management as collaboration in service networks.

In order to address the needs of service users with long term conditions a model of care is required that promotes working in partnership with service users and other care agents to optimise outcomes (Nolte; McKee, 2008). This requires a process of collaborative planning (Lorig, 1993). Case management is essentially an integrationist approach to collaborative planning, often associated with cases of multiple complex needs (Krumholz et al, 2006). The field of

case management and care integration is fragmented however and Nolte and McKee argue that it is difficult to define a generally accepted model that applies across all settings and contexts. Nevertheless, one framework that is perhaps gaining more ground than others, they cite, is the Chronic Care Model (CCM) (Wagner et al, 1999; Wagner et al, 2001). The Chronic Care Model (CCM) envisages a high quality interaction between a proactive clinical team and activated patients. The model is conceptualised as having strong links between the service delivery system and community resources, with a focus on functional and clinical outcomes, and is redolent with network considerations that have yet to be fully developed and operationalised.

In this context, Goodwin and Lawton-Smith (2010) distinguish between hierarchical approaches to case management, best suited for predictable and well defined case management needs such as single disease chronic conditions, and care co-ordination approaches. These rather feature collaboration and co-operation across organisations 'knitting together' care from multiple sources. They associate this approach with cases involving complexity, multiple morbidity and uncertainty, as may be found in mental healthcare. We would propose that the care coordination approach to case management best resonates with challenges in contemporary healthcare management. Goodwin and Lawton-Smith propose that the Care Programme Approach (CPA) case management system used in UK mental healthcare provides a helpful focus of study for understanding the care co-ordination approach, they argue that it holds lessons for wider healthcare case management.

The Care Programme Approach.

The CPA case management system was introduced in 1991 and provides for a named care co-ordinator and a person-centred process for assessing and reviewing patients with complex conditions, integrating necessary resources and working collaboratively with patients, carers and stakeholders to best effect (Department of Health 1990; 2008). Patient progress is assessed through a series of CPA review and planning meetings. The role of collaborative CPA planning sits at the heart of the care co-ordination process. All mental health service providers are required to deploy CPA in managing complex conditions, and it has general acceptance in clinical use (Kingdon; Amanulla 2005). In principle, CPA case reviews offer a convenient window for the study of patient-level mental health service as it is practiced in the UK.

There has been criticism of CPA as it has been practiced. Although in many instances CPA has been valued by service users, it is reported that it has not been consistently implemented as intended. There have been examples of a loss of relationship and engagement with the service users, not addressing areas that matter to service users and not sufficiently engaging family members (Goodwin; Lawton-Smith, 2010). There has been empirical work that confirms its configuration within services needs improving, with wide variation in practice (Carpenter et al, 2004, Rose, 2003), and instances of it being applied *to* rather than *with* service users (Rose, 2003). In an analysis done by Simpson, Miller, and Bowers (2003a,2003b) CPA implementation difficulties can be linked to a lack of unifying philosophy and a disconnect from the wider case management literature. In other words CPA has potential for value generation as a complex

case management system, but in its implementation the service benefit has been variable.

A particular challenge for CPA case management has been in UK Learning Disability Care. In 2007 came the discovery of extensive poor care and mistreatment of Learning Disability service users at Winterbourne View Hospital. In the subsequent review (Flynn; Citarella, 2012), the failure of the CPA case reviews to raise awareness with the relevant network of stakeholders such as family, commissioners and clinicians was identified as an issue. In other words, one view of the scandal is that it represents a failure of engagement of the service delivery network in CPA case management. This example illustrates the potential importance of properly structured and functioning service networks supporting service value generation in CPA case management, and indeed case management generally.

Service Networks.

According to Borgatti and Halgin (2011) the concept of a network both in the business and public sector literature is well established. A network is a set of actors or nodes that are interconnected. The nature of a node is that it consists of an actor, or a group of actors with collective agency. Inter-connections are reciprocal relationships and interactions which can take many forms. Borgatti and Halgin make a distinction between network theory and theory of networks, the former being concerned with how different properties of networks affect the world, which is the focus in this paper. In particular they discuss how different properties produced by the quality of ties and the shaping of the participants can have different effects. In the service and marketing literature however there is a tension between those that embrace networks and wish to propose a grand theory of embedded services in social systems (Vargo; Akaka, 2012; Akaka; Vargo; Lusch, 2013) and those who argue that these concepts have not been sufficiently developed and that the simple dyadic perspective remains sufficient for practical management purposes (Winklhofer; Palmer; Brodie, 2007).

Service Networks vs Focal Networks.

Möller (2013) usefully frames the debate by discriminating between the study of markets as networks, which are unbounded, and the study of focal nets and strategic nets, which are grounded by addressing practical considerations. Focal networks and strategic networks are tools concerned with service analysis and consist of just those actors and interactions that are practically perceived as relevant (Arjoutsijarvi; Möller; Rosenbroijer, 1999). Strategic networks (or value networks) refer to focal networks that are intentionally planned rather than simply emergent in the service sphere (Möller; Rajala; Svahn, 2005, Raab; Kenis, 2009). The value of exploring the network perspective is to develop a rich picture of the configuration of participants that exist in a particular setting and why. The lack of a theory testing dimension could be said to be a weakness, however Möller argues that strategic networks are directly related to the service value generating system, likely to impact on organisational effectiveness.Möllernotes the potential of case based analytic techniques developed by Ragin (Ragin, 2008: Ragin; Amoroso, 2010) as a means of testing this.

Service Delivery Networks (SDN) as a Particular Form of Focal Service Networks.

A particular kind of focal or strategic network, the service delivery network (SDN) has recently been a subject of inquiry by Tax et al (2013). Tax et al agree that understanding service experience for customers is better viewed in network terms. For their argument, a customer journey consists of dyadic encounters with a series of providers or organisations, which together form the service delivery network. The authors specifically cite the experience of healthcare as a complex service encounter where the concept of a SDN might well apply. It is key to their proposition that the SDN is an ego network focused on the customer or service user, and that the SDN includes a co-ordination function for these multiple interactions. As it stands, it is not clear whether their concept of a SDN simply captures an emergent focal network, or whether it can be applied in practice to play a role in predicting and testing the relationship between network configuration, the value generating system and organisational effectiveness.

The stance adopted by Tax et al (2013) is specifically focused on the customer as participating in an ego centric network, and a SDN is defined as two or more organisations that are perceived as responsible for the provision of a connected, overall service. However it is not clear that that is sufficient (Ford; Hakansson, 2006). From the value generating system point of view, Grönroos and Gummerus (2014) define three potential spaces or bubbles for interaction: the customer space, the provider space and a shared space where interaction takes place. In other words it is important to define the chosen vantage point for applying a network perspective. Möller is concerned with the provider vantage point of view when suggesting that strategic networks are intentionally planned. Tax et al propose a customer vantage point, but they also highlight the possibility of a collaborative space for parties for co-ordination of the elements of service, consistent with Grönroos and Gummerus' shared bubble. Grönroos and Gummerus also accept that value creation takes place in a network context based on a series of dyadic exchanges as the manner of interaction. In other literatureit is the shared space where stakeholders collaborate that is emphasised (Ballantyne et al, 2011), with uniquely determined actor to actor multi-party interactions and interconnections (Vedel; Geersbro; Ritter, 2012). In healthcare for example Zolkiewski and Turnbull (2002) define a focal network as the multi-party collaboration between a customer network, a supplier network and an indirect network (including other relevant organisations). It seems a reasonable extension of Tax et al's concept of a service delivery network that it can be applied from customer perspective, provider perspective or a collaborative perspective. As indicated by Borgatti and Halgin (2011), it is for the investigator to define the network under consideration. There is a consistent theme in the health and public sector service literature of the care experience taking place at the intersection of a number of participant networks: typically service user, provider and care purchaser (Provan; Millward, 1999, Ritter, 2000; Zolkiewski; Turnbull, 2002). We propose that a service delivery network concept can be applied to the collaborative space in a service system.

A further difficulty with Tax et al's version of SDNs is that it treats all other parties in the service experience (alters) on equal terms as a series of relationships with individuals. Again healthcare provides a good example of why this might be questioned. In McColl-Kennedy et al's (2012) study of co-creation style in healthcare, the authors elucidate that part of the patient style consists of their relationships within their personal networks (friends and family etc). However,

there is a further distinct set of relationships with the clinicians concerned, who are in their own professional networks. We would argue that there are within personal network relationships, and between network relationships that are important characteristics of the service space. The advantage of developing a SDN from the perspective of the intersection of participating networks would be to complement insights from McColl-Kennedy et al's work, and shed light on between network interactions, that might further enrich the more simplistic view that Tax et al adopt.

In summary, there is work to be done to capture the multiple stakeholder network perspective to the case management review process in complex healthcare, with CPA case management in UK Learning Disability care a particularly topical focus of concern. We propose that a service delivery network concept can be used to capture a strategic network, where the focus of the SDN is the collaborative space between the service user and participating organisations, and the SDN now becomes defined as two or more organisational networks, together with the service users network, that are responsible for the provision of an overall connected service. This brings the concept into line with the direction of travel of contemporary literature, and more firmly links SDNs to the service value generating system. This sets the stage for theory testing with regards to the influence of the shape and quality of the SDN on organisational effectiveness as envisaged by Möller (2013). This is an area that has not so far been empirically explored in more complex healthcare settings such as case management.

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, and 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.

In this study we have adopted a multiple embedded case study methodology using template analysis (King, 2012) to explore the network context to a systemic cross sectional sample of 20 cases of CPA case reviews in the Trust. Within 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 (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.

<u>Sample and Data</u>
The sample was selected comprising the first five cases scheduled from each of the four service areas following research approval 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 consisted of 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" and the construction and conventions associated with documents, in this instance being the official record of the CPA review, are also part of the document's reality, a version of reality that can be usefully studied. We therefore have regarded the study of the official CPA meeting record, within an interpretive paradigm supported by the inter-textual consistency between cases, as a valid perspective for investigating the functioning of CPA reviews.

The Template

The data obtained from the official CPA documentation was explored using a template analysis (King 2012). As allowed by the methodology, we have used knowledge from the literature to develop a suitable template for investigating network participation. The literature identifies the principle participant networks in health and public sector services as being a patient or service user network, a clinician network and a commissioner network as the dominant sources of agency (Zolkiewski; Turnbull, 2002, Provan, Milward, 1999). Meanwhile, again as permitted by the methodology (King, 2012), following an exploration of the first 6 cases, the emergent evidence of participation practices consisted of *representation* of stakeholders at CPA case reviews, the inclusion of stakeholder perspectives into the reviews by way of reports or *structuring*of space for discussion and evidence within the discourse recorded of active *contribution* (Spurrell; Proudlove, 2014). The mature resultant template is shown in Table 1.

The *patient network* would encompass the individual service user and their family and friends. In addition, it would also include those who might provide support in an advocacy role (e.g. mental health advocates, solicitors) and professionals from the service users home area community team (e.g. local care coordinator, community nurse, social worker). It might have been argued that these professional should be located in a different network, but from the patient eco-system perspective these are all agents whose primary purpose is to support the service users in their own communities.

The *clinician network* was considered to be the designated multidisciplinary team responsible for the case. The team might include a broad range of clinical disciplines, including a named responsible clinician, medical staff, nursing staff, occupational therapists, psychologists and other forms of specialist therapists.

Meanwhile, the *commissioner network* covered the service commissioners or their agents.

Forthe three further emergent subthemes,*Representation* captured the attendance of representatives from participant networks at the CPA case review. *Structuring* reflected the extent to which structured space was built into the CPA

discussion to encourage contribution from participant networks and *Contribution* reflected the extent to which there was active or passive involvement evident in the documentation from each network. These are important as they encompass the participation practices for each stakeholder network through which the interactions and interconnections of multi-level service exchange are structurally transacted, as envisaged by Vedel, Geersbro and Ritter (201).

Template Theme	**Template Sub-themes and Nature of Evidence**
Network Context • Patient Network Perspective • Commissioner Network Perspective • Clinical Team Network Perspective	*Representation* o Personal attendance at CPA review by network members *Structuring* o Structured documentary space within agenda or demonstrated in discussion minutes. *Contribution* o Views reactively elicited in discussions and documentation o Pro-active expression of views in minutes and co-production of reports to inform the review process.

Table 1. Mature Template for exploring network participation in CPA case reviews.

Analysis

The data for each case was reviewed for accuracy and completeness. The template themes and subthemes were encoded into NVivo version 10 (2014). Each set of case documentation was imported into the NVivo project and the data was examined and coded to 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 to case study analysis described by Yin (2014). A rich picture was developed from the documentary data of the consistency and extent to which the template captured the network context to CPA case reviews and the range and richness of participation for each network was considered and described.

Following comments by Möller (2013),in order to examine the patterns of network participation practices 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 can be evaluated. This is a quantitative technique that is able to operate with small case samples and avoids some of the difficulties of normative 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 participation practices, where participation practices have been operationalised as Representation, Structuring and Active Participation, as above. We followed a methodology on casing for investigating social phenomena at the micro level (Basurto; Spear, 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 mapped the degree of rich participation practice set membership for each network for each case and charted the overlaps in practice variation for further examination.

Results.

Our findings demonstrated that there was considerable variation to the participation practices associated with each of the patient, clinician and commissioner networks, which ranged from some very rich profiles to more limited ones. After describing the key findings for each participant network, we have used QCA methodology to illustrate these variations, and the degree of concordance of participation between patient, clinician and commissioner networks.

The Patient Network

The findings for the patient network ranged very broadly. In one case the only participation was partial attendance of the service user, with no support from other possible network members such as family, home team or advocates. At the other pole, service users pro-actively contributed, co-produced progress reports and included support from family members, solicitors, advocates and social worker of nurse from home area in their network. Generally structuring of space within the review for patient network contribution was limited. Figure 1 displays the quality of patient network participation for each case in terms of the aggregation of fuzzy set memberships for *Representation, Structuring* and *contributing.* As permitted within QCA methodologies, using researcher (MS) judgement a cut off of .7 was proposed as a reasonable threshold for good participation practice. Only 6 out of the 20 cases achieved that threshold.

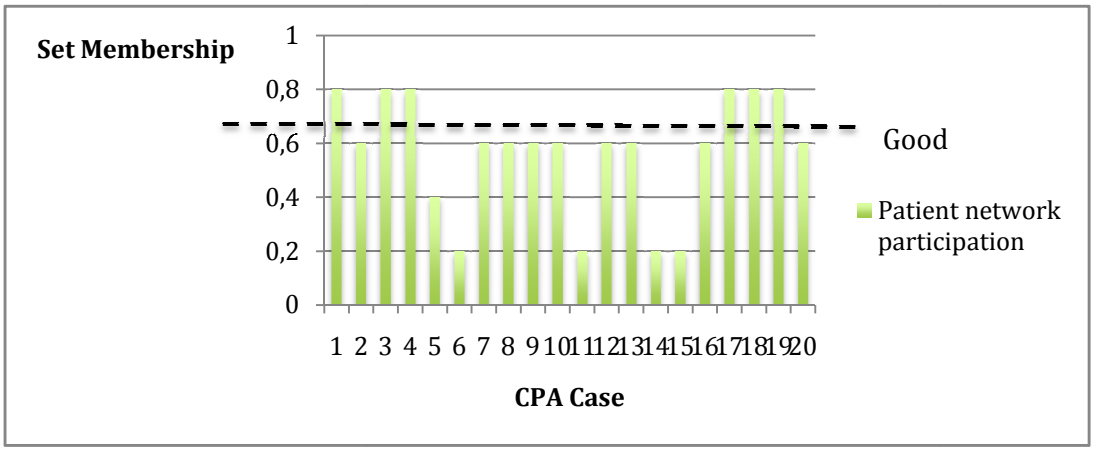

Figure 1. Chart of fuzzy set membership of rich participation for Patient Network

The Commissioner Network

Similarly there was considerable variation in Commissioner participation. A broad view was taken to allow that other parties such as social workers or community nurses might have roles in representing commissioners. Even al-

lowing for that however, commissioner attendance was limited for this cohort, although in a number of cases apologies were noted. Within the structuring of discussion space within CPA reviews there was not a clear sense of what might matter to commissioners as such, but for about half of cases there was a focus on care pathway progression, which some might assume coincides with what matters to commissioners. Again, the variation of commissioner participation is reflected in Figure 2, within a QCA framework. In this case only 4 cases reached the threshold we suggest as reasonable quality of practice. Therefore, there is evidence for scope to improve both the involvement of commissioners in CPA and to give further attention to what matters to commissioners within the format.

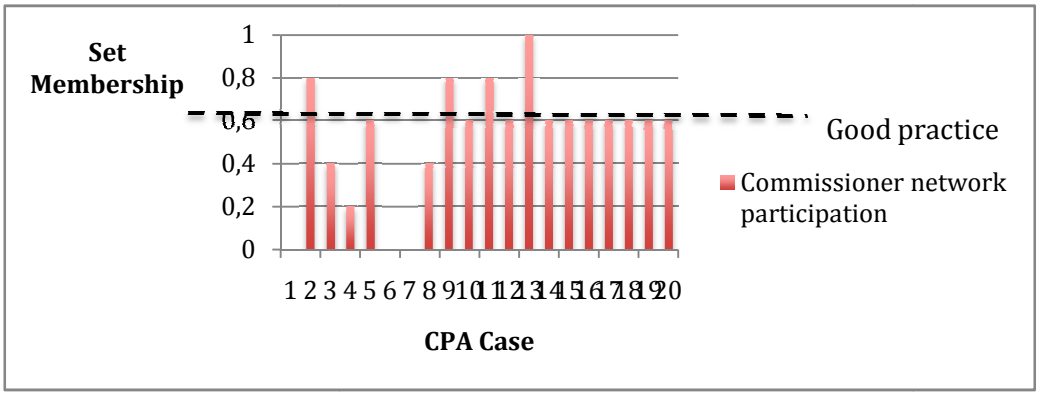

Figure 2. Chart of fuzzy set membership of rich participation for Commissioner Networks.

The Clinician Network

For the participation of clinicians, the key finding was the variation in richness of the multi-disciplinary team (MDT) representation and the level of collaborative practice that was seen. Thus, for some cases 'the MDT' consisted of just the Responsible Clinician (RC) and a nurse. This contrasted with other cases, which benefitted from the RC, a specialty doctor, the case manager and the unit manager as well as occupational therapy (OT) and psychology or psychological therapist representation. Generally, there was OT input for the most part. The psychological service input was the most variable feature, being only available in about half of cases. Figure 3 represents the variation across cases taking into account attendance and degree of proactive contribution. Only 6 cases reached threshold for reasonably good participation, similar to above.

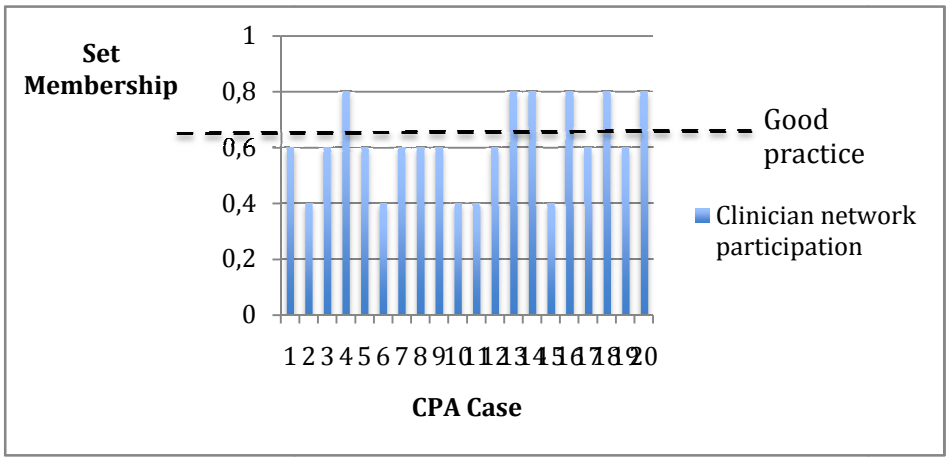

Figure 4. Chart of fuzzy set membership of rich participation for Clinician Network.

Network Interconnection

Having illustrated the variation in network participation across the sample using QCA, the interconnection between the networks at the case level can be seen by charting the set intersection for the three networks. Figure 4 integrates the variation in participation practices described above for each network to illustrate that different networks are behaving differently at different times. In other words there are not consistently cases where everyone is engaged and participating together, leaving other cases where engagement and participation is poor and simple suggestions of sharing best practice could be applied. Rather the picture appears to illustrate a more complex inconsistency between participating networks.

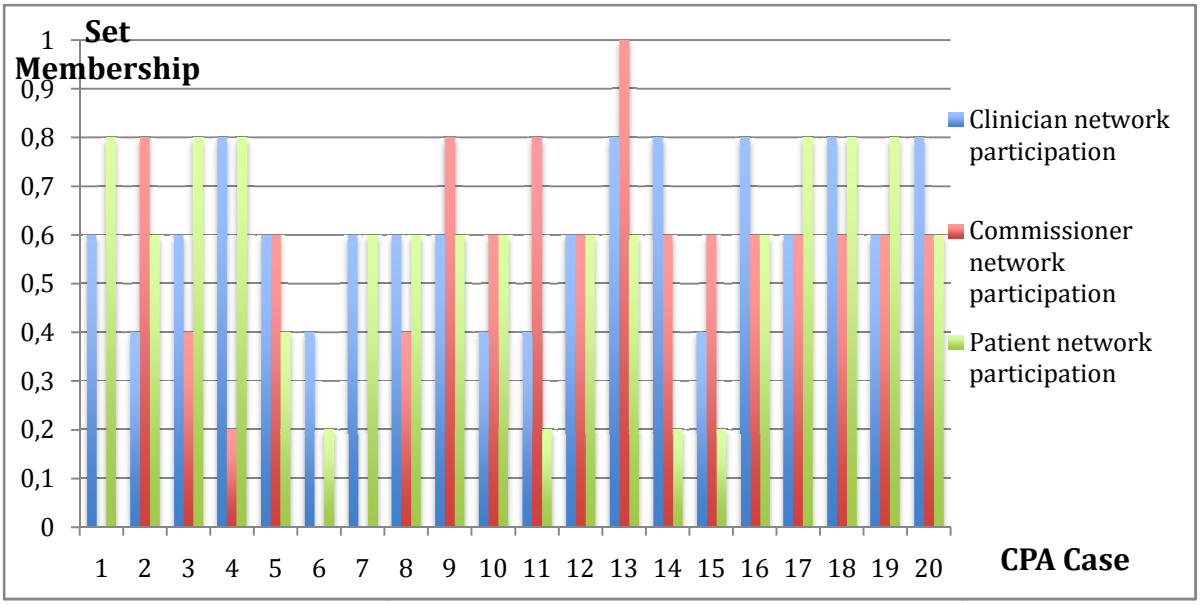

Figure 4. Chart of fuzzy set membership of rich network participation for each of patient, commissioner and clinician networks for a sample of CPA case reviews.

In order to examine this apparent disconnection, the degree of set overlap was calculated using fs/QCA software designed for the purpose (Ragin; Charles; Davey, 2014, Version 2.5). The coincidence of rich patient and commissioner participation was .58 (where 1 is complete coincidence), Patient and Clinician participation was .76 and clinician commissioner was .64. The degree of overlap of rich participation for all three was only .52. This is consistent with a greater disconnect for commissioner network engagement and that overall there does not appear to be a strong alignment between networks in the participation process.

Discussion.

In this investigation we have elicited the service delivery network (SDN) associated with CPA case management reviews in a learning disability service at the intersection of 3 participating networks relating to patients, commissioners and clinicians, as evident in the review documentation. From this vantage point, a

notable variation to the quality of participation was identified for each network across the series of cases, the implications of which are further discussed.

Participating Network Variation

The effect of the variation in practice from stakeholder networks across cases was that each emergent SDN appeared to present a rather unique participatory profile. As the quality of the SDN is presumed to be important in setting the stage for value creation (Tax et al., 2013), this can be seen as a key issue of service effectiveness. This study has specifically examined the documentary reality of CPA case reviews. There may well have been further interactions between stakeholder networks that were not captured from this perspective, either in the reviews themselves, or in interactions outside the review process. We would argue that CPA case reviews are a key forum for identifying and communicating the value proposition of the service, which should be reflected in the documentation. This would not detract from other interactions also taking place. It remains the case that some review practices demonstrated richer involvement of participants than others, which requires explanation.

Different stages and rhythms of care.

This study was a cross-sectional view of cases at different stages of care. Between case variation may simply reflect the evolution of engagement, or natural fluctuations in participation over time. Such fluctuations might for example reflect changes in patient confidence over time, or even fluctuating availability of professionals responding to competing demands to attend other meetings. It would be interesting to consider whether a more consistent picture emerged over a longitudinal perspective. From our data however, we would argue that such explanations are not sufficient to account for the marked level of variation identified. Aspects such as the way reviews were structured would not have been time dependent. Variation was seen just as markedly in professional practices as for patients and carers, and professional practices might be expected to be more consistently pro-active across the whole care period.

Participation Style.

Expressed in terms of 'co-creation style, it has already been highlighted by McColl-Kennedy and colleagues that variations in patient participation style might be an expected feature in healthcare (McColl- Kennedy et al, 2012; Sweeney; Danaher; McColl-Kennedy, 2015). Our findings suggest furtherthat a consideration of the different co-creation styles for participating clinicians, commissioners and other stakeholders might also be relevant. Moreover, it might also be expected that a further source of variation would be created by the interactions of different patient styles with different clinician or commissioner styles, and from the influences on those relationships from the other parties (Vedel; Geersbro; Ritter, 2012). Therefore a further opportunity for service improvement lies in developing optimal models for all participant engagement, not just as individuals but as interacting participating networks.

Lack of organising framework

Building on the theme of developing optimal models, it may be that a broader lack of consistency lies in how CPA reviews were framed. Different reviews might have viewed their purpose and objectives differently, for example. There is a difference between using a CPA review to report on progress, and using CPA as a creative space for designing new care approaches. There is a lack

of theory based framework development to guide Case Management (Nolte; McKee, 2008), including CPA (Simpson; Miller; Bowers, 2003a; 2003b). Within the SDN concept, Tax et al (2013) assume that there should be some kind of a service framework to support participant collaboration. This is mirrored in other commentary on the importance of an emergent platform to engage participants to support value co-creation (Grönroos; Voima, 2012). There is widespread recognition in the service literature of the merit of structuring such as blue printing or touchpoints for guiding value creation in service (Alter, 2008; Kimbell, 2011; Bitner; Ostrom; Morgan, 2008), which may well have some applicability here. Therefore, we would argue that a review of the operating framework that underpin CPA from a service theory perspective would lead to a better, more consistent framing of the participation practices within the SDN with a view to connecting with the value generating process.

What are the implications for CPA Case Management?.

As a standard feature of UK mental healthcare, it is legitimate to consider wider inferences from this case study series on a systemic basis (Yin, 2014). The key implication from this study is to confirm the previously reported variation in CPA patient engagement between services (Goodwin; Lawton Smith, 2010, Carpenter et al, 2004, Rose, 2003). Further, it extends that finding to include variation in engagement of other participants (clinicians and commissioners), and for that variation to potentially extend down to the case level in practice. In other words, if these findings are repeated in other services, it might be that there is a level of systemic difficulty that has not been previously appreciated, and which would be consistent with the concerns that emerged following the review of practice at Winterbourne View (Flyn; Citarella, 2012). Indeed, there is an initiative in hand to promote improved case management in Learning Disability care in the UK(Department of Health, 2012). As Simpson, Miller and Bowers(2003a; 2003b) indicate, there may well be a need for further theory development to support the functioning of CPA case management. We would argue that a consideration ofthe concept of SDN quality would be one important dimension to include in policy development and this paper makes a contribution to suggesting how this might beput into practice.

What are the implications for Case Management more broadly?

As indicated above, there is an opportunity for extending learning from CPA case management to case management more generally (Goodwin; Lawton-Smith, 2010). Although the cases studied were selected from a particular organisation in a particular service area, they do present good examples of complexchallenges for care co-ordination. Therefore, it is more generally useful to offer a framework, based on the concept of the SDN as the intersection of stakeholder networks, that directs attention to the potential richness of resource availability from all sources on a case by case basis.

When Nolte and Mackee (2008) point out that the case management literature has tended not to address more complex cases, they do not define what makes a complex case. The population studied involved people with a Learning Disability and some significant mental health problem sufficient to require hospitalisation. This argues that it would be reasonable to justify these as within the more complex range of healthcare support needs. In addition, either through limitation of capacity or through legal constraints, it could not be assumed that patients were able to make unconstrained choices. This issue of service user

constraint has previously limited the application of mainstream service models to such areas of public service (Baron; Harris, 2008). Similar conditions might well apply in other areas of healthcare, such as care of the elderly for example. In this study, by locating the individual patient perspective within a network of patient supporters, who collectively have agency as a service entity (Freund; Spohrer, 2013), we propose an empowerment of the patient perspective in case management. This effect would be in counter-point to the agency of other stakeholder networks, within the SDN concept.

What are the implications for applying the concept of the Service Delivery Networks (SDN)?

In this investigation, to explore a particularly complex area of service exchange, we have proposed some adaptations to the SDN configuration described by Tax et al. (2013) to better reflect more complex multi-party service exchange. It is consistent with other literature on public sector services that we have shifted the vantage point of the SDN to the intersection between participating networks (Provan; Millward, 1999, Ritter, 2000, Zolkiewski; Turnbull, 2002). It is important to note that this perspective is one of many SDNs that could have been elicited for exploration that might equally be of relevance and interest to consider. It is the researcher that defines the network of interest, as indicated above (Borgatti; Halgin, 2011). We justify our choice of vantage point as a pragmatic, appreciative stance, as permitted in case study investigation (Cox; Hassard, 2005), whereby this vantage point proves useful in bringing out fresh insights into opportunities for service improvement.

In Figure 5 we have illustrated the shift in vantage point that we are proposing, with implications for one way of exploring the connection between the SDN and the value generating system.In our proposal, consistent with Gronroos & Gummerus (2014) it is in the collaborative space that the participants engage, with emergent exchange of resources for benefit as the value generating process (cf. Ballantyne et al, 2011, Zolkiewski ; Turnbull, 2002).In this context the SDN we have revealed different agents participating with different degrees of sophistication (Vedel; Geersbro; Ritter, 2012). Extending Vedel, Geersbro and Ritter, our findings suggest that the alignment to the richness and sophistication of participating networks might also be important for the quality of the SDN.

Therefore, a model of the complex exchange SDN has been described which encompasses the richness of the participating networks in terms of empowering agency from all stakeholders, and capturing the sophistication of that participation in terms of representation, structured space, contribution and the degree of alignment of these qualities at the case level.As suggested by Möller (2013), we have using set-theoretic techniques from QCA with which to capture this qualitative signature of participation profile for individual SDNs. Our proposition is that this SDN qualitative signature would be related to service outcomes valued by all stakeholders. This model would be useful for service managers looking to develop case level insight into a key component of value creation. Further research is required however to empirically test whether in fact SDN quality does relate to aspects of value creation in practice. At this stage, this has been a limited application of QCA techniques. There are critics of QCA, and some object to the role of the investigator in making structured judgments about inclusion of cases in set membership (cf. Bennett; Elman, 2006). However, the approach is gaining credence in many public sector settings (Rihoux; Rezsöhazy,;

Bol, 2011), and of interest for further research, the methodology does allow for potentially testing causal relationships, for example between quality of SDN and valued service outcomes.

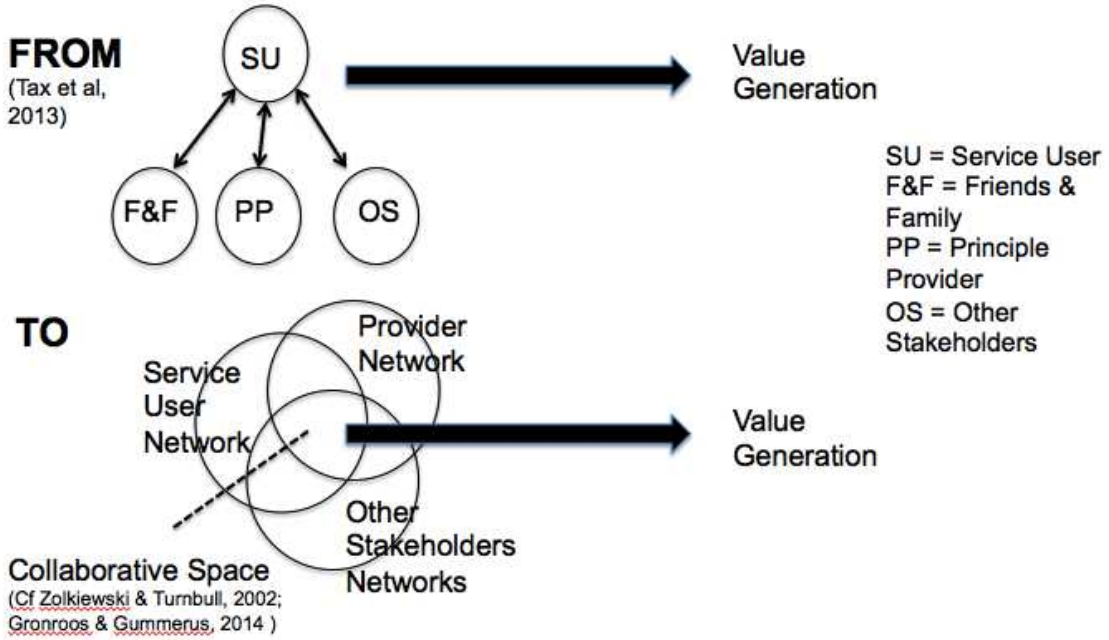

Figure 5. Choosing the vantage point for a Service Delivery Network (SDN) perspective in complex service exchange, such as healthcare.

Conclusions.

In conclusion, a SDN perspective from the vantage point of an intersection of stakeholder networks has provided a useful tool for elucidating variation in CPA participation practices in a UK Learning disability setting. The investigation adds to the body of empirical work looking to understand CPA and case management more broadly, as well as serving as a helpfulworked example of the application of this service network concept in a complex service area. Further, this study illustrates how it is possible to bring into focus aspects of the shape and functioning of the parties that are involved in complex case management, an issue increasingly seen as important for understanding care integration and service delivery improvement. This study was limited to a cross sectional view of the evolution of care over time, and represents findings from within just one provider organisation from the particular perspective of the documentary reality.

Nevertheless, the particular findings in this study replicate that there is an issue of variation in practice to be found specifically in CPA case management in mental heath, and further to suggests that this practice variability might penetrate down to the individual case level. However, by developing a rich qualitative picture of variability in SDN functioning, we are able to introduced a more nuanced view as to how factors such as variation in style of participation from all agents, the evolution of the service relationship over time and their interactions might all play a role. Within the framework of the SDN as a component of the service value generating system, we would expect that these factors ought to be demonstrably linked to valued service outcomes. This would be an area for further investigation.

A further contribution of this study has been to usefully adapt and extend the concept of the SDN from its application to essentially dyadic exchanges in simpler ego-networks to a much more complex service scenario involving multi-party exchange and interactions, with a service focus at network interfaces as being a more suitable vantage point. This development is of interest in supporting mainstream management looking to a better aggregated understanding of case level service experience, and also in suggesting pathways that might lead to better research frameworks for studying wider case management across healthcare, as well as complex service scenarios more generally.

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