

Improving the critical review capacity of commissioning networks to reduce needless admissions of older people into acute hospitals

Report to NHS Halton Clinical Commissioning Group – Executive Summary

April 2014

Overview of Research

- We explored the critical review capacity of your CCG, examining the commissioning process for services aimed at reducing needless admissions of older people into acute hospitals
- 10 semi-structured interviews were conducted with individuals within the general commissioning structure, or from a provider related to urgent care, and lasted between 45 minutes and 1 hour
- We asked respondents to describe the commissioning process, specifically focusing on Urgent Care Centres (UCCs)
- Our analysis was guided by the concept of Absorptive Capacity (ACAP). This is a concept developed through academic studies conducted in the private sector, derived from study of how R&D departments acquired and actioned knowledge to inform organisational innovation. We have applied this model to an exploration of critical review capacity in a healthcare setting.
- It is not our intention to 'blind you' with organisation science. We aim to give you concepts and a model to examine a strategic issue, and allow you to take a helicopter view of developing service interventions to reduce needless elderly care admissions of older people into acute hospital.

- Analysis following the ACAP model was divided into four areas: acquisition – obtaining information; assimilation - analysing information; transformation – turning new information into commissioning decisions by combining it with existing knowledge; exploitation – changing or developing organisational behaviour or routines in response to the new information.

- In addition, we considered antecedents to ACAP, also known as combinative capabilities. This refers to the knowledge processing activities of an organisation to generate, synthesise and apply new knowledge to enhance critical review capacity. There are three types of combinative capabilities: socialisation capabilities (which may be fragmented due to diverse professional and organisational cultures); systems capabilities (top-down guidelines or incentives from above); and coordination capabilities (social and structural mechanisms supporting information and knowledge exchange). A full theoretical explanation of combinative capabilities can be found in Appendix 1.

Overall Findings

- Notable at Halton CCG was the integration between the CCG and local authority which enhanced coordination capabilities

- Public engagement also enhanced your coordination capabilities, and there were indications that Patient and Public Involvement (PPI) was integrated at all stages of commissioning

- Acquisition of information was relatively straightforward, although there were concerns about the quality of the information acquired due to a perceived distance between the CSU and CCG

- The problems with acquisition of information from the CSU impacted the ease with which the CCG could assimilate data. However, coordination capabilities

(such as PPI and joint working between health and local authorities) mediated these problems

- Transforming information into service design of UCCs was complicated by the large number of stakeholders involved in service provision (i.e. primary care, secondary care, ambulance service, out of hours, voluntary sector etc.). Aligning these multiple organisations was once again facilitated by the coordination capabilities of the CCG. However, as the UCCs were not operational at the time of our first visit, it is not possible to comment fully on transformation (or exploitation), or on the way coordination capabilities facilitate the process. This may be something the CCG wishes to focus on in the second round of data collection
- It is also hard to comment on the exploitation of information fed back from UCCs, as the centres were not operational. However, initial findings suggest coordination capabilities will be central in aligning multiple stakeholders to enhance the way information is used to develop or scale up the centres as appropriate. Patient involvement will also be key in enhancing these coordination capabilities. More research is needed into the most effective way to enhance coordination capabilities with a view to improving exploitation of information and knowledge, and subsequent improvement of critical review capacity.

Implications and recommendations

- All interview respondents were clear that, in their opinion, the partnership between the local authority and health enhanced their ability to commission services for UCCs. In addition, this was complemented by comprehensive PPI, enhancing the coordination capabilities of the CCG. However, our analysis of the way this is transformed into practice is limited as the UCCs were not operational at the time of our visit.

- There is a need for a more in-depth exploration of how the information is transformed into service delivery within the UCCs, and the way in which the coordination capabilities of the CCG can be enhanced to facilitate the alignment of multiple stakeholders, exploiting the potential of the UCCs. This could cover one of the following areas:
 - o The use of PPI to exploit information fed back from UCCs
 - o The way in which primary and secondary care providers transform information to design UCC services
 - o The relationships between multiple stakeholders and the challenges of aligning them in complex service design
 - o The way the CCG harnesses and exploits information fed back from UCCs to continually develop services

- If you chose to continue to explore your critical review capacity in relation to UCCs, we recommend returning when they are operational. In the next (and final) report, we will be able to consider the way the CCG manages the transformation and exploitation of information, and consider the antecedents to enhancing your critical review capacity. This will offer opportunities for you to develop an action plan to maximise your organisational capacity for commissioning services to reduce needless elderly care admissions into hospital.

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Study Overview

CCGs do not operate in isolation, but exist within a wider network of stakeholders inclusive of primary care, secondary care, the national NHS Commissioning Board, Local Area Teams, Commissioning Support Units, tertiary care services, and local government agencies commissioning and providing health and social care. Given the complex nature of the network in which they are operating, and the boundaries across which they have to communicate information, CCGs will need to enhance their critical review capacity to be successful. To explore how CCGs can achieve this, we consider commissioning interventions to reduce needless admissions of older people into acute hospitals. The results from this study are not limited to care of older people, as they can be generalised to other commissioning domains.

To explore commissioning in your CCG, we conducted semi-structured interviews with 10 individuals from within your commissioning network. These individuals were stakeholders, from within and outside the organisation, which were involved at some stage of the commissioning process. Interviews focussed on the commissioning cycle, and respondents were asked about where they felt they were positioned within it; i.e. the acquisition of information, the analysis of information, service design and commissioning, or in the implementation and assessment of front line services. Once their position within the process was established, issues around the flow or translation of information, and the ability to link up front line services with data feedback systems, were explored. Specifically, we focused on the design and implementation of the Urgent

Care Centres (UCCs) within Halton CCG. Interviews lasted between 45 minutes and 1 hour and were audio recorded and transcribed.

To analyse the interviews, the research team used the concept of Absorptive Capacity (ACAP). ACAP is a model developed in the private sector, derived from study of how R&D departments acquired and actioned knowledge to inform organisational innovation. We recognise that healthcare represents a distinctive environment compared to private sector R&D contexts in which much of the empirical work around ACAP has taken place. This renders some of the dimensions of the ACAP literature less relevant to healthcare, but at the same time, brings others to the forefront. We are applying this model to the healthcare sector to enhance commissioning networks (for a thorough theoretical explanation, please see Appendix 1). The four areas of ACAP, guiding our analysis, are: acquisition of information; assimilation or analysis of information; transformation into commissioning decisions; and exploitation of those services by continuous development and dissemination. To improve critical review capacity, the literature suggests the need to consider antecedents to ACAP, otherwise known as combinative capabilities (a full theoretical explanation of combinative capabilities can be found in Appendix 1).

There are three types of combinative capabilities: socialisation capabilities (which may be fragmented due to diverse professional and organisational cultures); systems capabilities (top-down guidelines or incentives from above); and coordination capabilities (social and structural mechanisms supporting information and knowledge exchange). ACAP literature emphasises that enhancing coordination capabilities is key for organisations, as systems and socialisation capabilities are relatively fixed and can be negative influences on critical review capacity. Enhancement of coordination capabilities enables organisations to mitigate these potential problems.

Acquisition

Acquisition refers to the process of gathering information from a wide variety of sources, beginning the commissioning cycle. Within Halton CCG, acquiring data was not seen as a significant problem, with some even reporting a sense there was too much data available:

When we have a problem it's not information. We have information overload. It's analysis that's our problem. (Halton 7)

Analysis, or assimilation, of information is discussed below. However, the problems related to analysis stem from concerns about the quality of the information acquired from the CSU, who were seen as detached from the CCG:

I think the commissioning support units are too distant from the CCGs and the work that's going on in the locality (Halton 8)

The best data we ever had was when we had a local team. They were destroyed and put into a more central group. They've been destroyed and put into another group which covers a much wider area. The data they produce is rubbish... because they don't have our local feel at all. They don't know what we need. I mean they're techie people who are used to numbers. The numbers are only going to make sense presentationally as well as meaningfully operationally if you've got clinical input. They don't seem to have any clinical input. (Halton 6)

As a result, the extent to which the data acquired could be used appropriately by the CCG was sometimes questioned:

My biggest challenge is the fact that I don't always have access to the data that I think I need to do my job and that data when it is being used and discussed isn't necessarily being used in the appropriate way... I almost feel like there's sort of a mass of data that's floating around in the system but it's not always being necessarily used in the appropriate manner. I don't think some of the people who are perhaps collecting that are using it or deriving from that the correct answers. They're not asking the right questions so they're not therefore deriving the right answers from that data that they have (Halton 5)

However, despite these problems, when discussing the data acquired in relation to the Urgent Care Centres (UCCs), it was clear that information was acquired from a wide range of sources to supplement the information from the CSU:

So we got lots of information together. We collated information and we looked at... There was already a walk-in centre in Widnes and there was a minor injuries unit in Holton General Hospital in Runcorn, so we asked for figures of attendances and outcomes from both of those units. We had a questionnaire that went into GPs to ask them about their throughput in terms of urgent care. We had a questionnaire that went into local A&Es for both patients and staff asking basically why the patient was there, whether that was the best place for them and if it wasn't why didn't they go to the place they should have gone and what were the barriers to that. So we got that kind of information as well. So once we got all that information we kind of collated it all and came up with three kind of possible models of care and those models went to the board. We had a preferred model and the board agreed with the preferred model which is what we're just starting to implement. (Halton 10)

In conclusion, despite some minor difficulties associated with the acquisition of relevant data, due to a perceived disconnect between the CSU and the CCG, commissioners were able to acquire information to guide the set up of UCCs. As we explore in the following sections, this ability is due to their coordination capabilities, enhanced by joint working between social care and health care, and a focus on patient involvement during the commissioning cycle.

Assimilation

Assimilation refers to the process by which the information acquired is turned into a form which be analysed and used by commissioners. As acknowledged above, there were concerns that the information acquired was not always useful or relevant to the CCG.

I think where we are a bit weak as a system is some of the performance information that comes through from all of our provider organisations in the main. "Are we asking the right questions around the information we need?" and I don't believe that it's as robust as it could be in relation to making commissioning decisions. Emergency readmissions for example, we've got a high number of people who go back into hospital after they've been discharged. We've got some information here, some soft information here around some of the follow-up that happens, I've got some soft information here around some of the community teams that have to pick up a mess because somebody's been discharged inappropriately and then they go back into hospital. Those two lots of information don't tend to come together so it's quite anecdotal really as to who's got that info... And it's that level of intelligent data that we need and then we need that analysed so that that makes it more useful... We're trying to build that up, but I think it's still quite ad hoc really. (Halton 8)

Being able to bring together the 'soft' data with the data acquired from providers and the CSU was reported as underdeveloped. Having access to assimilated information was felt to be particularly important for a detailed understanding of local needs, in order to commission responsive services:

It's the deep dive stuff. So we've got the kind of overview and we can understand the kind of top level stuff. Actually it's delving into that, using information from other sources... So I think what I'm saying is from an integrated performance point of view you get a richer picture in terms of what's happening. (Halton 7)

Considering the assimilation of information with regard to UCCs, the importance of an integrated approach to data acquisition and assimilation was acknowledged as particularly important for developing joined up healthcare for patients:

What we needed to do was re-establish, go back and revisit some of the business plans that had been in play, revisit some of the evidence – so using the cluster PCT to draw out some evidence about pathways and flow; so ambulance utilisation, admits and readmits, attendances, use of walk-in centre, use of minor injuries and a raft of data really to understand what we might need on any given day and time of day to help think about what is it that we need to develop... it was suddenly clear that again there was this piecemeal approach and actually if we move forward and look at urgent care in the round and use the data and information about what we currently do and how we do it, we could potentially build quite a case for looking at managing those issues in the borough. And so we did some of that work and then kind of entered into public consultation about those really (Halton 3)

The use of information ‘in the round’, and the involvement of multiple organisational information, indicates how the assimilation of data concerning UCCs was enhanced by CCG coordination capabilities. In particular, public consultation was noted as a key mechanism for framing the assimilation process:

So we’ve done a kind of string of events that we’ll go and ask the public “What do you think? What is it you think? What is your opinion on health services? What do you think should change and how should you do that?”... We do that across the local authority, we use all our media in an innovative way... We’ve just signed a deal now with the local radio... it goes out to usually about 10,000 to 12,000 people a day and further afield. It’s got a website as well. So it’s got quite a decent following... So as we’re commissioning these things we’re going to be actively linking in live with the public to say “Well this is what we’re doing guys. What do you think? How can you help shape that?”. (Halton 7)

For example, the enhancement of coordination capabilities through comprehensive PPI enabled the CCG to analyse information about A&E attendances from a different perspective, leading to an understanding about the need for X-Ray diagnostics in UCCs:

And so one of the things we did running up to this was an audit of people who attended A&E over a two week period and looked at had they approached primary care, what was available in primary care, had they been to a walk-in centre, asked them questions about what alternatives they'd explored, would they consider alternatives? And that information also helped shaped some of the areas of service that we wanted to pick up on. Diagnostics x-ray was a big one. We found something like 25% to 30% of people who attended A&E actually just needed an x-ray and because we didn't have x-ray facilities available all the time and we've only got them in one part of the borough then we were pushing people to go to A&E and people themselves were able to identify that "I just need an x-ray. I know I don't need ... I've broken my arm. I know it's not badly broken, but I just need an x-ray to confirm it and a plaster" (Halton 3)

Assimilating the information acquired, generating in-depth, locally applicable analysis and understandings of the data sets was not a service provided by the CSU, and was a minor area of concern. However, the coordination capabilities of the CCG, enhanced by patient involvement and the use of information from multiple, external partners, were able to overcome these problems.

Transformation

Once different types of information have been assimilated into locally responsive knowledge, it needs to be transformed into a design for a service to be commissioned. As mentioned above, this was facilitated by enhanced coordination capabilities relating to PPI:

You talk to local people here and they will say "What we want is local services. What we want is to be able to go to one place where we can have our x-ray done, where we can have our whatever. That's what we want," which is why the feedback from the public engagement and from the engagement with the

local authority, particularly elected members, was “We’ve been asking you for this for ten years. If you can do that we’ll be made up.” So I do think it’s the right model. (Halton 2)

Information acquired from public consultation was transformed into service design which was responsive to their needs. For example, the acknowledgement that a UCC needs to provide a ‘one stop’ service for the public if it is to be successful at reducing A&E attendances:

What this community is saying to us is “I don’t want to start something to then have to go somewhere else because I may as well have just gone somewhere else,” and anecdotally that’s a function that A&E fulfils for people. You turn up, okay you might have to wait, but somebody sees you, somebody gives you some tests, somebody gives you a diagnosis and they give you treatment and they send you away including the medication that you might need. So you’re done and dusted in the time that you spend in A&E. We need to replicate that for these pathways as much as possible in the borough or else people won’t use them. Our population are not stupid. You know, they’ll go and search out and find the best possible service that they can get. And so the population are clear about that (Halton 3)

Similarly, issues such as geographical location of the UCCs were strongly guided by public opinion. Transformation of service design for UCCs was strongly influenced by the need to commission two sites, due to the river crossing cleaving the CCG area in two:

So we’ve got this notion of two sites, one either side of the bridge, and that’s really important in this borough because although the bridge isn’t very long people do not cross the bridge or tend not to cross the bridge, the local community, and moving down the line that’s going to become more important because we’re having another bridge built which you’ll have to pay to go over and so that will even more mean that people are less likely to go over the bridge. So having a two-town solution has been quite important (Halton 3)

PPI was a strong influence on the transformation of services, enhancing the ability of the CCG to commission responsive services. Alongside this, transformation was also enhanced by the inclusion of a large number of stakeholders in the implementation of UCCs. For example, the involvement of the ambulance service was a critical aspect of 'diverting' patients to UCCs, rather than A&E:

Urgent care centres eventually will be kite marked, so the paramedics will be able to divert... If somebody dials 999 and they need to be seen they can divert. They'll have certain algorithms that they'll divert into the urgent care centre. So it could be respiratory. It could be they've had a fall and a suspected fracture, elderly falls, but they could go to the urgent care centre for an x-ray and the falls team could pick them up. So it's just looking at alternatives. They don't have to go to A&E for everything. (Halton 9)

Whilst the involvement of multiple organisations could complicate the transformation of services (as we have experienced amongst other CCGs), these problems were not markedly notable at Halton. This was attributed to the integration of health and local authority, creating a more joined up approach to service design, and positively impacting the alignment of other stakeholders:

I think to actually make all the changes that we're going to make it's required a lot of engagement between clinicians and directors of both CCG and the borough council and secondary care and that's only happened because the CCG and the borough council work very closely together and there's no suspicion anymore, so everyone's pushing in the same direction and because of that I think that secondary care feel that... I mean they're dealing with one unit now instead of two units pulling in different directions; and the community trust's the same so you can actually get people in a room that actually will agree to things more readily. I mean there's always disagreements.... But it's been more of an adversarial kind of tone to meetings in the past where now it's we've got to look forward (Halton 10)

The coordination capabilities of the CCG were enhanced by their integration with the local authority, facilitating the transformation of services and enabling them to provide joined up, superior care for their local population:

I think I'm very, very pleased to have found that Halton CCG is able to work so closely with Halton borough council to the extent that we're actually based in council buildings as you can see. That was never the case in the days of PCTs. There was a lot of suspicion between the two, but now they work hand in hand. That I think facilitates what you're talking about – being able to bring in social care so that we can give people a package of care that's not fragmented. So that will be accessible through the urgent care centres. (Halton 10)

By having that real integrated partnership approach focused on Halton then we can really make a difference to Halton residents (Halton 8)

The challenge of aligning stakeholders relies on coordination capabilities of the CCG network. This was enhanced by the integration of health and social care, and of patient involvement. However, there are multiple stakeholders involved in the running of these services, and how they will influence the running of services is unclear. As the centres are yet to be set up, there was relatively little commentary about exploitation and transformation (considered further below), compared to areas of acquisition and assimilation. It may be that the CCG wishes to focus further on exploitation and transformation during the second stage of research, exploring more fully how the UCCs are put in place.

Exploitation

Research on ACAP in the private sector suggests exploitation is related to the ability of organisations to use the information based on small, local pilots or projects, to develop wide scale service change. This is difficult to comment on at this stage, as the centres were not operational at the time of our visit. However, instead we highlight some areas that may be problematic, for future consideration.

One of the main challenges, as mentioned briefly above, will result from the multiple stakeholders involved in the centres, particularly the interactions between primary and secondary care:

I think the biggest challenge probably will be we're going to have kind of an internal interface really between secondary and primary care where the urgent care centre and clinical decision unit lie in the hospital because we're basically asking a secondary care provider to provide us with staff to help us stop them admitting patients and we're asking to spend less money on employing those people than we would pay in tariff to admit the patient to hospital or to send them to A&E. So obviously that's a challenge (Halton 10)

Encouraging secondary care to work in the UCCs may be problematic, complicated by the awareness that the two main providers for Halton CCG were not always amenable to providing services together:

In terms of those two acute trusts potentially working together and splitting the business that's more challenging and that's already presented some challenges... what we wanted to do was for them to be able to have discussions facilitated by us to kind of sort that out rather than running through those processes, but we've been unable to do that... I think we could have managed that a little bit better. I think we could have provided a bit more leadership and a bit more kind of assertiveness about our expectations and managed that process a little bit better than we have done (Halton 2)

Exploitation of UCCs will rely on the enhancement of coordination capabilities to develop relationships between secondary care providers, to facilitate the on-going development of services offered by UCCs:

I think it's building that trust and building the foundations of relationships underneath which are key to everything that we were able to do... communication is key to all that (Halton 7)

Once again, coordination capabilities will be enhanced through PPI, and the ability of the CCG to communicate the nature of the UCCs to the public, to ensure they access the services appropriately:

Obviously they're the people we need to communicate with because they're the people we're relying on to go into the urgent care centres rather than the acute trusts or we will be in a pickle. So there have been some issues around communication. I mean some of that is around when you go out and you do your consultation events sometimes the public think that it's just going to happen now because they've just told me about it so there's some challenges there for us. I suppose the other challenges are making sure that it doesn't develop as a silo and it develops as part of the whole system. Unless we tie it into the whole system I don't think it will work as well as we think it's going to (Halton 8)

In terms of exploitation for the UCCs, this will require the involvement of a wide range of the public in decision-making, ensuring that a representative view of the wider population is used to develop the UCCs further. Whilst this may be challenging, the ability of the CCG to access public opinion from those who may not otherwise engage with health consultations, is enhanced by their integration with the local authority. This enables them to harness the potential of PPI structures they may not otherwise have had access to:

And the other thing is we spend a lot of time looking at where do the local authority go to engage with people and can we piggyback onto that which

actually has saved us in some ways a lot of work because we've been able to do dual things. So the local authority have local health groups and we go to them, local stuff like ward forums and we will go to the ward forums and have conversations (Halton 2)

In conclusion, the exploitation aspect of the commissioning process is the most underdeveloped of the four ACAP areas. This is unsurprising as the centres are not yet operational. However, findings suggest that coordination capabilities will be key in aligning multiple stakeholders in order to enhance the way information is used to develop or scale up the centres as appropriate. Patient involvement will also be key in enhancing these coordination capabilities. More research is needed into the most effective way to enhance coordination capabilities with a view to improving exploitation of information and knowledge, and subsequent improvement of critical review capacity.

Conclusions and Key Messages

- There were clear indications that the critical review capacity of Halton CCG was enhanced by its coordination capabilities in terms of the integration between health and local authority, and comprehensive PPI.
- The coordination capabilities enabled the CCG to overcome some of the problems noted with the acquisition or assimilation of data, stemming from a distant relationship with the CSU. This was particularly clear with the way PPI information was used to triangulate and make sense of data
- Transformation of data into service design holds the potential for difficulty, due to the large number of stakeholders involved in the UCCs. However, the integration of health and the local authority enhanced coordination capabilities, facilitating the alignment of multiple stakeholders, enabling complex service design.

- Conclusions about exploitation are currently limited, but we highlight the importance of developing relational interactions amongst stakeholders to continue to develop UCC services. Continuing development and exploitation will also rely on the integration of PPI structures, and the development of new PPI mechanisms in partnership with the integrated local authority.

Recommendations

- All interview respondents were clear that, in their opinion, the partnership between the local authority and health enhanced their ability to commission services for UCCs. In addition, this was complemented by comprehensive PPI, enhancing the coordination capabilities of the CCG. However, our analysis of the way this is transformed and exploited in practice is limited, as the UCCs were not operational at the time of our visit.
- There is a need for a more in-depth exploration of how the information is transformed into service delivery within the UCCs, and the way in which the coordination capabilities of the CCG can be enhanced to facilitate the alignment of multiple stakeholders, exploiting the potential of the UCCs. This could cover one of the following areas:
 - o The use of PPI to exploit information fed back from UCCs
 - o The way in which primary and secondary care providers transform information to design UCC services
 - o The relationships between multiple stakeholders and the challenges of aligning them in complex service design
 - o The way the CCG harnesses and exploits information fed back from UCCs to continually develop services
- If you chose to continue to explore your critical review capacity in relation to UCCs, we recommend retuning when they are operational. In the next (and final) report, we will be able to consider the way the CCG manages the

transformation and exploitation of information, and consider the antecedents to enhancing your critical review capacity. This will offer opportunities for you to develop an action plan to maximise your organisational capacity for commissioning services to reduce unnecessary elderly care admissions into hospital.

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Appendix 1

Theoretical Background

Clinical Commissioning Groups (CCGs) need to develop critical review capacity to intelligently commission healthcare, to increase positive clinical outcomes, financial management and service effectiveness. This requires CCGs, not only to critically review both formal (external) and local knowledge or information, but to subsequently transform and exploit this information to encourage service development throughout their local health and social care economy. Given CCGs are new organisations, extant literature on their critical review capacity is sparse. Nevertheless, early scoping studies highlight the potential for weakness amongst CCGs (Imison, Curry, & McShane, 2011), which was also apparent in their predecessors, Primary Care Trusts (Smith, Regen, Shapiro, & Baines, 2000; Swan et al., 2012).

Our study examines CCG critical review capacity in more detail, exploring commissioning processes related to reducing needless admissions of older people into hospital, a perennial problem in all healthcare systems (Audit Commission, 2002; Keating, Sealy, Dempsey, & Slater, 2008; Lyon, Miller, & Pine, 2006; Point, 2010; Windle et al., 2009). We draw upon the concept of absorptive capacity (ACAP) (Cohen & Levinthal, 1990; Lane et al., 2006; Zahra & George, 2002). Hitherto, ACAP literature has developed in the private sector, but has been applied to provide considerable insight to the case of healthcare (Berta et al., 2010; Ferlie, Crilly, Jashapara, & Peckham, 2012; Harvey, Skelcher, Spencer, Jas, & Walshe, 2009).

The concept 'absorptive capacity' (ACAP) was first coined by Cohen and Levinthal (1989), to describe an organisation's *'ability to identify, assimilate, and exploit knowledge from the environment'* (p.569). Lane et al (2006) hail ACAP as *'one of the most important constructs to emerge in organisational research in recent decades'* (p.833). Since its inception, ACAP has been seen as a core element of increasing critical review capacity, but the dynamics of enhancing ACAP are theoretically under-developed (Hotho, Becker-Ritterspach, & Saka-Helmhout, 2012; Lane et al., 2006). Zahra and George (2002) characterise four aspects of knowledge mobilisation crucial for developing ACAP: identifying and accessing relevant knowledge through acquisition processes; analysing and interpreting this information through assimilation; integrating existing knowledge

with the newly assimilated knowledge through transformation; and finally refining and developing existing organisational routines and behaviours through exploitation of the transformed knowledge. These components can be further considered as two interacting and complementary elements: Potential Absorptive Capacity (PACAP) - the ability to acquire and assimilate knowledge; and Realised Absorptive Capacity (RACAP) - the ability to put newly acquired knowledge into action within the organisation through transformation and exploitation. It is the variance between PACAP and RACAP which accounts for performance differences amongst organisations, with a decrease in variance crucial to enhancing ACAP (Zahra and George, 2002).

Combinative Capabilities

In this study we are concerned with reducing the variance between PACAP and RACAP to increase the critical review capacity of CCGs. To do this, it is beneficial to consider the antecedents to ACAP, otherwise known as combinative capabilities (Jansen, Van Den Bosch, & Volberda, 2005; Todorova & Durisin, 2007; Van Den Bosch et al., 1999; Volberda, Foss, & Lyles, 2010). Combinative capabilities refer to the knowledge processing activities of an organisation to generate, synthesise and apply new knowledge (Kogut & Zander, 1992; Van Den Bosch et al., 1999). They will influence the ability of organisations to develop the four dimensions of ACAP (acquisition, assimilation, transformation and exploitation), as harnessing and developing them will enhance critical review capacity and strategic innovation through exploratory, shared learning and decision making (Gebauer, Worch, & Truffer, 2012; Lane et al., 2006). Van den Bosch et al (1999) distinguish three types of combinative capabilities which will influence ACAP: systems capabilities, coordination capabilities and socialisation capabilities.

Regarding their effects upon ACAP, combinative capabilities work in different ways. First, socialisation capability refers to an organisation's vision to produce a shared ideology and development of a distinct group identity. The social processes associated with this capability are often seen as most influential in the development of ACAP within professional organisations (Hotho et al., 2012; Zahra & George, 2002). The shared culture or ideology that socialisation capability represents can transform and exploit new knowledge quickly, but may also represent a 'mental prison' that leaves little room for absorbing outside sources of knowledge that contradict shared beliefs. The absorption of new, external knowledge proves easier where it is linked to that

knowledge already embedded within the organisation, rather than representing a significant departure from pre-existing knowledge. Similarly, knowledge is more likely to be transferred between those within the organisation, where they have common knowledge in terms of expertise, training or other background characteristics (Volberda et al., 2010). Linked to this, powerful groups of actors, within and outside an organisation, may influence knowledge absorption processes to achieve their goals (Easterby-Smith & Prieto, 2008; Todorova & Durisin, 2007). The implication is that employees need to be exposed to diverse knowledge sources, but these need to complement existing knowledge sources (Zahra & George, 2002). Socialisation capabilities may render organisational members unable to 'see' or 'understand' the potential value of new, external knowledge (Todorova & Durisin, 2007). Healthcare is one such distinctly professionalised context, and the communication of knowledge and information between different organisational members is highly complex and iterative, with considerable but variable agency for actors to affect the process (Berta et al., 2010). There exist deeply ingrained organisational structures and social networks, which engender institutionalised epistemic communities of professional practice that exist in silos, relatively decoupled from one another (Ferlie, Fitzgerald, Wood, & Hawkins, 2005). This may impact socialisation capabilities, as professional training and early career experience may engender a custodial role orientation, so that professionals orientate narrowly towards their peers, rather than across the healthcare delivery system (Currie & White, 2012).

Second, system capabilities refer to formal knowledge exchange mechanisms such as written policies, procedures and manuals that are explicitly designed to facilitate the transfer of codified knowledge (Van Den Bosch et al., 1999). Within healthcare contexts this could be in the form of clinical guidelines, such as those set by the UK National Institute for Clinical Excellence (NICE), or mandatory priority setting by top-down Government initiatives, such as the continuing influence of the National Commissioning Board over CCGs. System capabilities such as pre-existing policy in the realm of organisational incentives, legislation and system level dissemination mechanisms or initiatives, which afford access to external resources and influencers, formalise but narrow knowledge acquisition and assimilation, and, at the same time, restrict exploratory learning, innovation and transformation (Berta et al., 2010). The primary virtue of systems capabilities is they provide a memory for staff handling routine situations in an organisation, meaning staff can react quickly. Like socialisation

capabilities, they increase the efficiency of knowledge exploitation, but narrow the search for new external knowledge and scope for information processing.

Co-ordination capabilities refer to lateral forms of communication such as education and training, job rotation, cross functional interfaces, distinct liaison roles. ICT solutions, social relationships, shared mental models, strategic alignment. In contrast to socialisation and systems capabilities, co-ordination capabilities increase scope of external knowledge acquired and assimilated, and flexibility in knowledge absorption. Hence, to enhance ACAP, managers might attend to organisational mechanisms associated with co-ordination capability (Jansen et al., 2005; Van den Bosch et al., 1999). Co-ordination capabilities might be developed in the domain of 'social integration mechanisms', such as boundary-spanning or liaison mechanisms, communities of practice, and decentralising authority and decision-making (Cohen and Levinthal, 1990; Jansen et al., 2005; Lane et al., 2006; Volberda et al., 2010). The aim for organisational managers, through developing co-ordination capabilities, is to establish ties with external sources of new knowledge and support this through establishing dense networks of ties within the organisation (Jansen et al., 2005). For example, within commissioning networks, such as CCGs, the increased involvement of GPs within the commissioning structures might act as a co-ordination capability as doctors have been noted as holding a mediating role in communication (or lack of) across jurisdictional boundaries (Berta et al, 2010).

From the literature review it is evident that CCGs need to reduce the variance between their PACAP and RACAP by improving their combinative capabilities, and subsequently enhancing their critical review capacity and commissioning processes. However, the influence of intra-organisational dynamics on combinative capabilities has received little attention in the existing literature, both within healthcare and the wider body of organisational research (Volberda et al., 2010). We recognise that healthcare represents a distinctive environment compared to private sector R&D contexts in which much of the empirical work around ACAP has taken place. This renders some of the dimensions of the ACAP literature less relevant to healthcare, but at the same time, brings others to the forefront (Easterby-Smith et al., 2008). As such, our exploration of in-depth CCG cases is timely in two respects: firstly it responds to calls for a deeper consideration of the influence of combinative capabilities on the variance between PACAP and RACAP, an area which has been highlighted for future research (Jansen et al, 2005); and secondly, the application of the ACAP model to CCGs allows exploration of the challenges facing commissioning bodies in healthcare globally.

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