PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	CCG leadership of healthcare commissioning networks in England
AUTHORS	Zachariadis, Markos; Oborn, Eivor; Barrett, Michael; Zollinger-Read, Paul

VERSION 1 - REVIEW

REVIEWER	Chris Naylor The King's Fund
REVIEW RETURNED	03-Nov-2012

THE STUDY	General assessment The article covers a wide range of issues regarding the development of clinical commissioning, many of which are highly topical. Its main shortcoming, as currently written, is that it does not adequately demonstrate how the application of network theory adds to our understanding of these issues (see results section, below). Introduction The introduction would benefit from a clearer articulation of why network leadership skills will be particularly important for CCG leaders in the current context. The reforms deliberately create a system in which no one organisation is 'in charge' – authority in the new system will need to be exercised through influence and consensus-building, and the design of CCGs means they will be constrained in terms of their in-house capabilities and will need to work with a range of other organisations (including other CCGs; CSUs and local authorities) in order to achieve their objectives. The capabilities described at the top of page 4 will be critical, and the authors could make more of this. Figure 1 and the surrounding paragraphs provide a useful history of clinical commissioning initiatives but the authors could do more to convey the important differences between the different policies (for example, compulsory Vs voluntary involvement; varying scope of services commissioned). Methods The article needs to be clear about the status of CCGs when the research was conducted. Although consortia nominally covered 90% of the population at the time, the groups did not have any statutory powers yet, many were in a state of extreme flux, and their fate was unclear due to political uncertainty. This will almost certainly have implications for the authors' findings. Later (page 8) the authors suggest that the changes occurring at this time were changes in name only (from GP commissioning consortia to CCGs) and that the

	substantive findings of the study are not affected by this context. This is unconvincing. There were more significant changes taking place and profound uncertainties during the study period, and this unstable context will certainly have affected the shape of networks and the dynamics within them. More information on how the analysis was conducted (e.g. the analytical framework used) would be helpful. Example questions from the interview schedule and survey would also be helpful in understanding what information was collected. Figure 4 is interesting and the text could do more to describe what it tells us in terms of the distinct leadership and organisational styles.
RESULTS & CONCLUSIONS	Results More needs to be done to demonstrate how the methods deployed in this study add to our understanding. For example: • On page 8 the authors describe the tension between retaining a local focus and achieving efficiency through scale. This tension is well-known and has been written about extensively. The authors need to explain what the analysis presented here, and the application of network theory specifically, adds to our understanding of this tension. • Similarly on page 9, the authors discuss how GP leaders will need to share knowledge with frontline clinicians in order to maintain engagement. As currently described this seems an obvious statement - the authors will need to explain how concepts such as network coherence give us a richer understanding, and not simply a new vocabulary. • The authors' reflections on the importance of history and pre-existing configurations are interesting but the article could do more to explain how this knowledge emerged from the social network analysis performed. The finding that CCGs had only 2-3 ties with acute providers is interesting and gets closer to demonstrating the utility of social network analysis. If possible it might be helpful to include a full table of numbers showing how many links different CCGs had to the various partner organisations. On page 11, the authors may want to mention that it is a legal requirement for CCGs to have both nurse and patient representation on their governing bodies – although not all CCGs had put this in place at the time of writing. The authors present results on this page regarding the benefits and challenges of patient involvement, which is a major issue in its own right. This article may not be the right place to include such discussion. On page 12, there are some interesting assertions about the risk of network isolation, e.g. "GP leaders can create cliques that are inward-facing and avoid engagement with other parties". This is a significant claim and the authors should show how it is demonstrated by their data. Discussion In the discussion, the section described as 'policy implications' largely concerns practice rather than policy.

	The authors could do more to explain what the key recommendations given in box 2 mean in practical terms, if they are to be of relevance to GP leaders.
GENERAL COMMENTS	A glossary defining key theoretical terminology (e.g. orchestrator, value network, degree, betweenness, sedimentation) would be helpful. The authors may also want to avoid using terms which will be less familiar to readers outside the UK, e.g. white paper. In several places the authors refer to health reforms “in the UK” where the reforms described were limited to England. There are a number of grammatical mistakes and the articles would benefit from careful proof-reading (e.g. page 3 line 21; page 4 line 27; page 12 line 5).

REVIEWER	Prof Mike Chiasson Dept of Management Science Lancaster University, UK LA1 4YX
REVIEW RETURNED	05-Nov-2012

THE STUDY	* There isn't a particular research question although the objectives are clear -- "emerging role of clinicians in orchestrating innovation". * While I think the topic and research question are important-interesting, I'm having trouble understanding the innovation network theory and its origins-components, and perhaps more importantly, the comparative analysis that I'm anticipating (but which never arrives) comparing the various practices and outcomes -- however tentative -- across the cases. In other words, if not explicitly comparing to a well stated theory, then comparison aross the cases or across the cases and previous practice-history seems necessary. * No patients studied in this paper. * The main outcomes are "emerging practice" -- and I suppose that this is done -- but the outcomes in terms of "best practice" implied by innovation network theory and partially completed in the paper through various implied evaluations of clinician practices I think needs further work.
RESULTS & CONCLUSIONS	* I think without a clear research questions and followup analysis, the results don't answer (yet) a clear question -- and the conclusions-interpretations and their relationship with the data are unclear at this point. * I suppose the previous evidence would be either the theory (which remains vague) and the other attempts at clinician-lead commissioning -- which is touched upon but not followed through. Again, comparisions with theory, across the cases, with some "gold standard" of commissioning, or any combination would provide a clearer contribution and outcome.
GENERAL COMMENTS	I think a clearer research question, and either a clearer comparative focus with any one of the following would be helpful: 1. Clearer and more detailed theoretical position (for what BMJ could allow). 2. Clearer comparison with a "gold standard" view of what commissioning leadership-innovation should look like (may be related to 1). 3. Clearer comparison of differences across casesand their intermediate or final outcomes -- i.e. a specific outcome-dependent variable (the current one is somewhat hazzy).

	4. Clearer comparsion with historical attempts to decentralize commissioning to clinicians. The source of the data for comparison can include both the social network analysis and the interview data. I think it may be helpful to consider what "wouldn't" these clinician-lead groups do -- given that the results and Figure 5 especially suggest basically that more involvement and engagement with everyone and everything is better. Given the difficult and time-consuming position of these clinicians, is this especially insightful and useful for them? Are there cases where one of your CGs is doing something particularly novel and different-unusual from these general statements -- setting priorities differently and uniquely? Unfortunately I don't have much more time to provide specific direction given the quick turnaround of reviews at the journal, and I'm certainly open to responses from the authors in a letter as well as in the paper. I wish them the best wishes in considering these comments.

REVIEWER	Dr Judith Smith BA MBA PhD Head of Policy The Nuffield Trust London, UK
REVIEW RETURNED	08-Nov-2012

REPORTING & ETHICS	As far as I can tell, ethical issues were appropriately addressed.
GENERAL COMMENTS	This paper examines the early stages of development of clinical commissioning groups in the NHS, using innovation and social network theory to explore the role of doctors in leading these new groups. It is refreshing to read a paper that explores the implementation of health care reform from a theoretical perspective drawn from other fields, and this lends a distinctive and attractive edge. The paper positions itself as providing insights into clinical commissioning, and in particular the role of commissioning in bringing about innovation. There are however a number of important areas where the paper needs strengthening, if it is to achieve this ambition: - First, it needs to modify its scope and be clear that the research reported here is based on work with CCGs in their very early stages of formation, and before much of the subsequence government guidance (e.g. re authorisation, commissioning outcomes framework) had been published. The paper offers important insights into the process of setting up CCGs, but not their operation CCGs are yet to formally start work). - Second, in order to underpin the empirical work, and the application of theory, there is a need for careful prior analysis of the extensive evidence base on primary care-led commissioning in the NHS. Most of this evidence is missing from this paper, and is needed in order to locate this work as another contribution to a large literature that has consistent themes re GP leadership, the focus on provision rather than commissioning, the time it takes to set up new

	organisations, the importance of relationships, the role of information, etc. Work I would expect to see includes: Dowling and Glendinning re the national PCG/T tracker study, Smith and Goodwin (2006) re the national case studies of PCG/Ts, more from Mays et al (book, 2001) re total purchasing, Smith et al (Health Foundation 2004, BMJ 2005) re lessons from a major review of evidence of primary care led commissioning, Checkland's extensive work on practice-based commissioning, and Ham's analyses over 20 years of international experience of commissioning. - Third, there is a need to explain much more clearly the justification for considering CCGs as 'innovation networks', for they are in fact statutory health funding and purchasing organisations, even if the policy intention might have been otherwise at the outset. Is commissioning really about innovation, and if so, what do the authors mean by this, and what evidence do they have to support this? Evidence on the performance of NHS commissioning (see Smith and Curry 2011, King's Fund book for an overview, Health Select Committee Inquiries, work by Checkland, and O'Cathain) suggests that commissioning struggles to do the core business and make significant strategic change, and innovation rarely features, except in respect of relatively marginal work in primary and community health services. - Fourth, related to the previous point, to make the paper practical and accessible to medical and practitioner readers, there is a need to explain how CCGs may differ from the primary care trusts that preceded them, what exactly they will be doing, how they might 'innovate', and what this might mean in a tough financial context. At present, the paper runs the risk of irritating readers with a lot of language that feels rather like jargon, for I was unclear what 'managing knowledge mobility', 'external innovation coherence', and 'managing network stability' mean in practice within clinical commissioning. As mentioned earlier, it is refreshing to apply theory to this area of health management practice, but this needs to be done in a well-argued and accessible manner, and rooting this in the available evidence base re clinical commissioning. In conclusion, there is some really interesting empirical material about the setting up and early development of pathfinder CCGs in this paper (the research is a snapshot of a very early stage of development, and there is no discussion of whether pathfinders were in fact embryonic CCGs or something transitional), but it is currently hidden from view, and the jargon from innovation theory risks alienating the reader. The paper would benefit from being significantly shorter, with a much crisper presentation and analysis of the experience of clinicians setting up new commissioning organisations, located within theory drawn from the world of organisational behaviour, and the extensive evidence base from over 20 years of experience. I question however whether the theoretical base needs to be focused on innovation – the development of social networks, and/or organisational development would seem to be more appropriate. More minor points: - The table on page 5 does not make it clear whether the 'wave' referred to is a wave of pathfinder intake or a CCG authorisation wave. There is scope for confusion, for who now actually remembers pathfinders, unless this is clearly spelled out?

	- Why were 8 case studies selected, and only 6 focused on in-depth? This needs to be explained. - On p6, CCG board membership is referred to as if it were stable, yet the pathfinders had no defined membership and were in major flux throughout the period of study (and still forming in late 2012). A brief mention is made on p8 of the fact that wider changes did not affect the findings of this research, but this warrants further discussion. - P7 footnote is odd – what are 'sensible reasons', and surely this needs explaining so that the reader can judge? - The results section is quite dense, and difficult to read. More signposting is needed, along with the aforementioned prune.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1- Chris Naylor
Its main shortcoming, as currently written, is that it does not adequately demonstrate how the application of network theory adds to our understanding of these issues.
Thank you for raising this point. We appreciate this as a shortcoming in the previous version of our paper. We have worked hard to clarify our argument and its relevance. Further, we have articulated how a network perspective allows a better focus on the relational capability of commissioning leaders and their dynamic interaction with multiple stakeholders. We argue that the emphasis in most prior work on commissioning has largely been at the transactional level between purchasers and providers.

The introduction would benefit from a clearer articulation of why network leadership skills will be particularly important for CCG leaders in the current context. The reforms deliberately create a system in which no one organisation is 'in charge' – authority in the new system will need to be exercised through influence and consensus-building, and the design of CCGs means they will be constrained in terms of their in-house capabilities and will need to work with a range of other organisations (including other CCGs; CSUs and local authorities) in order to achieve their objectives
Yes, we agree that this should be better emphasized. In our introduction, we highlight that commissioning has traditionally been understood as the dynamic of how commissioners evaluate, assess fit for purpose and set accountability processes for health delivery, thus focused on planning, assessing and monitoring activities. Commissioning studies have examined how entities have sought 'to take charge' (or not) of these tasks. As you point out, this reform can be seen as a deliberate shift in focus where no one organization is in charge, but rather these activities need to be negotiated across multiple stakeholders. We thus motivate our study more strongly around the need to understand the relational dynamics within this new commissioning process, which stands in contrast to the previous emphasis on how the various tasks are being accomplished. Thank you for this insight on the framing of our paper.

The authors could do more to convey the important differences between the different policies
We appreciate this comment, which has been echoed by the other reviewers. In our revised paper we review previous commissioning policies and practices. We have also developed a new table that outlines the important differences. In particular we highlight the distinctions between a market centred logic of organization and governance in previous commissioning reforms and the network centric logic of this current reform.

The article needs to be clear about the status of CCGs when the research was conducted… the authors suggest that the changes occurring at this time were changes in name only (from GP

commissioning consortia to CCGs) and that the substantive findings of the study are not affected by this context. This is unconvincing. There were more significant changes taking place and profound uncertainties during the study period, and this unstable context will certainly have affected the shape of networks and the dynamics within them.
We acknowledge this challenge of doing an in depth study of a dynamic system, which is necessarily changing and the ensuing limitations of study findings. Whilst our study was ongoing for a period of a year, our engagement with specific CCGs was much shorter as we collected the survey data, observations and interviews over a 3-5 month period. However we agree that the overall dynamics of the unfolding reforms are important in understanding the overall network dynamics. We emphasize this point more clearly in the challenges of managing network stability; for the cohort of CCGs we studied this was particularly acute, as the whole system (including policy formulation) was in flux, hence managing the stability a central relational challenge.

More information on how the analysis was conducted (e.g. the analytical framework used) would be helpful. Example questions from the interview schedule and survey would also be helpful in understanding what information was collected
We have re-written the methods section to address these issues and be more clear on the analytical framework as well as methods used. Due to limited length of papers in BMJ Open, we haven't included any specific interview or survey questions but we are happy to do so in a separate chapter in the appendix if this is considered an important addition.

Figure 4 is interesting and the text could do more to describe what it tells us in terms of the distinct leadership and organizational styles
We are pleased you found this figure of interest. We have extended our analysis to build on the points developed from the SNA and also added a second table comparing some of the SNA statistics. We have also linked these findings to our overall argument for network leadership and how CCGs could facilitate innovation in their network.

More needs to be done to demonstrate how the methods deployed in this study add to our understanding.
We have provided a stronger motivation for our network analysis, the predominant (quantitative and qualitative) method used. Given our stated interest in understanding the relational dynamics of commissioning, as opposed to a predominant focus in earlier commissioning studies of tasks involved (such as assessing, monitoring, planning) networks bring the connectivity of various entities and stakeholders to the fore.

On page 8 the authors describe the tension between retaining a local focus and achieving efficiency through scale. This tension is well-known and has been written about extensively. The authors need to explain what the analysis presented here, and the application of network theory specifically, adds to our understanding of this tension. Similarly on page 9, the authors discuss how GP leaders will need to share knowledge with frontline clinicians in order to maintain engagement. As currently described this seems an obvious statement - the authors will need to explain how concepts such as network coherence give us a richer understanding, and not simply a new vocabulary.

We appreciate this comment and acknowledge that extensive attention has been given to this point. Whilst this scalar dynamic is not a focus of our current analysis, we bring the tension into the analysis as it has important implications on the challenge of frontline GP engagement. Previous conceptualisations of commissioning where entities were 'in charge' of specific tasks, such as planning and monitoring, GP (dis)engagement was a significant feature; for example this has been cited as a limitation of the PCT approach to commissioning (Checkland, Coleman, Harrison, et al 2009). The network approach explicitly decenters hierarchy and thus more open about the various modes of engagement (ie the actors can enter the system in a large variety of ways, taking on roles

that are fore purposely shaped, and not necessarily needing to go through a hierarchy). Our innovation case studies highlight the important role that GPs play in contributing (and implementing) new ideas and hence foregrounds the importance of understanding their engagement with the broader network. Whilst the scalar tension remains, we suggest that the CCG boards relational ability to engage GPs is (theoretically) higher given more commonality in clinical background, and thus there is scope for new engagement dynamics. We highlight in our discussion, that - our study suggests that leaders need to go beyond a focus on transactions and bilateral relationships to fostering knowledge sharing with multiple stakeholders, while ensuring network stability and coherence. Rather than seeking to establish an excessive number of brokering ties themselves, leaders need to strategically enable adequate inter connectivity across the wider system acting like a relational catalyst. Network coherence as a term emphasizes the dynamic of information (as)symmetry across the network and the leadership role in enabling and catalyzing knowledge/information circulation, rather than pointing to their specific task of doing/fulfilling this role themselves.

The authors' reflections on the importance of history and pre-existing configurations are interesting but the article could do more to explain how this knowledge emerged from the social network analysis performed.
Whilst the network analysis was helpful in understanding the density of ties between board members, the specific linkage of the network features to historical circumstances was revealed in the interview data. Thus leaders expounded on how their previous work arrangement were influencing their current relationship, approaches and dynamics.

The finding that CCGs had only 2-3 ties with acute providers is interesting and gets closer to demonstrating the utility of social network analysis. If possible it might be helpful to include a full table of numbers showing how many links different CCGs had to the various partner organisations
We have a developed a new table in light of your comments.

On page 11, the authors may want to mention that it is a legal requirement for CCGs to have both nurse and patient representation on their governing bodies – although not all CCGs had put this in place at the time of writing.
We add this point as you suggest; however we also point out that at the time of our study this was NOT a requirement. The requirement came into policy at the end of our study period, after all the SNA's had been done

The authors present results on this page regarding the benefits and challenges of patient involvement, which is a major issue in its own right. This article may not be the right place to include such discussion.
Whilst we have considered seriously your point, we have elected to retain our analysis on service user involvement for two reasons. Firstly they were members on many of the boards we studied and hence integrated into our network analysis. Secondly, the experiential knowledge is a particularly important (and in many ways novel) policy emphasis that adds new complexity to the leadership challenge. However we agree that a full patient involvement analysis would be a good topic for another paper in its own right. Here we seek primarily to place it in context with other important relationships.

On page 12, there are some interesting assertions about the risk of network isolation, e.g. "GP leaders can create cliques that are inward-facing and avoid engagement with other parties". This is a significant claim and the authors should show how it is demonstrated by their data.
Given the language and terminology complexity presented in our paper, we have removed the network term of 'cliques' from our analysis. The term has quite distinct usage and nuance in the network literature however we did not feel that this concept added sufficiently to warrant this

development in our revised paper.
In the discussion, the section described as ‘policy implications’ largely concerns practice rather than policy.
Thank you for this comment. We have adjusted our heading to reflect this insight. The heading in our discussion now reads: Network leadership and practice implications

The authors could do more to explain what the key recommendations given in box 2 mean in practical terms, if they are to be of relevance to GP leaders.
We have now rewritten the Discussion section and have included an additional section which outlines the practice implications to network leadership as described in our paper. This supplements box 2 (which is box 4 in the revised version) and gives a detailed account on how GP leaders can influence their healthcare network activity.

A glossary defining key theoretical terminology (e.g. orchestrator, value network, degree, betweenness, sedimentation) would be helpful. The authors may also want to avoid using terms which will be less familiar to readers outside the UK, e.g. white paper.
Given the length of our paper we have elected not to write a separate glossary, though would be pleased to do so if the revision continues to warrant this. We have addressed this comment by pruning the theoretic terms used in the paper. For example we no longer draw on orchestration, innovation hubs, and value network and we’ve replaced these with more descriptive accounts of the theoretical framework used. ` We also minimize references made to UK specific terms.

In several places the authors refer to health reforms “in the UK” where the reforms described were limited to England.
Thank you for pointing this out. We have reworded our phrasing in this regard.
There are a number of grammatical mistakes and the articles would benefit from careful proof-reading
We apologise for the grammatical errors and have been careful to proof read the revised manuscript.
Thanks once again for your thoughtful points and suggestions which we have found most useful in revising the paper.

Reviewer 2: Mike Chiasson

While I think the topic and research question are important-interesting, I’m having trouble understanding the innovation network theory and its origins-components, and perhaps more importantly, the comparative analysis that I’m anticipating (but which never arrives) comparing the various practices and outcomes – however tentative – across the cases. In other words, if not explicitly comparing to a well stated theory, then comparison across the cases or across the cases and previous practice-history seems necessary.
Our interest in drawing on network theory stems from our theoretical interest in conceptualising the relational dynamics of the new commissioning process. We argue that previous commissioning studies have either focused on a policy analysis or on the transactional and task nature of commissioning (eg the planning, monitoring and assessing activities, which is how DoH (2005) defines commissioning. We take a relational focus and examine the dynamics between stakeholders and how these dynamics enable or constrain knowledge flows, network stability and network (information) coherence, all of which are considered to be important in innovation processes (e.g. Dhanaraj C, Parkhe 2006). Given that the 6 case sites are nascent network entities examined at the formative stages our purpose is to give an integrated account of the leadership challenges rather than comparative. However, we take on board your comment with regards to the value of more comparative analysis, and in the revised paper, we develop a comparison between two sites where innovative commissioning pathways were being developed. We highlight the differences in how the innovation unfolded and relate these at a tentative level to the social network. We also highlight the

commonalities, e.g. the need for drawing on frontline GP knowledge in both cases. Given the length of our paper we limit our comparison to two illustrative (rather than exemplar) sites.

The main outcomes are "emerging practice" -- and I suppose that this is done -- but the outcomes in terms of "best practice" implied by innovation network theory and partially completed in the paper through various implied evaluations of clinician practices I think needs further work.
In our revised paper we have addressed this critique by illustrating how two illustrative examples of innovative commissioning practice that increased the integration of primary and secondary care and in one case also led to decreased costs. In Box 1 we highlight the repeated failure of integration across a continuum of care and thus point out that current practice in the case sites were not at a 'best practice' standard and could be improved; this was the primary motive behind the innovation vignettes that we have now added to the analysis. Thank you for this point.

I think without a clear research questions and follow-up analysis, the results don't answer (yet) a clear question -- and the conclusions-interpretations and their relationship with the data are unclear at this point. I suppose the previous evidence would be either the theory (which remains vague) and the other attempts at clinician-lead commissioning -- which is touched upon but not followed through. Again, comparisons with theory, across the cases, with some "gold standard" of commissioning, or any combination would provide a clearer contribution and outcome. I think a clearer research question, and either a clearer comparative focus with any one of the following would be helpful: 1. Clearer and more detailed theoretical position (for what BMJ could allow).
We hope that the revised paper is clearer in this regard. Our exploratory analysis seeks to unpack the relational dynamics in commissioning (rather than how the tasks are undertaken) and open up the form overly dyadic focus of commissioner and providers under a market-based logic. To this end we suggest that innovation network theory is important as it foregrounds the importance of ties between entities; we draw on an illustrative case comparison, as you suggest, in order to show how these dynamics can unfold in very different ways, though may also have commonalities.
Our research question is: What are the relational challenges for GP leaders setting up new network-centric commissioning organisations in the recent policy reform in England? Our exploratory study is theoretically informed by network theory, and in particular in innovation network theory, which emphasizes how innovation can be enabled across networks. We take this position because of the multiple stakeholders involved in the reformed commissioning process and the numerous entities with the GP leaders were needing to engage. Whilst innovation was not the core function of the new networks, it was an explicit requirement for the new commissioning process to be more innovative and develop novel approaches to care.

2. Clearer comparison with a "gold standard" view of what commissioning leadership-innovation should look like (may be related to 1).
As there is no Gold standard for commissioning (also see revised introduction on the 'clinical commissioning continuum') and what the network leadership process might suggest, hence we draw on the theoretical arguments for enabling innovation networks (Dhanaraj C, Parkhe A 2006) as a useful perspective in our study. As such we foreground the important role of hub network entities in enabling network stability, knowledge flows and network coherence. In so doing, our approach is to think less about the tasks required for commissioning processes (planning, monitoring etc) as previous studies have already done, and focus more on how the network dynamics are enabled and constrained.
3. Clearer comparison of differences across cases and their intermediate or final outcomes
We appreciate this comment and have attempted to develop a more comparative approach across our cases. As we state in the revised paper, our purpose is not to compare different networks and assess which one is more innovative or commissions better, since at the time of the study (and up until April 2013) real commissioning is not being done by CCGs, as they are shadow entities until PCTs are dissolved. Hence we examine them in flux, as they are in transition and do not follow them

long enough to measure specific outcomes. However we do find they face common relational challenges, which we bring to the fore.
4 Clearer comparison with historical attempts to decentralize commissioning to clinicians.
In the revised paper we have added a section in the literature review, as well as a comparative table, that provides an historical comparison of commissioning in England. This also strengthens our argument and responds on prior comments on the gold standard for commissioning and relates it to historical attempts to achieve these.

I think it may be helpful to consider what "wouldn't" these clinician-lead groups do -- given that the results and Figure 5 especially suggest basically that more involvement and engagement with everyone and everything is better. Given the difficult and time-consuming position of these clinicians, is this especially insightful and useful for them? Are there cases where one of your CCGs is doing something particularly novel and different-unusual from these general statements -- setting priorities differently and uniquely?
This has been an instructive insight. We seek to highlight the relational focus of commissioning activities in the new policy formulation, rather than specify which relationships leaders need to engage in. We also caution against the problem of being overly connected, and suggest that this may be inefficient overall. Instead we suggest that leaders may consider strategically thinking about the knowledge brokering processes within and across the network and consider how they might enable better connectivity- not necessarily being the connectors themselves but ensuring that the connections are made by the appropriate and available individuals. Our conclusion suggests that GP leaders will need to assign and exploit knowledge brokering roles and leverage good communication between their board members and others outside their board in order to bring new ideas into the group, facilitate new synergies and alliances, and allow for projects that take advantage of the available resources.
Thanks again for all your comments which were very helpful in strengthening the paper in this revision
Reviewer 3; Judith Smith
Be clear that the research reported here is based on work with CCGs in their very early stages of formation, and before much of the subsequence government guidance (e.g. re authorisation, commissioning outcomes framework) had been published. The paper offers important insights into the process of setting up CCGs, but not their operation CCGs are yet to formally start work).
We appreciate your insight into the very formative stage of CCG development that we studied and have attempted to clarify this more fully in our methods section.
In order to underpin the empirical work, and the application of theory, there is a need for careful prior analysis of the extensive evidence base on primary care-led commissioning in the NHS.
This has been useful guidance and we have strengthened our review of previous commissioning practice and developed a comparative table (Table 1 in the revised paper) to illustrate the differences. This has helped us clarify the unique perspective our study takes on commissioning as a relational process which is unfolding in a network context.

There is a need to explain much more clearly the justification for considering CCGs as ‘innovation networks’, for they are in fact statutory health funding and purchasing organisations, even if the policy intention might have been otherwise at the outset. Is commissioning really about innovation, and if so, what do the authors mean by this, and what evidence do they have to support this?
We have clarified our position on innovation more fully in the paper. We acknowledge that commissioning involved certain statutory processes, though at the time of our study, these were still being undertaken by PCTs with CCGs functioning as shadow entities of commissioning. We agree that commissioning is not the same as innovation. However there is a clear mandate for innovation to be more firmly embedded within the commissioning process so that better, more suitable, and more responsive forms of care are commissioned and delivered. Numerous policy documents highlight the current policy focus on embedding innovation at the heart of healthcare processes, including commissioning. However, we foreground the importance of the network dynamics in the current policy

reform, as opposed to innovation per se, though are aware that in the organizational literature these frequently overlap.

There is a need to explain how CCGs may differ from the primary care trusts that preceded them, what exactly they will be doing, how they might 'innovate', and what this might mean in a tough financial context. At present, the paper runs the risk of irritating readers with a lot of language that feels rather like jargon, for I was unclear what 'managing knowledge mobility', 'external innovation coherence', and 'managing network stability' mean in practice within clinical commissioning. As mentioned earlier, it is refreshing to apply theory to this area of health management practice, but this needs to be done in a well-argued and accessible manner, and rooting this in the available evidence base re clinical commissioning.
We appreciate this point. As part of our revisions we have revisited these terms and made sure that we don't use any jargon that will confuse the readers. More specifically, we rephrased our key network leadership practices and removed the ones that were not obvious (e.g. external innovation coherence). In addition, where possible we were quite descriptive and tried to link these concepts more closely with the practice of clinical commissioning. We also included two examples where knowledge sharing and collaboration brought positive results by pointing out what it can be learned from these and can be reinforced by our theoretical approach. Finally, we have included a table that compares the previous commissioning approaches with the current one and how the network-centric approach of CCGs can encourage innovation.

there is some really interesting empirical material about the setting up and early development of pathfinder CCGs in this paper (the research is a snapshot of a very early stage of development, and there is no discussion of whether pathfinders were in fact embryonic CCGs or something transitional), but it is currently hidden from view, and the jargon from innovation theory risks alienating the reader. Indeed, the material about the early stages of pathfinders (later CCGs) is quite interesting and could lead to a paper on its own. However, in this project we have focused our effort in understanding the relational dynamics of the multiple stakeholders and the relational skill of commissioning leaders using a unique theoretical approach that involves innovation networks. The fact that we observed CCGs in their early stages worked to our advantage as we could explore the formation and development of healthcare networks without the mandatory nature and explicit guidance of the Department of Health. To make this more clear we have included examples where our social network analysis enables us to analyse the network ties and see what effects they have on commissioning practice (and innovation).

The table on page 5 does not make it clear whether the 'wave' referred to is a wave of pathfinder intake or a CCG authorisation wave. There is scope for confusion, for who now actually remembers pathfinders, unless this is clearly spelled out?
In the process of revising the paper we have been clearer on the timing of the study and the nature of the commissioning groups we've examined, i.e. the fact that they are pathfinders. In addition we have revised Table 2 and are now more explicit by saying that this concerns the "Pathfinder Wave" of the initial stages of commissioning groups.
Why were 8 case studies selected, and only 6 focused on in-depth? This needs to be explained.
We started our research by identifying 8 CCGs in the East of England that satisfied our criteria for diversity in size, location, and involvement in commissioning stages. Unfortunately, as is often the case in qualitative research, we were granted good in-depth access to only 6 of them. There is no reason to believe this was correlated with any of our criteria above (hence there was no selection bias) but was random. We have now removed this information so as to avoid any confusion that will undermine our results and will create any misunderstandings around the research process.

On p6, CCG board membership is referred to as if it were stable, yet the pathfinders had no defined membership and were in major flux throughout the period of study (and still forming in late 2012).

The CCG board members we examined were quite stable and people that were either voted or volunteered for the board were there for more than two years. Pathfinder membership was also very specific and structured. During our study 3 new members were added to the boards and one person resigned. Our SNA, observational and interview data were collected in relatively short time frames in relation to the on-going reform process (e.g. generally we studied each site for a period of 3-4 months) hence the on-going flux had less influence on the relationships during the course of fieldwork, as would for example a longitudinal study over the entire reform process. We have now provided more information around this in the paper.

P7 footnote is odd – what are 'sensible reasons', and surely this needs explaining so that the reader can judge?

We have removed this terminology in order to avoid confusion.

The results section is quite dense, and difficult to read. More signposting is needed, along with the aforementioned prune.

We have pruned the number of constructs being used in our study and we hope you will find the revised results section more accessible. Thank you very much once again for your careful and detailed comments.

VERSION 2 – REVIEW

REVIEWER	Mike Chiasson Professor, Information Systems Dept of Management Science Lancaster University
REVIEW RETURNED	10-Jan-2013

THE STUDY	The study doesn't sample patient in particular, and there isn't a need for statistical analyses in the research -- except the network analysis which is more for qualitative comparison.
GENERAL COMMENTS	I believe the authors have completed extensive work to address my initial comments and concerns. I look forward to seeing future results by the research team as the commissioning groups move beyond this early phase. Thank you for the opportunity to review for BMJ Open.