International Journal of Integrated Care – ISSN 1568-4156
Volume 10, 29 September 2010
URL:http://www.ijic.org
URN:NBN:NL:UI:10-1-100970
Publisher: Igitur, Utrecht Publishing & Archiving Services

Research and Theory

Collaborative working within UK NHS secondary care and across sectors for COPD and the impact of peer review: qualitative findings from the UK National COPD Resources and Outcomes Project

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Abstract

Introduction: We investigated the effects on collaborative work within the UK National Health Service (NHS) of an intervention for service quality improvement: informal, structured, reciprocated, multidisciplinary peer review with feedback and action plans. The setting was care for chronic obstructive pulmonary disease (COPD).

Theory and methods: We analysed semi-structured interviews with 43 hospital respiratory consultants, nurses and general managers at 24 intervention and 11 control sites, as part of a UK randomised controlled study, the National COPD Resources and Outcomes Project (NCROP), using Scott's conceptual framework for action (inter-organisational, intra-organisational, inter-professional and inter-individual). Three areas of care targeted by NCROP involved collaboration across primary and secondary care.

Results: Hospital respiratory department collaborations with commissioners and hospital managers varied. Analysis suggested that this is related to team responses to barriers. Clinicians in unsuccessful collaborations told 'atrocity stories' of organisational, structural and professional barriers to service improvement. The others removed barriers by working with government and commissioner agendas to

ensure continued involvement in patients' care. Multidisciplinary peer review facilitated collaboration between participants, enabling them to meet, reconcile differences and exchange ideas across boundaries.

Conclusions: The data come from the first randomised controlled trial of organisational peer review, adding to research into UK health service collaborative work, which has had a more restricted focus on inter-professional relations. NCROP peer review may only modestly improve collaboration but these data suggest it might be more effective than top-down exhortations to change when collaboration both across and within organisations is required.

Keywords

collaboration, inter-organizational, inter-professional, quality improvement, respiratory disease

Introduction

The UK government has sought to increase collaboration (joined-up working) across sectorial, organisational and professional boundaries within its National Health Service (NHS) [1]. In England at present (the situation is slightly different in other countries of the UK) primary care trusts (PCTs) arrange almost all the healthcare in their locality, either by direct management of services (through primary care organisations or PCOs) or through agreements with other organisations from whom they order services under contract. They therefore act as both managers and commissioners of healthcare. Most hospital-based care is commissioned from acute trusts (which are organisations set up to manage acute care hospitals in the UK) and most primary care from independent practitioners, coordinated with other community services which the PCTs either directly provide or commission. Features needed for successful collaboration between the different organisations and practitioners involved in this arrangement of supply and commissioning have been delineated [2, 3] but evidence regarding the actual running of these collaborations is lacking; such evidence is important to inform current practice and future reform.

It has been argued that existing analyses of health service collaborations have been too simplistic or too limited in scope. For example, Scott points out that while the focus has been on inter-professional relations, even when these are good, organisational and structural barriers to collaboration may remain [2]. Hudson stipulates that the way organisational factors affect an organisation's response to environmental factors should be a focus of attention [4]. There have been few published randomised controlled trials of interventions aimed at improving patient care by improving inter-professional collaboration across and within organisations of the NHS. The UK National Chronic Obstructive Pulmonary Disease (COPD) Resources and Outcomes Project (NCROP) attempted to do just this [5, 6]. The project was suggested following two UK national audits of acute hospital care for COPD which highlighted wide and unexplained variation in provision of care between respiratory units [7–9]. The project was developed through a coalition of the leading society for respiratory clinicians in the UK (The British Thoracic Society; BTS), the main patients' and carers' charity for COPD in the UK (The British Lung Foundation; BLF) and the Royal College of Physicians (RCP), whose Clinical Effectiveness and Evaluation Unit (CEEU) has had a longstanding interest in clinical audit and peer review to improve care. The project (described in more detail below) evaluated structured, multidisciplinary reciprocal peer review between pairs of hospital respiratory units.

Although the intervention was conducted in acute trust hospitals, three of the four areas of care for patients with COPD that the NCROP project focussed on involved collaboration across secondary and primary care: provision of long-term oxygen therapy; early discharge/hospital at home schemes and pulmonary rehabilitation. (The fourth area was the provision of non-invasive ventilation in the acute trusts.) The main NCROP evaluation was quantitative, essentially attempting to detect changes in provision in these four areas a year after the intervention [5, 6]; no statistically significant differences were found between the control and intervention groups. The evaluation may have lacked sufficient power to detect change so soon after the intervention; there were indications of beneficial change in some individual quality indicators that did not reach statistical significance [5, 6]. In order to better understand the impact and effects of the intervention, we conducted a qualitative evaluation which ran in parallel with the quantitative evaluation.

We adopted Scott's framework for considering collaborative work within and across organisations, sectors and professions [2]. This divides collaborative work into inter-organisational, intra-organisational, inter-professional, inter-individual and intra-individual dimensions (Table 1). Environmental and historical contexts [4] moderate each of these. In this paper we explore

Table 1. Types of collaboration described by Scott 2005 [2]

Type of collaboration	Description
Inter-organisational	Between organisations
Intra-organisational	Within organisations
Inter-professional	Between different professional groups
Inter-individual	Between individuals and therefore dependent on specific personalities and their priorities, ways of working, and understanding of patient needs [11]
Intra-individual dimensions	Transient and often unconscious characteristics of individuals, rather than reflecting entrenched ways of working, including for example impact of stress and tiredness

how examples of collaborative work or collaboration failures affect service improvements within COPD care and the impact on these of the NCROP service quality improvement intervention.

Background—the NCROP

The NCROP was a national randomised controlled trial. Respiratory units in the intervention arm received their national COPD audit results together with reciprocated clinical service peer review [12] by a paired unit. Units in the control arm only received their national COPD audit results.

The peer review model, trial method and rationale for focusing on COPD have been described in detail by Roberts and colleagues [5, 6]. The study design drew on the national COPD audits and an existing BTS peer review programme [7–10] as well as the Breakthrough Series model for collaborative health service improvement developed by the Institute for Healthcare Improvement (IHI) in the US. The IHI model has been adapted and used in a number of countries and for various conditions [13]. Groups of like organisations take part together and undergo IHI-run evaluations of service gaps and needs, learning sessions that include expert advice and evidence-gathering, formalised Plan Do Study Act cycles, and regular social exchange and report writing sessions. This usually continues for one year, then each team summarises what it has achieved in presentations to the other participating organisations. The NCROP design retained the key elements of the IHI model in a modified form that was more practical for teams and less demanding on resources. Teams assessed their own services using an RCP-designed questionnaire at the start of the study to determine gaps and needs, received advice from and shared experiences with others—primarily during the peer review (see below)—and were asked to keep monthly change diaries.

Altogether, 27 intervention pairs (54 respiratory units) and 23 control pairs (46 units) completed the study. Each intervention site convened a reviewing team comprising a broad representation of NHS professionals involved in COPD services (the study recommendation was for teams to include a respiratory clinician, a specialist respiratory nurse or physiotherapist, an acute hospital manager, and a representative of the PCT as commissioners of acute services). Multidisciplinarity was a key element of the design.

Intervention teams each undertook a day-long, structured review of services on-site at the unit with which they were paired, so that each of the 54 intervention sites acted as both a host unit being peer reviewed and, on a different date, as a visiting peer review team. At the end of each visit, reviewers gave oral feedback to their hosts and together they developed written action plans for service improvement. Each intervention site kept monthly or bimonthly 'change diaries' to document progress (or its lack) towards the targets in the action plans. Control arm units also submitted monthly or bimonthly diaries documenting any changes in their COPD services [5]. All units submitted new audit returns approximately 12 months after they had undergone peer review.

Conducting the peer review process itself required collaboration within and across organisations but the focus of this paper is on the broader collaboration around COPD service provision and change and the way this was influenced by the peer review intervention.

Methods

Interviews

Semi-structured interviews were conducted from July 2007 to February 2008 by an experienced health services researcher (the lead author), using a topic guide developed with representatives from the NCROP steering group. The topic guide covered: respondents' beliefs, perceptions and attitudes about COPD care, service change and peer review in general and the NCROP specifically; personal, departmental and organisational change behaviours and cultures; expectations and experiences of the NCROP; factors affecting (rate of) change. In this paper we consider data from all 43 interviews, representing 35 consultants, five nurses and three managers from 35 sites (24 intervention and 11 control sites). In this analysis we do not distinguish between intervention and control sites unless there were different findings between the two. Control sites were not relevant to discussions of the impact of the NCROP intervention.

We used purposive sampling, selecting sites with different levels of change between the first and third month after peer review reported in the change diaries (see Table 2), and different levels of baseline service provision—determined by a pre-study survey [5, 6]. We aimed to interview twice as many intervention sites as control sites since our main research question was to consider the barriers and facilitators of the intervention itself. We undertook non-participant observation of eight peer review visits and interviewed participants from these face to face. Initially, we aimed for a spread of respondents by profession, but managers and nurses at the hospitals we visited were frequently unavailable for interview. As we were limited in the amount of data we could analyse within the lifespan of the project, we could only interview one person by telephone at the other 27 sites. We required that these interviewees had taken part in both peer review visits; few nurses and managers had done so, therefore in most cases we interviewed the local physician NCROP intervention lead. Interviews were undertaken between two and 12 months after peer review. All data were anonymised. Research ethics approval was gained from the Joint UCL/UCLH Committees on the Ethics of Human Research (06/Q0505/21).

The service provision score was devised by the clinical trial team for their quantitative evaluation, with sites scoring one for the presence of each of long-term oxygen therapy, early discharge/hospital at home schemes, non-invasive ventilation. Thus, the maximum score was 3 and some sites scored 0.

Data analysis

Interviews were audiotaped, transcribed verbatim and imported into MaxQDA 2007 (Marburg, Germany: Verbi Software. http://www.maxqda.com). For the current analysis we used a form of thematic content analysis [14], looking for instances of the data that related to the different dimensions of Scott's model [2] and then exploring and developing themes that emerged within these. The lead author coded all interview transcripts for themes, with 20% cross-checked by team members to ensure reliability. Themes were identified, verified and amended through constant comparison [15], and following team discussion. Deviant cases and negative instances were identified and the analysis adjusted to include these elements but we have not considered them in detail here.

In this article participants are referred to using a code that identifies them according to: broad role (M for manager, P for consultant physician, N for nurse); site; whether they were interviewed by telephone (T) or face-to-face (F); whether they belonged to the control (C) or intervention (I) arm of the study; the relevant paragraph in the transcript. Extraneous features of speech (e.g., ums and ers) have been omitted. Longer sections of text removed to preserve confidentiality are indicated by ellipsis.

Table 2. Overview of the sites participating in the qualitative study

Feature	Intervention sites (n=24)	Control sites (n=11)
Number of sites belonging to the hospital trust (median)	1.7 (1)	2.6 (2)
Catchment population in thousands (median)	347 (282)	569 (385)
Number with tertiary services (n)	3	0
Number of respiratory consultants	3.7 (mode 3)	4.0 (mode 2)
Service provision score* (maximum score=3)	2.4 (mode 3)	2.3 (mode 3)

*Generated by the NCROP study team based on a pre-study survey.

Results

The framework outlined by Scott [2] broadly matches our data. We found that our interviewees only considered the different professions (managers and clinicians) *within* their hospitals. Their talk about staff in other organisations only concerned individual attributes and not generic features linked to professional roles. Thus, we consider inter-professional collaborations only in relation to intra-organisational findings. There was also insufficient talk about intra-personal features to enable us to determine patterns in the data for this dimension. It was clear from the interviews that the NCROP intervention was not necessarily at the forefront of interviewees' minds when they discussed collaboration. Here, we report what interviewees said about collaboration in general under the three headings: inter-organisational collaboration, intra-organisational and inter-professional collaboration, and inter-individual collaborations. Under each of these headings we also consider the influence of the NCROP peer review on collaboration. There were no clear temporal patterns in the data despite interviews being spread from two to 12 months after peer review to examine this; the high degree of flux in services and the likelihood that changes needed longer than one year to become apparent may help to explain this.

Inter-organisational collaboration

Although NHS reforms were intended to promote inter-organisational collaboration, structural and policy changes have made such collaboration difficult. Many

provider organisations had to deal with more than one commissioning organisation. In line with government requirements, many PCTs were merging at the time of the NCROP. In theory this might have made collaboration easier (because fewer organisations were involved) but in reality, it made dialogue harder because key posts were often vacant or occupied by new staff learning new roles.

Furthermore, PCTs were working on an explicit government policy steer to replace hospital-based with community-based services, an agenda which threatened providers and complicated collaboration. Some clinicians and acute trust managers spoke of the way they were "*trying grimly to hold onto services at the moment.*" (P01/TC:36–43). Their comments can be understood as 'atrocity stories'[1] [16] which assert the correctness and normative role of the hospital clinicians as professionals serving patients and defend this against what they represent as illegitimate and adversarial aspirations of the PCTs:

> *"What's happened is that the PCT have produced unilaterally, without any consultation with secondary care, they plan to do some primary care-led pulmonary rehabilitation. And they're commissioning that themselves, basically. And what template they're going to use, we don't know. We don't know what end user they're going to use, we don't know what the inclusion or exclusion criteria are; they've just decided that they're perfectly capable of doing this without any secondary care help or advice."* (P13/TI:57–61)

However, around a third of clinical participants were actively developing services in the community with the PCT. These clinicians saw this as a strategic approach intended to avoid the emergence of a 'disjointed service' in which hospitals might 'lose control' of clinical care:

> *"…there is a worry within secondary care that with long-term condition centres occurring [in the community], that this will have a huge impact on our work output and money regeneration and that secondary care will lose monies and therefore services may shrink rather than increase. But… we've engaged primary care very actively. Our chief executive has been aware of what workings we've had with primary care with regards to long-term conditions and COPD looks like it's going to go out to primary care. We're relatively signed up to that …… (…) and I think we're trying to come to amicable agreements that they don't go away and buy their own consultants to do their own thing, and then we have a disjointed service."* (P11/TC:37–58)

Thus, inter-organisational collaboration enabled service reconfiguration to run smoothly and providers to maintain power and influence during this process, even if the direction of change was not of their choosing.

Effect of the peer review

The NCROP peer review helped inter-organisational collaboration between trusts and PCTs both directly and indirectly.

Direct effects were achieved by the multidisciplinarity of the NCROP design, which meant people who would not normally meet each other professionally, including providers and commissioners, had protected time to come together to listen to each other's perspectives, foster good relations and—through the development of action plans—shape joint strategies for service improvement. Such developments could be significant, reflecting their importance for collaboration [2, 3]:

> *"But what the NCROP has focused us to do is actually start talking to the commissioners and the strategy directors in the PCT…which hasn't happened up until now."* P30/TI:39

Peer review also led to inter-organisational collaboration between the two-paired hospitals, something that was not part of day-to-day working. Its atmosphere of informal inclusion led teams to feel comfortable about and value the exchange of ideas and solutions to problems between hospitals. Although this often occurred only as a one-off event, during peer review visits, some

[i] In social interactions, we strive to fit social norms, by managing the impression of ourselves that we give out to others. This applies in natural encounters and also in the research interview and is often automatic. Sometimes people find themselves in situations where their social competence within a particular role is called into question, and they then use strategies to try to demonstrate that they are in fact socially competent. One way this is achieved is in talk, through the use of 'atrocity stories'. Such stories typically involve two conflicting 'realities', that of the person telling the story, and that of the person or people (their 'adversary') who have created the situation in which the story teller's competence is brought into question. In these stories, the story teller needs to explain why they are in fact competent, despite events. To make their story credible, since their adversary is not present to recount their side of things, they need to situate themselves in a third reality, a reality constructed through the atrocity story. This allows them to consider their own responsibility in relation to the event under consideration and the standards of the person to whom they are telling the story, and to use these to show that their adversary has created a problem that they have responded to as competently as can be expected. Each 'reality' (that of the adversary, the story teller, and the atrocity story) is governed by, and draws on, normative rules and standards that define adequately competent performances. The atrocity story draws on understandings of these that are shared between the story teller and their audience, such as shared features of an everyday world, and the story is strengthened through the use of intersubjective devices (such as 'as you know') that locate the story teller and their audience in a world quite distinct from that occupied by the adversary. By appealing to features of this shared world the story teller can show that according to these features they acted reasonably, morally and competently given the situation described in their story. The adversary may be portrayed as having acted reasonably within the adversary's own world—this admission enhances the story teller's competence and credibility [35]—but this world will be shown to be unreasonable in the context of the everyday world shared by the story teller and their audience. Although atrocity stories are constructed, they may accurately portray real events; what is significant is the way that the accounts are presented. If the audience can be made to share the story teller's disapproval or horror, they reassert the story teller's normative and competent behaviours and affirm that the adversary has acted outside the limits of what is appropriate or 'moral'.

participants said that they hoped to continue doing this. According to social exchange theory collaborations require mutual benefit to be sustained [17]. All participants made it clear that some benefits emerged despite the hospitals within pairs having different levels of service provision. Poorer performing teams had the opportunity with the NCROP of seeing models of good practice and learning from others who had more developed services; teams were encouraged rather than demoralised by this. At the same time, the better performing hospitals in pairs were encouraged by the exchange to maintain high quality services.

Indirectly, peer review helped inter-organisational awareness. Commissioners learned more about provider achievements, which in some cases led to successful applications for external awards and in others to an increase in services being commissioned. Less well resourced teams were able to demonstrate within their own organizations their low resource base compared to other teams.

Intra-organisational/inter-professional collaboration

Intra-organisational collaborations between different professional groups within provider trusts were said to be affected by broader issues within the NHS. For example, some clinicians who failed to achieve service change said acute trust managers' hands were tied by the '*greater forces*' of the wider financial climate within the NHS. In particular, respondents talked about losing out to other clinical conditions and tended to link the issue back to "*government priorities that [the managers] have to achieve [so that] COPD isn't on their radar really.*" (P13/TI:72–75). Often, these external pressures were widely understood, and did not lead to blame between different groups:

> *"I have no difficulties with my managers. My managers have the same problems as I do, and they're as supportive as much as they can be, but they can't magic money from nowhere. (…). If services are introduced for my patients, it means that other areas miss out."* (P12/TC:133)

Such shared understandings can of course also be seen as atrocity stories about the government, or as forms of impression management 'repair work' (i.e., the interviewees seeking to enhance or maintain their reputation with the interviewer) [18], serving to distance both clinicians and managers from any failure to change services, and obviating the need to blame intra-organisational tensions for the lack of success. An alternative approach used by some clinicians to distance themselves from problems and their causes was to tell inter-professional atrocity stories about trust management. In these stories, managers were seen as powerful and not understanding of clinical issues and needs. For example, some clinicians described their own clinical work as "*several steps down the food chain*" (P5/TC:50) from management, and one nurse talked about "*people from the management corridor*" (N14/FI:64). In such cases clinicians usually said trust managers were driven by financial interests and did not seem interested in the clinical:

> *"Commissioning services is done via the hospital management who has … as I said no connection to the [clinical] services; they don't actually ask us what needs to be commissioned. So it's all very awkward and unsatisfactory."* (P24/TI:164–5)

Intra-organisational collaborations were affected by material change as well as inter-professional relations. Many hospitals were closing or merging with others to rationalise and streamline services. This led to uncertainties about future resources and service delivery and often resulted in service changes being put on hold whilst structural changes were completed.

Significantly, some teams with intra-organisational or inter-professional collaboration problems did not focus on barriers to implementing changes or use them as a reason for failing to make service improvements. Here, participants spoke of the complexity of the problem and the way scarce resources meant the different partners needed to reconcile their different agendas so that everyone was partially satisfied (see also Farmakopoulou [19]). As with inter-organisational collaborative work, there was a common theme of flexibility and opportunism that enabled services to develop in the face of external constraints:

> *"Loads of the developments that we've done in respiratory medicine have happened because we've made them happen, and not because management have supported them or funded them. For example, we had some money from a legacy, and that's how we managed to get a respiratory nurse."* (P35/TI:219–236)

The use of such strategies did not indicate poor intra-organisational collaboration between managers and clinicians; rather the converse was true and these teams were dealing with the broader NHS context.

These same teams emphasised the importance of audits and pilots for intra-organisational collaborations (they were rarely cited as directly helpful for inter-organisational working, although we might have reported different findings from primary care managers or if our topic guide had a different focus). Audits provided a common language for the different professions, as the extract below proclaims. They translated clinical need into demonstrations of feasibility and worth that acute trust management could work with and enabled clini-

cians to take managerial viewpoints and restrictions into account when formulating plans and business cases.

> *"But actually generally, the evidence is there, but people don't use it. And (…) if you actually pull together [all the data], invariably you tend to find … not always, I'm not saying exclusively, because it's definitely not the case, but quite often most clinicians do know what they're talking about unsurprisingly! (Slight laugh) And they know what they want and actually, it's quite often they've difficulty transmitting what's in their head onto what's on paper, so that financially it stacks up as well as clinically it stacks up."* (M12/FI:154–166)

Some clinicians considered audits and pilots to be a necessary evil, and others showed a cultural shift to evidence-based change that aligned them with managers. Successful teams explicitly stated that an audit approach set them apart from less successful respiratory departments. The manager providing the previous extract used the term 'we' to demonstrate a collaborative relationship with their own audit-adopting clinical team.

> *"…We've certainly on some of the COPD stuff adopted a … (slight laugh) well, rather naff, but a traditional sort of modernisation agency approach of: 'Plan B study' and that type of style, and we've piloted things, we've tried them. And a good thing that we've done, which not everyone does, is when they've not worked, scrapped them."* (M12/FI:122)

Effect of the peer review

The review process highlighted the varying perspectives of the different professions, and sometimes the way sites had failed to deal with these. In drawing attention to differences, the peer review encouraged teams to reconcile them. Previously stymied teams were the most likely to report peer review as helpful in reducing the divide between acute trust managers and their clinicians, although we were not able to determine, from our cross-sectional data, whether this led to sustained improvement in relations. The need for better inter-professional collaboration was often written into the action plans. The peer review day itself was said to capture the interest of trust managers and acquaint them better with their respiratory team's work (just as it led to better awareness across organisations), and participants commonly argued that even when it only pointed out what was already known, it made "*management feel more comfortable if someone external has told them what they already knew.*" (P28/TI:31):

> *"…we get some external confirmation that what we think are the priorities are really priorities, and it makes it easier to … speak to management and say, look, this is very important…. to say, it's not just us with fancy ideas in our heads, other people from reputable institutions agree that this is important, and it's very important back up for us."* (P24/TI:186–187)

Inter-individual collaboration

A common theme in the data was the way previous professional experiences affected current ways of working. We have explored above how clinicians sometimes described a schism with managers, with the two professions unable to understand each others' perspectives. However, there was great variability in this between sites: schisms were not inevitable but appeared to arise from the attitudes and behaviours of individuals. Although we could only explore inter-professional issues within hospitals and not between hospitals and PCTs, as already noted, successful collaborations were described as possible across and within organisations depending on the attitude of the people in post. Perceived inter-organisational barriers could be overcome by inter-individual collaboration. Good team-working within the respiratory departments was also considered to be critical for changes to succeed and this depended on the individuals in the teams.

Individual managers within the hospital and within the PCT and primary care varied in their clinical and management training and in their duties (some managing staff or processes as active managers 'on the floor', others being desk-bound bureaucrats). This affected the way they naturally worked with clinicians and the dealings they had with them in collaborative work. Some were clinicians who had moved into management, and these understood both clinical and management issues. Others were career managers. Some of these had no understanding of the clinical and often also no interest in this, but many others were 'clinically motivated' (199: 38) and sought to learn from the clinical team:

> "…. [our hospital manager] *knows what she doesn't know (…) … so she phoned me and said, "This is what I'm going to send to the PCTs …based on what you've asked. I'll read it out to you and you can tell me if it's right." (…) …. So I think as far as she goes, that is her strength.*" (N19/FI:160)

Buchanan and Boddy [20] highlighted the important role of the change champion in facilitating joined-up working through their inter-individual collaborative work. Surprisingly, champions and clinicians with an interest in management did not appear to be associated with more changes in this study. However, teams with a generally positive attitude to problem-solving did appear to achieve more changes and this is manifest in the data in the way individual clinicians worked to

develop mutually satisfactory goals and targets with the PCTs.

> *"…we've developed action teams (…) we feedback saying, this is what we're doing. We'll do it for a six-month pilot, to see whether we're delivering and we're providing and there's enough capacity to do that. And then we review it…. the primary care managers are lethargic and so we've tried to have ways of getting around them. (…) then we've done patient questionnaires… to build up our argument that, (1) we can do it, and (2) it's well regarded. … and then it's very hard then for people to say well, stop doing that. … if we really feel we can't deliver it, then we resolve and say, well, people say it's fantastic, but we need this to deliver it, and then we have to see whether we can do that and how we go about doing it."* (P11/TC:72–78)

Inter-individual relations between clinicians and PCT staff (like the inter-organisational collaborations of which they were a part) were affected by organisational change, with newly appointed postholders still settling into their jobs. *Within* the acute trust this was not described as a source of inter-individual problems.

> *"Because the managers keep turning over quite frequently—this is obviously all from my perspective—in the PCTs, that a new person will come here and will suddenly have a great idea and try to dismantle things that you've established for a few years. And that's extremely frustrating I think."* (P01/TC:37–40)

Effect of peer review

The peer review provided opportunities for inter-individual collaborations by enhancing team working. This was mainly described within respiratory departments, less often across sectors, departments, organisations or professions. One effect was to give teams protected time to meet up:

> *"And I think we all work here as a team, but we don't get a lot of time with each other, unless you make a specific meeting. So actually to have time that we all met at the train station here, talked on the train while we went there, talked on the ward, I had a fantastic day with all the people there, anyway, and then talked on the way back, I think that actually helped us."* N13/FI:196–220

Mainly though, the peer review acted indirectly on team working by increasing morale. Teams realised during peer review that others faced similar problems: they were 'not alone'. Some also realised their achievements were greater than they had perceived. Even teams matched with departments with more or better service provision or resources reported a similar effect.

> *"It did help engender a certain sense of pride in our job, a sense of pride in what we're achieving. And it really did bring everybody together, we really did feel as if we are one sort of multi-disciplinary team. So that sense of team-working and community was something which probably we didn't expect and that was very positive."* N15/FI:200

Inter-individual collaboration in the form of networking was facilitated by one-to-one time at tea breaks or lunch or when visiting facilities, as the RCP recommended. This was a 'time to break down the barriers and have other chats' (P12/FI:24–27). It enabled people with similar roles to converse across organisations, in contrast with group sessions, when clinical leads were often said to dominate the discussion:

> *"I think that was very good because we could have open, honest time with each other and go, "Come on, you know, we're not trying to catch each other out. I'm not trying to say what you do is better than mine, and vice versa. (….) From my point of view I think that that was definitely beneficial, because as soon as you're introduced to each other, you went, "Oh, respiratory nurse!" straight away, (….) you're talking to a person that's on the same level as you. Although I spoke to the other site's lead quite a lot, obviously she's a consultant, so you know, how she works is very different to what I would be doing in my clinic."* (N11/FI:201–210)

Intra-individual collaborations

Intra-individual features were occasionally mentioned that affected collaborations, with some clinicians described or self-reported as intimidating, unrealistic about what could be achieved, lacking in experience or expertise, or facilitatory and encouraging. However, there were no clear patterns in the data concerning this.

Discussion

Our focus in this paper has been on collaboration around service provision and change rather than collaboration in undertaking the peer review process itself, although the latter mirrors the former. We found variability in the way different hospital clinical respiratory departments collaborated with commissioners, and also with managers within their own organisations, which analysis of interviews suggested related to the variable way teams responded to barriers to collaboration.

Our study had several limitations. We were unable to interview participants before they underwent peer review as we began the qualitative study at the same time as the reviews. So pre- and post-review comparisons depended on respondents' recall and reflection. However, our findings are supported by analyses of quantitative data collected before and one year after the reviews [5, 6]. Our purposive sample of 35 trusts may not have covered the full range of opinions,

experiences and contexts within the UK, although we aimed for maximal diversity in our sampling approach (see Table 2) and continued recruiting beyond saturation of themes to achieve a temporal spread. The intervention was based on acute services in secondary care and although the COPD services often involved collaboration across primary and secondary care, and peer review teams often included PCT representatives, interview respondents all came from secondary care. Our main research question and interest was in perspectives from secondary care. Primary care, PCT and patient representation at the peer review visits themselves had been problematic and it was neither feasible nor practical with the resources we had to recruit participants from primary care. We considered interviewing equal numbers of consultants, nurses and managers but nurses and managers were more likely to have moved post or duties by the time of interview, or to be unable to take part in interviews due to workloads, or to have only joined in the small part of the review process that was of most relevance to them. Mostly therefore our findings are based on the perspective of one person in the team, usually a consultant physician, whose views and experiences may have diverged from those of other team members and who may not have been aware of the full range of issues or service changes. Our findings need to be interpreted with this in mind. The study was not designed to explore reasons for differences in attitudes towards barriers to collaboration between different clinicians. We have assumed that it is better to collaborate and our data certainly suggest that collaborations result in better services. However, some hospitals might benefit most from a preserved autonomy; collaborations may reduce their power and consume resources, as systems are developed to enable the collaboration to proceed smoothly [21]. Certainly the way participants talked about structural service changes suggests some hospitals may feel more vulnerable than others to downgrading and closure and for these, lack of collaboration may be strategic. Quantitative analysis revealed that changes were often modest and, if NCROP is effective (the quantitative analysis may have lacked power) its effect size is likely to be small. This is relevant to any comparison of effective and less effective teams.

The study also has strengths. Our data come from the first randomised controlled trial of peer review, adding to previous research into UK health service collaborative work, which has had a more restricted focus on inter-professional relations. We recruited beyond saturation of themes, and our sample was diverse. The steering group for the study was multidisciplinary enabling a full range of perspectives to be considered during analysis and the writing of this paper. We were able to triangulate our findings with quantitative data from the main trial and an independent analysis of the entire set of change diaries provided by participants in the main study, which has been reported elsewhere [5, 6]. The same picture emerged from the three different types of analysis.

Clinicians in unsuccessful inter-organisational collaborations told ‘atrocity stories’ of organisational, structural and professional barriers to service improvement, including: financial constraints; managers who did not understand; PCTs seen as the adversary because of their focus on community-based services; a government out of touch with frontline reality. Such clinicians presented themselves as adequately representing their patients but as unable to progress services because of problems beyond their control. In taking this approach, which may involve misattribution of problems [22], teams may distance themselves from failures and problems and may not address factors that are within their control.

Those in more successful collaborations had weakened some barriers by working with, rather than against the government and PCT agenda of moving services into the community. This ensured they stayed involved in their patients’ care and were seen to be on the same side as the PCTs. Aligned agendas have also been considered as critical for success, compensating for issues between sectors and professions, in evaluations of IHI collaboratives [23] and of policy-driven change in the NHS [24]; the latter study involved interviews with 30 PCT leads in England and Wales in charge of reconfiguring respiratory services.

Successful change in our study was also associated with the appropriate use within organisations of audit data enabling robust business cases for change to be presented by clinicians to their acute trust managers that recognised the power of cost-effectiveness and cost-benefit arguments. The same benefits were not seen across organisations.

The NHS management literature of the 1990s and early 2000s talks often of a “them” (management) vs. “us” (clinicians) schism. This was said to be exacerbated by NHS reforms [25] that brought to the fore unresolved issues of authority and accountability. Clinicians were generally described as defensive [26] ‘custodians of clinical care’, fending off managerial encroachment onto their patch (see for example Kitchener et al. [27, p. 224]). Although we found some support for this in the inter-professional atrocity stories that clinicians told, the alternative stories of aligned agendas support Mueller and colleagues 2001 thesis [26] that in time the clinical professional value system may evolve to become more in tune with the managerialist value

system. Interventions, such as NCROP that facilitate collaborations may contribute to such an evolution. Aligning of agendas did not necessarily reflect a change in underlying belief systems.

Participants identified other individuals working in the same hospital in terms of their professional characteristics. By contrast, individuals within the PCT (encompassing both commissioning and community services as well as general practitioners) were generally viewed through the lens of their organisation, rather than their profession. The exceptions were those who had clinical backgrounds or acknowledged their clinical deficiencies, and these were held in higher regard than other individuals in the PCT. This may reflect the opinion among clinicians that PCT staffs are mainly managerial and as such have no real mandate through which to effect change.

We found many examples of poor intra-organisational collaborative work. Inter-professional barriers might be expected to be less likely within an organisation than across organisations since staff within an organisation should have developed ways of working together. However, the role of managers within acute trusts has changed in recent years [28]. It is understandable that collaborations between some trusts and PCTs are problematic, given that PCTs have been restructured several times in the last 10 years in ways that have particularly destabilised their commissioning function. This is illustrated by inter-individual problems from restructuring being ascribed by hospital clinicians to changes within PCTs rather than hospitals.

It was observed by our respondents that when clinicians, managers or commissioners within a successful collaboration left post, services sometimes degenerated or change became blocked. This shows the importance of having good inter-individual collaboration and key people in posts leading to change [29]. Nonetheless, we found that champions and clinicians with an interest in management were not associated with more changes in our study, and so were not critical for change, despite the positive effect of aligned agendas. It may be that NCROP multidisciplinary peer review served a function similar to that of the champion, though in a very different mode. It facilitated collaborative work within teams, and it brought people together across both intra- and inter-organisational boundaries even when this had not previously occurred and the individuals concerned might not normally have reason to meet. It enabled clinicians to highlight successes and continuing clinical needs of which managers and PCT representatives had been unaware, and stress inequities with other hospitals when these existed, while managers and PCT staff could represent their own problems and issues. In these ways, participants were able to reconcile their differences and exchange ideas across boundaries.

An important feature of the peer review was to provide protected time for people who should already be working together, to meet as a team—our data suggest the importance of protected time cannot be overestimated. The opportunity to meet as a multidisciplinary team with another team also appears to be a potent feature—not only allowing exchange of ideas across the teams but also in helping to build team working within the two teams, fostering morale, helping staff feel they were not alone [24], and enabling team members to shift position by offering new perspectives. Meetings have been described by others [23, 30] as an important feature of IHI collaborations also.

The NCROP peer review had benefits for all of the types of collaboration that we considered using Scott's model. However, our results suggest that its effects were more modest in relation to inter-professional rather than inter-individual collaborations. This may help explain the lack of significant effect found in the quantitative analysis at one year reported by Roberts and colleagues [5].

Collaboration and integration of services across primary and secondary care is embedded in NHS policy [31] and encouraged by the emergence within the NHS of collaboratives based on the IHI model [13]. However, the emphasis for long-term conditions is on collaborations between PCTs and the voluntary and community sectors. The aim is for multidisciplinary teams based in primary care or the community to support patients for who self-managed care is insufficient, with the support of specialist advice from secondary care on a limited basis [31].

The NHS is promoting managed care networks [32] as a way of forming or linking services across financial, structural or physical boundaries and therefore enhance the patient's journey through the pathway of care. The NHS differentiates these from other forms of collaboration because they have clear governance and accountability arrangements in place, with a formal management structure and a published strategy [32]. Networks are structural; many need to join collaboratives based on the IHI model to develop ways of effective collaborative working. The NCROP model differs from networks by including peer review, by its more limited scope, and its more informal arrangement. It differs from many other NHS collaborative initiatives in its setting and from the IHI model and its NHS variants in its more limited scope, its relative simplicity and informality and its emphasis on including manag-

ers within the teams [23]. Peer review, which is central to the NCROP approach, has several limitations, chief among which are its tendency to concentrate on improvement in one specific area, and its relative lack of power to overcome barriers to change.

Overall, the opportunities for collaboration and change afforded by NCROP might seem limited in scope when compared with the IHI model. However, it is encouraging that informants articulated a number of benefits, given that the literature on partnerships in healthcare does not offer robust evidence of their transforming power [33]. We found that NCROP peer review does provide a degree of mutual benefit, such as social exchange theory requires for sustained interaction between organizations, and it may therefore be more effective than top-down exhortations to change and easier and less costly to replicate than other collaborative models, including the more formal and regulated Dutch system of *visitatiae* [34] as well as the IHI model. Mutual benefits derived from the way NCROP peer review encouraged individuals and teams to work together. Their creativity and flexibility in developing joint problem-solving was more critical than the nature of barriers to change. NCROP peer review facilitated instances of creativity even in teams not previously successful in collaborative work. By increasing understanding and stimulating problem-solving, NCROP peer review has the potential to stimulate more sustained change over time. Whether this potential is realised and is translated into clinical change awaits the results of a further quantitative evaluation of the NCROP peer review, which is currently being undertaken.

Acknowledgements

The main NCROP study was funded by the Health Foundation's Engaging with Quality Initiative (EwQI). The researchers are grateful to GlaxoSmithKline UK Ltd, Boehringer Ingelheim and AstraZeneca UK Ltd for a combined Educational Grant that has funded this research evaluation. We are also grateful to Rhona Buckingham and Nancy Pursey, respectively NCROP Manager and Coordinator, and to all NCROP study participants, as well as the referees for their helpful comments.

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