Connections and consequences in complex systems: Insights from a case study of the emergence and local impact of crisis resolution and home treatment services

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ABSTRACT

In this article the broad contours of a complexity perspective are outlined. Complexity ideas are then drawn on to frame an empirical examination of the connections running between different levels of organisation in health and social care, and to underpin investigation into the intended and unintended local system consequences of service development. Data are used from a study conducted in the UK's mental health field. Here, macro-level policy has led to the supplementing of longstanding community mental health teams by newer, more specialised, services. An example includes teams providing crisis resolution and home treatment (CRHT) care as an alternative to hospital admission. Using an embedded case study design, where 'the case' examined was a new CRHT team set in its surrounding organisational environment, ethnographic data (with interviews predominating) were generated in a single site in Wales over 18 months from the middle of 2007. In a large-scale context favourable to local decision-making, and against a background of a partial and disputed evidence base, the move to establish the new standalone service was contested. Whilst users valued the work of the team, and local practitioners recognised the quality of its contribution, powerful effects were also triggered across the locality's horizontal interfaces. Participants described parts of the interconnected system being closed to release resources, staff gravitating to new crisis services leaving holes elsewhere, and the most needy service users being cared for by the least experienced workers. Some community mental health team staff described unexpected increases in workload, and disputes over eligibility for crisis care with implications for system-wide working relations. Detailed data extracts are used to illustrate these connections and consequences. Concluding lessons are drawn on the use of evidence to inform policy, on the significance of local contexts and system interfaces, and on anticipating the unexpected at times of change.

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Introduction

In this article complexity thinking is used to underpin a case study of the connections running between different levels of organisation in health and social care, in which the wider system consequences of change are also explored. Complexity ideas are used heuristically (cf. Anaf, Drummond, & Sheppard, 2007), and data generated in a United Kingdom (UK) mental health setting are drawn on.

Complexity thinking, as Waldrop (1992) writes, is wide-ranging and transdisciplinary, whilst Urry (2005) observes in the context of a generalised 'complexity turn' a particular infiltration of ideas into the social sciences from the end of the 1990s. In an early contribution Byrne (1998) outlines some of the hallmarks of this perspective. These include a concern with irreducible wholes, and the outcomes of interaction within interdependent systems. In conditions characterised by interrelationships a perturbation in one place can trigger a disproportionate, unforeseen, impact elsewhere. In the case of change in public services, these non-linear effects are akin to what Rittel and Webber (1973) have elsewhere termed 'waves of consequences'. Movements of this type mean systems are continually engaged in processes of 'emergence'. Byrne (1998) also writes of systems being nested, so that each can be thought of as simultaneously sitting above and below (and interacting with) other systems of different scale. Alongside these vertical (macro/meso/micro) links run the horizontal connections joining systems of equal level.

Increasingly ideas of this type are being brought to bear on the health and social care arena (see for example: Plsek & Greenhalgh, 2001; Rouse, 2008). Assumptions that top-down, mechanistic, relationships bind the worlds of policymaking, local service

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development and care delivery are yielding to alternatives emphasising tensions, contradictions and unpredictability (Chapman, 2004; Geyer & Rihani, 2010). Informed by the foundational idea of systems existing at different, but interlocking, levels (Plsek, 2001), themes of interrelationship and change can be considered across (inter)national macro-level health and social care systems and also within smaller, nested, meso-level systems where interdependent networks of people and organisations collectively concerned with local service provision coexist. At a still smaller scale are dynamic, micro-level, systems comprising paid and unpaid workers sharing responsibilities for face-to-face care to individuals. A complexity perspective can inform questions about (for example) the use of evidence in macro-level policy and the links from here to service development at meso-level. It also informs ideas about meso-level distinctiveness, with care systems at this scale emerging in ways which reflect local interactions between constellations of people, organisations and events. In this context, complexity thinking underpins the observations that what 'works' in one place may not 'work' in others, and that services may develop only when local actors learn what helps in their environments. Used in empirical studies, a complexity approach supports responses to Griffiths' (2003) call for closer examination of the connections running both within, and across, care systems of different scale.

Mental health systems

Contributing to the particular complexity found in mental health systems are divisions of work which are typically both intricate and fluid (Hannigan & Allen, 2006; Hannigan & Allen, 2011; Hannigan & Allen, in press). Fundamental ideas and practices remain vulnerable to challenge (Pilgrim, 2007), and policymakers' solutions to identified problems can prove contestable (Hannigan & Coffey, 2011). As in all systems, adjustments in mental health services (such as, for example, introducing a new type of team) can trigger wider, and potentially unintended, effects. With some exceptions (see for example: Tansella & Thornicroft, 1998; Pilgrim & Rogers, 1999) it is striking in this context how little attention has been paid to understanding system interrelationships in this field.

Like many other mental health systems around the globe in which deinstitutionalisation has occurred the system across the UK remains organisationally fragmented (Knapp & McDaid, 2007). Here as in other relatively well-resourced parts of the world provision is made through primary care, hospitals and increasingly specialised community teams (Thornicroft & Tansella, 2004). Improving the functioning of these systems has become an international priority (see for example: World Health Organization, 2009), and in the UK since the middle of the 1990s this has been reflected through the identification of mental health as an area for sustained action (Lester & Glasby, 2010). In Wales, where data in the study reported on here were generated, the authority to make macro-level health policy lies with the Welsh Government. At meso-level, responsibilities for services are shared by National Health Service (NHS) health boards and their local authority and non-statutory sector partners. Here, as in other parts of the UK, particular policy and service development attention has been paid to community care (Pilgrim & Ramon, 2009). Interprofessional community mental health teams (CMHTs), which from the late 1970s onwards became the principal vehicles for the provision of secondary care to people living in defined geographical areas, have been supplemented by newer services dedicated to the support and treatment of groups differentiated by characteristics such as level and/or type of need (Burns, 2004). Examples include teams and services providing assertive outreach, early intervention for people with psychosis, and crisis resolution and home treatment (CRHT)

care (Department of Health, 2001). In the case of CRHT services, these are known to have emerged in large numbers (Jones & Robinson, 2008; National Audit Office, 2007; Onyett et al., 2006). Welsh policy identifies these as a priority (Welsh Assembly Government, 2005a) and implementation guidance specifies that they should provide:

> a rapid response in the form of assessment and where appropriate support and treatment to adults for a brief period who are experiencing a mental health crisis, as an alternative to hospital admission. [Services should offer] people experiencing severe mental health difficulties the opportunity to be treated in the least restrictive environment with increased choice in the management of their mental health problems (Welsh Assembly Government, 2005b, p. 3).

Macro-level policy for Wales draws explicitly on favourable systematic reviews of the international evidence for home treatment (Burns et al., 2001) and crisis care (Irving, Adams, & Rice, 2006) to underpin the case for change. In their review, Burns et al. (2001) also note a historic lack of sustainability of home treatment services and argue for further UK studies. The relative absence of a UK-specific evidence base left initial policy for crisis services open to challenge. Pelosi and Jackson (2000), for example, contest the relevance of results in which intensive home-based care has been compared with hospital or clinic-based services rather than with services of the type routinely provided by UK CMHTs. Brimblecombe, O'Sullivan, and Parker (2003) draw a similar contrast between the relatively open-ended care provided by original home treatment teams positively evaluated in Madison in the US (Stein & Test, 1980), Sydney in Australia (Hoult, Reynolds, Charbonneau-Powis, Weekes, & Briggs, 1983) and in London (Marks et al., 1994) with the time-limited services offered by modern CRHT teams in the UK.

With debates persisting over approaches to the organisation and delivery of mental health care (Molodynski & Burns, 2008), crisis services came to UK prominence with support from influential advocates (see for example: Smyth & Hoult, 2000) as a favoured solution to problems identified across both the community and hospital parts of the system. In the absence of product champions (Burns, 2004), CMHTs lost the unequivocal backing of policymakers in the face of suggestions that they lacked focus and were fractured through interprofessional conflict (Galvin & McCarthy, 1994; Lankshear, 2003). These teams were also described as being difficult to manage (Onyett, Standen, & Peck, 1997). Additional, pressing, problems were identified in the hospital part of the system. Bed occupancy was shown to be high, and opportunities for meaningful therapeutic intervention scarce (Sainsbury Centre for Mental Health, 1998). In Wales the physical environment for inpatients was found to be poor (Wales Collaboration for Mental Health, 2005). Improving care for people in crisis was identified by users and carers as a priority (Naylor, Wallcraft, Samele, & Greatley, 2007), and CRHT services (along with other new types of mental health team) were identified as a means to unify disparate groups of professionals around clear and agreed goals (Peck, 2003).

The study: purpose and objectives

Although results are being reported from UK studies investigating the outcomes for people in receipt of community crisis care (see for example: Johnson, Nolan, Hoult, et al. 2005; Johnson, Nolan, Pilling, et al., 2005) very little, still, is known of the processes through which CRHT services are introduced or their initial and enduring system effects. Anecdotal evidence points to tensions between staff in crisis teams and in hospitals (Smyth, 2003), and recent research highlights some practitioners' concerns that new services may undermine continuity of care

(Khandaker, Cherukuru, Dibben, & Ray, 2009). With this knowledge gap in mind and underpinned by complexity ideas the study drawn on here had four specific objectives. The first was to examine the establishment and work of an exemplar new CRHT team and the management of its interfaces with the local psychiatric hospital and its partner community mental health teams. The second was to investigate the intended and unintended meso-level consequences of the team's appearance. The two remaining objectives were concerned with the micro-level provision and receipt of crisis care, and the service user experience.

Setting, access and approval

Access was secured to a single, interprofessional, CRHT service in Wales. Established in 2006, this standalone team was part of an immediate meso-level system in which services were also provided through three CMHTs and a hospital. Fieldwork took place over an 18 month period beginning in summer 2007. Prior to this, formal approval for the study was obtained from the relevant NHS local research ethics committee, the local authority and from the research and development office located in the NHS organisation with lead agency responsibility for the new service.

Design and methods

Case studies, in which 'the case' is examined in the context of its environment, are particularly suited as a means of investigating system interrelationships and change (Anaf et al., 2007; Anderson, Crabtree, Steele, & McDaniel, 2005). Here an embedded design was used (Scholz & Tietje, 2002; Yin, 2009) where the larger, organisational, 'case' studied was the exemplar team set explicitly in its meso-level surrounding. The smaller, embedded, units of analysis were four people with past personal experience of using the services of the CRHT team, and their micro-level networks of care. Data at both, interconnected, levels of organisation were created using ethnographic methods (Hammersley & Atkinson, 2007), with interviews predominating. All data were generated by the study's principal investigator (this article's author), who whilst having pre-existing knowledge of the local system was not an insider and had no direct interest or role in service developments.

Data relating to the CRHT team and its immediate and enduring meso-level impact were generated through interviews conducted with managers and practitioners purposively sampled across the local system, each of whom had a stake in the new service and knowledge of its establishment, work or effect. To create as detailed a picture as possible, beginning with an interview held with a senior NHS manager with responsibility for all working age adult community mental health services, using snowball sampling (Coleman, 1958) interviewees were asked to suggest other potential participants working in parts of the system which, in their view, had been touched by the CRHT team's 'waves of consequences' (Rittel & Webber, 1973). Using a flexible interviewing style the broad topic guides for these interviews (each lasting between 30 and 90 min) focused on the crisis service's origins, its functioning and the work of its members, its intended and unintended local system impact, and its degree of wider integration. Macro-level policy documents and meso-level service specification and operational policies were secured and treated as contextual data. With the aim of improving understanding of everyday work and system integration, opportunities were taken to observe routine meetings held within the crisis team, along with one-off meetings involving hospital and/or community workers located across the local system convened specifically to focus on service interface issues. At these events descriptive contemporaneous records of what was said were produced (Emerson, Fretz, & Shaw, 1995).

To investigate the micro-level provision of care and the service user experience, with the agreement of responsible practitioners (who also conveyed initial invitations to participate) four people with past experience of using the CRHT team were approached and consented to join the study. Interviews were held with all four, each focussing (again using a flexible style) on experiences during the journey into, through, and out of CRHT services. Access was secured to the written NHS practitioner records covering each participating user's period of crisis care. These were used as data, and also as a means of identifying health and social care providers to whom further interview invitations could be extended. These interviews, centring on the micro-level organisation of mental health care across the system's interfaces, were held with workers referring user participants to CRHT services, with CRHT team practitioners providing care during each user participant's crisis phase, and with workers to whom each user's care was transferred following crisis resolution.

By the close of the study's data generation phase a total of 34 interviews had been conducted. Three practitioners declined invitations to take part, as did one family member named by a service user participant as a significant crisis period carer. Information on the characteristics of interviewees is given in Table 1 below, in ways guarding against the disclosure of sufficient detail to inadvertently lead to the identification of actual people and places.

Data management and analysis

All interviews except two were audio-recorded. Detailed, contemporaneous, notes were instead taken in both instances. In all

Table 1
Characteristics of interviewees.

	No. of interviewees		No. of interviewees
Interviewees identified with reference to their location in the meso-level system		*Interviewees identified with reference to background*	
Crisis services workers	11	Nurses	16
Locality community mental health team workers	10	Psychiatrists	4
Hospital workers	3	Social workers	3
Participants working elsewhere in, or across, the system	6	Occupational therapists	2
Participants using mental health services	4	Clinical psychologists	1
		Support workers	2
		Service users	4
		Others	2
Total number of interviews conducted	*34*	*Total number of interviews conducted*	*34*

cases, brief summaries were made immediately following the completion of interviews for inclusion in the project's overall fieldnotes. All audio-recordings were transcribed in full, and transcripts checked for accuracy against the original recordings. Interview notes taken *in lieu* of direct recording were wordprocessed, and contemporaneous records made during observations of five meetings were written up and incorporated into the study's single set of wordprocessed fieldnotes. Pseudonyms for people and places were inserted into all transcripts, case note extracts, fieldnotes and policy documents during this period of preparing materials for analysis. Each policy document, interview transcript, case note extract and the set of expanded fieldnotes became one of 43 separate primary documents created using version 5.5 of the qualitative data analysis software package Atlas.ti (Lewins & Silver, 2007; Scientific Software Development, 2009).

Primary documents were read in close detail, and memos written to capture formative ideas as a means of opening up the overall dataset for more detailed analysis (Dey, 1993). This initial reading and writing was followed by systematic inductive and deductive coding (cf. Coffey & Atkinson, 1996). Reflecting the project's aim and objectives unique codes were attached, for example, to segments of data (of varying types and length) relating to specific aspects of the CRHT team's initial set-up, and to instances of its system effect. Codes were refined and linked as analysis progressed. As writing is integral to the creative work of qualitative data analysis and interpretation (cf. Wolcott, 2001), production of written materials (including this article, and other documents for earlier use by the study's participants and its funders) are best seen as a further stage in this process.

Findings

By the time fieldwork commenced towards the beginning of the case study team's second year of existence, a service specification and an operational policy had been negotiated to capture the aims, interprofessional composition, expectations and anticipated benefits of the CRHT service. Summarised here, these outlined the team's round-the-clock responsibilities as including: assessment of the needs of people experiencing mental health crises at the request, during normal working hours, of CMHT colleagues; gatekeeping admissions to hospital; providing short-term, but intensive, home treatment as an alternative to inpatient care; and supporting early hospital discharge. In interviews many local stakeholders described the high quality of care provided by the case study team and its progress in achieving its aims. Participating service users gave favourable assessments of their use of services. For example, in this first interview extract 'Christine' talks of having to get to know new CRHT team workers but also of the help she received from them:

> Service user: [...] I didn't like opening the front door and it was like, 'Hi Christine, I'm such-and-such'. I'm thinking, well, I'd have rather really got to know one or two people, but you know that's how they work [...]
> [...]
> I can't bear leaving the house at times, you know, those are the symptoms that I do get [...] and walking around the supermarket thinking that everyone knows me and everybody can read my mind is absolute torture. So you know, the fact that I'm actually leaving the house but I feel safe because I'm with two people [from the CRHT team] [...] you can have phone calls or have the option that you can ring at any time, which makes a difference, you know [...]. (Interview, service user: primary document (PD) 25)

Alongside the favourable assessments of the CRHT team's contribution to micro-level care the study's overall dataset also

yield evidence of a meso-level system in motion, with significant effects being felt across multiple interfaces as new services were planned and introduced. It is these connections and consequences that are examined in particular detail here.

Vertical connections: Welsh localism and meso-level decision-making

Complexity thinking informs the observation that public policies and service developments may have different effects in different meso-level settings, challenging assumptions that evidence from one environment can automatically be used to support change in another (Chapman, 2004). In this context, and set against a background of ongoing debate over the suitability of dedicated crisis teams in the UK, macro-level policy implementation guidance for crisis care in Wales steered clear of detailed top-down prescription. Reflecting localist traditions which instead favoured the deferral of responsibility to specify the exact shape of services to meso-level NHS and local authority stakeholders (Greer, 2005) national policymakers wrote:

> There is no set structure for a CRHT service, however, it is essential that services adhere to the key elements outlined in this guidance in order to meet service delivery objectives. The design of the service can be adapted to meet local need and circumstances (Welsh Assembly Government, 2005b, p. 3).

Options open across the country included the establishment of standalone CRHT teams as new, distinct, entities within local systems, or the expansion of the work undertaken by existing community mental health teams. Across the system where fieldwork took place national debates over the most suitable way of organising community alternatives to inpatient admission were locally rehearsed, with participants describing how managers, professionals, service user representatives and stakeholders from non-statutory groups became involved. Framing these meso-level deliberations was the hospital sitting at the historic centre of the system, comparable to others in Wales in being over-occupied and in need of physical improvement. Widely held amongst participants was the local view that dependence on this institution in the care of people in crisis was a problem, with new Welsh policy adding impetus to pre-existing drivers for change. In this second interview extract, a health service-employed manager with NHS and local authority responsibilities describes how macro and meso-level factors combined to generate pressure for system development:

> NHS manager: [...] there was a very clear view that we'd got to do something about the psychiatric hospital because it's pretty grim [...] It's been a far too beds-based service and we need to be providing a modern mental health service.
> Researcher: Yes.
> Manager: Which is much more about providing things in the community and reducing the reliance on beds, so I would guess that, you know, obviously as part of that crisis services were, you know, seen to be something that would be very helpful in that respect [...] So I think that the sort of thoughts around all this were in train well before the SaFF target [the all-Wales Service and Financial Framework target for the setting up of crisis services] came along [...]. (Interview, NHS manager: PD9)

Another participant, a senior NHS manager with a nursing background holding responsibilities across the community and hospital parts of the system, talks here of the meso-level implications of Welsh localism:

> NHS manager: [...] when guidance comes out of the [National] Assembly [for Wales] then they never say, 'and you will', it's not

like England, you know, 'here's the money, you will have a crisis team, an early intervention team and we will, there's balanced scorecards, and you will report to region and you'll get your heads banged against the wall if you haven't done it'. Wales is much more, 'we would like you to have', and, 'there is some guidance but it's up to you at the end of the day'.

Researcher: So more of a deferral to local organisations to establish services that fit local contexts?

Manager: Absolutely, and I think that the debate around crisis services was that very debate because there were people in the room who said that this is what CMHTs do, why are we setting up these services? […]. (Interview, NHS manager: PD12)

At a time when similar decisions were being made in England in response to more prescriptive policy guidance (Department of Health, 2001), and following a period of system-wide consultation and deliberation in which external expert advice was obtained, the option of setting up standalone services was selected based on appeals to clarity of purpose. Here this same general manager presents the case:

NHS manager: […] if you've got a specialist team and there's a focus then it functions better because it doesn't become flabby and lose its vision, and if it's part of a CMHT with everything else that's coming into a CMHT the danger is it loses that focus. (Interview, NHS manager: PD12)

Evident from interviews conducted across the system was the extent to which this decision continued to be contested. A local authority manager with a social work background, based in a CMHT, made a case for enhanced CMHTs on the basis of promoting access and continuity of care:

CMHT social work manager: […] I'd actually like to see them [CRHT services] as extensions to the community mental health team, rather than a standalone thing because I think there are, I understand that there are barriers sometimes that we have to overcome to actually access that service, and then I guess when they're [service users] coming back to us, for they come back to us in a sort of fairly timely way, I think if they'd have been an extension to our team, some of those issues could have been worked on in a different way, so that it was smoother, more seamless. (Interview, CMHT social work manager: PD8)

In a context in which decision-making managers at meso-level had considerable latitude to determine the shape of their local systems, and notwithstanding objections from some, an argument for a standalone team was successfully mounted and acted on. Here some of the consequences, manifesting across horizontal system connections, are traced.

Horizontal connections: ward closure, movements of people and cumulative consequences for hospital services

A new standalone team needs to be staffed, managed and housed, local policies and procedures negotiated, and attention generally given to the integration of new system components in the context of the larger whole. In this setting, immediate challenges included securing funding and people. With no additional resources being released by Welsh policymakers in explicit support of their expectation that alternatives to inpatient care for people in crisis be available by the end of March 2006 (Welsh Assembly Government, 2004), a community nursing manager here describes how establishing the case study team had meant closing services elsewhere:

Community nursing manager: [the CRHT team] was funded in its entirety by closure of a ward, so all the money that we spent in terms of the nursing staff, in terms of the revenues that were needed to maintain that was, so that, we've transferred into the team. (Interview, community nursing manager: PD1)

This immediate system shock, in which one part of the system was closed to support developments elsewhere, reverberated across the CRHT team/hospital interface. A senior nurse for inpatient services described a 'rawness' felt by members of the ward team disbanded to release funds. Participants also described how movements of staff around the system had been consequential for the remaining parts of the hospital and within CMHTs. The nurse manager with specific responsibility for community services said:

Community nursing manager: I think the inpatient services noticed it, you know, I'm sure a few of them say, 'You took some of our best staff', you know what I mean? I think the knock-on effect of that is there are a lot of nurses working on acute wards now with quite limited experience, you know, quite recently qualified […] . (Interview, community nursing manager: PD1)

A nurse in a CMHT said that new services had attracted a certain type of worker:

CMHT nurse: […] some teams have been depleted in terms of staff […] you do tend to have more motivated staff going for these nice new shiny jobs, so you then get left with more and more of the staff who probably perhaps don't want to be looking at change and stuff like that but being expected to take on increased responsibilities. (Interview, CMHT nurse: PD2)

Movements of workers within the system, coupled with the closure of a ward and the establishment of CRHT services with a remit to reduce admissions to hospital, exerted significant cumulative effects. In the following extract a hospital nursing manager describes how the loss of experienced inpatient staff combined with an elevated scarcity of beds had produced the unintended consequence that the system's neediest service users (those entering hospital despite gatekeeping and the availability of home treatment) had been cared for by the least prepared workers:

Hospital nursing manager: […] we've got an awful lot of novice nurses, what I would call novice qualified nurses around, and when you look at some of the nurses in the crisis team they're the nurses that we've trained up over the last five or six years, some longer than that, with a lot of experience. 'Cause often my worry on the acute wards is that there's a lot of inexperienced nurses who are there dealing with the most difficult clients often, even if it is for a short time, that's where they are and some of that's been very difficult. (Interview, hospital nursing manager: PD5)

Horizontal connections: system effects across the CRHT team/CMHT interface

Interview data also show the enduring effects of the CRHT service on its three partner CMHTs, and observational data reveal participants drawn from across the system actively addressing these in interface meetings convened for the purpose of identifying and managing emergent problems. One CMHT was housed in dilapidated accommodation, and had lost key staff in the context of service reorganisation. This was home to a nurse whose words are reproduced above, and in the course of this same interview comparisons are drawn between recent investments in community crisis provision and relative underinvestment elsewhere:

CMHT nurse: […] I think it's been acknowledged from way back that there was an expectation that the community mental health teams would become more resourced, and they haven't been really and they've adapted. The money has gone into the

crisis teams but the money hasn't gone into the other community areas really. […] It's not an intended effect but it's a side-effect that people start saying, 'Well why have they got all that?' […] we haven't got a phone each here, we've got a phone between about three or four people out there and people find that hard to believe. (Interview, CMHT nurse: PD2)

The creation of a new standalone CRHT service magnified levels of organisational complexity within the system by increasing the number of team-to-team interfaces. The interface between the case study team and its partner CMHTs was key, with locally produced policies stating agreed eligibility criteria for crisis care and out-lining processes for the sequential filtering of potential clients. However, accessing services remains an interactional process (Griffiths, 2001), and examination of the outcomes of referrals made to crisis services in other parts of the UK has shown that significant numbers are rejected as ineligible (Brimblecombe & O'Sullivan, 1999). Here, a nurse expresses the view that practitioners based, as she was, in CMHTs had initially thought that new crisis services would leave them with little to do:

CMHT nurse: I think there was quite a lot of, there was a perception within the wider team, within the MDT [multi-disciplinary team], that the crisis team would take over all the interesting work and we would be left with the mundane kind of day-to-day boring, well you know, the stuff that anybody could do really. (Interview, CMHT nurse: PD16)

In contrast, with knowledge of over a year of CRHT service functioning to draw on, some CMHT participants described the task of securing access to the new team's services as difficult, time-consuming and potentially fraught. Here a CMHT social work manager complains of inconsistencies in interpreting eligibility, and hints at the relational damage this causes:

CMHT social work manager: I think some of the difficulties we have is, the crisis team will often say, after, 'this person doesn't meet the criteria', and they're not always consistent in saying that […] which causes confusion across the team and actually, more than confusion actually, quite a lot of people get annoyed. (Interview, CMHT social work manager: PD8)

For their part, participants located within the CRHT team pointed to the importance of exercising a gatekeeping function and concentrating their efforts on only the most needy of people. Having acknowledged that the relaying of decisions not to offer care to someone referred by colleagues in CMHTs could be a source of conflict, a psychiatrist said that refusing to accept all referrals or assume additional responsibilities was necessary to sustain the kind of intensive, home-based, care required by people who might otherwise be in hospital:

CRHT team psychiatrist: […] You know, if suggestions are made that we take on extra work in whatever way or, you know, start doing all the screening assessments in casualty [the Accident and Emergency department] as well as, you know, then it's going to significantly diminish the amount of time staff on this team have to spend with people who we're caring for […] At the moment some people can have hours of contact a day because they need it and they would otherwise be in hospital […]. (Interview, CRHT team psychiatrist: PD18)

For practitioners in CMHTs carrying large caseloads and holding busy diaries, there were unanticipated workload implications associated with the need to provide care for users with elevated needs who, in a pre-CRHT service era, might have had brief admissions to hospital but who now were being offered neither home treatment nor inpatient admission. A nurse manager in a CMHT said:

CMHT nurse manager: [if] they're kind of below the threshold for crisis team involvement but they do need more intensive support, that will have to be offered, and then we struggle to meet that because, because we don't have the resource. […] it does mean, because we're not equipped to do emergency work really because CPNs' [community psychiatric nurses'] diaries are booked up two, three, weeks in advance, medical appointments are booked up two or three months in advance so anything, it's not the most giving system […] (Interview, CMHT nurse manager: PD11)

Whilst users and practitioners were able, then, to identify the high quality of micro-level care provided by the new CRHT service they could also point to examples of immediate and more enduring system shock. Unexpected increases in workloads, loss of valued staff in both hospital and community parts of the system, and disputes over eligibility and access with implications for working relations across interfaces, were all described by participants.

Discussion and conclusions

The complexity-informed analysis developed in this article lays bare the interrelationships and tensions which run between, and within, health and social care systems of different scale. Macro-level policy driven by the expectation that the same standard and type of care be made available to all sits uncomfortably with the simultaneous need to grant latitude to meso-level decision-makers in order that services become tailored to local contexts and democratic wishes (Klein, 2010). Macro-level policymakers are increasingly expected to draw on evidence to inform their plans for meso-level development, but challenging the idea of 'best practice' are contextual differences meaning that what has improved services in one place may trigger unhelpful, unpredicted, effects elsewhere (Greenhalgh & Russell, 2009). Other studies have shown how the spread (and non-spread) of innovations may also be influenced by the boundaries dividing different health professional groups, with competing ideas of what counts as suitable evidence for change characterising each uniprofessional 'community of practice' (Ferlie, Fitzgerald, Wood, & Hawkins, 2005). Where macro-level policy intertwines with local aspirations and drivers (as it did in this study site), meso-level systems will emerge through processes of deliberative action, negotiation and contestation, and unfolding waves of consequences (cf. Rittel & Webber, 1973). Rittel and Webber add that although actions can rarely be described as being universally 'the best', they can certainly make systems 'better'. The analysis developed here suggests that change can make systems both 'better' and 'worse' at the same time. In this meso-level site the four service users directly taking part in the study described positive, micro-level, experiences of the CRHT team, but other participants were able to give examples of unwelcome system effects arising in the context of the new team's appearance. It is a limitation of the study reported on here that micro-level data relate to only a small sample of service users. In future studies of this type it would be valuable to include people using pre-existing services likely to have been affected by new local developments in order to establish how adjustments are experienced by users across all parts of an interconnected system.

A unified complexity perspective does not exist, and differences have been aired over the meaning of this type of thinking and its application to health and social care fields (see for example: Paley, 2010; Greenhalgh, Plsek, Wilson, Fraser, & Holt, 2010; Paley, 2011). What this article shows is that some of these disputes can be sidestepped in favour of using a broad-based complexity approach, in heuristic fashion, in the service of empirical examination.

Developing and refining theory are important, but so too are conceptually informed but primarily pragmatic contributions which apply emerging ideas to studies of real-world systems in motion. As Gatrell (2005) suggests, complexity thinking applied to health and social care needs stronger empirical anchoring of this type. A mirror to this is that empirical health services research might benefit from an infusion of complexity ideas. Case study design and methods offer one approach to the conceptually framed examination of system connections, both vertical and horizontal, and as McDaniel, Lanham, and Anderson (2009) point out are capable of producing knowledge with large-scale value from relatively small-scale samples.

Across the UK, in countless meso-level locales mental health workers and service users will have been experiencing the impact, both helpful and unhelpful, of multiple new types of team and changes to everyday practices with little space to adjust to the cumulative consequences. The speed of developments has far outstripped the capacity of researchers to respond. CRHT services and other, relatively new, types of specialised community team have all appeared in the absence of any systematic programme of evaluation (Boardman & Parsonage, 2007), and in a service context in which studies have tended to ignore the wider effects of innovation (Burns & Priebe, 2004). The analysis presented here suggests that developments will have been assessed and experienced in diverse ways, reflecting the differing positions and circumstances of people dispersed throughout each system (cf. Jordon, Lanham, Anderson, & McDaniel, 2010). For policymakers and service developers comes the practical lesson that modest change in one corner of a system can have large effects elsewhere (Plsek & Wilson, 2001), and for these groups this article's analysis points to the value of carefully considering the possible reverberations of innovation in order that the previously unanticipated becomes expected and planned-for. Unintended consequences may always emerge, but a service development perspective which pays heed to interdependence and interaction across system interfaces is likely to help minimise these.

Conflict of interest

None.

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