Exploring patterns of care coordination within services for older people

Helen Chester

Jane Hughes

Caroline Sutcliffe

Chengqiu Xie

David Challis

Abstract

Introduction

Supporting frail older people at home is an international policy objective. This article explored variations in care coordination arrangements and their relationship with service level outcomes using England as a case study.

Method

Survey data and routinely generated data collected in 2006 from 119 local authorities responsible for social care were combined. Using cluster analysis, distinct groups were identified with regard to forms of care coordination.

Results

Considerable variation was evident both within and between different types of care coordination, reflecting implementation guidance. Links with service level outcomes were weak, the most notable being the provision of intensive home care, a component of intensive care management.

Discussion

Thus this study, using agency level data, confirmed the variability in care coordination arrangements and the relative absence of intensive care management, central to shifting the balance of care from residential and nursing provision to care at home.

Key words

older people, care coordination, England, case study, cluster analysis

Introduction

Care management, a precursor of care coordination, has been a feature of services for older people in many countries since its initial development in North America and subsequent development in the United Kingdom (UK) and elsewhere (Béland et al., 2006; Bernabei et al., 1998; Challis and Davies, 1986; Challis et al., 2009; Kemper, 1990; Leung et al., 2004a). It was introduced to enable the support of people in community-based care rather than institutional care because of the need to find cost-effective alternatives for those with complex needs requiring long-term care and to coordinate fragmented services (Applebaum and Austin, 1990; Cm 849, 1989; Davies and Challis, 1986; Ministry of Health, Welfare and Sports, 2007; Minkman et al., 2009; Moxley, 1989). A variant of care coordination, intensive care management, has been widely researched. This has been defined as “*the presence of a specialist care management service working exclusively with people with high needs or at high risk, carried out by staff with small caseloads*” (Challis et al., 2001: 410). In England it was demonstrated that intensive care management made it possible to support vulnerable older people at home who would have otherwise entered residential or hospital care, at lower or equivalent cost (Department of Health, 2009). Similar evaluations in the United States, whilst they did not necessarily demonstrate cost savings, provided evidence that intensive care management could improve access to and usage rates of community care (Kemper, 1990; Newcomer et al., 1997). Subsequently, the benefits of this approach have also been demonstrated in intermediate care services both preventing inappropriate hospitalisation and facilitating timely discharge in a number of countries (Béland et al., 2006; Corbett et al., 2005; Leung et al., 2004a, 2004b; Roberts et al., 2007). In England the introduction of the community care reforms in 1989 signalled the application of the principles of intensive care management to adults with a wider range of need than those for whom research had demonstrated its effectiveness (Cm 849, 1989). Furthermore, central government permitted local authorities, responsible for the provision of social care within geographical areas and possess a degree of autonomy within policy frameworks, to decide how best to implement the changes locally (SSI/SSWG, 1991a). Consequently different approaches to care coordination have emerged in England replicating developments elsewhere (Challis et al., 1998; Geron, 2000; Minkman et al., 2009; Newcomer et al., 1997; Weiner et al., 2002; Wistow, 2012).

This study had two aims. The first was to examine the key features of care coordination for older people in service delivery arrangements. The second aim was to explore the links between these and service level outcomes (core tasks, service delivery and satisfaction indicators).

Methods

Care coordination arrangements for older people in England constitute the focus of this research and a case study approach was employed focussing on the complexities, circumstances, and dynamics of practice in local authorities (Bowling, 1997; Rubin and Babbie, 2001; Yin, 1984). The purpose of the empirical enquiry was both descriptive and explanatory utilising secondary data analysis. This formed one element of a wider programme of research conducted over a decade, approval for which was received from the appropriate body, the Association of Directors of Adult Social Services. Data relating to care coordination arrangements and performance management are used at the agency level, based on local authorities who responded to a national postal survey undertaken in 2006. A total of 119 of 149 questionnaires were returned, representing four-fifths (80 per cent) of local authorities. Previous research relating to outcomes of care coordination in England has principally taken the service user as the unit of analysis (Challis et al., 1995, 2009). However, in this paper the agency (local authority) is the unit of analysis and measures of care coordination are explored using both survey data and routinely generated data at the agency level.

The method comprised four sequential steps: the construction of measures of variation in care coordination arrangements; the development of indicators to capture service level outcomes; the classification of local authorities using indicators of variation in care coordination arrangements; and exploration of the relationship between local authority arrangements for care coordination and service level outcomes.

Measures of care coordination

Measures to identify different sets of care coordination arrangements within older people's services within England were identified from a framework developed to describe variation in care coordination arrangements for older people (Hughes et al., 2013). For this analysis these were grouped into four domains relating to enduring policy themes in the policy literature in the UK (Cm 849, 1989; Cm 8378, 2012; Department of Health, 2013). These are considered in more detail below.

Flexible response to need. The importance of a flexible response to need was noted in the pilot case management projects for older people undertaken around the time of the community care reforms (Challis and Davies, 1986; Challis et al., 1995, 2002, 2009). Their purpose was to deliver more effective and efficient forms of support for older people with complex needs thereby providing a valid alternative to care home admission. An important feature within the pilot projects was the use of decentralised budgets controlled by care managers, permitting the purchase of a range of additional services beyond those routinely available. However, these arrangements were subsequently found to be generally absent following the introduction of care coordination more widely throughout the country (Challis et al. 2001; Lewis et al., 1996, 1997). This lack of capacity to provide creative and flexible support limited the ability of care managers to provide a more personalised response to identified need (Lewis et al. 1996, 1997; Ware et al., 2003). Two aspects of 'flexibility in response to need' are examined in this paper: the extent to which front-line care coordination staff are able to directly arrange for the purchase of domiciliary care; and the range of social care services available for older people within the care coordination process.

Continuity of support. The assessment and care management guidance that preceded the nationwide introduction of care coordination identified continuity of care for people with long-term care needs as important (SSI/SWSG, 1991a, 1991b). Subsequent research has demonstrated the value of the continued involvement of the same care manager undertaking the core tasks of assessment, care planning, monitoring and review for service users, including the capacity to respond quickly to changed circumstances (Challis et al., 1998, 2009). Two aspects of this 'continuity of support' within

the care coordination process were explored in this study: the extent to which the same practitioner usually remains responsible for the core care coordination tasks and a distinction between a clinical approach involving social work skills such as counselling and a more administrative approach (Challis, 1994a, 1994b). This was measured by the extent to which professional attributes and elements of social work skills, such as counselling, are seen as important components of care coordination. Previous research studies have suggested that an administrative type of care coordination for the purpose of providing information and advice in the short-term predominates in England (Lewis et al., 1996; Jacobs et al., 2006; Weinberg et al., 2003).

Joint working between health and social care. A lack of service integration has been associated with fragmented poorly coordinated services at the level of the individual, with delays or failure of service delivery (Berwick, 1991; Brodsky et al., 2000; Leutz, 1999). Historically in England, the assessment, purchasing and provision of health and social care have been managed separately by the National Health Service (NHS) and local government, only recently demonstrating evidence of greater integration in the commissioning, provision and delivery of services (Cm 4181-I, 2000; Cm 7673, 2009; Department of Health, 2001, 2009; Reilly et al., 2003). In relation to care coordination, appropriate involvement of both health and social care professionals has been a feature of successful programmes in the UK and elsewhere (Challis, 1994a, 1994b, 1999; Challis et al. 2007; Minkman et al., 2009; Roberts et al., 2007). Five measures of ‘joint working in health and social care’ at different organisational levels are utilised here. Firstly, in terms of commissioning, a measure of whether or not old age mental health and intermediate care services (with a focus on unnecessary hospitalisation and timely discharge) were jointly commissioned between social care and health. Secondly, in terms of practice, whether there is some evidence of care coordination being jointly provided by health and social care staff in specialist old age mental health services. Thirdly, with regard to management arrangements, whether there is some evidence of joint management of care managers by both health and social care personnel. Fourthly, in terms of information sharing, a measure of whether local authority staff can access NHS client records both computerised and client-held. Fifthly, in terms of

integrated service delivery at the level of the service user, whether health staff are able to assess for domiciliary care which is traditionally arranged by the local authority.

Differentiation. Differentiation within care coordination arrangements has been described as the process by which vulnerable adults with complex needs receive a level of service response which differs both in content and intensity to that received by others with less complex needs (Hughes et al., 2005). Effective systems for screening, prioritising and gatekeeping access to care coordination services permit the identification of service users with complex needs (Tucker et al., 2008). These features have been specified in policy guidance over many years in England (Department of Health, 1997, 2002, 2005) and were identified as precursors to intensive care management (Tucker et al., 2008). Three measures of differentiation have been explored in this study. Firstly, whether or not eligibility for entry into care coordination services was additional to those for universally available services. Secondly, whether there was a policy of allocating cases of different levels of need/complexity/risk to different staff groups, evidence of targeting within the process. Thirdly, a measure of whether authorities have specialist assessment and care coordination teams for older people and a team specialising in the review of care packages.

Indicators of service level outcomes

Nine indicators providing information about what we term service level outcomes were extracted from routinely collected data relating to local authorities in England. These were considered to belong to three sub-groups: core tasks; service delivery; and final outcomes. They are summarised in Table 1.

[Table 1 in about here]

Classifying local authorities

A subset of data obtained from the postal survey was used to operationalise the twelve measures of care coordination represented in the four domains described above. The construction and selection of these measures from the data were guided by a framework describing variation in care coordination

arrangements for older people (Hughes et al., 2013). Empirical analysis confirmed the appropriateness of this selection. In this process measures were selected based on their capacity to discriminate between local authorities. The relationship between these was explored to avoid overlap.

A hierarchical cluster analysis was performed in SPSS (2006) to identify different groups of local authorities with similar care coordination arrangements for older people using the indicators identified in Table 2 below. This identified the number of clusters of local authorities present in the data by using a measure of similarity to link those local authorities most like each other. A variety of different methods were compared before obtaining a final cluster solution (Everitt, 1993; Campbell, 2002). The Wards Method with the squared Euclidean distance used as the measure of similarity resulted in a manageable number of clusters where the cases within each appeared relatively similar to one another compared to others. Non-hierarchical cluster analysis was then employed to refine the classification (Campbell, 2002). This method, as it had the option to assign local authorities to clusters based on those variables where data were available, allowed the inclusion of local authorities who had missing data for one or more of the variables used in the analysis.

The mean scores for each measure of variation by cluster ranged from 0 to 1. A score of '0' indicated that none of the local authorities within that cluster had that particular measure and a score of '1' indicated that it was present in all. An average score for each domain of interest was calculated using the mean score for each indicator by cluster. Differences between the clusters in terms of the domain scores were explored using analysis of variance tests to validate the clustering exercise. Overall, this approach to the cluster analysis mirrored that used in a previous paper exploring differences in local authority commissioning and contracting arrangements within services for older people (Chester et al., 2010).

Linking service level outcomes and care coordination

To explore the relationship between the two, the indicators of service level outcomes and the classification of care coordination arrangements were linked at the level of the local authority, thus

allowing exploration of the relationship between the features of care coordination and service level outcomes, using the combined dataset. Differences between the clusters in terms of service level outcomes for older people were explored. Analysis of variance tests were employed. Where this was not appropriate because the data was not found to be normally distributed as measured by the Kolmogorov-Smirnov test, the non-parametric alternative Kruskal-Wallis test was used (Field, 2005).

Results

Tables 2 and 3 describe the findings derived from the third step of the method, the grouping by cluster analysis. Subsequent tables are derived from these and are illustrative examples.

Cluster analysis of measures of care coordination

In Table 2 the variations in care coordination arrangements are described in terms of the measures in the four domains described above. For each measure within the domains the mean scores by cluster are specified and the percentage of local authorities in the overall sample possessing each attribute identified.

There were nine clusters identified in the analysis. The number of local authorities within clusters varied between 7 and 18 as shown in Table 2. Reflecting the diversity in local authorities there is considerable variation in the size of local authorities, populations of older people (aged 65 and over) ranged from under a thousand to over two hundred thousand (CSCI, 2006; Wistow, 2012). Together these findings suggested that there were distinct variations in different sets of arrangements and that one type of does not predominate. Overall the local authorities display variation in each measure as indicated by the last column in Table 2. Those indicators with the highest prevalence were ‘Allocation of cases to different staff groups according to need/complexity/risks’; and ‘four services available: personal care; housework, shopping; and meals.’ Measures least likely to be present were: ‘local authority staff access NHS records including client held records’; and ‘jointly commission old age

mental health/intermediate care.’ Overall, most variation appeared to be in the domain of joint working in health and social care.

[Table 2 in about here]

Table 3 presents the mean scores for each of the four domains of care coordination with higher or lower scores indicating domains in which clusters are most or least active. Statistical tests of the domain scores, shown on the table, indicated that these were significantly different between the clusters. This provides further support for the view that these clusters represent different approaches to care coordination of services for older people.

[Table 3 in about here]

Variations in service-level outcomes by cluster

Table 3 presents in addition the main findings from the fourth step of the method. The principal finding in this table concerns the relationship between the service level outcomes for older people in receipt of care coordination (identified in Table 1) and the nine types of care coordination arrangements (first identified in Table 2). Only one outcome ‘intensive home care’ was found to significantly differ between the clusters. Interestingly, the descriptive statistics available indicated that intensive home care was lower in clusters with lower scores for differentiation (e.g. clusters 1 and 7) compared to those with higher scores for differentiation (e.g. clusters 2 and 8). This may be indicative of a link between intensive home care and differentiation in the care coordination arrangements, suggesting the presence of elements of intensive care management.

Exemplars

Table 4 provides an illustration of findings from Tables 2 and 3. Exemplar local authorities identified statistically as most closely representing the characteristics of each cluster are described. For each the number of measures within the domains of care coordination described above is reported. None of the

local authorities exhibited all 12 measures of care coordination. However, the cluster 6 exemplar had nine measures whereas that from cluster 1 had only two. Interestingly, the exemplar from cluster 8 contained all the measures from three of the domains of care coordination. However, it had none relating to joint working. Overall, these findings confirm those from Table 2, namely evidence of variation in the presence of the 12 measures between local authorities. Moreover, it illustrates that exemplar local authorities within the clusters had demonstrably different sets of care coordination arrangements.

[Table 4 in about here]

Table 5 presents data, including that relating to service level outcomes, of four exemplar local authorities included in the analysis reported in Table 3. Those selected were: the one with most measures of care coordination, the one with the least measures and two within the middle range. Three findings here are worthy of note. Firstly, service level outcomes did not appear to be related to the extent of development of care coordination arrangements. Broadly similar outcomes, irrespective of measures of care coordination were reported. Secondly, the link between intensive home care and the domain of differentiation identified in Table 3 was not confirmed in Table 5. Local authorities from clusters 1 and 6 reported similar proportions of households receiving intensive home care although the former exhibited no measures of differentiation within care coordination arrangements and the latter demonstrate two of the possible three measures. Thirdly, in terms of service level outcomes those for final outcomes were low suggesting minimal levels of satisfaction with care coordination.

[Table 5 in about here]

Discussion

The availability of these data allowed us to describe arrangements local authorities have for care coordination and explore how these related to service level outcomes. A strength of the study is that it

used an established framework, developed to capture variations between local authorities in terms of their arrangements for care coordination, to guide the construction and selection of the indicators for the cluster analysis. It was derived from a programme of research relating to coordinated care for older people conducted by the authors over a substantial period of time (Challis et al., 1998; Hughes et al., 2013; Weiner et al., 2002). However, a number of limitations do exist. Firstly, data from the postal survey represented a snapshot of arrangements at one point in time and these will have evolved in response to changes in policy and practice and fiscal austerity. Secondly, the challenges involved in measuring service level outcomes are many and have been noted elsewhere (Brand et al., 2012; Clarkson and Challis, 2006). Thirdly, the measurement and responsiveness of some outcomes may have been affected by the fact they were national performance measures (Brand et al, 2012; Clarkson, 2010; CSCI, 2006). Fourthly, it is not possible to measure every aspect of agency arrangements for the management and delivery of services. The measures of care coordination were taken from a framework developed with the explicit purpose of describing variations in care coordination arrangements informed by national policy guidance and research (Hughes et al., 2013). Fifthly, the focus in this paper was on determinants of variation in care coordination hence other factors such as urban versus rurality and demographic and income differences between local authorities do not feature in the analysis. The subset employed in this analysis was informed by policy and previous research and were selected because of the capacity of the data to discriminate between local authorities. The domains identified to describe the clusters were confirmed through exploratory analysis and discussion in a team experienced in research into care coordination arrangements.

Whilst this study has employed data collected over the last decade, the findings of the analysis are relevant to the further development of interagency arrangements for care coordination for older people. In England, policy guidance has recently noted that interprofessional and multiagency working is an important component of care coordination, identified as a mechanism to promote joined up care across hospital, community and social care (Cm 8378, 2012; Department of Health, 2013). Furthermore, care coordination has been identified as a means to help older people living with long-term conditions avoid crisis and unnecessary hospital admission (HSJ/Serco, 2014). Professional

collaboration, evidenced by the degree of inter-professional working, is a feature of care coordination provided within multiagency settings. However, the analysis revealed variability in the extent of arrangements for joint working between health and social care services. Improved arrangements for information sharing have been identified as a facilitator of joint working between health and social care staff (Department of Health, 2013). Data relating to outcomes was weak. However, other research has suggested that the service user experience and more generally, the outcomes of care coordination have been enhanced by assessment and support planning characterised by an integrated approach spanning health and social care boundaries (Chapman et al., 2009; NHS Benchmarking Network, 2014).

Findings from this study indicated nine models of care coordination (Table 2) for older people exist in England. There were significant differences between local authorities in terms of these arrangements (Table 3). Much variation was also found within the four domains of care coordination (Table 2). This was consistent with findings from earlier work relating to older people's services indicating that local authorities had different approaches to care coordination and suggested that such arrangements for older people vary in terms of practice and process in key ways (Challis et al., 1998; Weiner et al., 2002). The data allowed an exploratory investigation of variations in care coordination arrangements in England and how these might be related to service level outcomes. Whilst measures of variation might have been expected to have been associated with service level outcomes, evidence was tentative and related only to one, intensive home care. This may be because of the variation within clusters relating to the measures of care coordination reflecting the focus of the analysis, or it may be that these indicators of outcome are shaped by other factors. Recent research has demonstrated the importance of exogenous factors beyond the control of local authorities in shaping service provision (Brand et al., 2012). Here we explore some of the implications of variation in care coordination arrangements in England. Three themes of enduring international resonance are employed to guide the remainder of the discussion.

The balance of care

Shifting the balance of care from institutional-based care to care at home is an international policy imperative in the context of the rising cost and demand for social care support consequent on an ageing population and care coordination has been identified as a means of achieving this (Cm 849, 1989; Ministry of Health, Welfare and Sports, 2007; Moxley, 1989). In strategic planning a balance of care approach is primarily concerned with those older people at the ‘margins of care’ placed in care homes who with the right support could be cared for in the community (Challis et al., 2014; Hughes and Challis, 2004; Mooney, 1978; Tucker et al., 2013). Demonstration projects, where exemplar approaches to intensive care management were provided for frail older people, indicated that this could be achieved in England and elsewhere (Béland et al., 2006; Bernabei et al., 1998; Challis et al., 2009). However, as noted above, national guidance in England required that care coordination be more widely available, and not focussed solely on those in greatest need. Reflecting this, subsequent research has suggested that components of intensive care management, essential to support people at home, were rarely in place in local authorities in England (Tucker et al., 2008).

Measures of differentiation presented in this paper are illustrative rather than comprehensive but nevertheless are indicative of a possible association between differentiation in care coordination arrangements and levels of intensive home care provision, an essential component of intensive care management (Table 3). The consequent lack of an infrastructure within local authorities to support intensive care management for the most frail service users is reflected in a relative lack of differentiation in care coordination arrangements. Nonetheless, overall the findings suggest that local authorities vary considerably in the degree to which they have a differentiated approach to care coordination (Table 4). These findings have implications for the achievement of an appropriate balance of care in localities between community support and care home provision, and the ability of local authorities to achieve an appropriate level of intensive home care. They also complement findings from two other studies. In one, the presence of an existing intensive care management scheme was associated with a higher proportion of older people receiving six or more home visits per week and in another, an intensive care management service for older people with dementia was

associated with lower admissions to care homes (Challis et al., 2009; Jacobs and Challis, 2007). Thus, together these findings suggest that differentiation within care coordination arrangements may be key to shifting the balance of care away from residential and nursing home care to care at home by facilitating the development of intensive care management for those with complex needs.

Community-based services

Internationally, research has suggested that older people prefer to receive long-term care in their homes or the community (Challis et al., 2009; Weissert et al., 1988; Wells et al., 1999). To achieve this objective, the integration of health and social care services for older people has been pursued in a number of countries (Bergman et al., 1997; Bernabei et al., 1998; Commonwealth Department of Health and Aged Care, 1999; Department of Health, 2009; Johri et al., 2003) and is particularly important and beneficial for frail older people living in the community (Eklund and Wilhemson, 2009; Hébert et al., 2010; Kodner, 2006). In England there has long been an emphasis on supporting older people with varying levels of need to live in their own homes, rather than in institutional care (Cm 4169, 1998; Cm 6737, 2006; Cm 7673, 2009; Care Act 2014). This objective has also been pursued in settings where health and social care have traditionally been managed separately by the NHS and local government. Within care coordination arrangements the extent of integrated service delivery has been identified as contingent on both intrinsic and extrinsic factors (Challis, 1994b). Here we identify the latter as those relating to joint commissioning, provision and management arrangements, whilst intrinsic factors relate to practice level issues, namely the capacity of health professionals to assess for domiciliary care which is funded by the local authority and the extent to which staff from the latter can access NHS records.

In this study, variation in the presence of measures relating to both the intrinsic and extrinsic factors of care coordination arrangements was present, with significant differences between clusters in relation to the domain of joint working between health and social care in terms of service planning and delivery (Table 3). This is demonstrated in the two exemplar local authorities with that from cluster 1 having none of these measures and that from cluster 6 having all those relating to extrinsic

factors and one of the intrinsic (Table 5). However both intrinsic and extrinsic factors were identified in around half or less of the local authorities (Table 2). There is some evidence, from elsewhere in the UK, that extrinsic factors promote integrated practice although intensive care management was no more likely to be evident (Challis et al., 2006). Interestingly, in the current study, measures of differentiation, traditionally associated with the presence of intensive care management, do not necessarily present alongside those of joint working to promote integrated service delivery (Tables 3 and 4). A review of innovative models of care for older people concluded that financial incentives to promote the downward substitution of resources from institutional to community-based care are required (Johri et al., 2003). However, from this study it might be surmised that both intrinsic and extrinsic factors are necessary for the development of intensive care management.

Professionally-led care coordination or consumer-directed care?

International evidence suggests that different models of consumer-directed care are emerging, which include service users directly employing workers of their choice and the provision of cash payments with almost total discretion as to how these are used. Research has provided some evidence of improved outcomes. For example studies of consumer-directed care in North America have suggested that service users who self-direct their own care are more satisfied with it (Carlson et al., 2007; Doty et al., 1996; Tilly and Wiener, 2001), less likely to have unmet needs (Foster et al., 2003) and more likely to have improved outcomes in terms of well-being (Carlson et al., 2007). In England, consumer-directed care has taken the form of direct payments and, subsequently, individual budgets and personal budgets (Glendinning et al., 2008). The introduction of the latter into the care coordination process has allowed service users either to take their allocation of funding as a direct payment and make their own care arrangements or in a more conventional way have a local authority care manager plan and arrange services.

This dual approach in which, following the assessment of need and allocation of a personal budget, service users choose whether to organise their own care or request that this role is performed by a care manager provides the context for the review of the findings from this study. These are discussed in

respect of: flexibility in response to need; continuity of support; and service level outcomes. With regard to flexibility in response to need, care managers were unable to commit finances and resources to implement a care package without consultation without a more senior member of staff in the majority of local authorities (Table 2). This finding was similar to a subsequent study (Sutcliffe et al., 2012). In terms of the range of services available to support service users at home, research has suggested that some older people place greater importance on assistance with household tasks rather than personal care in maintaining their independence (Seddon and Harper, 2009). A flexible response to need would provide this within the care coordination process. This study revealed that whilst two-thirds of local authorities had four services available a substantial minority had less (Table 2). Other research has suggested that the introduction of service user control of a personal budget could provide a catalyst for the extension of such provision (Wilberforce et al., 2011). Overall, however, in England the take up of direct payments has been low amongst older people relative to other user groups (Fernández et al., 2007; Priestley et al., 2007; Riddell et al., 2005).

In terms of continuity of support in care coordination arrangements, in only a minority of local authorities was the same person responsible for assessment, care plan and review apparent. Similarly, under a half of local authorities had an administrative approach to care coordination in which bureaucratic processes predominated over a more therapeutic or clinical approach to support (Table 2). It has been reported that direct payments were more likely to provide continuity of care and to give older service users more control over the care received (Leece, 2007). Nevertheless, a clinical approach to care coordination is often required by frail older people and their carers, utilising the consequent relationship with a care manager to negotiate, monitor, and review complex care packages. This is not available if the service user assumes responsibility for their personal budget and may lead them to potential risks due to a lack of regulation of those being employed by individual budget holders and potential abuse by family members (Manthorpe et al., 2009). Moreover, these arrangements have been associated with a greater financial cost compared with the provision of traditional care and support and greater anxiety consequent on planning and managing care for older people (Netten et al., 2012; Woolham and Benton, 2013).

Conclusion

Cluster analysis was used to explore the complexities of care coordination arrangements that have evolved in England. Reflecting the discretionary guidance that accompanied the community care reforms, considerable variation in care coordination arrangements were noted with no one type predominating. Individual measures of variation were noted both within care coordination arrangements in local authorities and in respect of those at the interface of health and social care which are required to promote an integrated service response. Links between service level outcomes and different types of care coordination arrangements were generally weak, with the most notable being between differentiation within care coordination arrangements and intensive home care. Both these are important components of intensive care management, identified as a means of supporting frail older people with complex health and social care needs at home as an alternative to placement within a care home. Measures indicative of a flexible response to need, continuity of support and joint working between health and social care providers associated with intensive care management are represented in the patterns described but not in a systematic manner. This is in contrast to earlier demonstration programmes of intensive care management which have had programme fidelity as their hallmark with care coordinated by a case manager. Prospects for the future development of care coordination arrangements in England appear uncertain with the introduction of consumer-directed care into an already fragmented service response. The presence of intensive care management with services coordinated by a case manager – the preference of many older people and their carers – within a range of approaches to care coordination will be required to achieve the policy goal of maintaining frail older people in their own homes.

Declaration of Conflicting Interests

The Authors declare that there is no conflict of interest.

Research ethics

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Table 1. Measures of service level outcomes for older people in receipt of care coordination.

Measure
Core tasks ^a
Percentage of clients receiving statement of needs and how they will be met
Percentage of new clients where time from first contact to completion of assessment is within four weeks ^b
Percentage of clients receiving a review as a percentage of those receiving a service
Service delivery ^a
Percentage of new clients where time from completion to provision of all services in the care package is less than or equal to four weeks ^b
People helped to live at home per 1,000 population aged 65 and over ^b
Households receiving intensive home care per 1,000 population aged 65 and over
Final outcomes ^c
Percentage extremely or very satisfied with the help they receive from social services
Composite measure of service quality based on average proportion of 3 indicators, respondents reporting: care workers always come at time that suit them; I am always informed by my home care service about changes in my care; and care workers always do the things that I want done
Composite measure of well-being based on average proportion of 3 indicators, respondents who strongly agree with: I feel safe in my own home; I have as much contact with other people as I want; and I get up and go to bed at times that suit me

^aKey Indicators Geographical System 2005-06.

^bMeasure relates specifically to older people.

^cPersonal Social Services Users Survey 2005-06.

Table 2. Variation in care coordination arrangements (n=119)

Measure of care coordination	Mean scores by cluster number									Local authorities with attribute (%)
	1	2	3	4	5	6	7	8	9	
Flexibility in response to need										
Care managers authorise services	0.5	0.0	0.3	0.1	0.3	0.6	0.3	0.9	0.8	40
Four services available: personal care; housework, shopping; meals	0.3	0.3	0.4	0.8	0.9	0.9	0.9	0.9	0.5	66
Continuity of support										
Single worker responsible for assessment, care plan and review	0.2	0.3	0.6	0.1	0.5	0.4	1.0	0.8	0.4	43
Clinical approach to care coordination	0.6	0.3	1.0	0.0	0.9	0.3	0.6	0.8	0.2	53
Social care and health care - joint working										
Jointly commission old age mental health and intermediate care services	0.1	0.4	0.5	0.6	0.1	0.7	0.4	0.1	0.0	30
Joint provision of care coordination for older people with mental health problems	0.1	0.0	0.9	0.6	0.3	0.8	0.7	0.2	0.1	40
Some joint management arrangements of care managers	0.1	0.3	1.0	0.8	0.1	0.7	0.9	0.4	0.4	51
Local authority staff access NHS records including client held records	0.0	0.0	0.1	0.1	0.4	0.7	0.9	0.2	0.8	29
Health professionals assess for domiciliary care	0.1	0.3	0.9	0.6	0.7	0.5	0.6	0.1	0.9	49
Differentiation										
Eligibility criteria for entry to services	0.2	1.0	0.4	0.4	0.7	1.0	0.3	0.7	0.3	55
Allocation of cases to different staff groups according to need/complexity/risks	0.2	0.8	0.9	0.7	1.0	0.4	0.3	0.9	0.9	70
Specialist teams – by user group and function	0.3	0.3	0.5	0.3	0.1	1.0	0.0	0.6	0.0	36
Number of authorities in each cluster	16	12	15	18	16	11	7	14	10	

Source: Challis et al., 2009; Hughes et al., 2013.

Table 3. Variation in domains of care coordination and service level outcomes by local authority cluster (significant factors only)

Cluster no.	Flexibility in response to need ^{a*}	Continuity of support ^{a*}	Social care and health care- Joint working ^{a*}	Measures of differentiation ^{a*}	Intensive home care ^{b*}
1	0.4	0.4	0.1	0.2	39
2	0.2	0.3	0.2	0.7	72
3	0.4	0.8	0.7	0.6	62
4	0.4	0.0	0.6	0.5	71
5	0.6	0.7	0.3	0.6	63
6	0.8	0.4	0.7	0.8	65
7	0.6	0.8	0.7	0.2	28
8	0.9	0.8	0.2	0.7	73
9	0.7	0.3	0.4	0.4	51

^amean score.

^bmean rank.

*p-value <0.10.

Table 4. Measures of care coordination in each domain by cluster: exemplars (n=9).

Domains of care coordination (maximum no. of measures)					
Cluster no.	Flexibility in response to need (2)	Continuity of support (2)	Social care and health care- joint working (5)	Measures of differentiation (3)	Total indicators (12)
1	1	1	0	0	2
2	1	0	0	2	3
3	1	2	3	1	7
4	1	0	3	1	5
5	1	1	2	2	6
6	2	1	4	2	9
7	1	2	3	0	6
8	2	2	0	3	7
9	2	0	3	1	6

Table 5. Four exemplar local authorities from selected clusters: measures of care coordination arrangements and service level outcomes.

Measures of care coordination	Cluster no.			
	1	9	7	6
Flexibility in response to need				
Care managers authorise services	✓	✓		✓
Four services available: personal care; housework, shopping; meals		✓	✓	✓
Continuity of support				
Single worker responsible for assessment, care plan and review			✓	
Clinical approach to care coordination	✓		✓	✓
Social care and health care - joint working				
Jointly commission old age mental health and intermediate care services				✓
Joint provision of care coordination for older people with mental health problems			✓	✓
Some joint management of care managers		✓	✓	✓
Local authority staff access NHS records including client held records		✓	✓	✓
Health professionals assess for domiciliary care		✓		
Measures of differentiation				
Eligibility criteria for entry to services				✓
Staff mix as a criteria in case allocation according to need/complexity/risks		✓		
Specialist teams – by user group and function				✓
Measures of service level outcomes				
Core tasks				
Percentage of clients receiving statement of needs and how they will be met	93	72	96	83
Percentage of new clients where time from first contact to completion of assessment is within four weeks	85	71	79	85
Percentage of clients receiving a review as a percentage of those receiving a service	63	51	67	48
Service delivery				
Percentage of new clients where time from completion to provision of all services in the care package is less than or equal to four weeks	71	82	89	91
People helped to live at home per 1,000 population aged 65 and over	80	78	51	79
Households receiving intensive home care (per 1,000 of population aged 65 and over)	19	10	7	20
Final outcomes				
Percentage extremely or very satisfied with the help they receive from social services	56	61	51	52
Composite measure of service quality	37	43	31	45
Composite measure of well-being	44	40	46	47