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Integrated care networks and quality of life: linking research and practice

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Abstract

Purpose: To report on the development of a project dedicated to improving the quality of life of older people through the creation of integrated networks.

Context: The project is set within a post-industrial community and against a backdrop of government re-organisation and devolution within Wales. The immediate research context is determined by utilising an approach to the structure of integration derived theoretically.

Case description: Project CHAIN (Community Health Alliances through Integrated Networks) adopts a network perspective as a means of addressing both the determinants of health and service delivery in health and social care. The Project partners are: healthcare commissioners and providers; local authority directorates including community services and transportation; the voluntary and private sectors; and a university institute. Co-opted participants include fora representing older people's interests.

Data sources: The Project incorporates an action research method. This paper highlights qualitative data elicited from interviews with health and social care managers and practitioners.

Conclusions and discussion: The Project is ongoing and we record progress in building five integrated networks.

Keywords

integrated care networks, quality of life, action research, structure of integration

Introduction and purpose

In developed countries the increasing number of older people creates healthcare challenges, most prominent of which is the volume of demand. It is, however, the nature and origins of that demand that presents the most profound organisational headaches. Healthcare providers are not usually responsible for all the service delivery inputs that constitute a care package. Nor do they have any direct control over the lifestyles of individuals or the activities of other organisations that precipitate healthcare demand. These issues of responsibility and control give rise to two important themes and reactions to demand complexity.

First, healthcare demand stems to some extent from the wider socio-economic and cultural determinants of health itself. The New Public Health recognises the importance of a wide range of influences including: financial security; a safe environment; and food purity. Addressing these health determinants necessitates population approaches stemming from a variety of non-healthcare agencies. The strategic integration of these multi-agency efforts to improve health and well-being is designed, in part, to at least slow the increasing demand for healthcare interventions.

Second, not only are healthcare providers interested in reducing the number of people 'entering the front door'; they also want to ensure a rapid patient flow. Crucially, the timeliness of service quality at, for example, the point of hospital discharge, depends on social care arrangements. Difficulties in organising health and social care packages in the community lead to the phenomenon of 'bed-blocking' and results in inefficiency.

In response to these challenges, systems thinking and holistic care have become familiar notions. The overall aim is to integrate the diverse efforts of a range of interested parties to produce both population health gain and improvements in service delivery. This aim is consistent with policy initiatives that promote quality of life as a unifying theme. For what counts from the user perspective is the total quality of life package in which, for instance, financial income, home comfort, safety and healthcare services combine to form a coherent whole.

Project CHAIN (Community Health Alliances through Integrated Networks) was commissioned to pilot new ways of integrating activities directed towards improving the quality of life of older people. Whilst this prime goal reflects the duty of care core to the participating organisations, the strategic intentions are consistent with the introductory remarks on demand complexity. That is, the Project is also directed towards the complementary objective of improving the efficiency and effectiveness of agency interactions.

This paper first considers an approach to the structure of integration as a key theoretical construct. We then specify the context of action, taking in local and national details. The main section of the paper describes the Project's action research processes with an emphasis on the transformation of data into knowledge-in-action. We conclude with a review of progress-to-date and an indication of further developments.

Contexts – theoretical and actual

Approaching the structure of integration – range/level/degree

The recent SARS outbreak serves as a reminder that the terms 'integration' and 'integrated care' are used to cover a kaleidoscope of arrangements. SARS victims were treated by staff with a range of clinical specialisations. Both immediate patient needs and societal requirements for infection control necessitated integrated teamwork in ITUs. The overall patterning of the response to SARS harnessed the diverse inputs of, for instance, airport security staff, public health experts and government officials. Success, at least in the short term, has depended on deploying the micro-macro spectrum of communication and co-ordination efforts to produce a variety of integration formats.

Many integration exercises lack the international dimension and media-exposure of SARS, nevertheless they do share common elements, which, despite their variable-scale and system-wide nature, can be identified theoretically. The relevant literature takes in a wide historical sweep from consideration of the division of labour [1] to structuring network activity in virtual organisations [2]. Perhaps the crucial recent insight into the integration problem stems from the contribution of Lawrence and Lorsch [3]. They recognised fully that attempts at managing integration depended on the extent of task differentiation in relation to environmental conditions. This 'contingency theory' has influenced the conceptual underpinnings of Project CHAIN.

Drawing additionally on a number of other sources, we have found that a useful approach to the structure of integration lies in the three dimensions of range, level and degree. This approach initially focuses on the 'who' of organisational design and in application progressively develops a picture of the structuring of relationships. The three dimensions are specified as:

Range denotes the number of providers that contribute to integrated care. It combines differentiation (degree of specialisation) with complexity (number of sectors represented) as detailed by Alter and Hage [4].

Level refers to the ''...policy, finance, management and clinical levels...'' of integration as defined by Leutz [5]. The three levels of strategy, management and practice represent a simplification. Moreover, 'practice' is a more neutral term than 'clinical' in social and health care environments. Bolland and Wilson [6] have emphasised the need for integration at all levels of organisation. Vitally, we consider patients/clients as 'involves' [7] to indicate the potential for constructive interaction between supply and demand.

Degree is the extent of horizontal/vertical integration at/between each organisational level and varies from informal communication to formal merger [8–10].

These three dimensions have the potential for accommodating contexts as different as unified assessment specific to hospital discharge and transport infrastructure as integral to care systems [11].

Project CHAIN – setting and background

Project CHAIN is set in the County Borough of Rhondda Cynon Taf (population 240,000), formerly at the heart of coal mining in South Wales. The post-industrial legacy of that era presents a challenge to public health agencies. The area ranks as one of the most deprived in Europe, with standardised mortality ratios well above average and particularly high prevalence of cardio-vascular and respiratory disease. Meeting

the present health deficits through quality healthcare, whilst simultaneously addressing the determinants of health to be tackled by health promotion and public health measures, offers a considerable challenge to the efforts of all agencies and for CHAIN. Moreover, the industrial legacy is not restricted to health deficits. The people of the Borough reside typically in villages originally based around the now defunct mines. The relative independence of these communities is deepened by their location in series of topographically distinct valleys. Sitting health and social care facilities is problematic, and further exacerbated by difficulties in the transportation infrastructure. Detailed knowledge of how all these factors interact has been instrumental to the progress of the Project. (http://www.multimap.com/static/photoinfo.htm provides aerial photographs: use CF371DL as data for postcode field)

Detailed local knowledge needs to be complemented by understanding the institutional framework that structures the potential for change. Since 1999, some powers of the UK national government have been devolved to the Welsh Assembly Government (WAG). Responsibility for statutory health and social care provision now lies with a single Minister. Increasingly, this *degree* of integration between health and social care is spreading through the policy *level* in that the respective civil servants are being brought within a unified hierarchy. Secondary health care is managed and delivered through integrated acute and community National Health Service (NHS) Trusts. Primary health care is administered by twenty-two Local Health Boards (LHBs) who also have responsibility for commissioning non-specialist secondary services. These are geographically co-terminus with an equal number of local government councils who provide social, educational, environmental and other services. There is now a degree of formal integration between local government and the LHBs to the effect that officials from the former agency sit on the governing boards of the latter. However, unlike Primary Care Trusts in England, there are presently no plans in Wales for the unification of primary and community health and social services. There are other institutional actors, for example an ambulance trust, but these are peripheral to the existing phase of CHAIN.

CHAIN involves a wide *range* of organisations in a variety of relationships. Overall Project direction and scrutiny is performed by a Board representing the group of four funding partners: WAG, the local LHB, Rhondda-Cynon-Taff County Borough Council and the Welsh Institute for Health and Social Care (University of Glamorgan). These four institutions also contribute human and other resources, as do two local NHS Trusts and voluntary sector organisations. Older people themselves are represented through three dedicated forums. That is, there is good coverage of the interests of both supply and demand.

Chain in action – intent, method and enactment

Intent

Having specified the Project's contexts and quality of life aim, we move on to consider its intentions, processes and dynamics. Concentrating on the components of the project's acronym provides an initial guide. 'Community Health Alliances through Integrated Networks' is suggestive of the intent but requires further definition.

In inter-sectoral/agency/professional domains, we take the network to be the fundamental organisational unit. These networks will take on a characteristic form depending on the nature of the task and other contingent variables [4]. Certainly, service delivery networks will need to include the appropriate *range* of providers. In terms of *level*, we also recognise, for example, policy networks that operate both horizontally and vertically at the interface between, say, the Welsh Assembly Government and the senior management of NHS Trusts. Practitioners are often experts at informal networking; a *degree* of integration dedicated to 'getting things done' [12].

Thus, the primary developmental intention of CHAIN is to generate a number of networks with different functions that are integrated both internally and with each other. On completion of this phase, these integrated networks should have policy/managerial/practitioner *'coverage'* of the served community. That is, there is an umbrella of network-based alliances promoting and satisfying health and well-being issues. The final outcome is improved quality of life (QoL).

Method

Our identification of range/level/degree provides the framework for the latent structuring of integration. In itself this framework has only conceptual value. The imperative is to convert this static concept into a dynamic reality of integrated networks dedicated to health and social care issues. We selected action research (AR) as one means of delivering this imperative. AR serves the dual purpose of providing a type of method to obtain knowledge and of dynamically applying that knowledge to the task in hand. In an

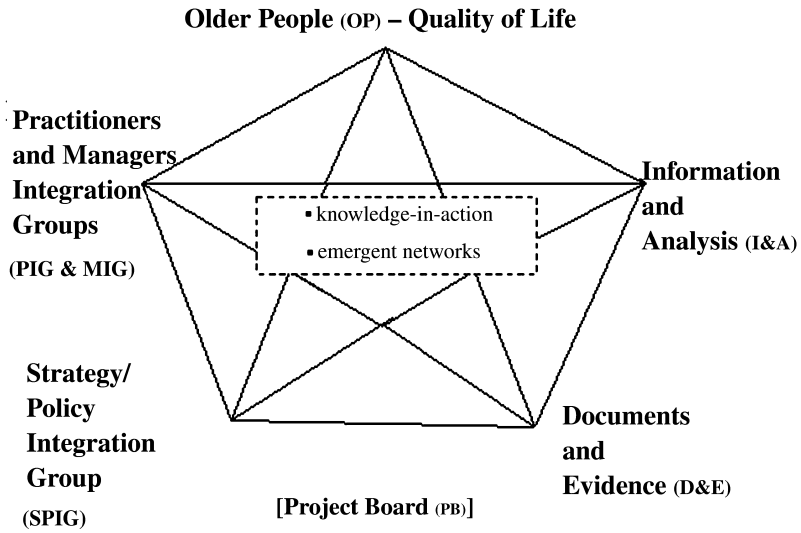

Figure 1. The Action Research Components of CHAIN.

R&D sense, AR is both research medium and developmental massage (cf. McLuhan [13]).

In scientific research, method refers to the paradigmatic means by which, for example, new knowledge is created or a hypothesis is tested. AR should be considered as an 'approach' to the practice of research rather than a method per se. In offering a working definition of AR, Reason and Bradbury [14] stress the linking of participants' action to the development of practical knowledge through emergent processes. This is not to say that formal quantitative or qualitative techniques of conventional social science research have no place.

Chisholm [15] records the use of AR to develop an interorganisational network:

> ''An action research (AR) approach provided one conceptual base for developing the network. Essentially, AR, as we define it, involves engaging in repeated cycles of diagnosing, planning, implementing, collecting and analysing data on outcomes, discussing outcomes with system members, reaching conclusions and defining new sets of action steps. In short, the process is highly cyclical.'' (See Figure 2)

Furthermore,

> ''Action research also attempts to generate knowledge of a system, while, at the same time, trying to change or develop it... Ideally, this leads to developing a system that is continuously learning from experiences, learning how to learn, and creating conditions (structures, processes and culture) that support and foster learning.''

Chisholm's perspective resonates with some of the main themes in organisational theory and practice in the last decade or so. Notable contributions are: Senge's work on the learning organisation [16]; soft systems theory [17]; and knowledge management [18]. In one of its facets, AR provides an opportunity for exercising the formal knowledge contained in these and other repositories.

To summarise AR as method in Project CHAIN. We have applied AR as a technology for integrating the tacit knowledge of health and social care participants with formal knowledge inputs so as to generate integrated networks. Tacit knowledge is elicited and then represented using conventional qualitative and quantitative methods. Formal knowledge exists in diverse sources of documentary evidence that includes policy documents, practitioner handbooks and the interorganisational literature. These inputs are then analysed and refined in CHAIN's virtual forums to generate knowledge-in-action as a precursor to network formation.

Enactment

Figure 1 represents the Project's action research components as derived from the theoretical structure of integration and the knowledge inputs. The inclusion of Older People, the Project Board and the other two groups reflects the notion of *level*. Additionally, *range* is represented by, for instance, the number of professions operating within the Practitioner Integration Group (PIG). 'Documents and Evidence' correspond to formal knowledge. 'Information and analysis' is the product of research activity and includes, respectively, older people's quality of life priorities and the efforts of the Strategy/Policy Integration Group (SPIG) to substantiate those priorities.

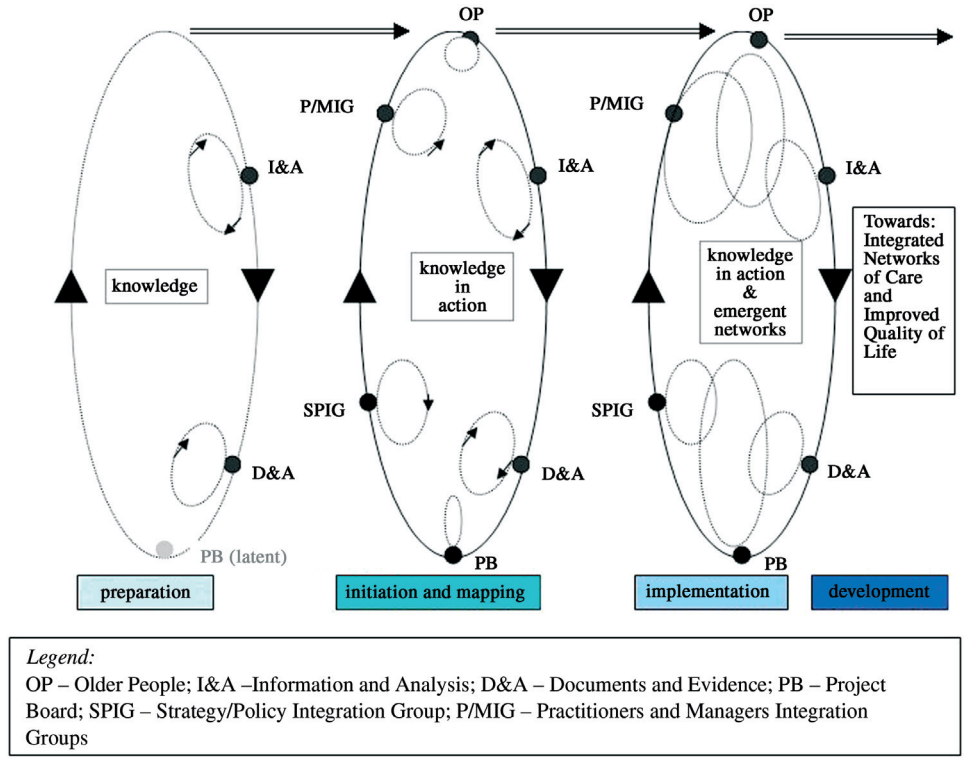

Figure 2. Outline of the AR cyclical processes.

The pentagram serves to indicate the interaction of the five components in the generation of 'knowledge-in-action' and 'emergent networks'.

The dynamics of these interactions are more fully represented in Figure 2. Each large ellipse represents a specific AR cycle. The smaller dotted ellipses indicate some processes that often occur daily. The accompanying text provides the content of the cyclical processes. Throughout, there is an implied application of Chisholm's AR definition, "... diagnosing, planning, implementing..." and so on.

Preparation

The theoretical designs that underpin CHAIN were developed over a period of eighteen months. The designs draw on extensive related work experiences coupled with a wide-ranging review of relevant literatures [19]. As a consequence, a proposal based on network development led to funding by a partnership, later constituted as the Project Board. CHAIN went live in January 2001 with the introduction into the local care system of the action research process and other change technologies.

Year 1 – initiation and mapping

Step 1 – initial engagement

The Project Board gave CHAIN a mandate to contribute to improving older people's quality of life. A question immediately arose: "What constitutes quality of life?" The three local Older People's Forums were consulted. Discussion groups were invited to talk freely and generally about their quality of life. They were then asked to itemise quality of life factors. The top five ranked responses were:

- Level of Income;
- Health Service;
- Comfortable/Safe Home;
- Security from Crime;
- Support for Independence.

Information derived from this exercise was relayed to the Strategy and Policy Integration Group (SPIG) formed by senior managers drawn from all the partnering organisations. Initially, the SPIG performed two main tasks. First, it began the process of identifying specific health and social gain target areas that would ultimately generate objectives to underpin the quality of life aim. Second, it analysed the strategic docu-

Table 1. Example drawn from data collection document plus selected responses

QoL facet: Health Status		
Target Areas (suggested by SPIG)	**Tasks**	**Comments** (supplied by MIG & PIG) These could include: Are the tasks appropriate? How health and social care integration can be improved? Examples of good integrated practice.
Maximise physical, mental and social well-being. Reduce level of self reported long-time limiting illness	• Reduce loneliness/isolation and adverse health related habitual behaviour • Improve access to health enhancing activities/services • Reduce iatrogenic disease • Changing the ''admission to hospital'' culture • Improve mobility programmes • Improvement in the nutritional status of older people • Involving and learning from business • Care and support for carers • Develop a joint assessment process based on a health and social model for older people and carers	Build on Age Concern's Good Neighbour and Primary Care Schemes Extend Leisure Prescriptions Better transport arrangements Develop Day Hospital Concept Medication issues System itself creates dependence Has to be everyone's responsibility, not just physiotherapists Similar to mobility: base multiple inputs around dieticians' core knowledge Learn the way business uses information. Pharmacists & opticians bridge public/private gap Carers Support Project. Crossroads Use assessments developed for hospital discharge More effective use of the 75 plus assessment

ments of the partners to answer the question: ''At the policy level, how joined up are we in relation to the quality of life aspirations of older people?'' In a nutshell, the answer came back: ''Not very integrated at all!'' [20].

This first step is summarised as: recognising the Older People's Forums and establishing the SPIG as foundational elements of network activity; deepening shared knowledge of the local context; developing horizontal linkages at senior management level; setting up vertical connections between policy makers and service users; and generating first passes at identifying targets.

Step 2 – broadening

Step 1 culminated with the production of a working SPIG document suggesting actionable tasks that would contribute to the core aim. Table 1 shows one example taken from a related data collection document that was circulated amongst 120 middle managers and practitioners. Reactions were recorded during in-depth, semi-structured interviews. These interviews also increased awareness of CHAIN and made possible the recruitment of members for the Management Integration Group (MIG) and Practitioner Integration Group (PIG). In addition to informing the quality of life target areas (Table 1), the interviews had two other main objectives:

- To discover the extent of local inter-organisational activity, especially networks;
- To explore the level of satisfaction of staff with (inter-) organisational arrangements.

The rationale behind these three strands was to gather further information; first on the content of quality of life issues; and second, on the extent to which network processes were already underway.

Step 3 – integrative analysis

Data were processed along standard qualitative lines. Transcribed audio-recordings were content and theme analysed manually. Information was represented in documentary form [21]. Included were: the local history of collaborative working; responses to the outline targets set by the SPIG; further insights into the local context, especially in terms of resources; and an appraisal of technology-in-use ranging from data collection and recording in respect of assessment to the availability of e-mail to promote horizontal interactions.

Table 1 contains some representative quality of life responses by managers and practitioners. We offer selected quotes as exemplars pertinent to some of CHAIN's core themes.

> ''Improving the health status of the elderly... how do you change the habits of a lifetime?''
> ''Too often it's about things being felt to be social problems not medical problems with people who are frail elderly. When things start to deteriorate it's because their health is deteriorating. Good practice is for their health to be looked into.''

These comments are juxtaposed as a reminder of our introduction concerning the nature of demand, the role of lifestyle and the allocation of responsibility for care. Clear expressions of these issues by practitioners and managers at the service delivery interface are the foundation of knowledge-in-action. It falls to the action research process to ensure that these foundational elements are first communicated and then acted upon in the interest of all participants.

The survey of managers and practitioners revealed a number of instances of network arrangements. These included the 'Primary Care Scheme' targeted at elderly people prone to self-neglect and 'CareLink' which acts as the hub for panic response communications for people at risk. Consistent with contingency theory, different organisations had distinctive articulations of their network role.

> ''Everything we do is through a network. If you really sat down and analysed what we did, we don't physically do anything that's in connection with any of these subjects. We act as a sort of facilitator and drag everybody together and put them into one building so it's more effective and easier to control and manage.''

Some interviewees made observations on the relationship between their role and organisational structure.

> ''My post...yes, I'm responsible for service delivery... but part of it should be developmental as well and sort of have an input into the strategic level. There is a need for a post that straddles the two (levels). Someone who understands the operational issues of delivering services whether it be staff management, resource management or budget management and then... (also) translating policies that come out of government into how you should do it.''

This statement corresponds partially with CHAIN's approach to the structure of integration and its intent. Such correspondence, accompanied by existing network knowledge, contributed to rapid Project development.

Implicitly, the above set of four quotes captures something of the enthusiasm and commitment of the local workforce. A central finding of the survey was that job satisfaction was associated with contributing to the quality of life of individuals, families and communities in partnership.

Step 4 – consolidation

Throughout this period, links with the Older People's Forums were maintained. They recorded high levels of approval with CHAIN's progress, particularly the way their own QoL priorities had been factored.

The document containing the aggregated findings of this cycle of participative inquiry was circulated to members of the Project Board, SPIG, MIG and PIG. Two open conferences gave the opportunity for group feedback. Two questions were of crucial interest in respect of the work:

- Did it provide a reasonable picture or map of the local care system?
- Did it contain the basis for action in relation to the older people's quality of life priorities?

Both were answered in the affirmative, and the conferences were characterised by a high degree of support and promises of commitment. To this point the first complete action cycle of Figure 2 had been undertaken.

Year 2 – implementation (putting it all together): the five issue-based networks

By the end of 2001, Project CHAIN possessed a substantial and substantive fund of knowledge derived from documentary evidence and its action research strands. Putting the various data, information and knowledge streams together, eleven issues emerged for consideration.

In early January 2002, a SPIG meeting was charged with reducing the eleven issues to a workable number for network development. Five 'issue based networks' were selected for development. To sketch progress during 2002:

Income improvement

This network was established given the absolute priority of local older people. The core involves a large range of interests. Prominent are older people themselves and representatives from the Carers' Support Project. Amongst providers from the statutory sector, the Department of Work and Pensions notably are working alongside colleagues from NHS Trusts.

Reduction in the fear of crime

Further contacts with the Older People's Forums confirmed this issue as seriously undermining peace of mind and general well-being. This is a wide-ranging network of care agencies and also involves the Police and the Media.

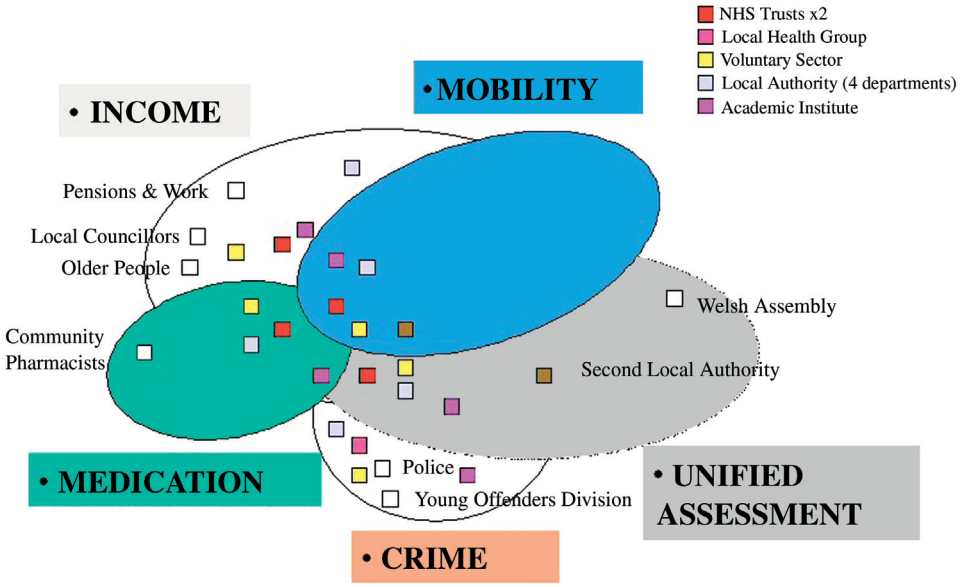

Figure 3. Integrating the Integrated Networks.

Mobility

This issue was chosen as it offers the opportunity of very wide network development. For example, work to date takes in both the setting up of a post-discharge community reablement team and a review of the use of taxis by older people.

Unified assessment

Given that assessment underpins access to a large range of services, its inclusion was considered vital for integration. During 2002, this issue became subject to a policy initiative by the Welsh Assembly Government. CHAIN's early recognition of this issue's centrality has resulted in accelerated local and national progress.

Managing medication in the community

CHAIN is designed to accommodate new knowledge inputs. In this respect, the publication of the National Service Framework (NSF) for Older People [22] provided a wealth of actionable evidence. Utilising this NSF in tandem with other documentary materials, our medication network core has progressed to the point of producing protocols for service delivery and defining the role of a named co-ordinator.

Concluding remarks – project status

Figure 3 illustrates graphically CHAIN's status in terms of covering Older People's QoL aspirations by a range of agencies, some of whom have sought inclusion as the Project has developed. Such ad hoc developments are entirely consistent with our emergent approach.

In addition to the range of actors, we have maintained our conceptual stress on level and degree. For example, both medication and assessment networks have benefited from a vertically integrated approach to connecting policy and practice. The degree of integration of each issue-based network is being progressively determined and refined by continued application of the action research method. The presently loose arrangements of the income network can be contrasted with the tightness of its medication counterpart.

Crucially, we are beginning to see increased flows of health and social care information: an indication, as suggested by Figure 3, that the five issue-based networks are being integrated. We look forward to supplying the hard evidence for this conjecture at a future stage.

Acknowledgments

This paper complements and augments the paper, ''Community Health Alliances through Integrated Networks (CHAIN): Reporting Project Progress in South Wales with Reference to the UK National Service Framework for Older People'', presented at the IJIC Conference, Barcelona, 2003; readable at http://www.ijic.org/portal/. The original paper takes a more general view of Project CHAIN and includes an outline of organisational design innovations such as the 'virtual organisation co-ordinator'. This revision focuses on the action research dimensions and is based on the helpful comments of two anonymous reviewers. Thanks go to them and also to Stephanie Helfferich and Astrid van

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