



*Kathy Eagar*

*Alan Owen*

*David Perkins*

*Linda Adamson*

*Karen Quinsey*

*Roy Harvey*

*Janette Green*

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This report is part of the final evaluation report on Care Net Illawarra, one of the Australian Coordinated Care Trials based in the Illawarra. Each of the national trials addressed the same primary hypothesis:

*Coordination of care of people with multiple service needs, where care is accessed through individual care plans, and funds pooled from existing Commonwealth, State and joint programs, will result in improved client health and well being within existing resources.*

A summary of the key elements of the Care Net Trial is contained in Appendix 1 of this report.

There are 10 reports in this evaluation series:

Report Number 1	The Care Net Trial – What it was and How it was Managed
Report Number 2	The Care Net Intervention (this report)
Report Number 3	Care Coordination in the Care Net Trial
Report Number 4	The Use of IT in the Care Net Trial
Report Number 5	Client Experiences in the Care Net Trial
Report Number 6	The Care Net Trial – Impact on General Practitioners
Report Number 7	The Care Net Trial – Impact on Health and Community Care Providers
Report Number 8	The Care Net Trial – Impact on the Wider System
Report Number 9	The Care Net Trial – Value for Money?
Report Number 10	The Care Net Trial – The Evaluators Conclusions

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## Report Number 2

### The Care Net Intervention

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## 2.1 Introduction

The Illawarra Coordinated Care Trial comprised a program of eight component activities undertaken over a period of 26 months.

The purpose of this report is to describe these activities. These interventions are examined in detail in other reports in this series.

## 2.2 Background

The Illawarra Coordinated Care Trial, or Care Net Illawarra, was established as part of a National series of demonstration projects that aimed to assess the benefits of coordinated care in the context of the Australian health care system. The primary hypothesis to be tested by the trials was:

*That coordination of care of people with multiple service needs, where care is accessed through individual care plans and funds pooled with existing Commonwealth, State and joint programs, will result in improved client health and well-being within existing resources.*

Fund pooling was a key component of the coordinated care trials. The established, program-based organisation and funding of health care services was thought to be a principal factor in frustrating flexible service provision and service substitution. The way to overcome this issue was believed to be the pooling of funds from Commonwealth, State and joint Commonwealth-State programs (Pekarsky 1999). Trials would be allocated a budget from which they could purchase services for clients, with funds for the budget coming from the finances of existing service providers. But there would be no additional money. A key Commonwealth requirement was for trials to be cost-neutral.

The Illawarra trial encompassed three local government areas: Wollongong, Shellharbour and Kiama, the area being located south of Sydney, NSW. Its principal stakeholders were the Illawarra Area Health Service (IAHS), the Illawarra Division of General Practice (IDGP) and the NSW Home Care service.

The trial aimed to coordinate the care of people aged 65 years and over with either a risk of falling or who had complex medical or social problems that required multiple services from more than one health care service provider. During the 1997 planning phase of the trial, roughly 1800 eligible residents were referred to the trial by the 100 GPs participating. 1200 clients were allocated to an active group and would have their care coordinated by the trial, while the other 600 were allocated to a control group.

After the planning phase, the trial went live on 1 November 1997. It finished on 31 December 1999, a total period of 26 months over 3 financial years.

The coordination of care was undertaken by 15-16 care coordinators, in collaboration with the client's GP. The GP maintained control of the medical aspects of the client's treatment, while the care coordinator organised access to other services, purchasing services agreed to with the participant and GP. The care coordinators performed a systematic assessment of their clients initially every three months and subsequently in response to need. These assessments were intended to inform the creation of the clients' care plan that, among other things, included the goals of care for the client. Finally, a service plan was created that described the package of services to be bought by the trial in order to address the clients' goals was created.

Thus, the trial adopted a commissioning model of service provision. It secured services mainly from community care service providers, having access to both public services (those in the IAHS

and the local HACC agencies) and private services. Medical (GP, specialist), pharmaceutical and hospital services were also within the funding pool, but these services were largely determined by GPs.

The trial used State and Commonwealth funds to develop an information system. Based on an intranet structure, the system supported email, client records, service utilisation, and financial data. This system did not support full communication between providers but significant steps included the increased use of computers by GPs.

## **2.3 The Eight Interventions**

The eight interventions which comprised the trial are summarised in Table 1. A more detailed description and discussion follows in subsequent sections.

Table 1 Components of the Care Net intervention

Intervention	Goal	Description
A formal assessment of all participants	To comprehensively assess the client's social and health context.	The first part of the assessment was the recruitment of participants with multiple services needs into the Trial. A systematic, comprehensive and validated set of assessment measures were applied in an assessment interview at the beginning of the Trial and repeated throughout, either when indicated by a change in the health status or circumstances of the client, or at regular intervals.
The care coordinator as service planner	To coordinate and facilitate the client's access to services for the period of the Trial.	15-16 care coordinators employed at Care Net to develop, purchase and oversee the implementation of needs based plans in consultation with the client/carer and the general practitioner. Care coordinators also had responsibility to monitor service delivery, service utilisation and cost and to evaluate outcomes for individual clients in relation to predetermined care protocols and critical pathways.
The care plan	To develop and implement a plan of action which is flexible and appropriate to client's needs and comprehensively responds to the social and health context, and is documented and costed.	Using computer based technologies, the care plan would document the different components of care received by clients and facilitate the planning and purchase of services where necessary. The care plan would provide a basis for communication between services and providers and provide the basis for financial management and financial projections.
The use of the general practitioner as case manager	To case management individual clients. To pro-actively engage general practitioners within the broader health and community care systems in a formalised and ongoing partnership.	General practitioners would coordinate investigations, treatments and the involvement of other health care disciplines in the care of clients and liaise with institutions in the management of care. The general practitioner managed the involvement of specialists, provided care for the chronic health problems of clients and acted as a consultant and resource on personal, family and social issues affecting the client. Originally envisaged as writing the care plan (with care coordinators writing service plans).
Information technology	To enable flexible and appropriate access to client information needed for the purposes of the other interventions.	To design and implement an independent linked information system which was to lead to an Electronic Health Record for all clients. The components of the information system included: a care coordination program for care coordinators; a patient management program for general practitioners; e-mail communication between Care Net and all providers involved in the client's care; interface with the IAHS information system to allow access to clinical data, including diagnostic test results and discharge summaries.

Intervention	Goal	Description
Funds pooling	To create a pool of funds from Trial sponsors that is available for the purchase of services for participants.	Based on the target group, the Trial received funds from four main sources: the Health Insurance Commission (HIC) for services listed on the Medical and Pharmaceutical Benefit Schedules (MBS and PBS respectively); the Illawarra Area Health Service (IAHS) for hospital and community services; the Home and Community Care (HACC) program for Home Care NSW services; and the Department of Veterans' Affairs (DVA).
Service substitution	To design, coordinate and purchase best practice interventions for clients using the funding flexibility generated by funds pooling.	Structured initiatives were undertaken to improve the health outcomes for clients and/or reduce the costs of the provision of services. Two such interventions were major undertakings by the Trial: the development and implementation of clinical guidelines and client checklists; medication management and the role of the Community Liaison Pharmacist. As well, care coordinators were encouraged to purchase community services as a "substitute" for institutional care (hospital or residential) or complement existing medical treatments with alternative approaches eg massage, Tai Chi, hydrotherapy etc.
A stand-alone service organisation	To influence mainstream service provision through independent case management and advocacy within the system.	An independent organisation called Care Net Illawarra was established under the auspice of the Illawarra Area Health Service. It had an independent management structure and an independent budget. To operate for the duration of the Trial.

### 2.3.1 The Formal Assessment of Clients

The Care Net assessment tool consisted of a battery of eight dimensions. The eight dimensions were identified by the Clinical Issues Committee as being those that, both individually and in combination, drive the need for coordinated care and are known to be predictive of the cost of care. After the relevant dimensions were identified, a measurement instrument was selected for each dimension.

Both the dimensions and the instruments were selected by a clinical group brought together at the beginning of the Trial. The group included representatives from general practice, rehabilitation medicine, geriatric medicine, nursing and occupational therapy. As much as possible, instruments were selected that were already in routine clinical practice. Further, instruments were to be preferred if they were well validated, efficient and had demonstrated inter-rater reliability. In the event, tools were selected that met the technical criteria for all but one of the dimensions (carer availability).

The dimensions selected for assessment are shown in Table 2.

**Table 2 Care Net assessment tools**

Dimension	Instrument
Health status	Medical practitioner assessment
Self perception of health status	Self-report
Self care ability (motor function)	Functional Independence Measure (FIM)
Cognitive function	Short Orientation-Memory and Concentration Test (SOMCT)
Instrumental (domestic function)	Lawtons IADL scale
Social environment	Health of the Nation Outcome Scales, 2 items
Physical environment	Care Coordinator assessment
Carer availability	Care Net Carer Availability Scale

The tools and their rationale for inclusion are described in more detail in a background paper to the evaluation (Eagar and Woods 1999). The initial assessment took about one hour and the subsequent review assessment forty five minutes. Care Coordinators were given training in assessment at the beginning of their appointments.

Unlike other trials, Care Net did not use the assessment to determine eligibility for any service. Nor was it necessarily used to inform care plans (see page 7). All coordinators' assessments were conducted in the home setting. They felt that this gave them better insight than would a surgery-based assessment.

The length of the assessment protocol was generally seen to be a positive feature by the Care Coordinators as it facilitated the development of rapport. Moreover, most Care Coordinators felt that the return visit for the review assessment was an important strategy to engage the trust of the client. There was no complaint about length or intrusiveness from the clients.

It was originally envisaged that a review assessment would be carried out every three months. This was changed in the course of the Trial to a review assessment every 4-6 months, depending on the judgement of the coordinator. There was discussion within the Trial as to the most appropriate review period. Some coordinators feel that low need clients did not even require a 4-6 month review but could initiate contact with the Care Coordinator if 'in need'.

### 2.3.2 The Use and Role of Care Coordinators

The Care Net Proposal (Care Net Illawarra 1997) proposed that the role of the care coordinator would be “to coordinate the client’s access to services for the target group for the two year trial period”. One care coordinator would be assigned to each client.

The care coordination function - function responsible for the planning, coordination and purchase of services to clients in the Trial, formed the centrepiece or engine room of the Care Net model of coordinated care.

The duties of the care coordinators, outlined in the Proposal and maintained for the duration of the Trial, were to:

- develop a client focussed needs-based plan in consultation with the client/carer and general practitioner;
- translate this into a service delivery plan;
- negotiate with approved service providers;
- cost and purchase the required services;
- advocate for the client, independent of the services;
- monitor service delivery, assessing progress and identifying where needs could be met more effectively;
- monitor service utilisation and cost;
- add, delete and change services as necessary; and
- evaluate outcomes in relation to predetermined care protocols and critical pathways.

It is further stated that care coordinators would have access to documented protocols and guidelines which would:

- set out the rights of consumers in the Trials;
- provide guidelines for how services should be coordinated;
- outline clear procedures for negotiation and referral to service providers; and
- set out the protocol for care coordinators to liaison with other participants in the care coordination team procedures.

To some extent, Care Net care coordinators were treading uncharted waters. Whilst there was a growing body of literature on case management for older people, the role of the care coordinator incorporated both case management functions and health care intervention functions.

There was inherent flexibility in the Care Net definition of the care coordination task and this was demonstrated in the packages for individual clients. Care coordinators, as agents for the client, developed client-centred packages of care. Nevertheless these attributes did not necessarily coincide with the delivery of service-oriented outcomes, nor with better client outcomes.

The original Care Net Illawarra proposal described a variation from the national hypotheses which sought to test “if improved health outcomes can be achieved with service substitution” (Care Net Illawarra 1997). The care coordinators’ role does not specifically link them to this aspect of the Trial except in the retrospective role of “evaluating outcomes”.

The primary aim of the care coordinators was the coordination of community services and this approach was not formally coupled with the aim of rehabilitation or stabilisation of chronic illness.

### 2.3.3 The Use of Care Plans

The Trial proposal envisaged that a care plan and a service plan would be developed for each client. In practice, some (90%) clients received service plans which included medical and community care services and pharmaceuticals.

To some extent, the design of the care plans for the trial was directed by the computer package used by the care coordinators. *Care Manager* was imported with few modifications from the community services sector and designed for the use of case managers coordinating community services.

The trial envisaged a broader role – linking community care with health care – and most importantly, the ability to substitute both within and between the different approaches and services. In combination, this all aimed to achieve the best possible outcome for client and carer.

Care Net adopted one care protocol approach to all clients within the project. This approach assessed the home environment of all clients and developed a care plan for all clients based on an assessment protocol.

A key feature of the trial was the ability of the care coordinators to purchase services from the pooled money with little overt guidance from trial management. The care coordinators could identify needs through the assessment process and then commission a service, aid, or appliance to meet that identified need.

Care coordinators asked clients about their overall ‘goal’ for the care plan. It was reported in the mid-term report that the use of the client ‘goal’ within the process of ‘care planning’ generated some controversy amongst the care coordinators. According to the Project Manager an explicit process was established to ensure that the goal was ‘owned’ by the client:

*“The current situation is that the participant is to set the care goal in their own terms. The care coordinator is then to work with the participant and the general practitioner to establish the barriers in achieving those goals. The interventions that make up the care plan are to be designed to reduce the impact of those barriers. The process should develop very individualised care plans (Foulstone 1998).”*

Care coordinators were not given any guidelines on total expenditure levels for individual clients or for individual services at the start of the trial. They were informed of the purpose of the Trial and given information on the overall expenditure savings needed to make the trial viable. They were also asked to bring to the attention of the executive any items they considered to be of high cost.

The Management Committee were informed mid-way through the trial that capping of care plans had been introduced. However, none of the care coordinators responding to a questionnaire at the end of the trial identified any particular ‘cap’ on care plan expenditure. Nine care coordinators were of the opinion that no cap had ever been applied to care plans.

### 2.3.4 The GP as Case Manager

The role of the general practitioner (GP) in the trial was to coordinate investigations, treatments and the involvement of other health care disciplines in the care of patients and to liaise with institutions in the management of care. The general practitioner was to manage the involvement of medical specialists, continue to provide care for chronic problems and act as consultant and resource on personal, family and social issues affecting their patient's care.

There were 102 general practitioners in the trial and they ranged from having a single patient enrolled to having more than 40 patients in the trial. 70 general practitioners had between 5 and 20 patients in the trial.

The proposal for the Trial (Care Net Illawarra 1997) stated that the primary care protocol would include two distinct planning processes:

- the care plan – process carried out by the general practitioner; and
- the service plan – process carried out by the care coordinator.

In practice, the care coordinator wrote the draft care plan. The majority (13) of the care coordinators worked with more than 5 general practitioners. Only one care coordinator had the close involvement of general practitioners in all care plans. Six care coordinators involved general practitioners in the development of some care plans and 3 care coordinators had some involvement with some general practitioners in the care plan. Two care coordinators reported minimal involvement of general practitioners in all their care plans (care coordinator questionnaire).

There was no standard protocol for the interaction between general practitioners and care coordinators. Only six care coordinators had established regular meetings with some of the general practitioners. One care coordinator commented:

*"I speak to general practitioners on the phone and send care plans regularly. I try to meet with general practitioners if there are things I want to discuss or change."*

It is unclear as to whether medical assessment, as recognised broadly in the literature (Applegate 1995), occurred within the Trial. The Care Net documentation contained no evidence that participating general practitioners consistently undertook a systematic medical assessment of all clients. It may be that some did, but the data were not made available to the Trial.

*Medical Director*, the computer program and only intervention with general practitioners which was widely applied to Trial participants, did not prompt general practitioners to undertake a comprehensive geriatric assessment, apart from the prompts contained within the medication database. Given the trial population, a policy to perform such an assessment might have been expected to be adopted.

There was some attempt to introduce clinical guidelines for specific conditions affecting a proportion of the trial participants. The evaluation found evidence that guidelines were produced for two conditions (Congestive Cardiac Failure and Chronic Airways Limitation). These did not call for a broad medical assessment nor did they prompt for any re-assessment after a period of time. Once again, it may be that some general practitioners did follow these guidelines, but the information about how systematic such applications were was either not collected or not made available to the trial.

### 2.3.5 The Use of Information Technology (IT)

The goal of the information system within the trial was to network Care Net with service providers. This would facilitate the interchange of clinical data and enable contemporaneous electronic communication around client needs.

It was envisaged that Care Net would maintain an electronic medical record which service providers could access via the network to keep abreast of the client's health status and to which service providers would also add as services were delivered. The information system was planned to network general practitioners, the Illawarra Division of General Practice (IDGP) the Illawarra Area Health Service (IAHS) hospital and community services, the Home Care services, and both local government and HACC funded agencies.

Care Net Illawarra had a clear vision of how an integrated computerised information system could assist care coordination and the management of the trial. An information system was designed which was planned to address four key roles in the trial:

- To assist care coordinators to create and maintain the care plans and service plans;
- To create a central database that would be used to maintain an electronic medical record that included the care plan and service utilisation information to all participating services providers;
- To create a network that gave general practitioners and service providers access to the electronic medical record; and
- To provide financial information, that could be linked to care plans, and so enable effective management of the trial.

The components of the information system that were selected by the trial are discussed in Report Number 4. In addressing the issue of implementation a number of comments need to be made by the evaluators. First, to their credit, the trial did implement most of the envisaged technologies. Second, the time frame for the trial, only 26 months, barely allowed the roll-out of the technology, much less problem-solving and the practical application of the potential implicit in the systems.

The trial anticipated the IT system would have a positive impact on patient outcomes by:

- Reducing (duplicate) investigations as a result of common provider access to diagnostic information;
- Reducing poly-pharmacy and the inappropriate use of medicines through the GP practice management software and the sharing of medication information;
- Reducing hospital admissions, for example, due to emergency departments or discharge staff having access to the client's care and service plans, thus enabling community support to be arranged;
- Promoting effective chronic disease interventions and management, through identification of, comprehensive assessment information on, and tracking of clients;
- Promoting quality assurance and quality improvement initiatives through the review of clinical and care plans; and
- Overall assistance in planning and financial administration to identify utilisation data and monitor outcomes.

There were a number of significant achievements for Care Net in the implementation of an IT system. Notably, care coordinators had, by the end of the trial, a user-friendly package that assisted them in maintaining client information and assessment data and ordering services. General practitioners had effective clinical practice management software, access to electronic messaging and links to pathology and hospital data.

However, the use of the system for care coordination was still embryonic and could only remain so whilst there was no pervasive data management, financial management or epidemiological skills within the organisation. The following examples illustrate this point:

- Care coordinators did not have access to clinically determined medical information on their clients. This hindered their involvement in identifying substitution protocols and implementing initiatives;
- Care coordinators, at the trial mid-point, developed and applied another paper-based instrument to assess risk for clients. The evaluators feel that the same data would have been available from the regular client assessment data if the trial had a skilled health information manager who could regularly interrogate the database.
- The roll-out only really encompassed general practitioners and Care Net itself. Other service providers were not given either the technology or the assistance to effect access to the Care Net information system.

Financial data management, applying to the management of the costs of care plans for clients in the trial, was only really developing towards the end of the trial.

### 2.3.6 The Use of a Funds Pool

Funds pooling in the Care Net Trial is discussed in Report Number 9. This section will cover salient points to an exploration of funds pooling as an intervention.

A key feature of the coordinated care trials was the creation of a funding pool. Funds were contributed to a trial by service providers so that care coordinators could purchase services required to meet the needs of a client. Guidelines for estimating the size of the pool were set out by the Commonwealth, but differences between the various trials meant that each trial would be required to devise its own method for estimating the contribution of each service provider.

Although each trial was ultimately responsible for the methodology it employed for the calculation of its funding pool, the design of the pool needed to be consistent with principles determined by the Commonwealth. These included:

- that funding should not divert funds from services outside the trial, nor diminish the quality of service for individuals outside the Trial;
- that contributions to the pool should be no greater than the cost of the services if there had been no Trial (cost-neutrality);
- that governments should contribute all funds to the pool on the same basis – average total costs; and
- that there should be no aggregate increase in client contributions to the cost of services provided under trial conditions.

Based on the target client group, the Illawarra Trial expected to receive funds from four main sources:

- the Health Insurance Commission (HIC) for services listed on the Medical and Pharmaceutical Benefits Schedule (MBS and PBS respectively);
- the Illawarra Area Health Service (IAHS) for hospital and community services;
- Home and Community Care (HACC) for services provided by the Home Care service; and
- the Department of Veterans' Affairs (DVA).

The initial conception of the Trial was that the partners would fund pools and that Care Net would purchase services using those funds.

Prior to taking on the role as local evaluators, the CHSD were engaged by Care Net to estimate the size of the funding pool. The method used to construct the pool is discussed in Report 9.

While the size of the pool was estimated by the CHSD, the CHSD estimate was not necessarily used to determine the final contribution made to the pool by the various pool funders. Rather the trial manager undertook various negotiations with funding authorities as the trial proceeded and some of these resulted in changes to the pool.

Significantly, while a new (and reduced) pool estimate was calculated for PBS services by the CHSD, no revision was made to the contribution actually made for PBS services. Conversely, the DVA contribution was increased without any external review. The bottom line of the analysis is that the deficit would have increased if the correct contributions had been made to the funding pool (see Report Number 9).

In Report Number 9 the evaluators describe the financial contributions made by the pool partners. Overall, Care Net received an income of \$11,840,843 dollars into the funds pool. It expended \$13,279,576 on the provision of services to its clients. In other words, there was a deficit of \$1,438,733 or 12.2%.

As well as running at a deficit when compared to the size of the funds pool, Care Net also appears to be a more expensive option in providing services to its client group. The cost of providing services (inpatient, MBS and PBS) between the control and intervention group was very similar. As Report Number 9 describes – there was only a difference of \$2 per person per month for inpatient care, \$7 for MBS funded services and \$4 for PBS funded pharmaceuticals. Across the 26 months of the trial, average costs for these 3 services for the intervention group were \$248 more per person than the average costs for participants in the control group.

### **2.3.7 Changes in Clinical Practice and Substitution**

During the Care Net trial, a number of structured initiatives were undertaken to improve the health outcomes for clients and/or to reduce costs of provision of services. Within the context of the trial these initiatives were referred to as 'substitution' initiatives. The intention was to enable general practitioners and care coordinators, under the guidance of trial management, to choose the best practice options for clients, without regard to artificial monetary incentives (through program funding and Commonwealth/State responsibilities).

#### **2.3.7.1 Development and implementation of clinical guidelines**

Care Net, in cooperation with the Illawarra Division of General Practice, convened 5 meetings with interested groups of General Practitioners to adapt guidelines on the management of Congestive Cardiac Failure (CCF) for use within the Trial. The objective of the process was to provide general practitioners, care coordinators, and clients with evidence based material tailored to their specific roles. About 30 general practitioners were involved in these consultations.

The first meeting considered a number of guidelines developed by the Australian National Heart Foundation and by US organisations and these were modified according to conditions within the Illawarra. These guidelines were then considered by a second meeting with different general practitioners who further refined and modified the results of the earlier working group. Each succeeding meeting of new general practitioners continued to refine and modify the results of the earlier groups.

This process continued until about March 1999 by which time it was considered that the clinical guidelines and client checklist were sufficiently adapted to be used within the trial. The patient checklists were distributed almost immediately by care coordinators to clients who had been identified by general practitioners as having CCF. The clinical guidelines were laminated and were ready for distribution by mid June 1999. However, due to changes in staffing that occurred at that time, it is not clear if the clinician guidelines were distributed to all participating GPs.

The Clinical Issues Committee met during the first six months of the trial but gradually realised it did not have the resources to plan or implement complex evidence based interventions. It did not meet after this time.

The impact of the clinical guidelines and client checklists could not be evaluated for a number of reasons: firstly, the development process took so long that there was no time left for them to have an impact before the trial finished; secondly, no process had been put in place to provide a basis for evaluation and no control group (within Care Net or external to it as proposed by the Centre) was established. The capacity of well designed adaptation and dissemination programs of clinical guidelines to change clinical practice is well documented in the research literature. The capacity of the Care Net model of care coordination to improve the uptake of guidelines was not demonstrated. This would have been the issue that a well designed study could have addressed and that would have contributed to testing the secondary National Hypotheses.

### **2.3.7.2 Medication Management and the role of Community Liaison Pharmacist**

The Community Liaison Pharmacist initiative had been started by the Illawarra Division of General Practice and it was some time into the Care Net trial before Care Net took over the funding and management of the Community Liaison Pharmacist (CLP). In early 1999, the Community Liaison Pharmacist initiative moved out of Care Net and into the TAC initiative of the Illawarra Area Health Service.

To a large extent progress on this initiative was significantly influenced by the Community Liaison Pharmacist – she was a very dynamic personality and drove the process before, during and after the direct involvement with Care Net.

There were process evaluation studies conducted by the Community Liaison Pharmacist including activities with Care Net general practitioners and clients. Information was available on:

- the numbers of clients and client groups that took part in education CLP programs;
- the clients whose medications were reviewed;
- the types of recommendations made by the CLP to general practitioners; and,

- the attitudes of general practitioners to the usefulness of the CLP recommendations.

There was no evaluation of the extent to which care coordinators contributed to improving the usefulness of the Community Liaison Pharmacist recommendations to either clients or general practitioners. Much of the activity of the Community Liaison Pharmacist was directed to community group education so, without some planning of an evaluation protocol, the control group clients may well have had access to the same information that the intervention group had and recommendations to general practitioners regarding intervention group clients may have changed GP prescribing practice for control group clients.

### **2.7.3.3      *Substitution: the care coordinators' initiatives***

As well as the individual care coordinator and client decisions on the care packages, a number of other broader initiatives in the area of chronic disease management were instituted:

- Dressing gowns were purchased and distributed to CAL sufferers;
- Massage therapy was used for people in chronic pain;
- Tai Chi exercise was encouraged and Care Net provided assistance with the cost of classes and travel to the classes; and
- Hydrotherapy exercise was encouraged and Care Net provided assistance with the cost of classes and travel to the classes.

The Trial had no way of systematically and independently identifying and collecting data on the effects of specific interventions on the clients, in spite of a relatively sophisticated information system. The system relied on the individual initiative of the care coordinator and the general practitioner. There was no attempt to identify suitable matched patients from the control group.

It has been suggested that these preventive initiatives were a response to the recruitment of clients with predominantly low and mid range needs.

#### **2.7.3.4 Substitution: private for public**

The Trial made extensive use of private services from outside the domain of the contributors to the funds pool (ie, in particular not IAHS Community Health and not Home Care). This was the major local divergence from the original NERG National Hypothesis 2.

These choices in practice meant that funds pooled on the basis of a fixed cost structure were then used to pay for services provided at a much “cheaper” marginal cost because the assessment of tenders did not have to take all the associated fixed costs into account.

Those contributing to the pool could not easily “downsize” to accommodate a lower level of “buy back” from Care Net as Care Net represented such a small proportion of their overall workload.

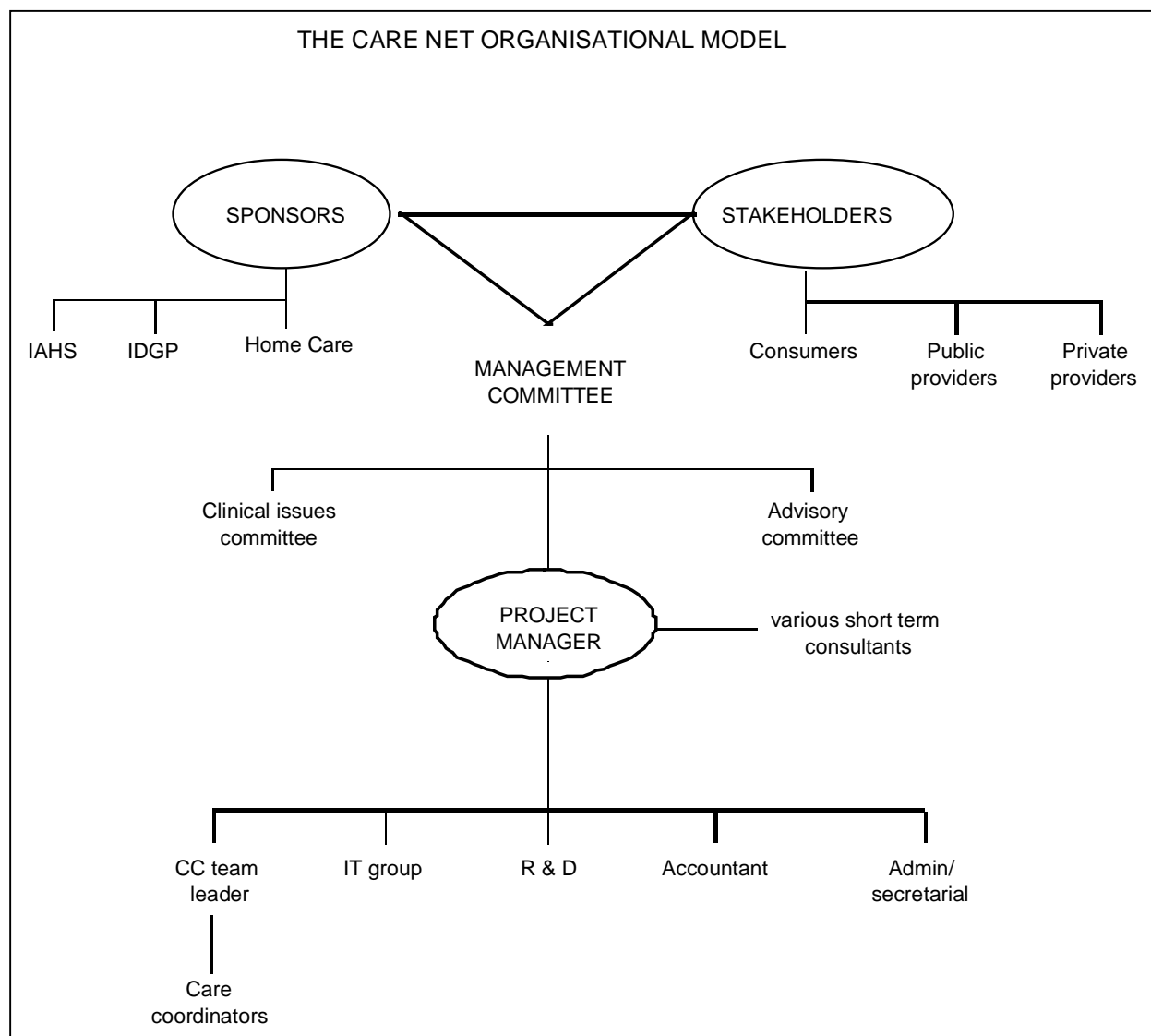
#### **2.3.8 The Creation of a New Organisation**

Care Net took the form of a hybrid organisation sitting between the sponsor organisations. Formally, it was part of the lead agency, the Illawarra Area Health Service (IAHS), for purposes of legal accountability. Its task required the setting up of a new organisation, the conduct of a trial, and organising the care of clients through individual assessment, care planning and the purchase of services. Care Net was housed in a separate building obtained especially for the trial.

It had to address a series of complex problems, some of which were identified in the trial planning documents and other which were identified as they arose in the live phase. It required systems to permit the management of a large volume of transactions with clients and a variety of agencies. It also had to collect a large amount of data for both internal trial management and evaluation purposes.

The formal arrangements provided for a structure in which the trial manager reported on a regular basis to the Management Committee and took advice from an advisory committee who were also represented on the Management Committee. In day to day management the system was a lot less formal with the project manager having considerable autonomy to make decisions and take actions without direct reference to the Committee with formal responsibility and accountability for the trial and its outcomes.

Figure 1 Care Net Organisational Model



## 2.4 Implications and Conclusions

The interventions described above represent a complex agenda for management, governance and implementation. They were complex, required the cooperation of other professionals and agencies and had to be achieved quickly. There was no existing model on which Care Net could draw and many of its tasks had to be undertaken simultaneously.

Such a task was best done by a stand alone organisation in which all resources could be focussed on a single program. One down side was that the trial had little impact on mainstream services. Another was that it developed the culture of a new service agency rather than a trial designed to systematically test coordinated care.

## Appendix 1: An overview of the Illawarra Coordinated Care Trial

The Illawarra Coordinated Care Trial, or Care Net Illawarra, was established as part of a National series of demonstration projects that aimed to assess the benefits of coordinated care in the context of the Australian health care system. The primary hypothesis to be tested by the trials was that:

*That coordination of care of people with multiple service needs, where care is accessed through individual care plans and funds pooled with existing Commonwealth, State and joint programs, will result in improved client health and well-being within existing resources.*

Fund pooling was a key component of the coordinated care trials. The established, program-based organisation and funding of health care services was thought to be a principal factor in frustrating flexible service provision and service substitution. The way to overcome this issue was believed to be the pooling of funds from Commonwealth, State and joint Commonwealth-State programs (Pekarsky 1999). Trials would be allocated a budget from which they could purchase services for clients, with funds for the budget coming from the finances of existing service providers. But there would be no additional money. A key Commonwealth requirement was for trials to be cost-neutral.

The Illawarra trial encompassed three local government areas: Wollongong, Shellharbour and Kiama, the area being located south of Sydney, NSW. Its principal stakeholders were the Illawarra Area Health Service (IAHS), the Illawarra Division of General Practice (IDGP) and the NSW Home Care service.

The trial aimed to coordinate the care of people aged 65 years and over with either a risk of falling or who had complex medical or social problems that required multiple services from more than one health care service provider. During the 1997 planning phase of the trial, roughly 1800 eligible residents were referred to the trial by the 100 GPs participating. 1200 clients were allocated to an active group and would have their care coordinated by the trial, while the other 600 were allocated to a control group.

After the planning phase, the trial went live on 1 November 1997. It finished on 31 December 1999, a total period of 26 months over 3 financial years.

The coordination of care was undertaken by 15-16 care coordinators, in collaboration with the client's GP. The GP maintained control of the medical aspects of the client's treatment, while the care coordinator organised access to other services, purchasing services agreed to with the participant and GP. The care coordinators performed a systematic assessment of their clients initially every three months and subsequently in response to need. These assessments were intended to inform the creation of the clients' care plan that, among other things, included the goals of care for the client. Finally, a service plan was created that described the package of services to be bought by the trial in order to address the clients' goals was created.

Thus, the trial adopted a commissioning model of service provision. It secured services mainly from community care service providers, having access to both public services (those in the IAHS and the local HACC agencies) and private services. Medical (GP, specialist), pharmaceutical and hospital services were also within the funding pool, but these services were largely determined by GPs.

The trial used State and Commonwealth funds to develop an information system. Based on an intranet structure, the system supported email, client records, service utilisation, and financial data. This system did not support full communication between providers but significant steps included the increased use of computers by GPs.

## Appendix 2: Hypotheses

The National Evaluation Reference Group established a primary hypothesis and a series of secondary hypotheses that represented the likely influences on whether that statement could be supported. The Care Net trial adapted that framework into a local set of hypotheses. The national and local hypotheses that are relevant to this report are listed below.

### NH1 The primary hypotheses:

### Local Illawarra adaptation

<p>National Hypothesis 1:</p> <p>“That coordination of care of people with multiple service needs, where care is accessed through individual care plans, and funds pooled from existing Commonwealth, State and joint programs, will result in improved client health and well being within existing resources”.</p>	<p>Care Net Hypothesis 1:</p> <p>“if improved individual client health and well-being can be achieved within existing resources where an individual’s multiple service needs are met through an individual care coordinator, a single care plan and a single pool of funds”.</p>
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The extent to which this is achieved, will be influenced by:

### NH2 The extent of substitution of services within the pool

<p>National Hypothesis 2: “The extent of substitution between services within a trial pool”</p>	<p>Care Net Hypothesis 4: “If improved health outcomes can be achieved with service substitution”</p>
	<p>Care Net Hypothesis 6: “If injury prevention can be achieved with service substitution”</p>
	<p>Care Net Hypothesis 9: “If care coordination and the purchasing of services from a central fund can reduce expected bed days in hospital. This will apply to both lengths of stay and re-admissions”.</p>

### NH4 The characteristics of clients selected

<p>National Hypothesis 4: “The characteristics of the clients to whom services are provided”.</p>	<p>No corresponding local adaptation</p>
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### NH6 The characteristics of the care coordination function

<p>National Hypothesis 6: “The characteristics of the care coordination function”</p>	<p>Care Net Hypothesis 2: “If the allocation of care coordinators to general practice surgeries improves communication between GPs and other services available to provide necessary services for their patients”.</p>
	<p>Care Net Hypothesis 3: “If the care coordinator in a role of patient/client advocate increase the patient’s involvement in care planning processes”.</p>

### NH7 Particular Types of Admin Arrangements

National Hypothesis 7: “The characteristics of trial administrative arrangements”	Care Net Hypothesis 7: “If an information system communication network containing the care plan and relevant clinical information can improve the cost-effectiveness of care coordination processes and outcomes”
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### **NH8 Consumer Involvement**

National Hypothesis 8: “The extent to which health consumers are partners in the planning of the coordinated care trial, the development of care plans and empowered through the coordination process”.	Care Net Hypothesis 5: “If consumer involvement in project management and policy development can improve the process and outcomes associated with care coordination”.
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### **NH9 Wider System**

National Hypothesis 9: “That the primary results can be achieved without detriment to other key areas of government policy, particularly in regard to equity of access and privacy, including any impact on clients outside the trial”.	No corresponding local adaptation
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