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The impact of workforce flexibility on the costs and outcomes of older peoples' services:

A policy and literature review

August 2006

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*Professor Ron Akehurst,
Dean of the School of Health & Related Research*

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Executive summary

Purpose and approach

The purpose of this review is to;

- Examine the key policies and other factors impacting on workforce change in Community and Intermediate Care Services (CAICS) for older people.
- Develop a model that describes older peoples' community and intermediate care services given the complexity of the interventions
- Examine extent and impact of workforce change resulting from policies
- Examine impact of and relationship between a range of organisational structures on service and user outcomes.

The review has been structured into six chapters to address these goals:

- Chapter 1 presents the purpose of and approach to the review
- Chapter 2 explores the policies that have impacted on workforce change
- Chapter 3 describes the history and sociology of the professions and the socio-historic factors leading to the current configuration of the workforce
- Chapter 4 reviews the literature on workforce change. The first section is a review of reviews around workforce issues. The second section specifically examines the key issues that are pertinent to intermediate care.
- Chapter 5 systematically explores the components of intermediate care to present a framework for the evaluation and comparison of intermediate care services
- Chapter 6 concludes the review and provides recommendations.

Because of the complexity of the questions being asked within each of the chapters, each one uses a different methodology to address the specific questions. The methodologies are embedded within the respective chapters.

The key findings are as follows;

Key policies that have impacted on the workforce

The modernisation of health and social care following the 1997 general election stipulated the need for high quality, person centred care that extended across health and social care boundaries. The goals, together with the size of investment required in both capital and human resources, were expressed within the NHS Plan ¹ with the details of service improvement at specialty level, set out in the National Service Frameworks ^{2,3}. These documents emphasised the need for and outlined systems that would support:

- *User centred care* where service user needs and opinions are central to the organisation and delivery of care.

- *Patient choice* whereby patients may choose from a 'national menu' of services provided by a choice network of providers nationally and locally.
- *Health focussed* service delivery that engages people in living healthier lives
- *Quality care* through introduction of national guidelines and frameworks, clinical governance and best practice, excellence bodies such as NICE and SCIE, amalgamated regulatory bodies such as the General Social Care Council and the Council for Regulation of Healthcare Professions, enhanced access to education and training and new methods of education and training such as Inter-professional Education.
- *Timely access* through set targets such as the 4 hour Accident and Emergency turnover time.
- *Efficiency and sustainability* through new financing mechanisms such as payment by results, structural changes such as creating Primary Care and Foundation Trusts and commissioning changes such as primary care Practice Based Commissioning and joint ventures with the independent sector.
- *Care closer to home* through shifting of resources and expertise to Primary Care Trusts.
- *Partnership working* through legislation enabling local authorities and health authorities to share resources ^{1 4 5}.

Specifically, the modernisation reforms impacted on Older People's services through:

- Targeting ageism;
- The introduction of 'intermediate care' which supports older people through their illness trajectory by integrating and utilising services as identified by patient needs ⁶⁻⁸;
- Legislation enabling health and social care partnerships to form and share resources to deliver intermediate care and to encourage more seamless care for older people ^{4 9};
- Targeting and improving the management of long term conditions and those with complex needs through 'Expert Patient' roles, improved access to multidisciplinary rehabilitative support from health and social care and through the introduction of the community matron role ^{3 10 11}.

Policy that has targeted the NHS workforce encompasses a range of themes which include:

- *Increasing staffing numbers* through increasing undergraduate training places, international recruitment strategies, attracting new staff into the NHS and encouraging return to practice non-practicing staff ^{1 12 13};
- *Improving staff retention* through new career pathways, pay systems and the working lives standard¹⁴⁻¹⁸;
- *Introducing new roles* such as assistant practitioners, consultant therapists and support workers in intermediate care through the changing workforce programme, accelerated development programme and the national practitioner programme ^{1 19-21};
- Developing *new ways of working* such as role sharing and blurring of professional boundaries ^{1 20-22};

- Improving *workforce planning* through communication with education bodies, introduction of workforce confederations and workforce care group teams ^{1 10 15 23-26}; and
- Improving the *quality of the workforce* through greater access to training, education & continuing professional development, introducing more rigorous clinical governance and professional regulation ^{1 4 10 27-35}.

The history and sociology of the professions

This section of the review highlights the importance of the historical development of the professions and the relationship between different professional groups. It also reinforces the socially constructed nature of the professions. In particular it highlights the social and historical constructions of the workforce, rather than being based on any form of 'evidence'.

- Health care division of labour is shaped by the relationship between professional groups and the state, and between the different professions themselves.
- Medicine has been pre-eminent in the health care division of labour. It was the first health care profession to enter into a partnership with the state placing it in an advantageous position to take ownership of newly introduced technologies (such as anaesthetics and antibiotics), as well as being able to take an important role in shaping the other health care professions as they evolved within the health care division of labour.
- There are different theories about the nature of professionalism. Much of the recent theory paints the professions as opportunistic and even predatory groups whose aim is to ensure that they are able to take on high status work, whilst preventing encroachment on their task domains by other professional groups. Additionally, professions have had to respond to changing circumstances and ensure that they are in advantageous position with respect to other professional groups.
- The model of 'professional closure' describes the way that the professions have attempted to control their task domains and role boundaries within the health care division of labour. Larson (1977) describes the 'professional project' in which the professions as constantly seeking to establish and maintain a 'market monopoly, social status and work autonomy'. However, this is at odds with recent government policy which aims to increase role flexibility, and recognise and reward individuals' skills and competencies rather than professional titles.
- The reinforcement of professional roles requires the support of 'powerful elites', predominantly the government, through the provision of protective licensing and legislation which stops rival professions undertaking these tasks. However professional roles are also reinforced through organisations, employers, other professional groups and the public.
- Professions have, until relatively recently, been given the privileges of autonomy, ability to regulate themselves, and in some cases, high pay, in return for offering their skills and knowledge to society.
- However, the traditional models of professionalism have faced a number of challenges recently. The introduction of managerialism, or New Public

Management has reduced the importance of the special relationship between the professions and the government, replacing it with new systems of accountability, such as clinical governance, which examine individual performance.

Accountability is moving from an implicit model of collective governance to explicit forms of demonstrating individual accountability. The new general practice and consultant contracts are one example of this change.

- The government has actively introduced a number of mechanisms which undermine medical dominance including non –medical prescribing; extended scope practitioners; the new consultant contracts; nurse-led walk in centres; European working time directives; proposals to introduce physician assistants; and nurse practitioners.
- Increasingly informed consumers are also challenging traditional models of health care delivery, such as the new models of the 'expert patient' and NHS direct.
- The health care workforce is currently undergoing unprecedented change. It is not clear how these changes will impact on the future workforce or the structures and hierarchies within the workforce.
- Despite the growing evidence of workforce change, it still appears that professional hierarchies exist. Those practitioners with extended roles have not gained the status or rewards that were traditionally attached to those tasks. For instance, non-medical prescribers do not have the status or income of doctors, the traditional gatekeepers of prescribing.

Workforce change – the evidence base and relevance to

intermediate care

This chapter is presented in two sections. The first presents a review of systematic reviews on the evidence underpinning health workforce change generally. The second section examines the literature around workforce and staffing that has arisen specifically from intermediate care services.

Section 1:

The majority of the evidence around staffing relates to nurse and care assistant, or nurse – physician substitution. Little of the existing evidence can be clearly translated into community based, multidisciplinary, intermediate care services.

There are a number of drivers for workforce change including skills shortages; productivity improvements; cost containment; quality improvement; technological innovation; and health sector reform.

The main approaches to introducing workforce changes include:

- skill substitution (e.g. doctor – nurse, qualified health professional – care assistant);
- role extension for existing practitioners (e.g. consultant nurses and allied health professionals, extended scope practitioners) and

- the introduction of new types of workers

Additionally, informal workers, such as carers and volunteers are widely used, however little is known about their effectiveness.

The evidence base underpinning each of these approaches is variable, and in some cases contradictory. This is confounded by the use of a range of different outcome measures and experimental techniques. Additionally, many staffing and skills mix studies utilise routinely collected indicators (e.g. length of stay, bed occupancy rates, mortality rates), and the majority are collected in secondary care projects. Thus, the current scope for evidence based evaluation of workforce change in community and intermediate care services is less advanced than secondary care projects.

Section 2:

Of 391 papers identified in the search around staffing in intermediate care, 91 papers were found to be relevant for this section. Of these, the majority are descriptive or position statements. A small number of surveys and audit data are available. No hierarchy of evidence was employed due to the paucity of experimental data. The key findings are;

- There is evidence of new roles within intermediate care, particularly the growth of support worker roles.
- There has been growth in the roles of support workers in these settings. Support workers undertake a variety of tasks which seem to be dictated by the team structure and purpose.
- The majority of intermediate care teams are multidisciplinary, and there is some documented role overlap in intermediate care settings.
- There are roles for the voluntary, private and social care sectors in delivering intermediate care, although the impact of these roles on services users is yet to be explored.

Defining intermediate care

Intermediate care is heterogeneous group of services which form part of a complex system of health care delivery. The literature points to highly different constructions in the ways of delivering these types of care, yet there are few studies evaluating intermediate care that are considered to be 'good quality' in the traditional sense of an RCT. Those that do exist point to few measurable differences in outcomes between the 'usual' models of care and the intermediate care service.

The lack of standard definitions or classifications of intermediate care services makes it difficult to compare services and / or outcomes. Existing intermediate care taxonomies incorporate a combination of purposes, functions and structures, yet within these taxonomies, there is little to unite the services in terms of a range of service attributes, which means that they have little value as a basis for analysis or comparison.

The purpose of this chapter was to provide a framework which identifies the key domains of service delivery and organisation which may impact on the outcomes of the service. The framework will also provide a basis for comparison of services and to help

guide service commissioning and development. We propose that all intermediate care evaluations should describe, in detail, their context in a comparable way, so that other services can learn from and / or apply the findings from these studies.

We utilised a qualitative (template) approach to explore the way that intermediate care services have been described across 17 key documents, evaluations and reports to develop a service description template.

The six domains that describe intermediate care services are;

1. Context
2. Reason for the service
3. Service users
4. Access to the service
5. Service structure
6. The organisation of care

The **context** refers to the social, political and organisational setting in which the intermediate care service is delivered and provided; for instance, services have different funding bodies; serve different types of populations (e.g. urban or rural); may be hosted by a range of different types of trusts.

The **reason for the service** refers to the justification behind the introduction of the various intermediate care services, such as 'bed blocking' and unmet needs of the community.

The **service users** refer to the actual or potential users of the intermediate care services and were defined by services in three ways; the socio-demographic and medical profile of the client group; Target population for the service; and individual service user needs

Access to services includes the pathways used by the service user to access the intermediate care service, as well as the eligibility criteria used by the service to regulate entry to the service. Access is described in terms of the referral source; access point or system; patient eligibility criteria; and patient exclusion criteria.

The **service structure** refers to the actual operational and organisational details of each individual service. The service structure and organisation and includes the setting or location of care; setting; staffing; average or target duration of input; professional lead and team organisation.

The **organisation of care** refers to the components that go together to make up the individual intervention from the perspective of the client or patient and includes the actual intervention; duration of individual client input; organisation of input; and intensity of input.

These domains form the basis of a template for service comparison and evaluation which is provided in Chapter 5 of the report.

Conclusions

Intermediate care staffing changes are taking place in a wider context of workforce change and evolution, and new ways and philosophies of delivering care. The current policy initiatives aim to improve health service capacity and productivity with a view to achieving measurable outputs. Increasing workforce efficiency has been a primary focus of the policy agenda. The implications for the workforce are still emerging, and include substantial changes to existing roles, the introduction of a range of new roles, and currently, redundancies for staff in a number of trusts.

Most of the literature on workforce substitution reinforces the notion that certain occupations have jurisdiction over particular tasks (and in some cases, over other professions). However, these jurisdictions are almost solely obtained through political influence and social positioning, not through research evidence that these practitioners are the best people to do the job. Agenda for Change, and the Skills for Health Competency Frameworks have attempted to alter this approach so that rewards are competency, not strictly profession based.

Yet 'good' research attempts to use positivist approaches to demonstrate whether one type of practitioner can effectively substitute or delegate roles to another type of worker to achieve an equal or better outcome. Alternative research methods are required to demonstrate workforce effectiveness and recognise that changes to the workforce configuration are dealing with a range of complex variables which include:

- The best evidence about the way to perform a particular intervention (which is largely non-existent);
- The competencies, skills and knowledge necessary to perform or deliver those interventions;
- An appreciation of the social and political boundaries that prevent particular groups from either performing a particular intervention or developing competencies that may be seen as the 'turf' of another professional group;
- The organisational setting or context in which the workforce change occurs.

The majority of existing workforce studies are unidisciplinary, or focus on the relationship between two different types of workers. However, intermediate care services are largely multidisciplinary. Therefore it is difficult to directly translate the findings of the existing research into intermediate care services.

Intermediate care is complex group of heterogeneous services involving many different agencies, staff and organisations. The wide variations between services makes service classification, and therefore comparison difficult. Yet despite enormous variations in models of intermediate care services, there are few clearly measurable differences in outcome between different types of services. This may indicate that the outcomes measures used in intermediate care evaluations are not appropriate, or not sensitive to change between different types of interventions. Alternatively, it may indicate that despite the diversity in the ways of delivering care, the outcomes are largely similar.

There is little empirical evidence available to support the best way of staffing or organising an intermediate care service.

Recommendations

There is insufficient evidence to draw firm conclusions about the contribution of different staffing models to patient, staff and service outcomes in community and intermediate care services for older people.

There is a need to replicate workforce studies that have been undertaken in secondary care settings which have involved multivariate analysis on components of care (including staffing) and compare these with a range of patient, staff and service outcomes.

There is a need for more descriptive contextual information on studies investigating intermediate care services to facilitate comparison and description.

Research is required which provides an understanding of the input of whole team roles, rather than necessarily the contribution of individual practitioners.

Further research is required about the roles and contribution of different types of practitioners in intermediate care, and the impact of different models of skill mix on intermediate care services.

Local evaluations are valuable in understanding the context of the workforce dynamics in intermediate care, however there is a need for large scale, comparative studies to explore the impact of a range of variables on patient, staff and service outcomes (including costs).

The routine collection of outcome measures or indicators, similar to those used in secondary care studies, would facilitate more straightforward evaluation of the impact of different service changes (such as workforce changes).

Chapter 1 Introduction and background

The primary purpose of this literature review is to examine the published evidence on approaches to staffing older peoples' community and intermediate care services (CAICS). This information has been gathered for two purposes.

1. It will inform the next stages of research which explore "how, and with what impact, workforce substitution and specialisation is influenced by workforce change policies in older people's community and intermediate care services".
2. It is also designed to help guide workforce planners and commissioners unpick the complexity of staffing teams which are often community based, multidisciplinary and may be multi-agency. We anticipate that this document will provide an update of available evidence to guide the commissioning and staffing of these types of services.

The context

Services for older people are an important setting in which to examine workforce flexibility. It is well documented that most developed countries have an ageing population³⁶. This change in demography has a number of implications. A number of policy assumptions^{2 37}, and service philosophies are moving the focus of care onto the management of chronic illness, later in life, away from hospitals to communities and to people's own homes^{37 38}. An emphasis on rehabilitation is also shifting the way that care is provided from hospital based, clinically dominated services to home and community based, multidisciplinary models of care, and in some cases managed through approaches like coordinated case management³⁸⁻⁴⁰. Thus they present an ideal setting in which to examine different approaches to workforce flexibility and the impact on the quality of care for older people.

The transformation of older peoples' services has coincided with widespread workforce change⁴¹. Some of these changes have resulted from the new ways of delivering services, but others stem from national workforce policies that specifically promote new roles, new ways of working, new systems of regulation, and the need to comply with European working time directives^{35 41-45}.

The community based setting for this research is particularly important for a number of reasons. Recruitment and retention has been identified as a major barrier to the delivery of effective intermediate care services⁴⁶. Primary health care led reforms to the NHS have seen substantial resources moved into primary care services and development¹⁶, yet there has been a disproportionate focus on secondary care research into the health workforce⁴⁷. Community services are often complex. They manage a continuum of conditions ranging from the 'treatment of diagnoses' to the consequences of a range of health and social issues. Many older people's services operate at the interface of numerous agencies, settings and professional groups, and they require workforce structures that can reflect and respond to this complexity⁴⁸. The increasing emphasis on

patient centred care, interprofessional working, and the push for workforce substitution and specialisation means that health service delivery as a whole is likely to become more complex. Local contextual differences mean that variations in community based service models are often appropriate, but these variations further increase the complexity of the services, and reduce the potential for generalisable approaches to service development and workforce planning. Thus, new approaches are required to address the questions arising around workforce flexibility for older people within a community setting.

The approach

This review has been approached in a way that differs from conventional systematic reviews of the literature in that it acknowledges that the health care workforce is an evolving concept which is defined by historical and socio-political influences. As such, we have included a chapter describing the history and sociology of the health professions. Additionally, the diversity of intermediate care services and the wide range of approaches to defining them meant that a novel approach was required to attempt to describe these services. Each chapter uses slightly different methodologies to answer the respective questions. The methods used are described within each respective chapter.

The aims of the review

The review aims to address the following questions;

1. What are the key policies underpinning workforce change in community and older peoples' services?
2. What are the key historical and sociological influences that have shaped the health care workforce as it is today?
3. How do different models of staffing impact on the patient, staff and service outcomes, particularly in the context of community and older peoples' services?
4. How are community and intermediate care services defined?

The structure of the review

The review is presented in 6 chapters;

Chapter 2. The policy context for workforce change (international and UK)

This chapter describes the key policies that have influenced health and social care workforce change in the UK over the past decade.

Chapter 3. The key historical and sociological influences on the workforce

This chapter explores the historical and sociological influences on the workforces leading to the current status of the health workforce in the UK. This is primarily from an Anglo-North American perspective and includes a discussion of the professionalism of medicine, and the development of the allied health professions and nursing.

Chapter 4. Examines the ways that different *models of staffing* impact on outcome, specifically for older peoples' services?

This chapter is presented in two parts. The first section summarises the key findings from existing systematic review examining the relationship between staffing and outcomes in a wide range of services. The second section specifically explores the evidence relating to staffing and intermediate care services.

Chapter 5. Define older peoples' community and intermediate care services

This chapter examines the settings, organisational structures, therapy provision, type of care, duration of care, funding, costs, staffing, the philosophy of care, capacity and outcomes of these types of services.

Chapter 6. Conclusions and Recommendations

Chapter 2 The policy context underpinning workforce change in older peoples' community and intermediate care services

Introduction

This chapter highlights the key policy documents and themes pertaining to the modernisation of health and social care, older peoples' services and the workforce.

For the purpose of this review a policy document is defined as a document published by a government department such as the Department of Health. A policy related document refers to documents published by government advisory groups such as the National Audit Office or The Audit Commission, groups or individuals commissioned to conduct reviews such as Derek Wanless and bodies established to implement change such as the Modernisation Agency or Skills for Health.

Policy and policy related documents published between 1997 and 2006 from health and social care government sources were selected on the basis of their relevance to all three areas: the modernisation agenda, older people and workforce change. The review excludes policy documents not directly relevant to these areas such as Consultant and GP contracts. The impact of these policies is reviewed within the historical and sociological context in chapter three.

A total of seventy two policy documents and policy related documents were identified and are discussed in this chapter. Appendix 1 lists all the documents used in this chapter in chronological order, and in the context of their area of relevance. Due to the volume of information provided by these documents, this chapter presents only a summary of the key points. A more detailed policy review has been prepared and is available on request. Some of the policy background shaping older peoples' services has been included in Chapter 5 of the review.

Changing philosophy of care

Following the general election of 1997, a ten year programme of modernisation for health and social care was outlined^{49 50}. The modernisation programme stipulated the need for high quality, person centred care that extended across health and social care boundaries. The reforms involved modernisation of every level of management and service delivery, from systems of health and social care financing to service commissioning, staff career and education reforms.

The goals, together with the size of investment required in both capital and human resources were expressed within the NHS Plan¹, published three years into the government's first term. The details of service improvement at specialty level were set out in the National Service Frameworks.

The modernisation plans aimed to change the philosophy of care, emphasising the need for service user involvement in planning and delivery of services; improvement in access to services such as faster times in Accident and Emergency (A&E); reduction in unacceptable variations in clinical practice; ensuring best and most efficient use of resources; more care to be provided in the community; partnership working between health and local authorities, private and voluntary sectors; patient choice and enhanced control over health; and a focus on promoting healthy lifestyles and improving the management of long term health conditions.

Policy directives that are required of health and social care agencies:

- Provide user centred care
- Provide quality care
- Ensure timely access to services
- Shift from central to locally controlled resources
- Enhance efficiency and promote sustainability
- Move care into the community - closer to 'home'
- Work in partnership with independent, government and voluntary sectors
- Implement and ensure patient choice and develop the expert patient role
- Promote and enhance public health and wellbeing

Key documents:

- *New NHS Modern Dependable*⁴⁹ and *Modernising Social Services*⁵⁰ promoted the concept of person centred care, seamless service delivery and joint working across sectors (facilitated by the use of pooled budgets). New NHS Modern Dependable devolved the responsibility for implementation of national policy to local Health Authorities.
- *A First Class Service*²⁷ and *A Quality Strategy for Social Care*²⁸ saw the introduction of clinical governance, national standards for services and treatments, centres for clinical excellence and new regulatory bodies.
- *The Health Act*⁹ provided the changing legislation to facilitate the use of pooled budgets across health and social care.
- *The NHS Plan*¹ proposed the move to primary care led services and the replacement of local Health Authorities with Primary Care Trusts. NHS Plan set waiting time targets, including 4 hour time limit for patients to be seen in Accident & Emergency.
- *Shifting the Balance of Power*¹⁶ provided the blueprint for the implementation of the new system that devolves authority and decision making power to service users and frontline staff through the introduction of Primary Care Trusts.
- *The NHS Improvement Plan*¹² outlined changes to funding and commissioning such as Payment by Results, which pays providers who treat more patients to higher standards, and Foundation Trusts which are independent legal entities that have the ability to raise their own funds from both the public and private sectors.
- *Choosing Health: Making healthy choices easier*⁵¹ introduced strategies to transform the NHS into a health improvement and prevention service by supporting individuals in the healthy informed choices that they make. Targets were set to reduce smoking, obesity, alcoholism and sexually transmitted diseases.
- *Our Health, Our Care, Our Say*¹⁰ outlined a further shift away from acute care into community, primary and social care settings with a focus on supporting people to have more control and choice over their health care. Practice based commissioning was introduced where primary care professionals commission and control the bulk of local health resources

Older Peoples' Services

Older peoples' services have seen significant change as a result of government directives and legislation. Intermediate care evolved in the context of the NHS Plan to provide seamless, person centred services that transcend established health and social care boundaries. It has been described as 'those services that assist the transition from medical dependence to personal independence, focusing on the restoration of self care abilities'². It has often been proposed as one solution to some inextricable NHS problems such as delayed discharges, long waiting times and unnecessary long term care admissions. The implementation of intermediate care is outlined in the National Service Framework for Older People² and directives such as the health and local authority circular Intermediate Care Services for Older People⁸. Integral to providing seamless intermediate care is the Single Assessment Framework which was introduced to minimise duplication of assessment and service provision.

Key themes arising from health and social care policy documents:

- New forms of care established delivered closer to home 'Intermediate care'
- Seamless transitions of care encouraged utilising single assessment process
- Joined up care utilising partnerships between health and local authorities (housing, health, transport, social services)

Key documents:

- *The Coming of Age*⁵² and the *National Beds Inquiry*⁵³ outlined shortages of recuperative and rehabilitative alternatives to hospital were contributing to growing numbers of lengthy 'avoidable' hospital admissions and the likelihood of older people requiring long-term care.
- *The NHS Plan*¹ introduced funding and targets for expanding intermediate care services for older people.
- The health service circular, *HSC/LAC 2001/01 Intermediate Care Services for Older People*⁸, defined intermediate care citing the need for rapid response teams, hospital at home, supported discharge services, day hospitals and residential rehabilitation facilities.
- *HSC/2002/01: LAC (2002) The single assessment process for older people*⁵⁴ introduced the SAP to reduce the number of assessments older people undergo, to minimize service duplication and optimize workforce skills and expertise.
- *Quality and choice for older peoples' housing: a strategic framework*⁵⁵ established strategies to ensure older people are able to sustain their independence and prevent health and mobility deterioration by providing access to appropriate housing.
- *Developing effective services for older people*⁵⁶ summarises the potential impact of a growing ageing population, reports on progress the government has made in ensuring services relevant to older people are joined up, avoid duplication and take account of older peoples' characteristics and needs. The document makes recommendations about utilizing and encouraging older peoples' champions in health care and how best to consult older people about their needs.
- *The National Service Framework for Older People*², the *National Service Framework for Long Term Conditions*³ and *A New Ambition for Old Age*¹¹ have translated policy into specific targets and strategies for older peoples' services.

Workforce

Workforce change has evolved out of the modernisation of health and social services to address overall workforce shortages and capacity constraints, increased workload in the primary care sector and changing professional boundaries.

Macro context: policy themes for the health and social care workforce

The introduction of the European Working Time Directive and recommendations from key reports have been significant contributors to national workforce policies. The Working Time Regulations which restrict the number of hours medical staff work demanded the development of alternative staffing options such as new team working patterns, new non-medical roles supporting or substituting for doctors in training and new service models⁵⁷. The Health Select Committee report on future staffing requirements (1999) identified numerous staffing problems within the NHS, recommending more strategic and integrated workforce and education planning, flexible deployment of staff, improved training, education and working conditions and improved pay and career structures particularly for allied health professionals and support staff⁵⁸. Furthermore, the Wanless Report⁵⁹ highlighted the extent of workforce change required to meet projected health and social care demands from a growing and ageing population. The report demonstrated the need for substantial changes to the skill mix of the health care workforce recommending greater utilisation of nurse practitioners and support staff and more uniform expansion of the workforce.

Problems identified within the health and social care workforce included:

- Widespread fragmentation and lack of workforce planning
- Training and education weaknesses
- Poor career and pay structures
- Poor employment conditions
- Inadequate and unbalanced workforce numbers and skill mix
- Inadequate clinical governance and regulation structures
- Limitations imposed on medical practitioner working hours - introduction of the European Working Time Directive

The NHS Plan¹ and the NHS Improvement plan¹² outlined recruitment and retention strategies and targets; creation of new roles and new ways of working particularly for nursing and allied health professionals; strategies to retain staff and improve their working lives; workforce planning directives; plans to enhance the skills and knowledge of the NHS workforce; and plans for enhancing accountability of practitioners through professional regulation.

Policy that has targeted the health and social care workforce encompasses a range of themes which include:

- *Increasing staffing numbers* through increasing undergraduate training places, international recruitment strategies, attracting new staff into the NHS and encouraging return to practice non-practicing staff^{1 12 13};
- *Improving staff retention* through new career pathways, pay systems and the working lives standard¹⁴⁻¹⁸;

- *Introducing new roles* such as assistant practitioners, consultant therapists and support workers in intermediate care through the changing workforce programme, accelerated development programme and the national practitioner programme ^{1 19-21};
- Developing *new ways of working* such as role sharing and blurring of professional boundaries ^{1 20-22};
- Improving *workforce planning* through communication with education bodies, introduction of workforce confederations and workforce care group teams ^{1 10 15 23-26}; and
- Improving the *quality of the workforce* through greater access to training, education & continuing professional development, introducing more rigorous clinical governance and professional regulation ^{1 4 10 27-34}.

Policy and related documents subsequently outlined strategies and targets around these policies and include:

Recruitment

- Workforce expansion targets such as 30,000 more therapists and scientists ^{1 12}
- International recruitment ^{1 12}
- Training expansion targets such as 4,450 more therapists trained ^{1 12}
- More flexible training options (Foundation degrees, step-on/step-off undergraduate nursing and allied health degrees) ^{1 15 28 60-62}

Staff retention

- New pay and career systems for staff (Skills escalator, Agenda for Change, Consultant contract) ^{1 17}
- Working lives standard - Employers to ensure more flexible working conditions for staff and staff involvement in service planning and development ^{1 14}

New roles and new ways of working

- Nurse and therapist consultant posts introduced ^{1 21 63}
- Nurses, midwives, therapists and support staff to undertake a wider range of clinical tasks ^{1 21 22 63}
- Working in multidisciplinary, inter-professional, multi-skilled teams ^{1 10 21}
- Inter-professional undergraduate education introduced to enhance role understanding and role efficiency ^{1 10 64}

Workforce planning

- Workforce Development Confederations introduced to commission education places, influence the content of education and training programmes and to oversee workforce planning (now part of Strategic Health Authorities) ^{1 16 24 25 65}
- Workforce scorecard and Local Delivery Plans introduced to align workforce planning with finance and service planning ^{66 67}
- NHS and local authorities to integrate workforce planning into corporate and service planning ^{10 66 68}

Improving the quality of the workforce

- All staff without professional qualification to have access to training to a national standard ^{1 24 28 31}
- Staff to have access to training for new roles ^{1 28 31}
- Clinical governance frameworks introduced encouraging continuing professional development, protocol based care and the development of national workforce competencies and standards ^{1 24 31 65}
- Development of a single Council for Healthcare Regulatory Excellence to enforce standards of practice across all professional groups ^{27 30 63}
- Formation of the Health Professions Council to regulate all healthcare professions that fall outside of nursing and medicine and protect professional titles ^{1 30 69}
- Formation of the General Social Care Council (GSCC) for England, and a Care Council for Wales (CCW) which regulate the training of social workers, set standards through codes of conduct and practice and maintain a register of social care staff ^{4 28}
- Plans to introduce regulation of support workers and assistant personnel ^{34 35}

It was anticipated the combination of pay reform with greater flexibility of roles and responsibilities, additional training and support and development of new roles would not only allow for the transfer of medical and GP workload to nurses and other health professionals and nurse and therapist workload to support staff ⁷⁰ but also encourage greater recruitment and retention of staff.

Career Framework for Health

The culmination of many of the government's workforce policies is illustrated by the Career Framework for Health (Diagram 1). The framework utilises a 'skills escalator' paradigm whereby a worker entering the health care workforce at 'initial entry – level 1', such as domestic staff with little formal education or health care knowledge, has the opportunity to train and gather skills to progress to a 'support worker – level 2' and so on to 'consultant practitioner – level 8' with very high levels of clinical expertise or even 'senior staff – level 9' with ultimate responsibility for clinical case load decision making and full accountability ⁷¹.

The Career Framework for the entire NHS workforce is currently 'top-heavy' with a surplus of post-registration professionals or 'practitioners' and a dearth of practitioners in the lower support staff, pre-registration levels (Diagram 2). There has consequently been a push to increase the numbers of staff at initial and lower entry levels such as support workers and assistant practitioners. The education and training programmes that have been developed such as the Foundation Degree and the National Vocation Qualification are now in place to enable initial entry level staff to move up the skills escalator and replace practitioners who move to higher more senior or specialised levels.

In order that staff may carry out a wider range of tasks safely across traditional professional boundaries, statements of competence describing good practice known as National Workforce Competencies (NWC) were developed. NWCs profile the knowledge and skills required to carry out particular tasks. The competencies are grouped into specific sectors such as older people, allied health and health and social care with the idea being that if pre-requisite knowledge and skills for particular tasks are determined, it shouldn't matter who carries out the task, so long as they fulfil the competencies required of them ⁷². It is envisaged these competencies will also be used by education and training authorities in the development of curricula for health care

students. Policy documents have also recommended competency based workforce planning rather than planning a workforce based around professional titles.

Agenda for Change, the new pay and career structure for NHS staff, theoretically links workforce change to pay and reward. Implemented on 1st December 2004 ¹⁷, Agenda for Change harmonised conditions of service for all NHS staff, with the exception of doctors, dentists and senior management ⁷³. Agenda for Change rewards skills, knowledge and competency rather than professional title by assessing staff against a Knowledge and Skills Framework, based on the National Workforce Competencies. Staff may pass to the next pay band after assessment against the Knowledge and Skills Framework ¹⁸. Each pay band represents different levels in the Career Framework.

Implementing workforce policies

The implementation of workforce policies has been overseen by many agencies and initiatives. These include the Modernisation Agency, now the NHS Institute for Innovation and Improvement, Skills for Health, the Large Scale Workforce Change initiative, the National Institute of Mental Health in England National Workforce Programme and the National Practitioner Programme.

The Modernisation Agency introduced the Changing Workforce Programme (CWP) which pioneered and implemented role redesign. New ways of working, or role re-design, covered four types of change ²⁰:

1. Moving a task up or down a traditional uni-disciplinary ladder
2. Expanding the breadth of a job
3. Increasing the depth of a job
4. New jobs, combining tasks differently to before

A range of role redesign projects were undertaken by the CWP with some newly developed roles implemented in England using a fast-track approach called an Accelerated Development Programme (ADP). These included assistants to allied health professionals such as generic rehabilitation assistants providing a seven day service to support allied health professionals in rehabilitation and intermediate care at home.

Skills for Health oversees the career framework for health and continues to develop National Workforce Competencies in consultation with health and social care providers and educators ⁷². The large-scale workforce change (LSWC) team designs and delivers service improvements and workforce developments through a series of nationally-led programmes ³³. The National Institute of Mental Health in England National Workforce Programme is a national programme to oversee the development of the mental health workforce across health and social care sectors ⁷⁴. The National Practitioner Programme (NPP) encompasses a range of projects that focus on the development and mainstreaming of practitioner roles. Practitioners are qualified professionals who, after training, can operate at a higher or broader level of responsibility and autonomy than previously ¹⁹.

Key workforce legislation:

- *NHS Reform and Health Care Professions Act* ³² – Council for Regulation of Healthcare Professions (CRHP) / Council for Healthcare Regulatory Excellence (CHRE) introduced in April 2003. Enforces standards of practice and determines fitness to practice across all health councils.

- *Care Standards Act*⁴ – established a register of social care staff and the regulation of the social care workforce through the General Social Care Council (GSCC) for England, and a Care Council for Wales (CCW)
- *Health Professions order*³⁰ - Council for Professions Supplementary to Medicine (CPSM) replaced by the Health Professions Council (HPC) in April 2002. HPC regulates healthcare professions that fall outside of the boundaries of more established bodies like the Nursing and Midwifery Council. Supervises established professions and registers and regulates new job titles.

Key workforce documents:

- *Working Time Directive*⁵⁷ lays down minimum requirements in relation to working hours, rest periods, annual leave and working arrangements for night workers. In 2004 the legislation extended to apply to doctors in training, who traditionally have worked long hours and provided out of hours medical cover. These provisions are to be phased in with a maximum hours requirement reducing from 58 hours in 2004 to 48 hours in 2009.
- *Health Select Committee report on future staffing requirements*⁵⁸ undertook a review of staffing projections underpinning the modernisation reforms. Workforce planning and pay and career structures were key issues identified by the Committee as requiring further government attention, in particular for Allied Health Professionals
- *The NHS Plan*¹ established workforce priorities and targets for 2004 and outlined the future programme of workforce reform.
- *Meeting the Challenge: a strategy for allied health professions*²¹ detailed the importance of the Allied Health Professions (AHPs) in delivering the NHS Plan. Employers were encouraged to use staff more flexibly and to use competency based frameworks rather than traditional professional roles to determine who should undertake tasks.
- *Investment and reform for NHS staff: taking forward the NHS plan*¹⁵ saw the introduction of Workforce Development Confederations which replaced education consortia and Local Medical Workforce Advisory Groups. In 2004, these bodies merged with their corresponding strategic health authorities.
- *Working together learning together: A framework for lifelong learning in the NHS*³¹ established milestones to be met by employers, Strategic Health Authorities, Education Providers, Regulatory bodies and Staff to develop and equip staff with the skills to support improvements in patient care and take advantage of wider career opportunities.
- *The Wanless Report*⁵⁹ examines the future health trends and resources required over the next two decades. The review highlighted the need for substantial progress on skill mix and pay modernization before the end of the decade to avoid capacity constraints. The utilisation of support staff was emphasised.
- *The NHS Improvement Plan*¹² established workforce reform priorities and targets to be achieved by 2008. These included continuing increases in frontline NHS staff, emphasis on working differently 'making the best use of skills', extra pay for staff and pay linked to performance.
- *Agenda for Change: Final Agreement*¹⁷ introduced harmonised conditions of service for NHS staff and better links between career and pay progression
- *Our Health, Our Care, Our Say*¹⁰ focuses on the workforce required to deliver care closer to home. The document demands new health and social care 'multiskilled teams' support people with ongoing needs and emphasizes the need to further develop practitioners with special interest roles. Employers are encouraged to plan around competence rather than staff group or profession and career pathways across health and social care are to be created.

Micro context: staffing older peoples' services

The NSF for older people ² recommends that intermediate care be provided by a team of professionals including general practitioners and hospital doctors, nurses, physiotherapists, occupational therapists, speech and language therapists and social workers, with support from care assistants and administrative staff (Para 3.27). There is an emphasis on multidisciplinary team working and coordinated cross-agency working whereby teams are advised to draw on the expertise of a wide range of professionals and work closely with services in local government, especially housing, and the independent sector. The NSF advises delivery of care involve locally agreed protocols and care pathways (Para 3.27) as well as an integrated multi-professional record for use by all members of the team which sets clear goals and timescales for individual care plans, and a management plan following discharge from the service (Para 3.38).

More recently, the NSF for long term conditions ³ and the white paper Our health, our care our say ¹⁰ reiterated the need for multidisciplinary and interdisciplinary team working and health and social care 'multiskilled teams' to deliver rehabilitation.

- **Multidisciplinary working** is defined by the NSF for Long Term Conditions as a group of different professionals working alongside one another towards a common goal. Their interventions are delivered in parallel rather than in close collaboration ³.
- **Interdisciplinary working** is defined by the NSF for Long Term Conditions as teams taking a more integrated approach. They work together towards a set of agreed goals, often undertaking joint sessions. Team members have a fuller understanding of other members' roles and skills and can work together in a holistic way, ensuring the various treatments complement each other ³.

The 'New Types of Worker' project, commissioned by the Department of Health, has used a number of pilot sites across England to look at the workforce implications of a range of developments in social care. It is particularly concerned with the boundaries shared across social care, health, housing, education and other sectors. A recent report from the project has identified new roles that have emerged which include, amongst others, the hybrid role ^{75 76}. These new roles reflect the changes that have occurred across health and social care in the provision of services to older people.

- **Hybrid roles** span the boundary between health and social care but sometimes education, housing and leisure are also implicated. These roles draw upon different professional traditions usually those of health and social care. An example of a hybrid role is that of the Community Support Assistant that provides 'low level' nursing, therapy and rehabilitation to adults who receive both personal care and nursing input at home ⁷⁶.

Conclusion

The modernisation of health and social care following the 1997 general election, stipulated the need for high quality, person centred care that extended across health and social care boundaries. The goals, together with the size of investment required in both capital and human resources, were expressed within the NHS Plan ¹ with the details of service improvement at specialty level, set out in the National Service Frameworks ^{2 3}.

The modernisation reforms specifically highlighted the need for improving Older Peoples' services through targeting ageism, introduction of new supportive and rehabilitative services 'intermediate care', legislating to enabling health and social care partnerships and targeting improvements in the management of long term conditions.

Workforce policies arising from the modernisation reforms have encompassed a range of themes aimed at increasing staffing numbers, improving staff retention, introducing new roles, developing new ways of working, improving workforce planning and improving the quality of the workforce.

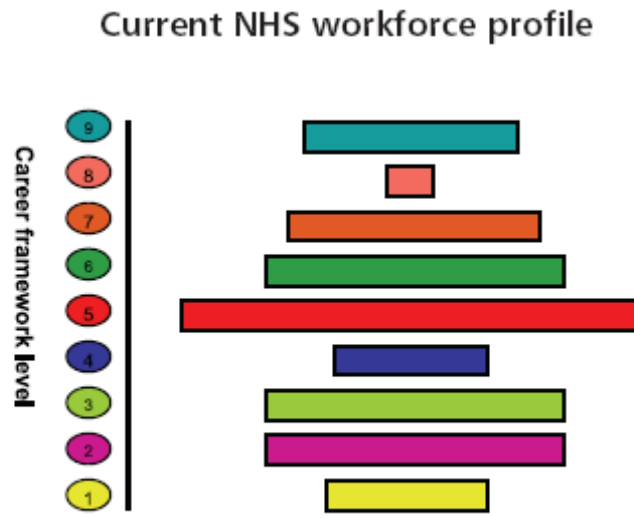
Since the introduction of the health and social care modernisation agenda and resulting investment in community rehabilitation and intermediate care services for older people, the number and type of teams and practitioners providing these services has seen tremendous change and growth. In many ways the demand for these services along with their structure, setting and clientele has driven the need for flexible working and has created an environment where the development of new roles and working across professional boundaries is vital to their success. The extent to which explicit workforce policy has shaped the current workforce providing older peoples' services is yet to be evaluated. It would seem likely though that the workforce delivering older peoples' community rehabilitation and intermediate care has developed in response to changes directly and indirectly brought about by concomitant health and social care modernisation policies.

Diagram 1: Key Elements of the Career Framework

- 9 More Senior Staff - Level 9:** Staff with the ultimate responsibility for clinical caseload decision making and full on-call accountability.
- 8 Consultant Practitioners- Level 8:** Staff working at a very high level of clinical expertise and/or have responsibility for planning of services.
- 7 Advanced Practitioners - Level 7:** Experienced clinical professionals who have developed their skills and theoretical knowledge to a very high standard. They are empowered to make high-level clinical decisions and will often have their own caseload. Non-clinical staff at Level 7 will typically be managing a number of service areas.
- 6 Senior Practitioners/Specialist Practitioners - Level 6:** Staff who would have a higher degree of autonomy and responsibility than 'Practitioners' in the clinical environment, or who would be managing one or more service areas in the non-clinical environment.
- 5 Practitioners - Level 5:** Most frequently registered practitioners in their first and second post-registration/professional qualification jobs.
- 4 Assistant Practitioners/Associate Practitioners - Level 4:** Probably studying for foundation degree, BTEC higher or HND. Some of their remit will involve them in delivering protocol-based clinical care that had previously been in the remit of registered professionals, under the direction and supervision of a state registered practitioner.
- 3 Senior Healthcare Assistants/Technicians - Level 3:** Have a higher level of responsibility than support worker, probably studying for, or have attained NVQ level 3, or Assessment of Prior Experiential Learning (APEL).
- 2 Support Workers - Level 2:** Frequently with the job title of 'Healthcare Assistant' or 'Healthcare Technician' - probably studying for or has attained NVQ Level 2.
- 1 Initial Entry Level Jobs - Level 1:** Such as 'Domestics' or 'Cadets' requiring very little formal education or previous knowledge, skills or experience in delivering, or supporting the delivery of healthcare.

Source: Skills for Health, Career Framework ⁷¹

Diagram 2: NHS workforce profile using career framework levels



Source: NHS Modernisation Agency

Source: NHS Modernisation Agency & NHS Healthcare Workforce Review Team ⁷⁷

Chapter 3 The Key Historical and Sociological

Influences on the Workforce

Introduction

This chapter traces the emergence of the health workforce through the sociological literature, drawing on social theory to explain the nature of professionalism and the approaches used by health professions to establish, maintain and extend their roles boundaries, task domains and authority. In doing so, it will clarify the way that inter-professional and profession–government relationships have shaped the health workforce, and highlight the obstacles and opportunities presented by these relationships in reformulating modern healthcare provision.

This chapter is not presented as a systematic review of the literature, instead it draws on key sociological texts and references to the sociology of the professions. The discussion is confined to the Anglo-American context, with an emphasis on the UK, to ensure direct relevance to the study, and because the concepts of '*professionalism*' have emerged from within Anglophone sociology⁷⁸⁻⁸¹.

The main stages in the growth of medical power, from the mid-nineteenth century onwards, are traced as the profession of medicine increasingly engaged with the government to secure key privileges. This focus illuminates the dynamic nature of the relationships with the government, and how the profession entered into a '*regulative bargain*' with the government which brought crucial advantages⁷⁹. This will be followed by;

- An exploration of the development of other health professions, largely through the twentieth century,
- A description of the influence of medical dominance and the medico-bureaucratic relationship on the role boundaries of the allied health professions,
- The influences of marketisation, managerialism and, more recently, government reforms associated with enhanced accountability and regulation, in shaping the healthcare workforce.

The health care division of labour

An important starting point of the discussion of modern health workforce is the health care division of labour. The division of labour is described as the specialisation of labour into specifically defined roles, which aims to increase the efficiency of output. It has been described by many philosophers including Plato, Marx and Durkheim. The modern world and the growth of capitalism, industrialisation and trade has led to increasingly sophisticated ways of organising and dividing labour.

The health care workforce clearly lends itself to a division of labour because of the breadth of expertise and knowledge about health and the human body, the different philosophical underpinnings of care, and the labour intensive nature of health care in which a team of people comprising individuals with specialist skills is often required.

A number of key influences have shaped the health division of labour and help to account for the current workforce configuration. The relationship between the health professions and the government is central to the provision and delivery of health services in the twentieth century, as the government has assumed a pivotal role in determining the way population health needs were to be met ⁸²⁻⁸⁶.

During the twentieth century, an increasingly complex range of technologies and specialisms evolved as new occupational groups emerged in support of the new welfare state in the UK ^{84 87-89}. The medical profession, already the pre-eminent authority in healthcare, entered into a partnership with the government, later called the '*medico-bureaucratic alliance*' ⁹⁰. This relationship gave medicine a unique cultural and social authority within healthcare which influenced a range of other health occupations engaged in the delivery of care ^{81 91 92}. This dominance of medicine in the health care division of labour is often referred to as *medical hegemony*.

As other health care professions emerged and increasingly sought a place within mainstream health care, medical hegemony meant that the newer health professions were more likely to be assigned an essentially supportive role. Furthermore, the roles of these new occupations were clearly defined by medicine, often through legislation or healthcare regulations. This led to a hierarchy of esteem based on medical power. As a result, the remaining healthcare occupations were subject to role limitation (such as dentistry or optometry, confined to a specific anatomical location and a limited range of roles), excluded from mainstream healthcare (such as homeopathy, acupuncture or herbalism) or subordinated to medical control (such as nursing, physiotherapy or radiography), as medicine sought to exercise its authority and shape the division of labour ^{93 94}.

'*Medical dominance*' became a feature of healthcare organisation across the English speaking world, and has also been evident in Europe ⁹⁵⁻⁹⁸. Medical dominance grew throughout the twentieth century, and whilst it continues to underpin much of the current structure of the health services, evidence suggests that it may now be in decline ^{85 96 98 99}. In particular, the new managerial agenda has altered the relationship between the professions and the government, challenging the established hierarchical workforce model ¹⁰⁰.

Understanding Professionalism in the Workforce: Theoretical

Considerations

A number of theories have developed the modern understanding of '*professionalism*' and the way that professions establish and maintain market control of their services and

attempt to attain high social status^{79 93 101}. A defining feature of professional occupations is that they enjoy certain privileges and rewards within society, in particular high levels of autonomy and social status¹⁰². These privileges are considered to reflect the value society places on professional expertise, in which special rewards are exchanged for the altruistic use of complex professional knowledge^{101 103-105}. In this view, professions are trusted to regulate their own practitioners through codes of conduct and disciplinary mechanisms which protect the public and ensure high standards of practice¹⁰⁶. Yet, as Saks^{80 81 101} has argued, these approaches lack the support of empirical evidence and remain essentially ahistorical.

In contrast, the most influential view of the health professions, and the most empirically sustainable, explores the ways that professions attempt to ensure control over their role and task boundaries, thus moulding the division of labour to their advantage (from the Neo-Weberian tradition)^{79 90 107-111}. The concepts of social closure and professional dominance are central features of this theory, and help explain the competitive nature of professionalism, and the strategies adopted by professions in the pursuit of their professionalizing goals^{79 108 112 113}.

Social closure

'Social closure' is described as the profession 'drawing a boundary around their knowledge and creating a monopoly through certification and credentialism, which excludes outsiders'¹¹¹. For these strategies to succeed, the government must accept and endorse the profession's claims and provide a 'market shelter'¹¹⁴ through legislation and licensure. Professions engage in both 'exclusionary' and 'usurpatory' closure strategies, aimed at preventing competitors from encroaching into existing task and knowledge domains, whilst at the same time attempting to 'poach' skills and roles from competing professions^{84 92 102}.

Medical dominance

'*Medical dominance*' describes the extent to which the profession of medicine was able to establish control and authority over its own knowledge and task domain, and extend this power to control the knowledge, skill and role boundaries of other healthcare professions¹¹⁵. Although influential, the concept of '*medical dominance*' has been questioned because it implies that only the medical profession attempts to obtain dominance and control over the task domains of other health professions⁸⁴. Other authors⁸⁴ argue that all professions within the health division of labour engage in strategies designed to resist encroachment by other groups and to promote expansion at the expense of others. As Larkin pointed out,

'occupational imperialism refers to attempts by a number of occupations to mould the division of labour to their own advantage, or as Kronus (1976) puts it, to extend normative and legal boundaries as far as possible in their own interests. It involves tactics of 'poaching' skills from others or delegating them to secure income, status and control. The medical profession has clearly been the most successful in these spheres, but it is not the only group with an interest in controlling the division of labour' (Larkin 1983: 15)⁸⁴.

The success of these strategies depends upon the level of endorsement and support by '*powerful elites*', most notably the government ^{79 116}. Legally recognised closure, in the form of protective legislation, has been regarded as the '*ultimate legitimizing of a task domain*', and reinforces the importance of government endorsement in attaining control over elements of practice, and in shaping the division of labour ⁸⁴. At the same time, these boundaries become reinforced and shaped by the actions of clients, employers and other occupations ¹¹⁷.

Perhaps the clearest theoretical framework illustrating the exclusionary and competitive nature of the professions is to be found in Larson's '*professional project*' ¹¹³, centred on Weber's concept of social closure as an occupational strategy ¹¹⁸. Within this framework, professions are viewed as constantly seeking to establish and maintain a '*market monopoly, social status, and work autonomy*' (Larson 1977:49) ¹¹³. Larson's concept implies a '*coherence and consistence*' which links a range of '*apparently unconnected acts*' as part of a profession's occupational strategies; one which, crucially, does not require them to be '*entirely clear or deliberate for all the members, nor even for the most determined and articulate among them*' (Larson 1977: 6) ¹¹³. Thus, it is possible for a profession to act reactively (as well as proactively) to changing circumstances, whilst retaining an underlying set of goals aimed at securing, maintaining or enhancing the key advantages of market control, social status and work autonomy. Each response to new challenges, over which the profession may have little immediate control, informs, or evokes, a strategic counter-response which aims to defend existing privileges or to acquire new ones.

Central to these occupational strategies is the use of professional ideology as a resource in persuading others – notably the government, the public and other, more powerful, professions – of the validity of their claims to special status ^{78 79 83 113 119 120}. In viewing the collective actions of a profession within a division of labour in this way, it is possible to understand and explain the competitive nature of inter-professional relationships and the degree to which professional '*jurisdictions*' are contested ¹²¹. Indeed, Abbott described a dynamic '*system of professions*', in which professions continually compete with each other for control over jurisdictions centred on role and task domains, where ascendancy is not necessarily guaranteed or beyond effective challenge ¹²¹. The concept of occupational imperialism captures this subtlety thus

*'The term 'occupational imperialism' is not intended to connote an ossified skill distribution, but an arena of tension and conflict between groups which is largely shaped in outcome by the differential access of each to exterior power resources' (Larkin 1983: 17)*⁸⁴

Inter-professional competition

Abbott ¹²¹ views inter-professional competition as a fundamental feature of professionalism which centres on conflict over the content, control of, and differentiation of work. Light ¹²² also deployed a further theoretical elaboration in describing the concept of countervailing powers as an explanatory framework in which '*a profession or one of its competitors may gain dominance by subjugating the needs of other groups, which over time will mobilise their own resources and connections to counter this*

dominance. Indeed, Hartley¹²³ recently drew upon the countervailing powers framework to identify the erosive effects upon medical dominance of a '*system of alignments*', developed between other agencies with vested interests – most notably competing healthcare providers, the government and corporate or consumer forces. In this context, the inter-related activity of these competing forces may collectively ensure not only the establishment and maintenance of professional hegemony, but, through a counter-mobilisation, ensure a decline in such dominance. Indeed, recent evidence continues to accumulate which suggests a fundamental shift in the trajectory of medical dominance across the Western world^{98 124 125}.

New public management

The advent of managerialism and marketisation, often referred to as a neo-liberal '*New Public Management*' (NPM) have created further challenges to the autonomy and authority of the healthcare professions^{100 112 126}. These reforms are seen to signal the end of the '*special*' relationship between medicine and the government, introducing a new strain of accountability for the professions most clearly demonstrated in the era of '*clinical governance*'^{85 127}. Indeed, the current policy agenda, emphasising a new professionalism which is '*not based on exclusion control and special status*'⁸⁵, may perhaps be understood more in terms of the newer concept of the '*professional project of the self*'¹²⁸. This notion allows a re-conceptualisation of the professional project as individual, rather than necessarily collective, where the latter may be attenuated or failing.

NPM reforms and their associated '*performance ethos*' has undermined the autonomy and status of the professions, yet they present new opportunities for professionals to redefine professionalism¹²⁸⁻¹³¹. Thus, it is clear that theoretical insights derived from the sociological literature inform a deeper understanding of the dynamics of professionalism and collectively constitute a powerful explanatory tool when exploring the forces shaping of the healthcare workforce.

The Profession of Medicine and the Health Division of Labour

The medical profession has been characterised as an '*ideal type*' profession, displaying the enviable features of autonomy, social authority, and dominance over the broader health division of labour^{82 91 113 115 116 132}. Formal recognition of this powerful position can be traced back to the mid-nineteenth century, although moves by the profession to establish legitimised control over all medical practices through government regulation reach back to the early 1800s^{79 133}. Indeed, the government was instrumental in the '*formal founding*' of the medical profession via Acts of Parliament in 1511 (restricting the practice of '*physick*' to those approved by church authorities) and in 1523 (restricting practice as a physician to those examined by the President of the Royal College of Physicians (RCP), or, in the case of provincial practitioners, to those graduating from Cambridge or Oxford universities)⁸².

A Royal Charter was granted to the RCP at its inception in 1518, yet the profession was still neither unified nor uniformly regulated^{79 82}. In spite of the emergence of the RCP as

a licensing body independent of the government, church or universities, it was not until 1858, after '*forty years of internecine struggle*', that a new Act of Parliament - The Medical Act 1858 - finally unified the disparate groups of physicians, surgeons and apothecaries within one profession^{79 134}. The internecine struggle to which Macdonald⁷⁹ referred emerged as a result of the professionalizing ambitions of the RCP, in its attempt to achieve not only self-regulatory control and market monopoly, but also '*sovereignty*' over the companies of surgeons and apothecaries^{82 135}.

In order to strengthen its position it developed an ideological claim that drew a distinction between itself as a profession, and that of a trade or guild, based on its practitioners' '*special qualities and duties*'. As Berlant⁸² pointed out, the exclusionary strategies shaping the health division of labour were evident even then:

The Royal College's theory of professional authority provided for both horizontal differentiation in the form of monopolisation and vertical differentiation in the form of regulation of the medical guilds, which were deemed to be inferior to the profession. Not surprisingly, the surgeon and apothecary companies resented and resisted the superior position and domination of the physicians.
(Berlant 1975, p.141-2).

Over the following two centuries a range of strategies were adopted by the RCP in an attempt to establish a monopoly and expand control over its competitors, at a time of relatively low government involvement⁸². One key transition in RCP strategy enabled formal recognition and status for apothecaries and surgeons, whilst preserving both higher status and control over certain practices for physicians. It thereafter '*claimed elite status within an extended medical profession*' (Berlant 1975, p.145)⁸². Yet it was not until the political ascendancy of Liberalism, in the mid-nineteenth century, that the unification of medicine finally took place, in a compromise which fell short of a trade monopoly but enhanced the authority of the medical profession and won the support of the government.

An appreciation of the principles of 19th century Liberalism are important to an understanding of the shifting trajectory of the profession of medicine, both then and again in the 1980s, with the re-emergence of market principles and the ideology of the New Right^{100 136 137}. Belief in the virtues of a free market, with open competition and individual choice, alongside state non-intervention, encouraging efficiency, effectiveness and value for money, prompted criticism of the monopolistic tendencies of the medical profession in both eras^{82 138-141}.

Libertarian, liberal values and laissez faire principles opposed the privileges of the medical profession and demanded that free markets, unhindered by restrictive regulations or legislation, be restored and that individuals should be free to choose, and be responsible for their choices (under the doctrine of *caveat emptor*). Medicine attempted to circumvent this criticism by arguing that the provision of medical services should be regarded differently to the sale of other goods. They emphasised the altruistic nature of service to society rather than service for financial gain, accompanied by claims that patients were unable to make rational choices, as they were either too ill ('*helpless*') or unable to make judgments about professional abilities^{79 82 133}. The result was an

exchange of privileges. The Medical Act (1858) removed the legal restriction on medical practices, permitting anyone to practice yet allowed the profession to retain its right to issue licences, which were listed in an official medical register, regulated through the new General Medical Council^{82 134 142}. This was an important precedent in the development of the allied health professions through the 20th century, and in the current reconfiguration of the healthcare workforce.

Another privilege was the monopoly granted on government employment, providing registrants with a key market advantage, as government intervention in healthcare provision grew through the twentieth century^{79 82 142}. In achieving this position, medicine secured the '*basis for determining the terms of employment of other health care workers*' and thus '*won the authority to determine their place in the division of labour*' (Larkin 1983, p.11-12)⁸⁴. Yet, as Larkin (1983, p.18)⁸⁴ pointed out, in order to maintain a dominant position in an increasingly complex division of labour, medicine was required to '*distribute existing and new skills through a division of labour which could only be dominated with state support*'.

As government involvement in the creation and provision of a welfare state grew, a '*regulative bargain*'⁷⁹ was necessary to maintain authority and control in a division of labour increasingly dependent upon the specialist expertise of the emergent paramedical workforce^{84 85 90 107 108}. Both Macdonald⁷⁹ and Larkin⁹⁰ traced the rise in government intervention in healthcare from the early 1900s, with the ascendancy of the Liberal Party and its reforming policies alongside the passage of the National Insurance Act of 1911 and the founding of the Ministry of Health in 1918. As a result, demand for a newly accessible state run medical service grew, and the power of the profession remained strong as the government was largely dependent upon medicine for advice in health matters^{79 84 90 107}.

Medical power may already have reached its zenith by the inauguration of the National Health Service in 1948, albeit in a government-sustained form, subject to instability via numerous boundary disputes from potentially competing providers^{84 90}. However, thereafter, challenges to the sovereignty of the profession gathered momentum as the rising sophistication in technological, pharmaceutical, diagnostic and therapeutic capabilities increasingly demanded the support of allied health workers skilled⁹⁰. Indeed, by the inter-war years there were insufficient doctors to maintain the monopoly claimed by the profession in certain areas of practice, forcing the profession to, for example, support demands for the formal recognition of ophthalmic opticians, through the creation of an official Ministry of Health register⁸⁸.

The BMA created a Board of Registration of Medical Auxiliaries in 1936, with a view to controlling the development of the healthcare support workforce, which was initially endorsed by the Ministry of Health^{84 90 107}. At the same time it worked against the demands of other allied health professions seeking legislative recognition and protection along the lines of nursing (1911) and dentistry (1921)^{107 143}. Thus, medical legitimacy was afforded to many of the paramedical groups in exchange for subordination to medical authority in such matters as the medical direction and definition of paramedical work^{84 85 90 107 108}.

However, after the inception of the NHS, opposition to BMA plans to establish a statutory basis for auxiliary status (the '*Cope Report*') intensified. Mindful of these objections, the Ministry, fearful that the Cope proposals would undermine the stable administration of the new NHS, rejected the terms of the Report (1951) which recommended paramedical registration on auxiliary terms, and eventually chose to gradually recognise, by statute, the registration of a number of paramedical groups^{84 85 90 107}.

These changes did not lead to a collapse of medical authority and hegemony, but rather a modification which resulted in the emergence of paramedical professions with government recognition and a degree of autonomy from medicine, yet without full control over their skill and role boundaries in a hierarchy still led by an influential medical profession^{84 85 90 92 93 107 108}.

Further restrictions on the medical autonomy and authority emerged in earnest in the 1980s, coinciding with the ascendancy in Thatcher's ideologically driven '*New Right*' market policies^{136 144 145}. In a bid to overhaul an NHS perceived to be profligate, inefficient and even ineffective, the Conservative Government established a series of reforms aimed at reversing these trends^{91 136 139 140 145}. The managerialist agenda was intent on reducing professional power and clinical freedom in order to ensure greater efficiency and more effective use of resources in the wake of the Griffith Report of 1983. This empowered non-medical managers to manage services across professional boundaries^{86 91 136 144 146}. Individual responsibility and fiscal probity guided the development of policies which sought to empower patients and constrain public expenditure^{145 147}.

In this climate, the cosy propinquity which had characterised the profession-state concordat appeared at an end^{91 147}. By the early 1990s an internal or '*managed*' market had been introduced in a bid to promote a more competitive edge in the commissioning and provision of health services, thus encouraging an adversarial and arguably more confrontational style in contracting^{138 139 147}. Central to the policy agenda was a shift in emphasis towards the primacy of primary care. In doing so, the government sought to steer the emphasis away from expensive hospital care, and to encourage general practice to provide a wider range of treatments at lower cost¹⁴⁸⁻¹⁵⁰.

A greater emphasis on user involvement and consumer choice reflected the view that the healthcare needs of an ageing population lent itself more to self-care than hospital treatment, and that early intervention and health education would have important preventative roles^{138 150}. New GP contracts hinted at changes in the role of the doctor, as constraints in prescribing budgets were set alongside new targets in vaccination, home visits and in the provision of annual health checks and more minor surgery¹⁵⁰. By the mid-1990s much of the healthcare commissioning in primary care was achieved through GP fundholding, in which GPs purchased both hospital and community services for their patients, involving a shift in clinical roles, as many tasks were being undertaken by other healthcare workers under supervision^{145 150}.

Gradually, by the Conservative government's third term in office, market policies were increasingly aimed at professional services and the internal market permitted

paramedical groups to compete with medical specialties in the provision and delivery of certain healthcare services on a 'level playing field'^{138 151}. The use of contracting coupled with the setting of specific targets which would be monitored in the interests of ensuring quality and efficiency lent a further, competitive edge to the provision of services¹³⁷⁻¹³⁹
144 150

Crucially, the Government intended that the reforms, launched under Working for Patients¹⁵², would secure a shift in role and skill boundaries between professional groups; a mantra which was to be carried forward by the new Labour Government from 1997^{138 140 153}.

As part of this initiative, local managers, in consultation with their professional colleagues, will be expected to re-examine all areas of work to identify the most cost-effective use of professional skills. This may involve a reappraisal of traditional patterns and practices. Examples include the extended role of nurses to cover specific duties normally undertaken by junior doctors in areas of high technology care and casualty departments; the use of clerical staff rather than nursing staff in receptionist work.(Department of Health 1989:para.2.13)¹⁵²

Throughout the 1990s and into the new millennium the medical profession has been assailed by demands for greater openness and transparency, in the wake of a number of high profile cases of negligence and criminality¹⁵³⁻¹⁵⁵. It has also been increasingly subject to demands for greater accountability, through performance indicators, governance measures, revalidation requirements and the oversight of authoritative regulatory and statutory organisations such as the National Institute for Health and Clinical Excellence and the Healthcare Commission^{148 156}.

Health care modernisation

For the New Labour government, healthcare modernisation brought a renewed emphasis on workforce redesign and the centrality of patient-led service provision¹⁵³. Demands for 'new ways of working' reflected the extent of change envisioned for the healthcare workforce, and the introduction of Agenda for Change¹⁵⁷ and new nurse and therapy consultant roles illustrated the depth of change required¹⁵⁸. The development of NHS direct, nurse-led walk-in centres and one-stop shops for first contact care reflects a changing environment in healthcare that arguably may demand a re-evaluation of the ongoing relevance of the concepts of professional autonomy and dominance^{85 153 159}. Yet, it is clear that professionalism itself hinges on the demarcation of skill, role and knowledge boundaries that define and maintain professional groups¹¹². However, for Fournier¹¹² professions are likely to have the capacity to respond to these challenges by re-constructing their boundaries in the light of new demands, particularly the more powerful professions such as medicine.

Impact of European Working Time Directives

For medicine, a further challenge to professional authority, stems from the wider implications of the EU European Working Time Directives on doctors' hours¹⁵⁸ and its recent extension¹⁶⁰. Long working hours have been a concern for some time, prompting John Major's Conservative Government of to initiate a policy shift reducing junior doctors' hours and urging employers to make better use of the skills of nurses and other

allied health professionals¹⁶¹. Similar recommendations emerged in the Calman-Hine report¹⁶² on cancer care, ensuring a greater role for nurses in areas such as lymphoedema care, symptom control or psycho-social support¹⁵⁸. Reductions in junior hospital doctors' hours, increased rates of retirement among primary care physicians and a distinct shift towards part-time working among women doctors continue to drive change in the contemporary healthcare workforce¹⁶³.

Shifts in predicted disease patterns, consistent with an ageing population, are also relevant. A decline in severe disability is predicted alongside a rise in '*minor*' health problems, providing further justification for enhanced nurse and allied health roles¹⁶³. Indeed, the cost, quality and acceptability of enhanced primary care nurse roles in minor illness has already been convincingly established^{163 164}.

Recruitment and retention remains a critical issue for the NHS, and represents an ongoing dilemma^{165 166}. An annual loss to the NHS workforce of 9%, amounting to 100,000 staff, cannot be accounted for by retirement alone, and many authors suggest low morale and high levels of work stress contribute significantly to the exodus¹⁵⁸. Replacement of specialist staff, requiring highly specialised training, is particularly problematic, and has led to enhanced role development among allied health professionals as a means of coping with demand and ensuring continuity of care¹⁵⁸.

Physician assistants

Plans for new '*Physician Assistant*' practitioners, adopted from the US model, have been implemented in the form of pilots in Birmingham and Sandwell, and also in Cambridgeshire, designed to relieve the workload of the overstretched hospital doctor¹⁶⁷. Thus, a combination of policy reforms, recruitment and retention problems, technological advances and shifting patient demographics all demand a reconfiguration of health workforce roles that involve enhanced skill development in nurse and allied health professions alongside a more focused role for doctors.

Health care assistants

Another crucial element in this equation has been the emergence and growth of healthcare assistants, where expanded roles are now encouraged by government in a bid to support the new workforce based on a combination of genericism and growing specialisation, thus providing greater workforce flexibility¹⁶⁸.

Complementary and alternative medicine

Furthermore, the impact of alternative and complementary medicine has led to greater patient choice and wider acceptance among the more mainstream professions, which have gradually incorporated many complementary techniques and remedies into orthodox practice, most notably from acupuncture, osteopathy and homeopathy^{81 169 170}.

Throughout, the profession of medicine has been adept at responding to these challenges, and is constantly reformulating both strategy and policy in order to ensure the maintenance of its self-regulatory powers. Indeed, in the absence of any productive alternative, it is difficult to predict the absolute demise of the hierarchical system of healthcare organisation and medical hegemony⁸⁵. Rather, a gradual realignment of healthcare professions' functions, based on reformulated role boundaries, either

negotiated at local level or established as national policy appear to be emerging in tandem with an evolving hierarchy, in which medicine is still central, if no longer super-ordinate. Perhaps Larkin's⁸⁵ vision of healthcare co-equal partnerships, centred on a softer, more collaborative and co-operative medical hegemony, may in time emerge and establish the '*new ways of working*' at the heart of the NHS policy agenda¹.

Nursing and the Allied Health Professions: New Roles in the

Division of Labour

Paramedical professions are broadly regarded as healthcare care occupations, other than medicine, which engage in the direct delivery of healthcare to patients⁸⁴. These groups have grown considerably throughout the latter half of the twentieth century and early 21st century, in response to the increasing complexity of healthcare technologies and the growth in demand for healthcare services^{85 171}.

Sociological and socio-historical studies have contributed significantly to an understanding of the dynamics of healthcare provision and workforce development through analyses of both the emergence and growth of medical power and the subsequent impact on the shaping of the paramedical workforce^{84 85 87-90 93 107 108 143 172 173}. Central to the emergence and development of this supportive workforce has been the overarching '*sovereignty*' of medicine^{93 135 173}. The authority of the medical profession enabled the paramedical groups to be systematically controlled and restrained in a way that role boundaries were carefully circumscribed and locked into place through the power legitimized by the government and public opinion alike⁹¹.

Medical authority enabled constraints to be introduced which limited the legitimate role boundaries of the paramedical groups, which were either subordinated to medical control with task delegation (such as nursing or radiography), limited to discrete parts of the body (such as dentistry, optometry and podiatry); or, indeed, simply excluded from legitimate mainstream healthcare practice altogether (acupuncture, osteopathy, homeopathy or chiropractic)^{93 169 174-177}. Examples of these cases illustrate the way in which the role boundaries of the paramedical professions were initially controlled and shaped in order to provide a supportive role to medicine. They also illuminate and link these developments to the current, and arguably unique, challenges facing the paramedical workforce – notably service fragmentation, blurring and loss of role boundary identity and the spectre of genericism.

Radiography provides one exemplar of the simultaneous emergence and subordination of a paramedical profession in the construction of a healthcare workforce designed to accommodate increased demand, growing technological complexity and role specialisation^{84 87 173 178} (See Box 1). As demand for healthcare provision grew following the inception of the NHS, so too did the need for government to ensure a viable and efficient service¹⁷⁹. Central funding for the NHS permitted a vast expansion in hospital medicine across the country, and with it grew the need to ensure the provision of increasingly sophisticated complex health services. Heavy demands on doctors' time and expertise led to an increased need for support staff to provide the technical application

of new techniques and methods which would aid medical diagnosis and therapeutic care.

Box 1: The emergence and subordination of radiography

Medical specialisation in areas such as radiology (now nuclear medicine) required technical support, creating a role vacancy for paramedical groups such as radiographers, who would undertake the tasks of radiological imaging under the direction of medical radiologists, who would in turn interpret the images and provide the diagnoses^{84 87 173 178}. As a result, the role boundaries of the radiographer were limited to technical tasks undertaken only at the behest of the radiologist, leaving the central medical tasks of diagnosis and treatment planning to the doctor. Gradually, a therapeutic role for the radiographer was introduced, but only under direct medical supervision, and after the medical treatment regime had been decided by the physician. Only recently has this scenario begun to change, in the light of new workforce pressures, changing health demography and new health policy reforms aimed at rethinking professional roles^{158 178}. Radiographers are now increasingly involved in 'red spot' activities, assuming pseudo-diagnostic activities designed to relieve the burden on over-worked casualty physicians and radiologists^{158 178}.

Similar shifts in the trajectory of other paramedical professions have been evident from the literature, where role changes in nursing¹⁵³, podiatry¹⁵¹, occupational and physiotherapy¹⁸⁰ and operating department practitioners¹⁸¹ have all expanded and changed in ways which created tensions and uncertainty, whilst establishing new responsibilities and shedding older ones. Pharmacy has undergone a transformation from an essentially commercial enterprise, rendering services for financial gain in a competitive marketplace, to a therapeutic and increasingly independent diagnostic role in prescribing^{93 182-185}.

Indeed, nursing, optometry and allied health prescribing constitutes a recent innovation, based on policy reform, which illustrates the changing nature of healthcare and the allocation of roles and skills within the division of labour. Whilst diagnosis, surgery and prescribing were once identified as exclusive and central core activities of the medical profession^{116 151 182}, arguably it is only diagnosis that remains legitimately the preserve of medicine, and that, too, is under threat^{112 151 184 185}.

Until recently, however, the price to pay for any expansion in the roles of the paramedical professions had been inter-professional conflict with medicine, from which the roles were usually usurped^{90 93 173}. Usurpatory and '*lateral*' closure mechanisms accounted for the majority of enhanced paramedical roles until the trends towards planned service reconfiguration became embedded during the late Thatcher years.

In this sense, three phases of paramedical expansion can be identified. Firstly, professionalisation strategies, when aligned with the flow of government policy agendas, enabled piecemeal and usually highly limited incursions into the role boundaries of medicine^{84 107 151 186}. Limited access to medicines, carefully controlled by the medical authorities through agencies such as the Department of Health's Medicines Commission (and its successor the Medicines Control Agency, now the Medicines and Healthcare Products Regulatory Agency) were granted to nursing and podiatry in 1980, later involving optometry and ambulance paramedics in 1997¹⁸⁶⁻¹⁹¹. Secondly, the advent of government policies directed specifically at reducing medical authority and initiating competitive quasi-market principles were introduced, in the Thatcher years, which enabled the paramedical professions to compete with medicine as providers of healthcare in specific settings, such as invasive foot surgery¹⁵¹ or the treatment of minor eye disorders⁹³. Thirdly, under the New Labour government, policies designed to fundamentally redesign health services in a way which specifically identifies nurse and allied health role changes is now being implemented. This does not consist entirely of role expansion, however. The advent of university foundation degrees, the introduction of assistant practitioner roles in addition to healthcare assistants, and the shift towards specialist paramedical roles are all government sponsored activities which reflect government policies rather than professional aspirations, either by intent or serendipity. Many of the changes reflect the underlying ideology of the Third Way agenda.

The paramedical professions are granted '*rights*', such as protection of title and a reduction in medical control in exchange for '*responsibilities*', evident in the new accountability and transparency imposed upon the professions through clinical governance or enforced self-regulation in the form revalidation requirements and a re-aligned regulatory process^{85 127 140 145 147 192}.

Throughout the emergence and development of the roles of the paramedical professions, one key feature remains important to any understanding of role boundary change. Almost uniquely, in the UK (and often in the former Empire and Commonwealth nations) codified legal restrictions on medical practices have not been widespread⁸². In Roman law, evident throughout most of continental Europe, medical practices are largely restricted by statutes which enable an ongoing monopoly of certain practices¹⁹³. Thus, the ambitions of the paramedical professions posed very real threats to medical control, and the thwarting of their realisation remains a testament to the influence of medical authority.

Discussion: the Current State of the Workforce

There is little doubt that many of the forces currently shaping the healthcare workforce have eroded the sovereignty of the medical profession. What is less clear is the extent to which they have affected the established hierarchical arrangements which have been centred on medical hegemony since the inception of the welfare state. Direct, interventionist, government policy reform has featured strongly in both imposing and enabling change in the role boundaries of the healthcare professions. Competitive, adversarial inter-professional conflicts, centred on jurisdictional disputes, are clearly less

in evidence than in the past, although they have not yet been entirely superceded by negotiated and consensual agreement. Perhaps the emergence of '*soft bureaucracy*' in the health services, as a means of maintaining self-regulatory authority whilst accommodating demands for accountability and new public management philosophies¹⁹⁴, coupled with the development of '*co-equal partnerships*'⁸⁵ provides the professions with an opportunity to retain autonomy and power whilst accepting role change. Fournier¹¹² astutely identified the professions as adaptable and resilient in the face of such change, in contrast to the view of the professions held by many in the Thatcher government, which tended to depict them as inflexible and intransigent. Today, the professions appear to be largely engaging with an ineluctable process of healthcare reform, responding proactively as well as reactively to the new demands in a bid to retain professional status and authority.

Role boundaries, although defended vociferously and usurped enthusiastically in the past, may now need to be reshaped in order to enable the emergence of new professional identities. Dynamic role boundaries have always been a characteristic feature of the healthcare professions, and therefore also of the healthcare workforce and health division of labour, as Abbott's¹²¹ influential theory of a '*system*' of interconnected professions has demonstrated (although this has been contested – see Macdonald 1995).

New challenges demand novel responses and fresh strategies which do not necessarily signal the demise of the professions per se, nor an end to the distinctively hierarchical character of the health division of labour. Shifting role boundaries do not yet appear to lead to deprofessionalisation through a loss of monopoly over key aspects of work¹⁷¹. Rather, there is greater evidence of a disaggregation of knowledge from more highly specialised groups to generalist, or at least less specialist, groups. To date, there are no examples of role changes that have *removed* the attributes associated with successful professionalisation¹⁷¹. Nor has enhanced professional status demonstrably followed the acquisition of enhanced roles for the non-medical professions.

Non-medical prescribing by nurses or allied health professionals, for example, does not appear to have brought status equality with medical professionals¹⁷¹. Certainly the current climate of health policy and workforce change is challenging the capacity of the medical profession to control and direct a range of other, allied professions, but does not necessarily presage a loss of autonomy, at least for the medical profession. Indeed, the attributes of autonomy, control and self-regulation may no longer be regarded as quite as central to professional identity as they once were¹³⁰.

Perhaps the greatest challenge faces the most specialised professional groups; those that have, in the process, '*ditched the dirty work*' in times of high demand, but find themselves unable to reclaim the territory in times of oversupply¹⁷¹. Once these tasks have been relinquished into a wider workforce inhabited by new, non-specialist occupational groups eager to subsume such roles, then, as demand again rises, their scarcity value is likely to be reduced.

Conclusions

This section of the review has highlighted the importance of the historical development of the professions and the relationship between different professional groups, reinforcing the socially constructed, rather than 'evidence based' nature of the existing professional groupings.

- The relationship between professions and the state, and the relationship between different professional groups is key in shaping the health care division of labour.
- Medicine has been pre-eminent in the health care division of labour. It was the first health care profession to enter into a partnership with the government placing it in an advantageous position to take ownership of newly introduced technologies (such as anaesthetics and antibiotics), as well as being able to take an important role in shaping the other health care professions as they evolved within the health care division of labour.
- There are different theories about the nature of professionalism. Much of the recent theory paints the professions as opportunistic and even predatory groups who aim to ensure that they are able to take on high status work, whilst preventing encroachment by other professional groups. Additionally, professional groups have had to respond to changing circumstances and ensure that they are in advantageous position relative to other professions. The model of 'professional closure' describes the way that the professions have attempted to control their task domains and role boundaries within the health care division of labour. The term the 'professional project' describes the way in which the professions as constantly seeking to establish and maintain a 'market monopoly, social status and work autonomy'.
- The reinforcement of professional roles requires the support of 'powerful elites', predominantly the government through the provision of protective licensing and legislation which stops rival professions undertaking these tasks. However professional roles are also reinforced through organisations, employers, other professional groups and the public.
- Professions have, until relatively recently, been given the privileges of autonomy, ability to regulate themselves, and in some cases, high pay, in return for offering their skills and knowledge to society.
- However, the traditional models of professionalism have faced a number of challenges recently. The introduction of managerialism, or New Public Management has reduced the importance of the special relationship between the professions and the government, replacing it with new systems of accountability, such as clinical governance, which examine individual performance. Accountability is moving from an implicit model of collective governance to explicit forms of demonstrating individual accountability. The new consultant contracts are one example of this change.
- The government has actively introduced a number of mechanisms which undermine medical dominance including non –medical prescribing; extended scope practitioners; the new consultant contracts; nurse-led walk in centres;

- European working time directives; proposals to introduce physician assistants; and nurse practitioners.
- Increasingly informed consumers are also challenging traditional models of health care delivery, such as the new models of the 'expert patient' and NHS direct.
 - The notion of workforce flexibility is reinforced through the introduction on of new roles including health care assistants, physician assistants, and the adoption of complementary and alternative therapies into mainstream care.
 - A number of allied health professions have seen the emergence of their roles into traditionally medically roles such as surgery and prescribing.
 - The expansion of paraprofessional roles commenced without explicit government support, however grew under the new managerialist agendas, and now actively receive the support of the government to contribute to the new ideology of health care provision.
 - The health care workforce is currently undergoing unprecedented change. It is not clear how these changes will impact on the future workforce or the structures and hierarchies within the workforce.
 - Despite the growing evidence of workforce change, it still appears that professional hierarchies exist. Those practitioners with extended roles have not gained the status or rewards that were traditionally attached to those tasks. For instance, non-medical prescribers do not have the status or income of doctors, the traditional gatekeepers of prescribing.

Chapter 4 Workforce change – the evidence base and relevance to intermediate care

Section 1 Skill Mix and New Roles

Resource availability, regulatory environments, culture, custom and practice will all play a part in determining the “typical” or “normal” roles and mix of staff and other care givers in intermediate care. To the extent that these factors vary, so will the typical mix. There are also different drivers that may lead an organisation or health system to examine its current skill mix with a view to change.

Table 1 highlights some of the key issues, which explain why examining the issues of roles and skill mix of health professionals is an important, but complex issue. These driving forces are not mutually exclusive; in many cases, more than one driver will be acting on a health system. Health systems, in intermediate care and elsewhere, are labour intensive. It is inevitable that any policy focus on improving productivity and achieving cost containment in health care will focus on human resources issues.

It should also be noted that introducing a new role, or changing skill mix is not the only potential intervention or solution to these challenges. Other responses could include improving utilisation of hospital beds, capital equipment and other resources; improving staffing patterns in relation to day-to-day fluctuations in workload and patient dependency; improving the delivery of in-service training and continuing education to current workers, introducing or extending the use of technology based care¹⁹⁵, and reviewing and altering resource allocation and distribution (e.g. between tertiary, secondary and primary care). Skill mix / new roles is one potential solution, but not the only solution, to many HR challenges.

This section draws from a review focused on English language publications that were published in the period up to September 2005, which was based on searches on CINAHL & pre-CINAHL, BNI, Medline, First Search, Web of Science, and Cochrane Collaboration. The search terms used were: “skill mix”; “skill substitution”; “personnel mix”; “reprofiling”; “staffing levels”; “staffing mix” and “changing roles”. This review updated previous published work¹⁹⁶. Most research and policy publications relating to skill mix and new roles in the health sector have emerged from a relatively small number of countries – mainly in North America, with some also from the UK and Australia. A recent French language review of roles and competencies in primary health care¹⁹⁷ drew almost exclusively from English language publications, and noted that the introduction of new roles and skill mix change was primarily a phenomenon of “Anglo-Saxon” countries (although it should also be noted that there have been similar developments in other countries such as South Korea¹⁹⁸ and in some African countries and in the Pacific¹⁹⁹).

Table 1: New Roles and Skill Mix: Drivers, Issues and Possible Interventions

DRIVER	ISSUE	POSSIBLE INTERVENTIONS
Skill shortages	Respond to shortages of staff in particular occupations or professions	Skill substitution; improve utilisation of available skills, develop new role
Improve retention/reduce out-migration	Out migration of internationally qualified health professionals	Develop "mid level" cadre without internationally recognised qualification
Improve productivity/performance	Achieving productivity improvement of teams of health workers	Redesign roles of individual workers and/ or alter mix of skills within the team
Cost containment	Improve management of labour costs	Reduce unit labour costs or improve productivity by altering staff mix or level
Quality improvement	Improve quality of care	Improve utilisation and deployment of skills of staff through achieving best mix of staff and roles
Technological innovation; new medical interventions	Achieve cost effective use of new medical technology and interventions	Re-training of staff; new skills; different mix or new type of role or worker introduced.
New health sector programmes or initiatives	Maximise the health benefits of the implementation of the programme through having appropriately skilled workers in place	Assess cost effective mix of staff required; skill enhancement of current staff; introduction of new roles
Health sector reform	Achieve cost containment, improvements in quality of care and performance and responsiveness of health sector organisations	Re-profiling, "re-engineering"; labour adjustment; new roles; new workers.
Changes in legislative/regulatory environment (Note, can also be a possible intervention)	Scope for changes in (or constraints on) roles of different occupations, professions. Changes in legislative environment. E.g. Increase in medical indemnity costs	Role change or enhancement; new skills required; introduction of new workers

SOURCE: adapted/ updated from Buchan and Dal Poz, 2002/ Buchan and Calman 2005^{47 199}

The key findings of the available literature are discussed below:

There have been some reviews and meta analysis which have examined aspects of skill mix, most commonly focusing on doctor-nurse overlap (but see McPherson et al²⁰⁰). A small number of meta-analysis have been conducted on skill mix related issues, in North America (Canada/USA)^{201 202} but "traditional" literature reviews are more common^{47 199 203-219}.

There is also a Cochrane review of doctor/ nurse substitution in primary care²²⁰. The objectives of the review were to " evaluate the impact of doctor-nurse substitution in primary care on

patient outcomes, process of care, and resource utilisation including cost” The authors identified 4253 articles for screening of which only 25 articles, relating to 16 studies, met inclusion criteria. The authors concluded that “The findings suggest that appropriately trained nurses can produce as high quality care as primary care doctors and achieve as good health outcomes for patients. However, this conclusion should be viewed with caution given that only one study was powered to assess equivalence of care, many studies had methodological limitations, and patient follow-up was generally 12 months or less. While doctor-nurse substitution has the potential to reduce doctors' workload and direct healthcare costs, achieving such reductions depends on the particular context of care”. The Cochrane data base of systematic reviews also reports a small number of reviews that have been undertaken on aspects of education of health care staff and outcomes ²²¹.

Another relevant type of literature is the published analysis of large scale multi site data-sets, which provides the opportunity to assess the relationships between staffing mix and levels, and output/outcome indicators, and also provides the possibility of establishing routine use of performance indicators for comparison and benchmarking.

The main approach adopted in these studies is large data set analysis, often using staffing, organisation and outcome data from multiple sites to assess the extent to which variations in measures of activity, output or outcome can be attributed to differences in staffing level or staffing mix. Most of the published work in this area has been conducted in the United States and Canada.

Recent studies include:

- a study of nurse staffing, organisation and quality of care in 303 hospitals in the USA, Canada, England, Scotland and Germany ²²²;
- a study of staffing levels, mix and outcome indicators (patient length of stay; UTI, pneumonia etc) in 799 hospitals in 11 U.S. States ²²³ ;
- an examination of mortality rates, patient length of stay, cost of care in relation to pharmacy staffing in approx. 1000 US hospitals ²²⁴;
- a study of nurse staffing, skill mix and outcome indicators (30 day mortality, stroke, pneumonia etc) in 75 acute care hospitals in Canada ²²⁵,
- an examination of staffing levels, workload and risk adjusted outcomes (e.g mortality, cerebral damage) in 186 neonatal intensive care units in the UK ²²⁶,
- a study of nurse staffing and post-surgical events (e.g venous thrombosis, embolism, UTI etc.,) in hospitals in six U.S. states ²²⁷,
- an assessment of workload and skill mix in 17 hospitals in England ²²⁸
- an examination of the effect of different nurse staffing mix and models on costs and patient safety outcomes in 19 teaching hospitals in Canada ²²⁹

There has been a significant growth in the number of large scale studies examining links between staffing levels, mix and outcome in recent years. These studies make two contributions- they add to our understanding of the linkages between staffing levels/ mix and outcomes, and they also provide a test bed for identifying and assessing the appropriateness of outcome indicators in relation to staffing mix.

The third main type of study is the localised / case study examination of role overlap, role extension and mix. Many such studies to have an organisational or operational focus. Many are exploratory in nature. They draw from a range of different methods; in recent years the two

main areas that have been examined are the mix between qualified health professionals (usually nurses) and care assistants, or the mix/overlap between physicians and nurses. There are also some studies that examine or evaluate the impact of "new roles"- either current staff working with additional responsibilities, or new types of health worker.

The skill substitution of care assistants for nurses has been one major focus. Most studies are based on research in developed countries. There are examples of studies which report cost and quality improvements in the "after" phase of introducing or increasing the use of care assistants²³⁰⁻²³¹, whilst other studies suggest either that no overall savings or improvements have been made, or that there have been significant negative effects²³²⁻²³⁵. This reinforces the context specific nature of these examinations, and highlights the danger of generalising from single site studies conducted at one point in time¹⁹⁶⁻²¹⁴.

The second main focus of single site studies has been on doctor-nurse or midwife role overlap and substitution. Medical staff are usually relatively expensive, and in some health systems are relatively scarce, in comparison to nursing staff or other health professionals. These factors have been drivers to encourage policy makers to examine the potential for developing advanced roles for nurses, midwives and other health professionals as part of a process of skill substitution and revision of role differentiation with doctors¹⁹⁹⁻²³⁶. Role extension could include introducing roles of clinical nurse specialists, nurse practitioners, clinical nurse midwives, nurse anaesthetists, consultant physiotherapists and pharmacists.

The development of alternative models of care delivery using nursing/midwifery staff rather than doctors has been the main focus of research on skill mix where there has been use of RCTs²³⁷⁻²³⁹. Relatively few research studies which focus on human resources aspects of healthcare are based on randomised control trials (RCT's); whilst RCT's tend to be regarded as the most robust type of investigative research in health care, some aspects of HRH does not lend itself to the use of RCT's (which may in any case be "unnecessary, inappropriate, impossible or inadequate" for some types of health services research²⁴⁰). Observational studies and evaluation can make a vital contribution to informing policy and practice in healthcare.

The third focus has been on "new" workers or new roles (a distinction that is sometime overlooked, as new roles are often filled by existing workers with additional training, rather than "new" workers). Many health systems have considered, or have implemented "new" health workers, to fill a skills gap, to improve cost effectiveness of the skill mix of the workforce, or as a response to new technology²⁴¹. In practice, the "new" worker is in fact often a current occupation or grade with additional skills or an extended role.

Alongside an analysis of the skill mix of the formal sector it is important to consider the role of informal workers, volunteers and patients' relatives. A recent Cochrane review of lay health workers (LHW)²⁴² demonstrated that they are widely used to provide care for a broad range of health issues. However, little is known about their effectiveness.

The range of care provision and care environments in which "informal" care is operating are diverse, and there are few examples of evaluation which would help inform decisions on inherent effectiveness, or best methods of co-ordinating or integrating with formal care provision²⁴³. The distinction between "formal" and "informal" is also often blurred because the "informal" worker actually received formal training, or is connected with a formal organisation.

It is evident that there is a need for further study on the extent and effectiveness of informal care, both in its own right, and to assess where there is overlap, or potential linkage or

integration with “formal” care, as a broader aspect of skill mix assessment, of health policy formulation, and of organisational management.

The evidence base on skill mix and new roles is limited but growing. Most published research is focused on acute care in the English speaking developed world. The majority of studies examine skill mix in nursing or between physicians and nurses. Single site “point in time” studies will usually have only limited generalisability, whilst the smaller number of reviews and meta-analysis have more utility. Generally, there is evidence of scope for positive change through substitution of physicians by nurses in defined care environments, but there are many qualifications to these findings. The pattern of findings on qualified nurse / unqualified nursing assistant mix is more varied. The evidence on the use of “informal” workers is extremely limited, and there have been few studies published which examine the roles and mix of other health professional occupations.

Whilst they may inform policy, multiple site studies are less likely to have an immediate impact on practice at operational level, and the reliance on secondary data from available datasets means that the findings of the studies are predicated on this data being accurate and complete for analytical purposes. This is a major constraint on comparative studies. There may also be a significant time lag (several years) before research is published, and the policy focus may have shifted during the time period.

Skill Mix and Outcomes

Different studies have utilised different measures of cost and outcome to assess the relative merits of different skill mixes (however in practice few studies focus both on costs and on outcome measures).

In assessing the relevance of outcome measures as a way of assessing the relative merits of different skill mixes, the first point to consider is the purpose of using the indicators. This will have a direct bearing on which indicators are likely to be most relevant. Main purposes could include:

- routine monitoring (e.g. a periodic check on the ratio of different types of staff, or of staff: activity ratios).
- performance indicators (systematic monitoring of staffing indicators to support performance management or benchmarking). A recent detailed examination of the use of HR performance indicators²⁴⁴ noted that “They provide an indication of some characteristic of the organisation that is a measure of efficiency, effectiveness or quality. Used singly or in groups they highlight differences from some norm or standard of organizational activity”(p 5)
- evaluation (examination of the relationship between staffing levels or mix and organisational attributes or outcomes; this may be based on routine data or “one-off” generation of additional primary data).

The other key issue to consider is what is meant by “staffing level” or “skill mix”. The indicator(s) used for “staffing” in different studies and systems vary, and can include actual staffing numbers, the number of funded staffing posts, staffing hours, staffing costs (either average or actual) and staff mix (as defined and differentiated by occupation, grade or by qualification level). There are different methods of “measuring” staffing (e.g the use of staff time), which may in turn lead to different assessments of staffing costs- see e.g the study of general practitioners costs in England²⁴⁵.

Clarifying the purpose of developing the indicators will help determine which indicators will be most appropriate. The current level of data availability and information system infrastructure in the health system (and its potential to generate additional data at an acceptable cost) will also be factors in determining which indicators, and which overall approach, to use. There is no point in creating an 'ideal' list of indicators if these cannot be used in practice because of system and resource constraints.

With these caveats in mind, the Table below sets out a range of indicators which have been used as indicators, where staffing levels or mix have been the primary focus of attention. This is only an illustrative list, in particular, a wide range of clinical outcome indicators have been considered, or used- for a more detailed examination see Needleman et al, (2001)²⁴⁶. (Note: some studies will focus on a specific outcome as the primary focus of interest (e.g cross infection)and will then examine the relationship with understaffing, or the use of temporary staff as a contributory factor). There are also a range of staffing: process/ output/outcome indicators summarised in a "basket of indicators" in Hornby and Forte (2002)²⁴⁴.

Table 2: Examples of Indicators

"Activity" / Process Related	Beds Occupied Beds Outpatient Visits Client Contacts
Staffing Related	Job Satisfaction (measured by attitudinal survey instrument) Accidents/Injuries Absence Assaults on Staff Vacancy Rates Overtime Use of Temporary Staff
Care Related (Output/ Outcome)	Patient Length of Stay Readmission Rates Live Births Mortality Rates Urinary Tract Infections Pneumonia Shock Upper Gastrointestinal Bleeding Deep Vein Thrombosis Pressure Sores/Ulcers Cross Infections Patient Satisfaction Survey

There are four general points to note about the indicators. Firstly, some of the indicators, particularly the clinical indicators, are only likely to be routinely reported in health systems with a relatively sophisticated information infrastructure. Attempting to generate such data for a "one-off" evaluation exercise would be potentially costly and time consuming. Secondly, the majority of care indicators are derived from secondary care, rather than primary care or intermediate

care environments. This means that the current scope for evidence based evaluation of staffing, skill mix and outcomes in primary care and intermediate care is less well advanced than in secondary care. The absence of studies using outcome measures when assessing advanced roles in allied health professions was highlighted in the recent SDO review²¹⁰. This in part is a reflection on the secondary care bias in the US health system, the source of many of the current studies, but also reflects the relative difficulty in delineating the focus of evaluation in community based care. Thirdly, some of the indicators (eg patient length of stay) may be proxy measures for costs. It is evident that the relationship between staffing indicators and outcome indicators is complex, and that other organizational factors will play a part.

The fourth point to note is that there is some evidence that not all the outcome specific indicators in section 3 of the box are universally applicable. There is a need to examine if the outcome indicators being used are reliable and valid for the purposes to which they are being put²⁴⁷. The large scale study of nurse staffing and outcomes in the US (Needleman et al 2001²⁴⁶) considered and rejected some indicators and reported that some outcomes indicators are more sensitive than others in particular types of care delivery.

Section 2 Literature relating to the workforce in community and intermediate care

This section relates specifically to literature about the workforce in community and intermediate care services. The purpose of this section was to identify and characterise the existing literature on workforce within the community and intermediate care settings in relation to its coverage, quantity and quality.

To achieve this objective an information officer conducted broad searches across the Medline, CINAHL, King's Fund, DH-Data, Web of Science, Web of Social Sciences, Cochrane library, Embase, BNI, Biosis and Psychinfo. The complexity and diversity of the services, and multidisciplinary nature of the staffing meant that a number of different search terms were required (Appendix 2). The initial search retrieved 16189 references. This database was then searched electronically for those papers that were specific to intermediate care and rehabilitation, resulting in 372 papers.

Two researchers (AM and SN) examined each of the abstracts for their direct relevance to staffing in community and intermediate care services. As a result of the paucity of experimental studies relating specifically to staffing in intermediate care we decided to include all experimental studies (qualitative and quantitative), as well as descriptive studies that provided insights around staffing in community and intermediate care services. There were numerous position statements, primarily from professional organisations defending their role within the intermediate care setting, which were excluded from this review. Fifty-one papers were included in the final review.

References for included studies were entered into a searchable Endnote (Version 9.0) database. Keywords for included articles were applied to describe such key features as: study design, country, setting (e.g. home, community); and method.

Nature of the literature

Overall there were very few studies that specifically examined the intermediate care workforce as a primary goal or outcome. In most cases, workforce was a secondary component of the research therefore the relevance to the workforce issues has been extracted for the purpose of this review.

The vast majority of the literature is descriptive, including service evaluations, and case studies of events within organisations around their intermediate care staffing approaches. Because of the paucity of relevant literature, it has not been assessed for quality.

The following table summarises the key features of the literature;

		Number of papers included
Country of origin	UK	43
	USA	4
	Canada	1
	Other / not specified	3
Methods	Survey / questionnaire	7
	Descriptive / case studies	15
	Qualitative	8
	Systematic / literature review	4
	Uncontrolled comparison	5
	RCT	5
	Mixed methods	2
Professional group	Audit	4
	Nurses	8
	Geriatrician / consultant	1
	General practitioners	4
	Assistant practitioners / support workers	3
	Therapists	5
	Pharmacists	1
Multidisciplinary team	4	
Voluntary sector		2
Service user involvement		2
Skills and training needs		6
Skill mix		7

Full summaries of the included papers can be found in Appendix 3.

Skill mix in intermediate care

Intermediate care services have diverse models of staffing, however typically intermediate care teams are multidisciplinary^{40 248-257} even in usual care settings, or when labelled 'nurse led unit', or 'GP led unit'. They are likely to include input from physiotherapy, occupational therapy and therapy assistants^{249 253}. A wide range of other staff may be involved in the delivery of

intermediate care, however this varies greatly across the different services²⁵⁶. There is no evidence about the 'best way' to staff an intermediate care service, and this is likely to depend on the setting and purpose of the service²⁵³.

Only one experimental study specifically examined the impact of different models of staffing on costs and outcomes²⁵² by comparing hospital at home with care on a hospital ward. Overall, patients in hospital at home received more multidisciplinary input during their episode of care and at 3 months follow-up. The greatest contribution to costs of the hospital at home service was nursing costs. An examination of the ratio of nurse contact to non contact time showed higher grade nurses to be extremely expensive per contact hour, and the authors suggested that increasing the proportion of nurses involved in more direct nursing care could reduce the costs of the service. In contrast, the costs of the other members of the multidisciplinary team (eg therapists) constituted a relatively small component of the total cost.

A Canadian study examined the impact of staff ratios and dependency-to-worker ratios in residential settings²⁵⁸. They found that inadequate staff ratios and high patient dependency-to-worker ratios may cause higher incidence of staff injury in residential settings. Staffing ratios correlated with the dependency of residents but not with any other facility variable (funding, tasks performed, workload or work pressure).

There is evidence from a number of qualitative studies that intermediate care requires staff to work across professional boundaries, and that initially, this can create tensions, however generally this improves with time, and is perceived by staff to enhance patient and service outcomes^{40 48 259}.

A recent systematic review of the 'Evidence for the effectiveness of intermediate care'²⁶⁰ found that the evidence supporting the development of specific intermediate care services is quite heterogeneous, and still lacking. They reported that overall, intermediate care services are not associated with adverse consequences for recipients. There was little evidence to support different arrays of staffing, although one study found that six weeks of occupational therapy in an intervention group was associated with greater improvements in physical function in the short term, and greater satisfaction with a range of services²⁶⁰. Another study showed that multidisciplinary rehabilitation improved physical outcomes for people with Parkinson's disease, however general and mental health declined. Extrapolating from the main study findings, it appears that despite large variations in staffing across services, there is little measurable effect on the outcomes for service users.

Implications for different groups

Geriatrician / consultant

No experimental studies specifically explored the role of input of geriatricians into intermediate care services. One survey of 268 specialist registrars to the British Geriatrics Society examined the community training and experience of specialist registrars in elderly care medicine and found that the content of the community training was lacking²⁶¹.

General practitioners

The studies of general practitioners in intermediate care have been undertaken from a range of perspectives.

- A comparison of general practice led intermediate care units with usual care found no differences in outcomes at one or three months, however patients in the GP unit were more satisfied with the care, staff, facilities and quality of care²⁶².
- Intermediate care can reduce out of hours requirements for GPs (eg palliative care)²⁶³.
- The costs of GP care at 3 months for patients randomised to a Hospital at Home service were more than those randomised to the hospital ward²⁵².
- GPs have a range of reasons for referring patients to intermediate care services, and some referrals are not appropriate (or patients still require admission to hospital) ^{264 265}.

Voluntary sector

Two studies explored the role of the voluntary sector in intermediate care. Manthorpe and colleagues²⁶⁶ surveyed volunteers within the Calderdale Intermediate Care Project (n=13). The study describes the demographic profile of the volunteers (mostly females with nursing backgrounds and not currently in paid employment). The volunteer's work was described as befriending and social activities, including supporting, listening, talking, encouraging and building confidence. These were seen as fitting within the general scope of volunteering, rather than being specific to intermediate care services.

Waddington and Henwood²⁶⁷ undertook postal questionnaires and follow up interviews with 55 volunteers from British Red Cross Home from Hospital schemes. The volunteers were found to offer similar types of support to those found by Manthorpe. In addition, there was a perception that the scheme supported people who "fall through the net". There were high levels of satisfaction amongst commissioners with the schemes.

There is, to date, no empirical evidence of benefits to patients or impact on service costs or outcomes of the use of voluntary health workers in community and intermediate care settings. The roles provided by the voluntary sector appear to be largely social and complement those provided in intermediate care, but further research is required to verify this.

Pharmacists

One paper described the use of two intermediate care pharmacists whose purpose was to provide a specialised role within intermediate care to reduce the amount of time other staff spend managing medicines. The pharmacists undertook an initial visit of 45 – 60 minutes, then follow- up reviews. Their roles included rationalising medication so the patients take the fewest no of doses possible; recommending easy opening container tops; use of reminder stickers; storage suggestions; and family involvement; and organisation of dosages to fit with carer routines.

There was no clear evaluation of costs or benefits of the roles, or whether other staff could be trained to undertake these duties.

Nurses roles

A number of studies have examined the effectiveness of 'Nurse Led Units'²⁶⁸⁻²⁷⁰. The main implication of these units for staffing is that they are nurse led intermediate care services, rather than medically led units. Griffith's systematic review of NLUs found that the units often have enhanced skill mix, including senior nurses and nurse specialists²⁶⁸. There is evidence that regardless of the title of the team, the teams are likely to include therapy input for rehabilitation. Despite the heterogeneity of groups, patient outcomes, costs etc (NLU results) are fairly consistent and comparable to normal medical care²⁶⁹.

A US study compared the ability of 24 nurse assistants and 1 nurse practitioner to assess ADLs in four patients. The results were highly correlated between groups, suggesting that nurse assistants can perform assessments of activities of daily living as well as one highly qualified nurse²⁷¹.

Wiles, Postle and colleagues²⁷² found that models of nurse-led postacute care provide opportunities for nurses to develop enhanced nursing roles in which care associated with concepts of therapeutic nursing can be provided. However, even though the work was satisfying, it was seen by junior and middle grade nurses and other professional groups as being of low status. In contrast to senior nurses' views, they did not equate work on the NLU with the continuing professionalisation of nursing. Senior nurses viewed the route to developing nursing on the NLU as involving nurses as doctor substitutes (extended roles) rather than as working in separate but complementary therapeutic domains (enhanced roles).

Despite the relatively large body of evidence around nursing substitution and skill mix in the secondary care sector, there is a lack of evidence around their roles in older peoples' community and intermediate care settings.

Jones' paper suggests the more highly skilled nurses are expensive and provide relatively little direct patient contact²⁵².

Therapists

Despite the widespread use of therapists in community and older peoples' services, there is little empirical data relating to their specific role or contribution within this setting. According to Jones²⁵², therapists contribute only small proportion of the overall costs of delivering intermediate care services. There is evidence from other settings that increased therapy intensity from occupational therapy, physiotherapy and speech and language therapy leads to improved outcomes for patients²⁷³.

One study²⁷⁴ examined the impact of therapy intensity within community based rehabilitation on outcomes for stroke and hip fracture for older people. They found slight improvements in the stroke subgroup at 3 months for the Therapy Outcome Handicap measure ($p < 0.05$) and the EQ-5D ($p < 0.05$) with increased therapy intensity (6 face to face contacts per week) compared to normal intensity (3 face to face contacts per week), but no benefit for the hip fracture group.

A small number of qualitative studies highlight the overlapping nature of therapists' and nurses' roles within the intermediate care setting, and the delegation of roles to support workers, demonstrating the potential for workload substitution between different types of workers^{40 48}.

Further research is needed to understand the contribution and input of therapists in intermediate care; the contribution of different models and levels of skill mix (ie the number of different types of workers, and the grade-mix of staff), and optimal levels of treatment intensity.

Service user involvement

Service users are becoming increasingly empowered to be partners in the delivery of their own care, however there is still little published evidence of attempts to engage older people in the development of community and intermediate care services²⁷⁵.

One study from the US ²⁷⁶ describes the implementation of a peer counselling model within a 66 bed intermediate care unit. However, there are no published examples of similar approaches within the UK.

Assistant practitioners / support workers

There is evidence that a number of intermediate care settings employ support workers and that they perform a variety of tasks and have a range of different titles^{40 48 277}. Whilst there is anecdotal evidence supporting and valuing their roles, there is little empirical evidence of their impact on the outcomes for the patient or service.

Partnership working

A number of older peoples' community and intermediate care services are jointly hosted. Ryan – Woolley²⁷⁸ highlights the issues of the cultural divide between the agencies and their approaches to working and suggests that understanding the different cultural perspectives is important to successful working in these teams.

Skills and training needs

There are a small number of surveys and descriptive studies which highlight a range of different skills and training needs of intermediate care practitioners, however they tend to focus on specific conditions (eg mental health and dementia needs) or aspects of care. There has been no systematic approach to identifying the general skills and needs requirements of intermediate care practitioners.

Other issues

One paper describes the use of robotic technology to provide daily therapy for hemiplegic stroke patients. It is an uncontrolled study of a small number of subjects, but highlights the possibilities of using technology instead of staff for regular repetitive therapy interventions.

Conclusions

Despite the enormous variations in team structure, staffing and organisation, there are generally few measurable differences in patient outcomes. There are, however, some variations in the costs of the services, and costs to different stakeholders (such as the service user). This can mean either, that variations in staffing do not make much difference, or that the outcomes used to measure the changes are not sensitive enough. Variations in skill mix can impact on service costs, however there is limited evidence of services altering skill mix to impact on costs.

There are no published studies that compare the impact of a range of different skill mix options on patient outcomes or preferences. For instance, the impact of the number of different types of workers on patient outcomes is unclear. It is also unclear how the absence of certain professional groups, such as speech and language therapists or podiatrists, impacts on the outcomes for the team. For instance, if certain types of workers are not present in a team, then who provides those roles, or are they neglected? A study by Young and Robinson et al²⁷⁹ examined the health service use of frail elderly patients before the introduction of an intermediate care service (n = 823). Chiropody was the most frequently utilised service with 67% of the sample accessing chiropody within a 12 month period (physiotherapy 2% & OT <1%) and yet as Enderby and Wade's study demonstrates²⁴⁹, 93% of community rehabilitation teams do not provide any podiatry input at all.

There is a need for greater understanding and consultation around service user preferences for different types of staffing (type, roles, numbers etc). For instance, Brown et al²⁸⁰ found that home care workers were most valued service provider in the health and social care team and it did not matter to the service user whether or not the team was integrated as long as their needs were met.

Much of the literature relating to the intermediate care workforce attempts to represent the interests of professional groups, but it is clear that much of the intermediate care service delivery involves complex, interdisciplinary interventions; that many roles can be delivered by more than one type of worker; and it is difficult to distinguish the specific input or impact of particular types of staff roles.

Some studies have described discipline specific interventions that are effective, but these tend to only reflect one aspect of rehabilitation and one approach to measuring the outcomes, when it is apparent this intermediate care interventions are holistic and integrative.

It appears that these teams do not conform to traditional roles around the division of labour, and that many of the tasks delivered within intermediate care require generic skills, with some input from people with specialised skills. There are likely to be many different ways to organise and staff intermediate care teams.

Chapter 5 Defining older peoples' community and intermediate care services

Introduction

The purpose of this chapter is to establish the context in which workforce change takes place for older peoples' community and intermediate care services. Workforce is only one, albeit important, component of any health service structure. However, the workforce is situated within a wider organisation, political, social and physical context, all of which are likely to influence the outcomes of patient care. In order that services may be able to apply the findings of research arising from other studies, they need to be able to compare the context of their own setting to that where the research has taken place. To date there has been no systematic description of the various components that comprise an intermediate care service, which makes defining or comparing any type of intermediate care service difficult.

Specifically, this chapter will;

1. Define what is meant by community and intermediate care services for the purpose of this research;
2. Examine the different components that comprise a service that are likely to impact on the outcomes of that service; and
3. Determine the impact of these variables on the outcomes of the services.

The outcome of this chapter is a template that can be used by service managers to describe their services, and also to form a basis for comparison between different types of services. It was not the intention of this part of the report to quantify the relationships, but to provide a model based on the approaches to describing intermediate care services.

Policy Context

Intermediate care has arisen as a result of a series of reviews which drew attention to the pressures of a growing ageing population and shortfalls in provision of adequate health and social care for older people heavily influenced the government's future policy programme for older peoples' services. Many of these initiatives are not new, however the recent introduction of financial incentives and service guidance in the form of National Service Frameworks, amongst others, has led to the current iteration of what is now called intermediate care.

The Audit Commission conducted two studies in 1997 investigating continuing and community care services for older people⁵². The report outlined insufficient investment and attention to preventative or rehabilitative care for older people was contributing to growing numbers of lengthy 'avoidable' hospital admissions that were often detrimental to older peoples' health and social well being. Equally the shortage of recuperative and rehabilitative alternatives to hospital was seen to increase the likelihood of older people requiring long-term care.

Rehabilitation was cited as the 'missing factor' in the care of older people^{52 281}. Recommendations, reinforced by early government policies^{6 7}, included the joining up of health and social care services for older people and the development of new and alternative forms of

care for improving rehabilitation after treatment. Many of these alternative forms of care became known as 'intermediate care' and began to grow in number and function ²⁵⁶.

The importance of community rehabilitation and intermediate care services was highlighted in the National Beds Inquiry ⁵³ which identified these services as viable and cost effective solutions to the increasing pressures on acute services caused by 'bed blocking'. Following the inquiry, 5000 intermediate care beds, some in community hospitals, others in specially designed wards in acute hospitals, as well as 1,700 extra non-residential intermediate care places were created.

Opportunity to further develop and improve services for older people came through commissioning powers given to Primary Care Trusts ¹⁶ and the 1999 Health Act ⁹ which allowed health and local authority partners to pool resources. Equally, grants to foster health and social care partnerships in promoting older peoples' independence ⁵⁰ and funds released to address winter pressures ²⁸² fuelled the development of older peoples' rehabilitation services in the community.

Expansion and improvement of older peoples' community rehabilitation and intermediate care services was a major part of the government's policy strategy outlined in the NHS Plan ¹. The NHS Plan set targets and identified strategies for improving older peoples' services and, combined with funding arrangements, heavily influenced the future shape and organisation of these services.

The NHS Plan stipulated by 2004 "*...widespread bed blocking will end*" through "*...new intermediate care services which ensure seamless care for patients*" (Para 12.9). To do so, £900 million was made available to those who could demonstrate they had established a range of services that would achieve this objective.

Specific policy directives included:

- Ensure standards of care for older people and their carers through implementation of the National Service Framework (NSF) for older people and associated initiatives (workforce development etc.);
- Improve whole systems of working, including improved partnership working between the NHS, social services and the independent sector (including housing) leading to a reduction in bed blocking;
- Promote independence in old age, including the expansion of intermediate care and community equipment services; And
- Introduce a single assessment process from 2002.

Specific targets to meet these directives by 2004 included (Para 15.14):

- an extra 5,000 intermediate care beds and a further 1,700 supported intermediate care places to benefit around 150,000 more older people each year;
- extra rapid response teams and other forms of admission prevention benefiting around 70,000 more people each year;
- 50,000 more people to living independently at home through additional home care and other support and 50% more people to benefit from community equipment services (assistive technology);
- a further 75,000 carers and those they care for to benefit from extended carers respite services;
- no one to be waiting for longer than four hours in Accident and Emergency from arrival to transfer, discharge or admission (Para 12.10)

The shape of older peoples' community and intermediate care services were further influenced by the introduction of cross charging for delayed discharges such that local authorities became financially responsible for the costs of bed blocking and hospitals made responsible for emergency readmissions³⁷.

Definitions of intermediate care

The shape, organisation and definition of community rehabilitation and intermediate care has been influenced by two key documents. The 1998 Department of Health document *Better Services for Older People – Maintaining the Momentum*^{7 283} and the 2001 Department of Health circular HSC/LAC 2001/01⁸. These documents proposed that intermediate care would target people who would otherwise face unnecessarily prolonged hospital stays or inappropriate admission to acute in-patient care, long term residential care, or continuing NHS in-patient care; involve active therapy, treatment or opportunity for recovery; maximize independence and enable patient/users to resume living at home; be time limited to no longer than six weeks; and involve cross-professional working.

The health service circular, HSC/LAC 2001/01, described in detail the form care should take citing the need for:

- *Rapid Response* teams designed to prevent avoidable acute admissions by providing rapid assessment and access to 24 hour short-term nursing/therapy support in the patient's home or 'step-up' facilities;
- *Hospital at Home* schemes to provide intensive support in the patient's home as a way of avoiding hospital admission;
- *Residential Rehabilitation* facilities to provide a short term programme of therapy and enablement in a residential setting such as a community hospital, rehabilitation centre, nursing home or residential care home for medically stable people who need a short period of rehabilitation to re-gain sufficient functioning to return home safely;
- *Supported Discharge* schemes providing short-term nursing and/or therapeutic support in a patient's home to enable earlier transfer of care from an acute hospital and rehabilitation and recovery at home;
- and/or *Day Hospitals* to provide short-term programmes of therapeutic support provided at a day hospital or day centre.

These definitions were taken forward in the National Service Framework (NSF) for Older People² which was responsible for setting national quality standards for delivering older people's care. The document reiterated intermediate care was to be used as an opportunity to maximize people's physical functioning, build confidence, re-equip them with the skills they need to live safely and independently at home, and plan any on-going support needed (Page 45, Para 3.19). The NSF advised these services were to be delivered by teams of doctors, allied health professionals (physiotherapists, occupational therapists, speech and language therapists etc), nurses and support workers.

Following the National Service Framework for Older People, the number and type of community based services for older people have grown substantially⁴¹ and are expected to further expand and increase in complexity as acute care services are progressively moved into primary and community care settings¹⁰ and as the NSF for Long Term Conditions takes effect.

The NSF for Long Term Conditions, introduced in 2005, outlines 11 quality requirements to improve health outcomes for people with long-term conditions. It is recognized that older people

represent a large proportion of those affected by long term conditions³. The NSF requires the provision of early and specialist neuro-rehabilitation in inpatient or residential settings, with planned, coordinated transfer to the community; access to rehabilitation at home and in the community and including supporting people as they adjust to change and take part in leisure and other social activities; and work and vocational rehabilitation which includes supporting people to remain in, begin or return to employment or other occupational activity.

The shape of intermediate care is likely to be further influenced by the revised NSF for older people, released in April 2006¹¹. The document outlines ten programmes of care that cover three broad themes: dignity in care; joined up care; and healthy ageing. Unlike the previous NSF, this document does not reserve a programme of care specifically for intermediate care, instead focusing on ways to better understand and cater for older people with complex needs and long term conditions (programme 6), improve urgent care (programme 7) and enhance independence, wellbeing and choice (programme 10).

Defining Intermediate Care

Despite the guidance around the introduction of intermediate care, it is evident from a number of recent national reviews and studies^{284 285}, that the introduction of these services has been open to a wide range of interpretations. Difficulties describing and defining intermediate care has been noted elsewhere^{41 249 256 286-290}. Equally, the diversity in services prevents the development of a robust evidence base of outcomes for patients and cost-efficiency^{41 288 291}.

A 2004 survey of Health Authorities and Primary Care Trusts (PCTs) across England concluded that intermediate care and community service provision is a "constellation of complementary services rather than a straightforward, easily characterised model of care"⁴¹. A national evaluation report by the same authors highlights that intermediate care is an additional service rather than a substitute for existing services²⁸⁴. Another national evaluation²⁸⁵ describes intermediate care as "a set of bridges at key points of transition in the person's journey from hospital to home (and vice versa) and from illness to injury" that functions to "integrate, link and provide a transition between locations; between sectors; and between individual states (illness and recovery, management of chronic disability)" (page i).

Enderby and Wade report that because community rehabilitation services vary so greatly, the term 'community rehabilitation' can not be used as a standalone term to describe a specific type of service^{292 290}. Local contextual differences also influence the way that the services have been implemented for example a study comparing six community services providing home based rehabilitation for people following stroke identified differences in target populations, the timing and duration of intervention²⁹³.

It is clear that despite the terminology used in HSC / LAC 2001, it is difficult to clearly categorise any intermediate care service according to a particular function, setting or purpose. A systematic review of the Best Place of Care for Older People after acute illness recommends that service models be described in terms of the objectives of care²⁹⁴. Melis and colleagues suggest that rather than producing more definitions of intermediate care, the key elements of the concept should be defined²⁸⁸. One national evaluation recommends that intermediate care should be targeted at patients on the basis of their need or severity, in particular those with the greatest clinical need^{284 295}.

There have been a small number of proposals for taxonomies of intermediate care services. For example Enderby and Stevenson²⁸⁶ consulted with region-wide intermediate care service providers to produce a matrix that matches client needs or objectives of care against service settings. The resulting model is based on 8 levels of patient care needs;

Level 1: Patient needs prevention / maintenance programme

Level 2: Patient needs convalescence

Level 3: Patient needs slow stream rehabilitation

Level 4: Patient needs regular rehabilitation programme

Level 5: Patient needs intensive rehabilitation

Level 6: Patient needs specific treatment for individual acute disabling condition

Level 7: Patient needs medical care and rehabilitation

Level 8: Patient needs rehabilitation for complex profound disabling condition

Geddes and Chamberlain²⁹⁶ used data collected from 1076 patients from six community services to construct a taxonomy of four types of co-ordinated community based rehabilitation for people with stroke. The four types of care are;

1. Early supported discharge rehabilitation,
2. Post discharge rehabilitation,
3. General Practitioner oriented rehabilitation and
4. Late community rehabilitation.

Wade²⁹⁰ constructed a system for classifying community rehabilitation services based on the specialised skills required of the service, the geographic location of the service, the management organisation that runs the service and where patients receive their intervention.

Hoenig, Slone et al²⁹⁷ developed a rehabilitation service taxonomy for stroke patients. The taxonomy aimed to identify the key variables that comprise stroke rehabilitation services such that they can be reliably measured and compared. The authors classified types of hospitals/services according to defined *a priori* categories of rehabilitation characteristics based on review of rehabilitation and health services literature. The categories included personnel (e.g. staffing intensity, staffing diversity), the physical facilities in which care was provided (e.g. equipment, physical layout), system or hospital-level characteristics (e.g. size, continuum of care) and process of care (e.g. use of protocols, attendance at team meetings). Large scale surveys were administered and datasets were accessed to collect data around these variables of interest. An expert multidisciplinary panel was also used to identify which variables were clinically important. Thirty rehabilitation characteristics had face and/or construct validity and were considered by the authors to represent a taxonomy for measuring stroke rehabilitation services. These included, for example, the diversity of allied health professionals and number of physiotherapists, a facility for simulated home environment; the use of guidelines; and the rehabilitation workload.

Hoenig's study also demonstrated significant differences in resource use and organisation of care across services. The greatest amount of resources and organisational sophistication were found in centres with rehabilitation units and the least in centres based in nursing homes and intermediate care facilities. Additionally, the study found that although there was significant variability between services in terms of the use of support staff and the number of different rehabilitation professionals attending team meetings, these variables were not rated as being clinically important by the expert-panel.

A systematic review by the Birmingham – Leicester National Evaluation demonstrated that the effectiveness of interventions to improve the speed and quality of discharge or to avoid

admission altogether depend to a large extent on the broader service context in which they take place. Interventions that work well in areas with well-resourced and efficient community support services may have little or no impact where these services are inadequate or lacking²⁸⁴.

The Leeds National Evaluation reports "intermediate care is defined by its unique combination of purposes, functions, content and structure" (page i, executive summary)²⁸⁵. Their evaluation investigated, in great detail, 5 case study sites to define intermediate care in these terms. From these case studies, the researchers found four main dimensions of intermediate care emerged: Service type, content and location; bridging or integrative mechanisms to route people appropriately into and out of intermediate care; systems to ensure access to those who may benefit; and skilled multiprofessional staff in partnerships and engaging with specialist expertise. When evaluating intermediate care, the researchers advise consideration of the *configuration* of services within a locality rather than concentrating on the service alone.

Method

Instead of attempting to force this heterogeneous group of services into existing service labels and definitions we felt that it was important to utilise the existing descriptions of intermediate care to develop an understanding of their roles, purpose, and the way that they are being defined.

The purpose of this review is to explore the boundaries of older peoples' community and intermediate care services as they have been described in the literature. Therefore, a traditional, systematic review approach was not appropriate. Instead, we have selected key, strategic documents, including national evaluations and national surveys of CAICS and undertaken a structured qualitative analysis of these findings, using Template analysis²⁹⁸.

Template analysis involves the development of a coding "template", which summarises themes identified by the researcher(s) as important in a data set, and organises them in a meaningful and useful manner²⁹⁸. Broad themes are hierarchically coded to encompass successively narrower, more specific ones.

The approach that was used to define intermediate care services for this review was to look qualitatively at the ways that different services had been characterised. In other words, we examined the characteristics that the services described about themselves in order to develop a model to describe what intermediate care services are.

Template analysis was performed by two researchers (SN, AM) on research identified in the National Research Register, the King's Fund and National Audit Office documents and other relevant literature endorsed by members of the research team.

The National Research Register was searched using the terms 'intermediate care', 'older people's services' and 'community rehabilitation'.

For the purpose of this review, we included UK based research which had systematically explored intermediate care services. Projects were included if results were in the public domain or directly available to the research team either as reports or peer reviewed literature; were from national and regional research programmes; and were broad service evaluations. We were specifically interested in projects that provided data on a wide range of different types of CAICS.

Findings

Literature included in the analysis

Searches of the National Research Register (NRR) identified six relevant projects for which results were available. Projects included three national evaluations of intermediate care, one project associated with one of the national evaluations, one multi-region evaluation of community intermediate care services and one national survey of community rehabilitation. Results from the projects were available as peer reviewed literature (n=5) and reports (n=2).

Two complete project reports were available to the research team, the Birmingham and Leicester Universities' project '*Intermediate Care: A National Evaluation*²⁸⁴'; and Leeds University Institute of Health Science and Public Health Research project '*An evaluation of intermediate care for older people*'²⁸⁵. Three separate parts of the Birmingham and Leicester project were used for the review and included a systematic review of the effectiveness of intermediate care (Chapter 3); a national survey of service composition and organisation (Chapter 4)⁴¹. Diversity in intermediate care. *Health and Social Care in the Community*, 12(2), 150-154; and results from five nation-wide case studies (Chapters 5-7). In depth descriptions of 5 case study sites across England were used from the Leeds project (Chapters 4-8).

The results from the Bradford national evaluation of intermediate care were not available to the research team in report format. The evaluation produced three separate peer reviewed journal articles which were included instead.

As well as the eight NRR documents three key policy documents, two King's fund documents, one National Audit Office and four other peer reviewed journal articles identified by the research team as relevant to the analysis are included, giving a total of eighteen references included in the template analysis. These are listed in Appendix 4.

Template analysis

Rather than using a coding framework determined from *a priori* themes, the template was drawn directly from the 18 source documents. The initial coding framework identified 334 individual variables to describe intermediate care services (see Appendix 5). These items were then clustered into 78 categories, which were reduced to 17 sub-categories, then 6 overall groupings to describe the services. The themes arose by clustering variables with similar attributes, for instance, the themes 'referral sources', 'access points' and 'inclusion / exclusion criteria' are all associated with accessing the intermediate care services, so were clustered together under the heading "access to the service".

The six primary themes are:

1. Context
2. Reason for the service
3. Service users
4. Access to the service
5. Service structure
6. The organisation of care

The greatest volume of descriptive information pertained to service structure and the least for service context.

1. Context

The context refers to the social, political and organisational setting in which the intermediate care service is delivered and provided, and was described under five broad themes in the literature;

- 1.1 Funding body
- 1.2 Population served
- 1.3 Nature of area (eg rural, urban)
- 1.4 Host organisation
- 1.5 Organisational context

Most documents referred to the host organisation and elements of the population that services exist in to describe context of community and intermediate care services. The least information related to the organisational context.

1.1 Funding

Five documents described funding in terms source, reason for, type and amount. The source of funding was described as primarily arising from pooled health and local authority budgets and government grants such as special transition grant and promoting independence grant, Tomlinson monies and Challenge fund. Others included social services, mental health trusts, charity or voluntary sectors, joint health and private sector and mainstream funding. Two documents described winter pressures as the main reason for funding. Other reasons included land sales and waiting list funding. Funding was described as either recurrent or non/recurrent and very few documents detailed exact amounts of funding received for services.

The Birmingham-Leicester national evaluation reported that service providers view joint funding arrangements for intermediate care as particularly important to its future development.

1.2 Population

This refers to the socio-demographic profile of the region where the service is provided and includes the size of the population, prevalence and incidence of illness, ethnic diversity, socio-economic status, housing, life-expectancy and the age-breakdown of the population.

Despite the potential importance of this information for service planning and comparison, only six documents referred to the size of the population served, and few documents described any other elements of the population. Some elements described include disease occurrence in the population, ethnic diversity, local economy, age mix, housing and life expectancy.

1.3 Nature of the area

Very few documents described the locality in which services were set. Those that did described the nature of the area as rural, urban or sub-urban.

1.4 Host organisation

Half of the documents described the care system and the host organisation for services. The most commonly cited was health authority followed by joint health and local authority / social services hosts. Other hosts included the voluntary sector, independent sector and mental health trust.

The Birmingham-Leicester national evaluation report that the establishment of positive relations between health and social services departments was identified as the main facilitating factor in the development of intermediate where poor relations were seen as an impediment.

1.5 Organisational context

Very few documents described the organisational context of organisations hosting services. One document described organisational context in terms of overarching management structures, operational policies, steering group members / remit and operational strategies.

The Leeds national evaluation argued that the effectiveness of intermediate care should be measured in terms of whether the system has been successfully implemented i.e. had relationships been developed between services within each case study site and whether the system is performing effectively and efficiently. The evidence presented in their report suggests the former has been partially satisfied however the latter is still being addressed.

2. Reason for the service

The 'reason for the service' refers to the justification behind the introduction of the various intermediate care services. Often these reasons are responsible for shaping the purpose, approach and goals of the service.

Three broad themes emerged from the selected documents relating to reasons for the service:

- 2.1 Initiating factors
- 2.2 Contributing factors
- 2.3 Purpose or goal of the service

2.1 Initiating Factors

Initiating factors were those factors described as the trigger for the initial introduction of the service. Initiating factors were described by seven documents, and include unmet needs in the community, bed blocking, policy directives and capacity pressures such as increased demand from ageing population. Other factors were that funding was available to start a service, acute hospital wards and beds were closed, cost cutting across health authorities and surplus of buildings available for use.

2.2 Contributing factors

Contributing factors are factors that were present at the time of introduction of the service that were described as helping to shape intermediate care services rather than initiate them. Contributing factors include winter pressures, National Service Framework targets, four hour Accident and Emergency turnover targets and as a result of needs identified through consultation with stakeholders.

2.3 Purpose of the service

The majority of documents included information that described the purpose or goal of services. There were many terms used to describe the purpose or goal of a service which could be broadly categorised as organisation focussed or patient focussed, as identified by Andrea Steiner²⁹⁹.

Organisation focussed goals described the service in terms of benefits to the organisation, such as decreasing length of stay, and more appropriate hospital admissions. Conversely patient focussed goals described the service in terms of benefits to patients, for instance maintaining independence. One document also described carer focussed goals.

There was a clear organisational focus on preventing admissions to acute hospitals and reducing the length of patient stay. One document described the purpose of a service as "improving effectiveness by avoiding duplication of services"²⁵⁶. Other organisational goals included;

- preventing admission to long term care,
- improving the profile of elderly care and reducing age discrimination,
- improving links and aligning hospital and community services,
- preventing recurrent (re)admissions,
- increasing capacity,
- decreasing the cost of care,
- developing workforce skills and
- identifying at risk patients.

Rehabilitation was a strong theme within patient oriented services. Commonly cited goals were promoting recovery from illness and promoting independence. Providing rehabilitation and maximising physical function were also common. Less frequently cited goals were providing timely therapeutic intervention, building a patient's confidence, improving access to rehabilitation services, improving self care skills and restoring personal autonomy.

There were however many non rehabilitation focussed purposes which included providing in-depth discharge planning, care for terminally ill patients, providing education, case management, averting social crises, supporting vulnerable persons, improving the coordination of services, investigating medical situations such as reasons for recurrent falls, bring care close to the patient and providing respite care. One document also described a goal of intermediate care as being to prevent carer breakdown.

3. Service users

The 'service users' refer to the actual or potential users of the intermediate care services and were defined by services in three ways;

- 3.1 The socio-demographic and medical profile of the client group
- 3.2 Target population for the service
- 3.3 Individual service user needs

3.1 The socio-demographic and medical profile of the client group

The client profile refers to the socio-demographic and medical profile of clients who accessed the services, including service user age and sex, pre-admission residence, physical status and case mix. Case mix included medical conditions (such as incontinence, confusion, chest infection, UTI), surgical, orthopaedic, deteriorating mobility, trauma e.g. fall, social issues, psychiatric, palliative and chronic diseases (such as arthritis, MS, Parkinson's disease, diabetes, COPD).

Client profiles were less frequently described in terms of mental health status, social care status (such as receipt of home care services), disease severity, income level, marital status, ethnicity and social class.

The Birmingham-Leicester national evaluation of intermediate care found that older people are the main recipients of intermediate care services, however intermediate care is not entirely age related. Patients admitted to their case study sites appeared to have dependency scores at admission much lower than earlier trials of hospital at home (median admission Barthel score 16) which suggests that intermediate care may be providing services for patients who would not otherwise need hospital care.

The same evaluation found that client's personal characteristics (age, gender, living arrangements) are not good predictors of costs or functional outcomes. Functional gains as

measured by the Barthel index were larger for younger patients and those with greatest clinical need (Barton, Bryan et al. 2005).

Similarly, the Leeds national evaluation of intermediate care found that gender, age and location prior to care are poor predictors of the likelihood of remaining at home six months after an episode of intermediate care (Godfrey et al 2005).

3.2 Target population

Many documents described the services' target population by referring to age (usually >65 years but not always), medical stability, case mix and vulnerability to acute hospital admission / discharge complications.

This differs from the concept of 'population' described under heading 5, which is a description of the characteristics of the population of the catchment area in which the service lies. Surprisingly few documents linked their target population with their catchment population.

Most research on intermediate care has focussed primarily on disease-specific or case-mix specific services such as Parkinson's disease, COPD, heart failure, stroke and knee surgery (Parker et al 2006).

3.3 Service user needs

Service user needs referred to the care or support needs required by the client, but which were not necessarily defined in terms of a diagnosis. For instance, user needs are described in terms of medical needs such as wound care or IV antibiotic care; specific rehabilitation needs such as patient needs slow stream rehabilitation or intensive rehabilitation. One document described the needs of a terminally ill service user as requiring support while their home was prepared for their end-stage care. Very few documents referred to user needs when describing the attributes of their service users.

The Birmingham-Leicester national evaluation found that clients who benefit the most from intermediate care are those with the greatest clinical needs, who would otherwise be supported in an acute hospital setting, although greater need is also associated with higher costs.

4. Access to services

Access to services includes the pathways used by the service user to access the intermediate care service, as well as the eligibility criteria used by the service to regulate entry to the service. Access is described in terms of the following four features;

- 4.1 The referral source
- 4.2 The access point or system
- 4.3 Patient eligibility criteria
- 4.4 Patient exclusion criteria

Eligibility criteria and exclusion criteria have been describe separately

4.1 Referral source

The 'referral source' describes the person or service who directs the client to the intermediate care service. Referrals can arise from a specific health or social care professional; a service; a setting or non-health related workers. Most documents described the referral source as a professional or specific service.

The most commonly referral sources were from GPs and nurses (community, district, specialist, ward based), but social workers, allied health professionals, medical consultants, health visitors and home care managers were also listed.

Where the referral source was a described in terms of a service or setting, they were primarily social services and acute hospital wards. Other referral sources included local authority services, other intermediate care services, Accident and Emergency, hospital outpatient departments, community hospitals and nursing home / residential homes. Some documents describe services who accept referrals from service users (self referral), carers and relatives and volunteers.

The Birmingham-Leicester national evaluation found that approximately as many referrals to admission avoidance were by nurses and social workers combined (who cannot admit to hospital) as GPs and A&E departments (who do have admission rights) and suggest that this may be part of the reason that intermediate care sometimes provides services for patients who would not otherwise need hospital care.

4.2 Access point or system

The access point or system describes the first point of contact of the client with the service. Examples of different types of access points include 'single point of contact / entry' which may involve an assessment by a qualified professional or a support worker. Other points of access include medical assessment; single assessment process, telephone triage and an assessor attending a discharge planning meeting for the client in question.

The Leeds national evaluation found that there are a wide range of access points into intermediate care, and that the point of entry into intermediate care does not necessarily determine the subsequent pattern of service use (Godfrey et al 2005).

4.3 Patient eligibility criteria

Documents described a patient's eligibility for accessing services in several ways. Clients were able to access services if they met particular **medical criteria** such as being medically stable, minimal medical input is required and/or no further medical treatment is required; **rehabilitation criteria** such as client requires rehabilitation / post acute care and is likely to gain from input / has rehabilitation potential; and/or **assessment criteria** such as assessment prior to acceptance and/or a medical opinion obtained.

Other eligibility criteria included vulnerability to hospital admission or long term care; patient demographics, such as age and geographic location; discharge status such as a patient's discharge destination identified, client is likely to return home and/or home environment is suitable for rehabilitation; mental health status which including client motivation and client is not confused / suffering dementia; case mix specific such as fall, stroke or orthopaedic conditions; the patient's GP available for input and support; care status such as client does not need 24 hour care and main carer admitted to hospital / unable to care for client; client has fallen more than once in a year; and client requires hospitalisation but refused admission to hospital.

4.4 Patient exclusion criteria

Patients were excluded from services generally for medical or rehabilitation reasons such as medical instability or if specialist medical and/or specialist rehabilitation care is required.

Specifically, service users were excluded for medical reasons such as medical instability, short term prognosis, rapid recovery is expected, high level technical interventions are required and specialist medical management is required. Similarly patients were excluded from services if

they required long-term rehabilitation, acute care or specialist rehabilitation, transitional care / convalescence (no active therapy) or were assessed as being unable to regain sufficient capacity for independent living.

Other exclusion criteria included discharge status such as clients who may require long term care placement, residential status such as nursing home clients or clients who are awaiting re-housing; mental health status such as client has behavioural problems or requires high level mental health care; capacity limits such as clients who were referred but there was no capacity to accommodate them; and care status such as client requires palliative or respite care.

5. Service structure and organisation

The service structure refers to the actual operational and organisational details of each individual service. The service structure and organisation consists of eleven themes:

- 5.1 Setting or location of care
- 5.2 Description of the setting
- 5.3 Facilities available
- 5.4 Service capacity
- 5.5 Duration of input
- 5.6 Agencies involved in delivering care
- 5.7 Payment systems
- 5.8 Professional lead
- 5.9 Staffing
- 5.10 Availability of the service
- 5.11 Team organisation

Most of the information available related to the service setting or location of care and agencies involved. Despite most documents offering some information regarding staff configuration, there was little descriptive information available on staff grade/skill and staff roles.

5.1 Setting / location of care

The Birmingham and Leicester national evaluation classified setting in terms of residential and non residential care. Residential care incorporates settings in which service users are institutionalised for the whole duration of service provision. The most common form of residential settings were acute hospitals, nursing home residential homes and purpose built intermediate care or rehabilitation facilities.

Non residential care may be delivered in the patient's home or where the service user attends a health or social care setting on a daily basis (Parker et al, 2005). Non-residential settings include community hospitals, the patient's home and sheltered housing. Others included day care centre, day hospital, resource centre, schools and out-patient clinics.

The Birmingham and Leicester national evaluation found greater short term improvements in quality of life and function for patients treated in residential settings, compared to non-residential settings, but higher episode costs. Green *et al* (2005) report greater improvements in independence for patients receiving care in a community hospital compared to a district general hospital.

The Leeds national evaluation reported that those who used non-residential services were significantly more likely to still be at home six months after discharge compared to those who used residential services. Although, these findings may be explained, in part because people

who used residential services were generally more frail on admission than non-residential service users.

5.2 Description of setting

The 'description of setting' differs from the *setting / location of care* above because it describes the setting in terms of its purpose or specific attributes, rather than its location. Descriptions of setting included;

- rehabilitation unit
- dedicated intermediate care beds
- nurse led unit
- ward or condition specific unit e.g stroke, hip
- accident and emergency
- step-down and step-up facilities
- geriatric assessment unit
- triage unit
- recuperation facility
- day medical unit
- minor injury unit
- transitional beds
- beds for Asian elders.

5.3 Facilities available

Services were described in terms of the facilities they have available, including; offices, gyms, kitchens, equipment store rooms, integrated community equipment stores and laundries.

5.4 Capacity

Despite the emphasis on measuring and enhancing intermediate care capacity, there is not one consistent approach to measuring capacity. Most documents described capacity in terms of the service size and volume at a particular point in time. The majority of documents describe capacity in terms of throughput, bed numbers / occupancy and number of clients seen per month or year. Others include number of places available or filled per month, number of referrals, number of episodes treated, number of patients treated, number of admissions and/or length of stay. Capacity was rarely described using staffing numbers.

Both the Leeds and Birmingham-Leicester national evaluations reported that many services had difficulty providing data on capacity and throughput.

5.5 Duration of whole service input

Some services described an estimated time limit for their service (usually between 6-8 weeks), or stated that their service was unlimited.

5.6 Agencies involved

The agencies involved in the delivery of intermediate care services most frequently included acute hospital, community rehabilitation / community therapy services, community nursing / district nursing services, local authority (including housing) and social services (including home care services).

Other agencies less frequently cited included specialist assessment services, general practice, individual therapy services (PT, OT, Dental, Psychology, Dietetics, Chiropody/Podiatry, SALT, Optician), PCT, carer support services, independent sector (e.g. private nursing/residential facilities), specialist medical services (e.g. falls, respiratory, Alzheimer's etc.), specialist therapy

services (e.g. Parkinson's, stroke), community equipment services, specialist diagnostic services, night nursing, mental health services, voluntary services (e.g. red cross, Age concern), patient groups (e.g. stroke club), specialist support services (e.g. Macmillan support team), university, children's services, transport services, leisure and religious agencies.

5.7 Payment systems

Only two documents mentioned payment systems for services. Payment was described as 'free at point of contact'; as a specified payment; as conditional upon local authority payment services received; or as dependent on specified time frames.

5.8 Professional lead

From the review data, nurses are the most common professional lead of intermediate care services, followed by doctors (GP or consultant) and allied health professionals (PT, OT or SLT). Others include paramedic, psychologist, social worker / social services, shared role or no lead at all.

5.9 Staffing

Staffing was described either in terms of the staff configuration (ie the numbers and types of different staff), or the staffing model (eg multidisciplinary).

Configuration was described most frequently, with 29 different types of staff documented. The most commonly mentioned staff were nurses followed by GPs and occupational therapists. Nurses were described as specialist nurse practitioners, rehabilitation nurse specialists and tracker nurses. Half of the documents referred to 'therapists', hospital based doctors, support workers (rehabilitation assistants, health care assistants etc.), physiotherapists and speech and language therapists.

There was a large array of other staff described including psychologists, care managers, carers, social workers, link workers, administrative staff, community nurse, district nurse, domestic staff, counsellor, volunteers, intermediate care assessor, placement officer, intermediate care officer, mental health staff, care managers, dietitians, podiatrists, coordinators, art therapists, student nurses and team leaders.

The model or organisation of staffing was described generally as multidisciplinary teams or multiprofessional. Few documents described staffing in terms of whole time equivalent numbers, staff roles, training, grade/skill level or management. In particular there was very little information relating to allied health practitioner grade and skill level. One document included information about recruitment strategies and vacancies; how services organise the funding for staff and how they commission or contract staff from various agencies; descriptions of staff rotations through various services; and how staff split their time amongst various services.

Conversely very little information described staff skill/grade, whole time equivalent numbers, roles, training, management, support : professional staff ratios, employment conditions and pathways. There was no information describing staff demographics, ethnicity, qualifications or ratio of staff to clients.

5.10 Availability of the service

Services are available 24 hours, 7 days/week; within working hours only; and week days only. Other models of availability include on-call support, out of hours support or a combination of these availabilities, for instance week days only with out of hours support.

5.11 Team organisation

Few documents described the organisation of their teams. Of those that did, shared protocols and shared client files / multi-professional records were referred to. Team management structure was described by two documents in terms of split management, specific team management, individual professional management and distant management. One document detailed team meeting structure, frequency, content and attendees. The same document described the location of teams in terms of common team bases and separate locations.

6.0 The organisation of care

The organisation of care refers to the components that go together to make up the individual intervention from the perspective of the client or patient and include the following;

- 6.1 Intervention
- 6.2 Duration of individual client input
- 6.3 Organisation of input
- 6.4 Intensity of input

6.1 Intervention

Interventions fell into four distinct categories:

- Supportive
- Active
- Assessment
- Non-active

Supportive interventions are those which are designed to maintain the health status of the client, or provide respite care for their family or carer. Examples of supportive interventions include personal care; respite care / opportunity for recovery; carer or family support; social support such as shopping and housework; social care such as emotional support or counselling; organising access to other services such as befriending services; terminal or palliative care; day care; home improvement, repairs and adaptations; supervising medications and providing transport.

Active interventions, or active therapy include a range of physical, social and medical interventions that aim to improve a component of the health or well-being of the client. Examples of active interventions include nursing support, such as wound care; rehabilitation which was described as physical (such as walking practice, strength exercises), social (such as bingo, quizzes, discussion groups) or recreational/workplace (such as re-integration into workplace environment); medical intervention/therapy; equipment provision or adaptations; training in equipment and adaptations; education; discharge planning; and exercise prescription either in groups or classes such as falls or relaxation classes.

The Birmingham-Leicester national evaluation reported that interventions for specific client groups, such as home based occupational therapy following stroke and multidisciplinary rehabilitation in a day hospital for Parkinson's patients, were associated with improved physical function as was home-based rehabilitation and supported discharge following stroke (Parker et al 2006).

An **assessment** generally involves a review of the client to guide decisions about their most appropriate care or treatment option. There are many examples of different types of assessments, including multidisciplinary assessment; medical assessment; home visit; home safety checks; monitoring / observation; and identifying falls risks.

Non active interventions are the provision of a physical resource, such as an unmonitored 'hotel bed', without any accompanying therapy or rehabilitation support.

Most services use a combination of these interventions which are usually an opportunity for recovery (supportive) and physical rehabilitation (active). However, very few documents cited social input, supportive or active, as the primary intervention of the intermediate care service.

6.2 Duration of individual client input

There was very little information describing the duration of individual client input. Duration was described in terms similar to those used for capacity e.g. length of stay. There was no specific information relating to how long clients received input, from whom and what it entailed.

6.3 Organisation of input

Most documents describe how services organised the delivery of their input to patients. The use of care plans or care pathways and integrated (multi-agency) care provision were the most common methods referred to.

Also mentioned was the use of review processes, clinical objectives and goals/time scales, medical and multidisciplinary assessments, discharge planning, taking regular outcome measures, involving users and carers in planning and goal setting and using discrete / separate services to deliver care.

6.4 Intensity of input

Only three documents detailed intensity of intervention delivered to service users. Intensity was described in terms of frequency of input e.g. daily visits, weekly visits and level of intensity e.g. high, low. One document described intensity in terms of the average frequency and time service users received therapy for over a week period e.g. one twenty minute physiotherapy session per week. In this way intensity differed to capacity which was generally described in terms of how many service users were seen or the number contacts with a service user.

Conclusions

This chapter has highlighted the complexity of the models of intermediate care services, but presents a new framework for defining and ultimately measuring and comparing service delivery and development.

Intermediate care services are highly complex, and to date, there has not been a framework for investigating this complexity. This is important in the assessment of workforce change, because change to any element of a service needs to be seen within the wider context of the models and approaches to service delivery and organisation.

As Godfrey points out, intermediate care is defined by a combination of purposes, functions, content and structure²⁸⁵. Many of the existing models or taxonomies that have been used to describe intermediate care services focus either on one attribute of the service, such as the purpose of the service (eg Enderby's 8 levels of care)²⁸⁶, or a mixture of attributes. For instance, the original health service circular (NSC/LAC 2001/01)⁹ provided guidance based on an array of service settings, structures and functions. Other models include the professional background of the service lead within the definition of service types (e.g. nurse led, general practitioner led).

It is important to consider the inter-relatedness of each of the elements, and, for the purpose of this study, the relationship between staffing and the other outcomes. For instance, many of the features of the 'service structure', such as the approach to team organisation and availability of the service, will have an impact on staff types, numbers and roles.

A service data collection tool has been developed from the framework described in this chapter (available on request). This concept will be developed further in the following ways;

- We will undertake cluster analysis with variables collected from a national audit of intermediate care services, based on this framework, to establish whether any clusters arise that could be useful to provide a taxonomy of CAICS.
- The same framework will be applied to existing data from the Leicester – Birmingham National Evaluation, which also includes patient and service outcomes. We will use linear regression analysis to determine whether there is a relationship between the service variables and the outcomes for the service (costs) or patients.

Chapter 6 Conclusions and recommendations

This review has explored the dual concepts of community and intermediate care services, and staffing of these types of services, and reinforced the complex nature of both of these areas.

Chapters two – four of the review examined the different influences and effects on the workforce. The final chapter examined the complex environment of intermediate care, which highlights the complex context in which health workforce change is emerging.

Overall, there is a lack of concrete evidence on which to base decisions about workforce organisation and management in intermediate care services. Much of the existing workforce literature is based on unidisciplinary analysis, or substitution between two different types of workers, and largely based in secondary care settings. However, intermediate care is often multidisciplinary, multi-agency, and can be based within a range of different settings. Each of these factors introduces a new level of complexity which impacts on workforce organisation and management.

Additionally, as chapter 5 illustrated, the workforce is only one component of health service delivery, and it needs to be examined in the wider context of service organisation and delivery, population requirements and political drivers. The workforce is also constrained by historical and social boundaries, many of which are being challenged by current policy initiatives. However they are an important driver which cannot be ignored.

Intermediate care staffing changes are taking place in a wider context of workforce change and evolution, and new ways and philosophies of delivering care. The current policy initiatives aim to improve health service capacity and productivity with a view to achieving measurable outputs. Increasing workforce efficiency has been a primary focus of the policy agenda. The implications for the workforce are still emerging, and include substantial changes to existing roles, the introduction of a range of new roles, and currently, redundancies for staff in a number of trusts.

Most of the literature on workforce substitution reinforces the notion that certain occupations have jurisdiction over particular tasks (and in some cases, over other professions). However, these jurisdictions are almost solely obtained through political influence and social positioning, not through research evidence that these practitioners are the best people to do the job. Agenda for Change, and the Skills for Health Competency Frameworks have attempted to alter this approach so that rewards are competency, not strictly profession based.

Yet 'good' research attempts to use positivist approaches to demonstrate whether one type of practitioner can effectively substitute or delegate roles to another type of worker to achieve an equal or better outcome. Alternative research methods are required to demonstrate workforce effectiveness and recognise that changes to the workforce configuration are dealing with a range of complex variables which include:

- The best evidence about the way to perform a particular intervention (which is largely non-existent);
- The competencies, skills and knowledge necessary to perform or deliver those interventions;

- An appreciation of the social and political boundaries that prevent particular groups from either performing a particular intervention or developing competencies that may be seen as the 'turf' of another professional group;
- The organisational setting or context in which the workforce change occurs.

The impact of health care policy on workforce change

Chapter two presented the key policies that have influenced the changes to the health workforce, highlighting the drivers that focus on addressing the lack fragmented nature or lack of workforce planning; inconsistencies in career and pay structures; and imbalances in the workforce numbers and skill mix.

The recent health policies are underpinned by philosophies emphasising user centred care and patient choice.

- User centred care
- Patient choice
- Health focussed service delivery
- Quality care
- Timely access
- Care closer to home
- Partnership working

Yet, there is little evidence of consultation of older people in the development and implementation of intermediate care services nationally. Additionally, there is little evidence that older people are offered any choice in terms of their use of intermediate care services, either in terms of choosing between different types of intermediate care services, or having the option to remain in hospital longer if they so desired. Intermediate care does reflect the current policies in terms of introducing partnership working and moving care out of hospitals and into the community (although it is not always clear whether this care is provided closer to home).

The policies that have targeted workforce change have aimed to

- Increase staff numbers
- Improve staff retention
- Introduce new roles (e.g. assistant practitioners)
- Develop new ways of working
- Improve workforce planning and
- Improve the quality of the workforce

There is evidence of all of these changes within intermediate care, in particular the growth of support workers, promoted through the Modernisation Agency's accelerated development programme.

Historical and sociological influences on the workforce

Chapter three outlined the historical and socio-political events from which our current workforce has emerged, and continues to be shaped. It highlights the growth of the professions, largely

under the dominance of the medical profession, but leading ultimately to groups with different levels of professional autonomy. It also points to the shifts in managerial approaches which are already undermining the historical autonomy of the professions, instead demanding increased professional accountability to managers.

Workforce change – the evidence base and relevance to intermediate care

Chapter four illustrates the paucity of evidence around the impact of workforce change, particularly on the target areas of quality and productivity. Whilst there is some evidence of skill mix variations being able to enhance health care quality, these are largely from nursing / medical research in the secondary care sector. The literature arising from intermediate care is largely qualitative and reinforces the individual professional perspectives involved in bringing groups of practitioners together from different professional backgrounds. Whilst there is a perception that this is better for patients, and possibly even for staff, there is no empirical evidence to support this.

The limited existing evidence around intermediate care services shows that intermediate care services are staffed and organised in vastly different ways. However, (again from limited empirical evidence) in most cases, patient outcomes do not vary greatly between different types of services. It is difficult to determine the influence of staffing variations on the outcomes for patients, however the limited existing findings do not provide any evidence that variations in skill mix have a great impact on patient outcomes.

There is evidence that skill mix has an important impact on service costs, however this is based on examples from small numbers of services. Further research is required to determine the relationships between staffing configurations, service costs and patient outcomes.

Defining intermediate care

Chapter five brought together a range of disparate interpretations of intermediate care services to attempt to provide a framework for its comparison. It does not propose any form of taxonomy within this framework, and further research will be done in applying this framework to empirical data collected from intermediate care teams to examine whether any form of taxonomy emerges. It does provide a standard basis for the collection of information about intermediate care services, which can then be used to search for classifications within these definitions based on the range of attributes of the services – for instance, the type or size of population served, the function or purpose, the setting.

Recommendations

There is insufficient evidence to draw firm conclusions about the contribution of different staffing models to patient, staff and service outcomes in community and intermediate care services for older people.

There is a need to replicate workforce studies that have been undertaken in secondary care settings which have involved multivariate analysis on components of care (including staffing) and compare these with a range of patient, staff and service outcomes.

There is a need for more descriptive contextual information on studies investigating intermediate care services to facilitate comparison and description.

Research is required which provides an understanding of the input of whole team roles, rather than necessarily the contribution of individual practitioners.

Further research is required about the roles and contribution of different types of practitioners in intermediate care, and the impact of different models of skill mix on intermediate care services.

Local evaluations are valuable in understanding the context of the workforce dynamics in intermediate care, however there is a need for large scale, comparative studies to explore the impact of a range of variables on patient, staff and service outcomes (including costs).

The routine collection of outcome measures or indicators, similar to those used in secondary care studies, would facilitate more straightforward evaluation of the impact of different service changes (such as workforce changes).

Appendices

Appendix 1 Policies underpinning workforce change in older peoples' services

	Older People	General	Workforce
1990			
	Caring for people: Community care in the next decade and beyond		
1997			
Oct	Audit Commission: The coming of age: improving care services for older people		
	Executive Letter (97)62, Better services for vulnerable people		
Dec		White Paper: The New NHS Modern Dependable	
1998			
Aug	Letter from the NHS Executive: Better services for vulnerable people – maintaining the momentum		
Nov		Modernising Social Services	
Oct		European Working Time Directive	Working together, securing a quality workforce for the NHS
		A first class service: Quality in the New NHS	
1999			
		The 1999 Health Act	HSC 1999/111: LAC (99) 18: Modernising health and social services: developing the workforce
		Patient and Public involvement in the new NHS	HSC 1999/065: Clinical governance in the New NHS
			Select Committee on Health: Report on future staffing requirements for the NHS
June			Government response to the Health Select Committee's report on the review of workforce planning
			Making a difference: strengthening the nursing, midwifery and health visiting contribution to health and health care
2000			
	Shaping the future NHS: long term planning for hospitals and related services: consultation document on the findings of the National Beds Inquiry	HSC 2000/011: LAC 2000/10: Implementation of the Health Act partnership arrangements	HSC 2000/030: Human resources performance framework

	Older People	General	Workforce
June	The Audit Commission: The way to go home – rehabilitation and remedial services for older people		
July	HSC 2000/016: LAC 2000/14: Winter planning circular	White Paper. The NHS Plan. A plan for investment. A plan for reform	A health service of all the talents: consultation document on the review of workforce planning
Aug		A quality strategy for social care	Modernising regulation in the health professions
Sept			Improving working lives standard
Nov			Meeting the challenge: a strategy for the Allied Health Professions
2001			
		Shifting the balance of power within the NHS: securing delivery	Modernising regulation: establishing the new Health Professions Council
		Kennedy, I: Learning from Bristol: the report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995	Modernisation Agency: Changing Workforce Programme
			Investment and reform for NHS staff: taking forward the NHS Plan
			Shifting the balance of power within the NHS: Human resources framework
Jan	Guidance HSC 2001/01: LAC 2001/1: Intermediate Care services for older people.	Investment and reform: taking the NHS plan forward	
	Quality and choice for older people's housing: a strategic framework		
Mar			National Audit Office: Education and training for the future health professional workforce in England
Jun	The National Service Framework for Older People		Health Professions Order 2001
Nov			Working together, learning together: A framework for life long learning for the NHS
2002			
		Wanlass, D: Securing our future health: taking a long-term view	Establishing the new Health Professions Council: report on the statutory consultation
		Introducing payment by results: the NHS financial reforms	NHS Reform and Health Care Professions Act 2002
			HR in the NHS plan: more staff working differently

	Older People	General	Workforce
			Workforce Development Confederations functions, accountabilities and working relationships
Jan	HSC/2002/01: LAC (2002) The single assessment process for older people	Shifting the Balance of Power: the next steps	
	The single assessment process: guidance for local implementation		
Apr		Delivering the NHS Plan: the next steps on investment, next steps on reform	
May			Primary care workforce planning framework
Jun	National Service Framework for Older People: support implementation – Intermediate care: moving forward		
Oct		Improvement, expansion and reform – the next 3 years: priorities and planning framework 2003-2006	
2003			
			The Chief Health Professions Officer's ten key roles for allied health professionals
Jan	Discharge from Hospital pathway: process and practice	HSC 2003/001 – Protecting staff; delivering services: implementing the European Working Time Directive for doctors in training	
Jun			Delivering the HR in the NHS Plan
2004			
Mar	Improving chronic diseases management		Regulation of health care staff in England and Wales: a consultation document
			Press release: Health minister announces plans to regulate support workers and complementary therapists
May		A Compendium of Solutions to implementing the Working Time Directive for Doctors in Training from August 2004	
Jun		The NHS Improvement Plan: Putting people at the heart of public services	Delivering the NHS Improvement Plan: the workforce contribution
Jul		National Standards, Local Action: Health and social care standards and planning framework 2005/6-2001/8	
		Standards for Better Health	

	Older People	General	Workforce
Sept			Social Care Workforce: Developing a New National Agenda – Report
Oct			The NHS Knowledge and Skills Framework and the development Review Process
Dec			Agenda for Change Final Agreement
			Agenda for Change: what will it mean for you? A guide for staff
			Executive letter 02/12/2004: Implementation of Agenda for Change from 1 st December
2005			
		A short guide to foundation trusts	A national framework to support local workforce strategy development: a guide for HR directors in the NHS and social care
Jan			Agenda for change: NHS terms and conditions of service handbook
Mar	The National Service Framework for long term conditions	Creating a patient led NHS: delivering the NHS Improvement Plan	
Jun	Getting to grips with the NSF for long-term conditions: a 10 year strategy		
Aug		Press release: NHS response to European Working Time Directive results in better patient care	A workforce response to local delivery plans: A challenge for NHS Boards
2006			
Jan		White Paper - Our health, our care, our say: a new direction for community services	
Mar	Audit Commission: Living well in later life: a review of progress against the National Service Framework for Older people		
April	A New Ambition for Old Age: Next Steps in Implementing the National Service Framework for Older People		

Other:

Modernisation Agency: Changing workforce programme 2001; Accelerated Development Programmes
National Workforce Projects (NWP) team enabling solutions for Working Time Directive 2009 – National Practitioner Project

NHS Careers campaign 2005

July 2005 NHS Institute for Innovation and Improvement supersedes the NHS Modernisation Agency

Appendix 2: Search terms for Chapter 4

Capacity:

hospital ADJ bed ADJ capacity
Bed-management.de.
Patient\$ adj number\$
Patient\$ adj capacity
Number\$ adj of adj patient\$
Workload
Workload
Workload#.w..de.
Staff adj capacity
Workload adj capacity
Unit\$ adj capacity
Health adj service adj needs

Intermediate care:

Intermediate adj care
Intermediate-care.de. Or intermediate-care.de.
Early near discharge
Patient-early-discharge.de.
Earlier near discharge
Facilitat\$ near discharge
Support\$ near discharge
Expedit\$ near discharge
Hospital adj home
Hospital-at-home.de.
Hospital next home
Hospital adj nursing adj home
Hospital near nursing adj home
Hospital near hospice
Home adj hospital
Home next hospital
Home adj care adj services
Home-care#.de. Or home-care-of-patient#.de.
Home next care next services
Rehabilitation adj centres
Rehabilitation near centre
Rehabilitat\$ near cent\$
Community-care#.de. Or community-health-care#.de.
Community adj care adj centre\$
Patient\$ adj hotel adj bed\$
Patient-hotels.de.
Halfway adj home\$
Transitional adj car\$
Patient\$ adj hotel\$

Older people:

Older adj people
Older-people#.de.
Old adj people
Old\$ adj person\$
Elderly adj people
Elderly adj person
Older adj generation
Elderly adj generation
Pensioner
Geriatric\$

Organisational structure:

Service\$ near delivery
Service-delivery.de.
Health adj service adj delivery
Human adj resource\$ adj management
Human-resources-management#.de.
Staff\$ near model\$
Workforce near organisation
Workforce.w..de.
Staff\$ near organisation
Staff\$ near organization
Organisation\$ adj structure
Organisational-structure#.de.
Administration
Administration#.w..de.
Organisat\$ adj infrastructure\$
Organisational-infrastructure#.de.

Therapy provision or type of care:

Therap\$ near provision
Service adj provision
Health-service-provision#.de.
Complementary adj therap\$
Complementary-medicine#.de.
Complementary-therapies#.de.
Holistic adj health
Occupational adj therap\$
Occupational-therapy.de. Or occupational-therapists.de. Or occupational-therapy-services.de.
Self adj care
Self-care.de.
Physiotherapy
Physiotherapy.w..de. Or physiotherapists.w..de. Or physiotherapy-services.de.
Rehabilitation
Rehabilitation.w..de. Or rehabilitation-services.de.
Managed adj care
Care near plan\$
Individualised-care-plans.de. Or community-care-planning.de.
Care near management
Care-management.de.
Case adj management
Case-management.de.
Nurs\$ next care
Nursing-practice#.de.
Patient\$ near care
Patient-care#.de.

Work setting:

Working-environment.de.
 Workplace\$
 Work adj place\$
 Job adj site\$
 Work adj location\$
 Work near location
 Place near work
 Setting
 Work near setting\$

Philosophy of care:

Philosophy next care
 Philosophy
 Philosophy#.w..de.
 Belief
 Religious-beliefs.de.
 Health adj beliefs
 Health-beliefs.de.
 Staff adj belief\$
 Staff-attitudes.de.
 Staff-views.de.
 Staff adj attitude\$
 Staff adj view\$

Staff outcomes:

Staff adj satisfaction
 Job-satisfaction#.de.
 Staff adj morale
 Staff-morale.de. Or staff-morale.de.
 Staff adj retention
 Staff-retention.de.
 Human adj resource adj management
 Human-resources-management#.de.
 Staff adj turnover
 Staff-turnover#.de.
 Staff adj development
 Human-resources-development.de.
 Professional adj development
 Professional-development#.de.
 Job adj satisfaction
 Staff adj attitudes
 Staff-attitudes.de.
 Job adj enlargement
 Job adj enrichment
 Staff adj development
 Human-resources-development.de.
 Staff adj development adj opportunit\$
 Staff adj recruitment
 Recruitment.w..de.

Staffing:

Human adj resource adj management
 Human-resources-management#.de.
 Staff\$ adj model\$
 Staff\$ adj level\$
 Staff-levels#.de.
 Staff\$ adj capacity
 Staff\$ near capacity
 Staffing
 Staffing#.w..de.
 Number\$ near staff

Skill adj mix
 Skill-mix.de.
 Nurs\$ adj role\$
 Roles#.w..de.
 Nursing-practice#.de.
 Nurs\$ adj led adj service\$
 Nurse-led-services.de.
 Volunteer\$
 Volunteers#.w..de.
 Chang\$ near role\$
 Role-development#.de.
 Role\$ near develop\$
 Skill\$ adj substitution
 Personnel adj mix
 Reprofiting
 Job-profiling.de.
 Staff\$ near mix
 Patient\$ adj care adj team\$
 Interprofessional-collaboration#.de.
 Integrat\$ near car\$
 Integrated-care.de.
 Flexible near work\$
 Flexible-working#.de. Or flexible-working-hours#.de.
 Professional\$ adj model\$
 Support adj worker adj model\$
 Additional adj staff\$
 Teamwork.w..de.
 Staff adj development
 Human-resources-development#.de.
 Education
 Training#.w..de. Or education#.w..de.
 Train\$
 Staff adj development adj opportunit\$
 Recruitment
 Recruitment#.w..de.
 Staff-retention#.de.
 Staff\$ near retention

Service outcomes:

Health adj service adj outcome
 Health-service-evaluation.de.
 Service adj development
 Health-service-development.de.
 Health adj service adj development
 Service-development.de.
 Cost adj effectiveness
 Cost-effectiveness#.de.
 Economic adj evaluation
 Economic adj evaluation
 Economic-evaluation.de.
 Clinical adj effectiveness
 Clinical-effectiveness.de.
 Clinical adj outcome
 Clinical-outcomes.de.
 Service adj outcome
 Outcome-measurement.de.
 Outcomes
 Service adj quality
 Quality-of-patient-care#.de.
 Quality adj assurance
 Quality-assurance#.de.

Patient outcomes:

Patient adj health
Patient-views.de.
Outcome
Quality-of-patient-care#.de.
Health adj outcome
Health-outcomes#.de.
Patient\$ adj outcome\$
Patient-outcome.de.
Outcome-measurement.de.
Quality-of-life.de.
Health adj improvement
Health-improvement.de.
Improvement
Patient-views.de.
Patient adj progress
Patient adj recovery
Patient-recovery#.de.
Patient adj improvement
Health adj gain
Health-gain.de.
Mortality
Mortality.w..de.
Death
Death.w..de.
Morbidity
Morbidity.w..de.
Symptom adj control
Symptom adj management
Pain adj control
Pain adj management
Pain-management.de.
Patient adj welfare
Patient-welfare.de.
Patient adj need
Patient-needs.de.
Patient adj wellbeing
Emotional adj health
Health-status.de.
Mental adj health
Mental-health.de.
Fitness
Fitness.w..de.
Physical adj wellbeing
Social adj activit\$
Social-activities.de.
Complication\$
Adverse adj events
Adverse-events.de.
Medical adj errors
Medical-accidents#.de. Or medical-accidents#.de.
Length next stay
Hospital-stay-duration#.de.
Duration near stay
Period next stay
Patient-readmission.de.
Patient-emergency-admissions.de.
Patien\$ adj readmissio\$
Patient-readmission.de.
Emergency adj admissio\$

Unplanned adj readmissio\$
Patien\$ adj expectatio\$
Patien\$ adj satisfaction

Appendix 3: Papers included in the intermediate care workforce literature review

General practitioners						
Reference	Method	Professional group	Country	Setting	Findings	Comments
1. Boston, N. K., P. M. Boynton, et al. (2001) ²⁶²	Prospective, non-randomised comparative study of a GP unit Vs conventional care for >65 yrs patients. Patient interviews at 5 days post-admission, one month and three months. Demographics, medical data, cognitive function, physical & mental functioning (SF-12) taken as baseline measures then followed up at one and three months. Similar exclusion criteria to IC.	GPs and nurse led units	UK	Community hospital / NLU	No difference between groups for baseline measures. No difference in outcome measures at one or three months. GP unit patients more satisfied with care, staff, facilities and quality.	Key points: Same as NLU - title (GP) doesn't necessarily imply a different service to conventional care except for follow-up/continuity of care Neither setting led to short term reductions in service use Possibly better communication and community involvement in GP unit
2. Grant and Dowell (2002) ²⁶⁴	Interviews with 27 Scottish GPs to understand the factors influencing their decision to refer to community hospitals.	GPs	UK	Community hospital	Primary reasons for referral were patient preference, hospital capacity and capacity of the referring Dr to manage the patient in the community. Other factors that influenced their decisions included their perception of the community hospital and DGH; medical uncertainty about the patient; the process of care; training and support systems;	GPs have a variety of reasons for referring patients to community hospitals (or not).
3. Grande GE, Todd CJ, Barclay SI, Farquhar MC (2002) ²⁶³	RCT comparing usual care with the Cambridge hospital at home service (CHAH) on patients' quality of care, likelihood of remaining at home in their final 2 weeks of life and general practitioner (GP) visits. The patient's district nurse, GP and informal carer were surveyed within 6 weeks of patient's death.		UK		No clear evidence that CHAH increased likelihood of remaining at home during the final 2 weeks of life. The service was associated with fewer GP evening and night visits in the penultimate week of life to patients on the CHAH scheme.	Implications of the model of care for out of hours visits.
4. Young, J. and Sharan, U. (2003) ²⁶⁵	Audited records of 81 patient who were admitted to CH from home. Audit looked for information on circumstances for admission, who saw the patient, did patient have GP assessment prior to admission, were patients assessed within 3 hours of admission by hosp doctor and within	Medical : Medical assessment of patients prior to admission to IC - skills for referral	UK	Community Hospital	10% of patients required transfer 33% not assessed by GP prior to admission 69% not assessed in 3 hours by hosp practitioner 28% not assessed in 24 hrs by consultant	Key points: 10% of Referrals into IC by GPs require hospital admission despite rigid criteria. Implications for skills and competencies of those referring into IC.

	12-24 hours by consultant. Appropriateness of referral was judged on whether or not the patient required transfer to the DGH for specialist care.					
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Geriatrician /consultant

Reference	Method	Professional group	Country	Setting	Findings	Comments
5. Bansal, A. and Young, J. (2001) ²⁶¹	Survey to 268 specialist registrars listed as members of British Geriatrics Society 1999 to ascertain experience in community geriatrics -	Specialist registrars and newly qualified consultants	UK	Community	72% RR Low participation in community geriatric training Day hospital clinics, community hospital and nursing/residential home clinics felt to be of greatest training value 27% had experience of a home visit with a therapist, 10% with a post discharge home visit and 9% with GP clinics	Key points: Survey suggests inadequate content of community training for specialist registrars Increasing time spent with GP seems to be most popular solution

Multidisciplinary team

Reference	Method	Professional group	Country	Setting	Findings	Comments
6. Griffiths, J, Austin, L et al (2004) ²⁵⁰	Case study Reports findings from a year long pilot case study of a newly established CRT with PTs, OTs, nurses & support workers. 11 staff - 4 co-ordinators, 3 key workers, 4 associate key workers (support workers)	Interdisciplinary team work Difficulties, facilitating factors and issues with working across professional boundaries	UK	Community	Describes roles of each staff member Describes barriers to teamwork - namely due to newness of the team. Included referrals, time for rehab, confidence building with each other and referring acute staff Factors facilitating teamwork - adversity, shared definition of rehabilitation, narrowly defined service => easier to negotiate patient goals, teambuilding exercises, eradication of hierarchical role boundaries, empowering management style Working across professional boundaries - initial tension, letting go of roles takes trust => took a long time to grow, developed new skills.	Key points: Inter-disciplinary and team working takes time Trust enables effective interdisciplinary team working Common philosophy of rehabilitation required for effective teamworking
7. Griffiths, P. (2002) ²⁵¹	Small scale survey of managers of 18 wards who offered acute and rehab care & who referred into the NLU. Compared MDT discharge process & team members, therapy input and discharge processes.	skill mix of ic teams Role of MDT in discharge planning	UK	Nurse led unit / hospital / intermediate care	Services and staff available to NLU same as ward except geriatricians who were more available on ward. NLU and wards similar connections with GP, DNs and D/C planning coordinator. Range of therapies available on both. No difference between NLU and ward for	Key points: <i>Nurse led</i> does not mean nurse input only. NLUs have similar service and therapy input as wards.

					n.o of patients receiving therapy. Wide variation in MDT composition and conduct in both. Authority to discharge on the wards was a medical responsibility & on the NLU, nursing.	
8. Shield, F. (1998) ²⁵⁵	Description of implementation of a new therapy led community rehabilitation service in Stoke. Information about interdisciplinary care, rehabilitation assistant role & organisation of care.	Prof group: MDT	UK	Community	Interdisciplinary care => Enables a Holistic approach to care due to staff 'seeing beyond their individual remit' Core skills remain unchallenged Specialised staff able to devote more time to expert areas Client's problems can be addressed more functionally with shared roles Uses 'poached egg' analogy A lot of detail around assistant roles=> Role evolving into a key worker and advocate rather than simply a therapy assistant Training and career progression Used as key worker to follow through case from assessment to discharge and if readmitted to team Real life skills valued equally as therapy experience Details organisational structure=> patient pathway, referral systems, assessment & discharge systems, organisations involved	Key points: Poached egg analogy to interdisciplinary care Insight into the 'workings' of an interdisciplinary team Describes rehab assistant role in team
9. Jones, J, Wilson, A, Parker, H, Wynn A, Jagger C, Spiers N & Parker G (1999) ²⁵²	Cost minimisation analysis within a pragmatic randomised controlled trial. Main outcome measures: Costs to NHS, social services, patients, and families during the initial episode of treatment and the three months after admission	MDT	UK	hospital at home scheme in Leicester and the city's three acute hospitals	HAH provided substantial MDT (physiotherapy, occupational therapy, GP and district nursing) input in comparison with the hospital ward. Cost per day was significantly higher for hospital at home than for acute care. The ratio of time not in contact with patients to contact time varied from 1.8:1 for B grade staff to 8.0:1 for G grade staff. Nursing costs dominated the costs of HAH. Hospital costs dominated the costs of the initial episode of care for patients randomised to hospital care. Inputs for physiotherapy and occupational therapy constituted a relatively small component of the total cost, but were more apparent in HAH than hospital care. Costs could be	

					reduced by altering the balance of nursing work.	
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Pharmacists						
<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
10. Bellingham, C. (2004) ³⁰⁰	Description of introduction of two intermediate care pharmacists to help stop the team spending as much time managing patients' medicine.	Pharmacists	UK	Intermediate care - community	<p>IC team uses a standardised assessment form to identify problems with medicines (obtaining repeats, supply and administering meds) => pharmacists then prioritise and follow up with a 40-60 minute review per patient</p> <p>Role is to 'make judgements on how the patient will manage with their medicines and work out what help they need to improve the situation'</p> <p>e.g. they rationalise medications so patients take the fewest number of doses possible, recommend easy-opening containers, reminder stickers on fridge or cooker, tackle medicines hoarding, switch evening doses to the morning if carers only come in morning.</p> <p>Identified issues with current systems such as many different agencies are involved with medicines but there is no awareness of roles and responsibilities</p> <p>Also assisted in educating social services and home care staff about SAP and importance of identifying medication problems and how to deal with them</p>	<p>Key points:</p> <p>Role is described</p> <p>Importance of input described</p> <p>Mostly common sense that others could undertake but with a key educational role and some specialist skills</p>

Nurse roles						
<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
11. Bernhaut, J. and K. Mackay (2002) ³⁰¹	Semi structured interviews with nurses, GPs and patients. Questionnaires posted to GPs. It is not clear how costing data were collected.	Extended nursing roles	UK	Intermediate care	<p>Nurses described extended roles in intermediate care including listening to the patients' chest and heart; G-grade nurses ordered X-rays and initiate blood tests and could also perform venepuncture and cannulation; they practice autonomously in wound management. Nurses felt their roles were different from those in previous work. Team work is important.</p> <p>GPs said that without intermediate care they would have to admit patients to acute</p>	

					care. Patient feedback highlighted high levels of satisfaction.	
12. Griffiths, P., Edwards, M. et al. (2005) ²⁶⁸	Systematic review of the literature around NLUs, 9 studies were included.	Nurse-led units	UK	Intermediate care - NLU	Defines NLU as <i>an institutional setting where nurses assume the care management function (including admission and discharge) and team leadership that is usually vested in doctors.</i> Nurse staffing generally equivalent to that on control wards Enhanced skill mix in NLU nursing team with senior nurses and nurse specialists although control wards not usually compared In all cases there was additional preparation for staff either in terms of advanced qualifications, specific skills training or wider programmes of practice development. Although high levels of therapy are cited in NLUs, 4 studies demonstrated this was not significantly different to control wards Despite heterogeneity of patient groups, NLU results fairly consistent Some evidence for improved physical function, reduced admission to long term care and readmission however not in long term	Key Points: NLUs utilise enhanced skill-mix and additional skill training/preparation In terms of rehabilitation - therapy input is similar for NLU and control studies
13. Hartig, M. T., V. F. Engle, et al. (1997) ²⁷¹	Compared nurse assistant with masters level nurse practitioner. in terms of accuracy in assessing nursing home patient's ADL 24 assistants assessed four different patients, and were compared with the same nurse practitioner	Nurse aid and nurse practitioner roles	USA?	Nursing home	Nurse practitioner assessments correlated highly with assistant findings. Occasionally nurse assistant elected more optimistic responses but not significantly	Key points: Assistants reliable compared to nurse practitioner when assessing older patients on validated health assessment tools
14. Richardson, G., P. Griffiths, et al. (2001) ²⁶⁹	RCT comparing nurse led ward to consultant led ward. Resource use data collected (Length of stay, number of investigations performed, multidisciplinary involvement); unit cost data collected (including therapeutic units of therapy and nursing); patient level data collected (Barthel, GHQ).	Prof group: Nurses MD involvement	UK	Intermediate care - NLU	Defines the NLU as catering for patients with predominantly nursing needs whereby nursing is the predominant active therapy NLU used more physiotherapy and control more OT but not statistically sig. Higher costs for NLU (due to increased LOS) although lower post-discharge community costs	Key points: Therapy input same on NLU and control with no long term difference in outcome for patients

15. Shepperdson, B., K. Phelps, et al. (2001) ²⁷⁰	Pilot study monitoring the first 30 admissions to new district nurse led beds in a community hospital. Interviews of 30 patients admitted.	Prof group: District nurses	UK	Intermediate care - Community hospital	DN can admit patients from their case-load if they think they have nursing needs that require more intensive input DNs responsible for admission, treatment and discharge. GP involved only if medically necessary. DNs would visit their patients but day to day care delivered by nursing staff. Details of patient characteristics and reason for admission (mostly wound care & respite) Patient satisfaction remained high Descriptive data give on outcomes - DNs thought generally good ('improved', 'no change' etc.), Patients less optimistic	Key points: Basically same as GP-unit as per Boston & Boynton (2001) just with DNs instead of GPs Can't really draw any conclusions except patient satisfaction was high, 18 said they were in favour of nurse led beds, 5 didn't see the difference and 7 had wanted to stay at home
16. Wiles R, Postle K, Steiner A, Walsh B. (2001) ²⁷²	38 in-depth audio-taped qualitative interviews were conducted with NLU nursing staff and with a range of other professional groups (managers, acute ward nurses and doctors).	Nurses	UK	10 bed nurse led unit	Models of nurse-led postacute care provide opportunities for nurses to develop enhanced nursing roles in which care associated with concepts of therapeutic nursing can be provided. However, even though work was satisfying, it was seen by junior and middle grade nurses and other professional groups as being of low status. In contrast to senior nurses' views, they did not equate work on the NLU with the continuing professionalization of nursing. Senior nurses viewed the route to developing nursing on the NLU as involving nurses as doctor substitutes (extended roles) rather than as working in separate but complementary therapeutic domains (enhanced roles).	

Therapists' roles

<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
17. Nancarrow, S. (2004) ⁴⁰	Interviews with staff members of two different intermediate care teams.	Prof group: physio, OT, nurse, support worker, MDT		intermediate care	Therapists' roles were most closely aligned with each other whilst nurses saw their roles as more medical. practitioners were not threatened by overlapping roles, and felt that intermediate care promoted role overlap. Role overlap has the potential to optimise staff resources in an interprofessional working environment.	

18. Mason, S., J. Wardrope, et al. (2003) ³⁰²	Description of training programme to introduce new role of community paramedic practitioner in intermediate care.	Paramedic practitioner	UK	Intermediate care - community	Scheme to provide clinical assessment of older people in their own home. The scope of practice of paramedic practitioners include; assessment and treatment of minor injury, including minor wounds, wound infections, soft tissue injury and requesting radiographs; assessment of minor head injury; assessment of mental function; falls assessments; social care assessment of older people.	Key points: New role for intermediate care Example of 'joining up' services through new roles Skills required for this role
19. Zaatar, A. and A. Zaatar (2002) ³⁰³	Descriptive, audit of routine data from 118 patients over 4 months from a pilot intermediate care scheme involving 30 nursing home places.	Prof group: Nurses and Therapists	UK	Intermediate care - nursing home	Patients happy with nursing care, but concerns over limited therapy availability	
20. Nancarrow, S. (2004) ⁴⁸	Qualitative	Prof groups: Therapy, nurses, social workers, managers	UK	Intermediate care	staff satisfied with intermediate care, but mixed perceptions of its status in comparison with other roles. Intermediate care poorly understood by other practitioners. High value and use of support workers.	
21. Ryan, T., Enderby, P. and Rigby, A. (2006) ²⁷⁴	RCT comparing intensive with non-intensive home-based rehabilitation (provided by MDT - OT, PT and SLT) following stroke or hip fracture Intensive = six or more face-to-face contacts per week; non-intensive = 3 face-to-face contacts per week Measured Barthel, Fenchay activities, TOMs, EQ-5D, HADs at baseline and 3 months Assessors were blinded to allocation.	MDT Intensity of therapy	UK	Community rehabilitation	For stroke group - sig differences in TOM handicap and EQ-5D but clinically minor For hip group - HADs depression, TOM handicap (insignificant clinically - 0.6 mean difference CI 0.06-1) Probs with study - underpowered; 2:1 intensive therapy ratio was not achieved; lack of information regarding the nature of the interventions	Key points: Although clinically small, sig improvements in social participation, patient activity and more favourable outcomes for depression with more intensive rehabilitation for <i>stroke</i> patients More intensive MDT rehabilitation did not results in improved outcomes for hip fracture patients

Assistant practitioners / support workers

Reference	Method	Professional group	Country	Setting	Findings	Comments
22. Lichtenberg, P. A., G. C. Heck, et al. (1988) ³⁰⁴	Case study (descriptive)	Prof group: Psychotherapist & paraprofessionals	US	Intermediate care - residential	Relationship b/w psychologist and 'paraprofessional' to support psych therapy Describes training and support structures for paraprofessional staff to implement psychotherapy at IC unit	Key points: Training and skills for support staff

23. Nancarrow, S. et al (2005) ²⁷⁷	Survey of 33 IC services participating in an Accelerated Development Programme to develop support roles.	Prof group: Support workers	UK	Intermediate care	Details numbers and roles of support staff in intermediate care.	Key points: Data on staffing of IC Description of roles High numbers of support staff used
24. Ottley, E., A. Tongue, et al. (2005) ³⁰⁵	Descriptive	Prof group: support workers	UK	Intermediate care	Comments on a programme designed to introduce support workers into intermediate care services	

Voluntary sector

<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
25. Manthorpe, J., J. Andrews, et al. (2003) ²⁶⁶	Postal questionnaire examining roles and tasks of Age Concern volunteers in Calderdale (n=25, 13 returned).	Sector: Voluntary Roles of volunteers, satisfaction	UK	Intermediate care	Demographic data (mostly women, half >54yrs, most had nursing background) Most activities were befriending & social, some domestic, none personal or health care Role = supporting, building confidence, talking, encouraging Issues encountered are listed such as bereavement, physical decline.	Key points: Important insight into roles of volunteers as mostly social aspects of care - but as with assistants, when professional/support IC staff are lacking or unavailable - their role changes from more care than social
26. Waddington, E. and M. Henwood (2003) ²⁶⁷	Descriptive account of a series of reviews conducted of British Red Cross Home from Hospital services.	Sector: Voluntary sector Roles of volunteers, satisfaction	UK	Intermediate care	Service provides older people with emotional and practical help on discharge from hospital. Roles mostly include befriending & practical help, infrequently include personal care. Social services primary contractor with increasing interest from primary care	Key points: Roles of volunteers Larger numbers surveyed than Manthorpe survey

Service user involvement

<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
27. Gallagher, E. M. (1985) ²⁷⁶	Descriptive	Service user involvement in service delivery - peer counselling	USA	Intermediate care - Residential	Abstract describes a project where peer counselling by residents was implemented in a 66-bed intermediate care facility. Participants were tape-recorded before and after training interviewing a role player. Details of training undertaken are given. Improvement in use of empathy with training	Key points: Paper recommends use of peer counselling Issues around skills and training for volunteers / staff

28. Andrews, J., J. Manthorpe, et al. (2004) ²⁷⁵	Literature review describing approaches to service user involvement, its purpose & levels of involvement.	Roles of older people in IC	UK	Intermediate care	Little evidence of involvement of older people about decisions regarding intermediate care. Users can participate research through diary keeping and interviews. Suggests that need to accept user goals as 'success outcomes' rather than other measures.	Key points:
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Skills and training needs

<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
29. Kotiadis, K., G. I. Carpenter, et al. (2004) ³⁰⁶	Describes implementation of SAP in an intermediate care project in Kent. Used a SAP to examine the suitability of patients entering IC.	Skills	UK	Intermediate care	Found some patients placed in IC inappropriately esp day hospital.	Key points: Skills required for SAP / assessment Training, education, skills & knowledge issues
30. Negus, J. (2004) ³⁰⁷	Describes implementation of two IC services in London.	Skills and roles	UK	Intermediate care	Services address carer needs and older people's financial needs.	Key points: May have some useful information around what skills and training are required for staff in IC.
31. Sherratt, C. and S. Younger-Ross (2004) ³⁰⁸	Descriptive	Training: Skills shortages	UK		Discussion around rehabilitation capacity of older people with mental health needs / dementia. Discusses reasons why MH clients are discriminated against by IC structures such as 6 weeks rehabilitation, poor skills and knowledge of staff and assessors etc. Outlines a template developed for people with dementia in IC Key points: Skills and knowledge esp of assessors in IC are lacking when it comes to MH issues => need for education to reduce discriminate	** look up -looks like position statement
32. Schwab, M., J. Rader, et al. (1985) ³⁰⁹	Describes introduction of a programme for dementia clients in an intermediate care facility.	Training & skills	USA	Intermediate care - Residential	Mixed results	Key points: Possibly useful information around skills required for dementia patients
33. Uglow, J. and J. Dewing (2004) ³¹⁰	Descriptive	Training	UK	Intermediate care		Key Points: Possibly useful information around skills required for exercises for IC patients
34. Manthorpe,	Interviews with practitioners and	Voluntary	UK	Intermediate	Practitioners - require skills to engage ill,	Key points:

J. and M. Cornes (2004) ³¹¹	patients around older peoples' involvement in their care.	sector study Skills and roles		care	distressed &/or fearful patients and patients with communication difficulties; often need to judge realism of patient goals; mostly need to address confidence issues; involve people in their care decisions; if encountered MH probs - highly value having MH expert in their team esp if team is mostly rehab; Patients - find written information on voluntary services available difficult to absorb	Provides information on the skills practitioners perceive they require to deliver services to older people
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Skill mix						
<i>Reference</i>	<i>Method</i>	<i>Professional group</i>	<i>Country</i>	<i>Setting</i>	<i>Findings</i>	<i>Comments</i>
35. Parker S. 2006 ²⁵³	Survey of NHS Trusts in England, 2003 about rehabilitation service provision.	all	UK	Day hospitals and home based rehabilitation	88% of trusts provide rehabilitation services 46% provide home based rehab (HBR) and day hospital rehab (DHR). Services in both settings usual included physiotherapy OT and nursing. Community services were less likely to have specialist medical staff or include a medical assessment, but more likely to include social workers and general practitioners. Day hospitals were more likely to provide access to specialist care (eg falls, Parkinson's care)	
36. Enderby, P. and Wade, D. (2001) ²⁴⁹	Survey sent to CRT network in 1998 - 98 returns included (65% RR) Four different models of community team identified	Staffing, management, organisation	UK	Community rehabilitation teams	1. CRTs - broad range of clients generally aged 16 =>; 2. Young disabled community teams - Assessment and Rx persons aged 16/19 and 50/60 yrs with broad long-standing disabilities; 3. CRTs for older people - assessment and Rx for over 65s usually with stroke, neurological disease, fractures and msk disorders; 4. Client group-specific CRTs - e.g. stroke, MS, head injury Four types of management: 1. split management - separate team and professional heads; 2. specific team manager - single person responsible for team; 3. Individual profession management - no formal team management; 4. distant management - manager does not participate in team directly Staffing detailed including 22% had	Key points: Early description of types of CRTs available - may be useful for our selection criteria Management styles used Staffing of CRTs lacking in professional expertise

					profession specific support workers, 40% generic, 38% no support workers. Many teams had little or no input from most professions.	
37. Wiles, R., K. Postle, et al. (2003) ²⁵⁷	In-depth interviews with patient's and carers of a NLU Details staffing ratios and therapy input	Prof group: Nurses, Expert patients	UK	Intermediate care / NLU	Majority confident with their level of care and nursing skills A few missed doctor presence, did not have confidence in nurse skills or saw doctor absence as detrimental Many saw nurse care as more understanding, caring with less jargon. Many saw lack of doctors => more relaxed atmosphere and more able to develop relationship with nursing staff Most significant drawback was delay in obtaining adequate medication especially analgesia Patient experiences and perceptions of NLU markedly different.	Key points: Most patients comfortable with nurse skills and absence of doctors except for delays with obtaining medications Very different perspectives across all interviewed for the same NLU!
38. Vaughan, B. and J. Lathlean (1999) ²⁵⁶	Case studies of 4 IC sites & Descriptive information from 71 services.	General IC includes staffing	UK	Intermediate care	Wide variation in staffing and structure of services despite common headings - 'early discharge', 'admission prevention' etc.	
39. Nancarrow, S. and G. Mountain (2002) ⁴⁵	Review	All			Little evidence to support staffing models in intermediate care services.	
40. Cohen, M., J. Village, et al. (2004) ²⁴⁸	Staff injury / injury rates were analysed from 71 facilities over a five year period. Data was from a database belonging to the worker's compensation board. Linear regression was used to compare IC characteristics (staffing ratio, patient dependency, funding etc) with staff injury rates. Interviews and focus groups were also conducted. Facilities were divided into high and low injury rate facilities and compared for facility variables.	Other issues: Staff injury and facility characteristics	Canada	Intermediate care - residential	Burnout, time-loss, injury rates and musculoskeletal injury rates were sig correlated with staff ratios and resident dependency-to-worker ratios i.e. low injury facilities had sig better staff ratios and dependency-to-worker ratios than high injury facilities. No sig correlation between funding levels and staffing levels; the resident dependency-to-worker ratio correlated strongly with staff ratios; Staffing ratios did not sig correlate with total tasks performed, perceived workload or work pressure.	Key points: Inadequate staff ratios and dependency-to-worker ratios may cause higher incidence of staff injury in residential settings. Within this setting, staffing ratios did correlate with the dependency of residents but not with any other facility variable (funding, tasks performed, workload or work pressure).

41. Rudd, A. G., C. D. Wolfe, et al. (1997) ²⁵⁴	RCT comparing early discharge with 'Specialist' stroke community rehabilitation team with normal discharge process for stroke patients:	Prof group: Specialist team of therapists led by consultant (MDT) Staffing of community teams and patient outcomes	UK	Community	Total therapy received by patients after discharge did not significantly differ between groups & physical outcomes at one year were not significantly different. Patient satisfaction was higher & length of stay significantly lower for specialist group. Specialist team = senior 1 stroke PT, OT, SLT and assistant; Normal = generic domiciliary SLT and PT; outpatient PT.	Study limitations - therapists, patients and assessors were not blinded. Not very clear what intervention the control group received prior to their discharge i.e. did they also receive specialist rehab until discharge? Key points: Two teams staffed in different ways but same outcomes. Main difference is setting
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Other						
Reference	Method	Professional group	Country	Setting	Findings	Comments
42. Parker S, Martin G, Regen E, Forster S, Parker H, Stirling B, et al. ²⁶⁰	Systematic review	Did not specifically examine staffing	International	intermediate care	Reviewed 49 papers. Did not specifically examine the impact of staffing. Found that intermediate care services are heterogeneous. Different models of intermediate care do not appear to impact on mortality or readmission rates. Other outcomes measured were physical functioning, patient satisfaction, carer outcomes, service use, costs and mental health. Physical functioning and service use appear to be the outcomes most directly affected by staffing. Six weeks of occupational therapy in an intervention group was associated with greater improvements in physical function in the short term, and greater satisfaction with a range of services. Multidisciplinary rehabilitation may improve physical outcomes for people with Parkinson's disease, however general and mental health declined.	
43. Hesse, S., G. Schulte-Tigges, et al. (2003) ³¹²	Evaluated the impact of additional daily therapy for 3 months with a robotic arm trainer on chronic hemiplegic stroke patients. Followed up for 3 months.	Support technology	Germany	Stroke rehabilitation	Patients happy with robotic trainer 8 out of 12 subjects had at least a moderate increase in muscle tone; reduced wrist and finger spacticity; reduced hand pain No lasting effects on follow-up	Key points: Support technology - a step further than support workers It shows the potential to be a valid and satisfactory replacement for support /

						professional staff in stroke rehabilitation
44. Rummary, K., A. Coleman, et al. (2003) ³¹³	Two part methodology to evaluate progress of health and social care partnerships from a management viewpoint: 1. Longitudinal survey tracking 15% of English PCGs in the first 3 years of their existence; 2. In-depth interviews sampled from the above survey with 4 PCGs that highlighted older peoples services as a priority & they represent various stages of joint working.	Sector: Interface Organisation al level	UK	Primary care	Highlights barriers & facilitating factors to partnership working. Barriers include: NHS free / SS means tested, lack of understanding of each other's roles (esp GP & Soc Services), PCGs just forming and establishing own priorities, SS bound by local accountabilities (funded by local taxation) and therefore slow to change / more bureaucracy. Facilitating factors: joint training around assessments, time for relationships & trust to develop, dedicated managerial support, SS on PCT boards, same agenda for older people.	Key points: Not directly relevant to staffing Operational perspective to joint working => understanding of each other's roles has been important in facilitating partnership working
45. Ryan-Woolley, B., K. Wilson, et al. (2004) ²⁷⁸	Case study of implementing new CRT. Multiple methods included: Interviews with patients & staff, Health economist critique, field notes, review of CRT documentation.	Sector: Interface Training: Communication, role awareness Prof groups: All MDT	UK	Community	Cultural divides impeded practice such as SS V health care, medical staff attitudes V nursing/therapy/social workers, acute trusts V older peoples services. Main probs between these cultures were lack of understanding of roles, rehabilitation and what CRT did. Other important issues identified were: Social services found health documentation difficult to comprehend when taking over discharge processes; technology barriers - SS database not used appropriately by health workers; staff shortages made data collection difficult. Patients disliked shortness of input and suddenness of discharge; Staff commented on inadequate discharge information & timing from acute sector & others commented on CRTs inadequate communication with other services.	Key points: Communication between sectors, role understanding, common philosophy & planned, widely consulted implementation key to successful CRT Cultural divides important dynamics in CRT
46. Ward, D., M. Severs, et al. (2004) ³¹⁴	Qualitative	Sector: NHS / Private				
47. Young, J. B., M. Robinson, et	Frail elderly patients (n=800) before the introduction of IC services were compared to patients who were	Intermediate care system	UK	All intermediate care	IC patients compared to their control equivalents had similar clinical outcomes but increased hospital bed days over 12	Key points: Where patients were recruited using normal

al. (2005) ³¹⁵	admitted to IC over a 12 month period (n=848). NEADL was primary outcome measure then hospital bed days, mortality, BI, HAD and care placements. Measured at 3, 6 and 12 months.			services in Leeds	months. Most patients utilised the hospital at home arm of IC.	hospital process, authors feel IC (in particular hospital at home) in practice may not be as effective as RCTs have shown. Assuming the IC services used in this study are staffed as per national average, will staffing differences show an impact on patient outcomes if this study doesn't? Does this demonstrate IC is providing an 'extra' / monitoring service considering they utilised a greater number of hospital bed days?
48. Zaatari, A. and A. Zaatari (2001) ³⁰³	Descriptive	Other issues: Referral types => link to staffing req?				
49. Cornes, M. and J. Manthorpe (2004) ³¹⁶			UK			
50. Fear, T., B. H. De-Renzie, et al. (2004) ³¹⁷	Telephone, face to face interviews and focus groups were held with personnel (managers) of 42 nursing and residential homes in one PCT to identify the extent of independent sector involvement in intermediate care.	Independent sector	UK		Highlights huge diversity in types of independently run facilities Highlights some of the functions independent nursing homes are providing that are IC related.	Key points: Cultural difficulties such as funding structures and philosophy of care are inhibiting use of independent facilities to participate in IC fully. Some homes are fulfilling IC principles No mention of staffing - however implications for cross-agency working - potential for conflict with differing philosophies of care
51. Brown L., Tucker, C. and Domokos, T. (2003) ²⁸⁰	Non randomised study comparing outcomes of >65 yrs patients in an integrated health and social care team with more traditional arrangements over an 18 month period	Integrated health and social care teams	UK	Community	High levels of missing data due to death, too ill or moved into residential care and older people sig more likely to refuse to be interviewed	Key points: High levels of missing data so caution with interpreting results BUT also identifies problem associated with

	<p>Main outcome measure proportion of people living independently at home; secondary measures Barthel, Mental test, Geriatric depression scale, Philadelphia geriatric centre morale scale. Interviews to gauge satisfaction</p>				<p>People in integrated group sig more likely to be referred by family than those in traditional group (p<0.05). Trend towards swifter response for integrated team (but missing data) No diff b/w groups for ADLs & mental function -Bathing and climbing most difficult for both groups Integrated group sig more likely to be depressed & lower QoL Similar levels of all outcomes over time. QoL increased slightly for integrated group.</p> <p>Interviews demonstrated similar satisfaction; speed of response rarely an issue; little interest in who organised the services so long as they received what they felt was needed Most important factor was the quality of relationships experienced with service providers Another significant factor was the relationship with their <u>home care workers</u> - they were also identified as the <u>most important group of service providers</u>. Significant theme was overall poor morale and high extent of loneliness experienced by older people</p>	<p>collecting data in this context/older people Home care worker perceived as most important service provider Relationships with service providers more important than timing of service delivery or indeed who organises delivery (integrated team or not) High levels of loneliness => possible explanation why home care staff most important and relationships most important aspect of service provision</p>
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Appendix 4: Sources of evidence for template analysis of CAICS:

Author	Title	Journal / source	Year
<i>Policy documents</i>			
Department of Health ⁹	HSC/LAC 2001/01 Intermediate Care	The Stationary Office	2001
Department of Health ¹	The NHS Plan	The Stationary Office	2000
Department of Health ²	The National Service Framework for Older People: Intermediate Care	The Stationary Office	2001
<i>Guidance documents</i>			
Steiner A ³¹⁸	Intermediate care: A conceptual framework and review of the literature	King's Fund	1997
Vaughan B & Lathlean J ²⁵⁶	Intermediate care: Models in practice	King's Fund	1999
Bourne J ⁵⁶	Developing effective services for older people	National Audit Office	2003
<i>National Evaluations of Intermediate Care</i>			
Barton et al ²⁸⁴	A national evaluation of the costs and outcomes of Intermediate Care for older people: <i>Final report- Chapter 4 Organisation form and function of intermediate care services and systems</i>	University of Birmingham & University of Leicester	2005
Barton et al	A national evaluation of the costs and outcomes of Intermediate Care for older people: <i>Final report - Chapters 5,6 & 7 Case studies & outcomes</i>	University of Birmingham & University of Leicester	2005
Barton et al	A national evaluation of the costs and outcomes of Intermediate Care for older people: Chapter 3 <i>Systematic review - evidence for the effectiveness of intermediate care.</i>	University of Birmingham & University of Leicester	2005
Green et al ³¹⁹	Effects of locality based community hospital care on independence in older people needing rehabilitation: a randomised controlled trial	British Medical Journal 331: 317-322	2005
Young et al ²⁷⁹	A prospective baseline study of frail older people before the introduction of an intermediate care service	Health and social care in the community 13(4): 307-312	2005
Young et al ³²⁰	An estimate of post acute intermediate care needs in an elderly care department for older people	Health and social care in the community 11(3): 229-231	2003
Godfrey et al ²⁸⁵	An evaluation of intermediate care for older people: <i>Final report – chapters 5-8 case studies</i>	Institute of Health Sciences and Public Health Research - University of Leeds	2005

<i>Other peer reviewed literature</i>			
Enderby P & Stevenson J ²⁸⁶	What is intermediate care? Looking at needs	Managing community care 8(6): 35-40	2000
Enderby P & Wade D ²⁴⁹	Community rehabilitation in the UK	Clinical rehabilitation 15: 577-581	2001
Barrett et al ³²¹	A description of an intermediate care service using routinely collected data	Journal of Nursing Management 10(4): 221-227	2002
Parker G et al ²⁹⁴	Best place of care for older people after acute and during sub-acute illness: a systematic review	Journal of health services research and policy 5(3): 176-189	1999
Parker S et al ²⁶⁰	Systematic review of intermediate care literature: updated Best place of care for older people	Manuscript in preparation	2006

Appendix 5: Summary of the main themes arising from the template analysis

1. Context	Funding	<i>Source Reason Type e.g recurrent Amount</i>
	Population	<i>Size Epidemiology Ethnic groups Local economy e.g. poverty Age mix Housing e.g ownership, type Life expectancy</i>
	Nature of area	<i>Rural Urban Semi-rural / sub-urban</i>
	Host organisation / description of care system	<i>Joint health and local authority Health authority Local authority Voluntary sector Independent sector Mental health trust</i>
	Organisational context	<i>Overarching management structures Operational policies Steering groups e.g. members, remit Operational Strategy</i>
2. Reason for Service	Purpose / Goal	<i>Organisation goal Patient goal Carer goal</i>
	Initiating factors Contributing factors	

3. Service Users	Client Profile Individual Client Needs	<i>Medical</i> <i>Rehabilitative</i> <i>Social</i>
4. Access to service		

<p>Availability of service</p> <p>Team organisation</p>	<p><i>Employing organisation / payment stream</i></p> <p><i>Pathways e.g. rotations</i></p> <p><i>Management structure</i></p> <p><i>Shared protocols</i></p> <p><i>Shared client files / multi-professional record</i></p> <p><i>Team base</i></p> <p><i>Team meetings</i></p>
<p>6. The organisation of care</p> <p>Intervention</p> <p>Duration of input (individual)</p> <p>Organisation of input</p> <p>Intensity of input</p>	<p><i>Supportive</i></p> <p><i>Active</i></p> <p><i>Assessment</i></p> <p><i>Non-active</i></p> <p><i>Frequency</i></p> <p><i>Level</i></p> <p><i>Time</i></p>

References

1. Department of Health. The NHS Plan. A Plan for Investment. A Plan for Reform. London: Department of Health, 2000.
2. Department of Health. The National Service Framework for Older People. London: Department of Health, 2001.
3. Department of Health. The National Service Framework for Long Term Conditions. London: Department of Health, 2005.
4. Department of Health. Explanatory Notes to Care Standards Act 2000. London: Department of Health, 2000.
5. Department of Health. Building Capacity and Partnership in Care. London: Department of Health, 2001.
6. Department of Health. Executive Letter (97)62, Better Services for Vulnerable People. London: Department of Health, 1997.
7. Department of Health. Better Services for Vulnerable People: Maintaining the Momentum. London: Department of Health, 1998.
8. Department of Health. HSC 2001/01: LAC (2001)1 Intermediate Care Services for Older People. London: Department of Health, 2001.
9. Department of Health. HSC 2000/011: LAC 2000/10 Implementation of the Health Act Partnership Arrangements. London: Department of Health, 2000.
10. Department of Health. Our Health, our care, our say: A new direction for community services. London: Department of Health, 2006.
11. Department of Health. A new ambition for old age: next steps in implementing the national service framework for older people. London: Department of Health, 2006.
12. Department of Health. The NHS Improvement Plan: Putting People at the Heart of Public Services. London: Department of Health, 2004.
13. Department of Health. HR in the NHS Plan: More Staff Working Differently. London: Department of Health, 2002.
14. Department of Health. Improving Working Lives Standard. London: Department of Health, 2000.
15. Department of Health. Investment and Reform for NHS Staff: Taking Forward the NHS Plan London: Department of Health, 2001.
16. Department of Health. Shifting the balance of power within the NHS securing delivery. London: Department of Health, 2001.
17. Department of Health. Executive Letter 02/12/2004: Implementation of Agenda for Change from 1st December 2004. London: Department of Health, 2004.
18. Department of Health. The NHS Knowledge and Skills Framework (NHS KSF) and the Development Review Process. London: Department of Health, 2004.
19. NHS Modernisation Agency. National Practitioner Programme.
20. NHS Modernisation Agency. Introduction to role redesign and CWP, 2004.
21. Department of Health. Meeting the Challenge: A Strategy for the Allied Health Professions. London: Department of Health, 2000.
22. Department of Health. Supplementary Prescribing by Nurses, Pharmacists, Chiropodists/Podiatrists, Physiotherapists and Radiographers within the NHS in England: A Guide for Implementation. London: DoH, 2005.
23. Department of Health. Future Staffing Requirements. The Government's Response to the Health Committee's Report on Future Staffing Requirements. June 1999. London: Department of Health, 1999.

24. Department of Health. A Health Service of All the Talents: Developing the NHS Workforce. Consultation document on the Review of Workforce Planning. London: Department of Health, 2000.
25. Department of Health. Workforce Development Confederations functions, accountabilities and working relationships. London: Department of Health, 2002.
26. Department of Health. National Standards, Local Action: Health and Social Care Standards and Planning Framework 2005/06–2007/08. London: Department of Health, 2004.
27. Department of Health. A First Class Service: Quality in the New NHS. London: Department of Health, 1998.
28. Department of Health. A Quality Strategy for Social Care. London: Department of Health, 2000.
29. Department of Health. Modernising Regulation in the Health Professions: A Consultation Document. London: Department of Health, 2000.
30. Department of Health. Modernising Regulation: Establishing the New Health Professions Council. London: Department of Health, 2001.
31. Department of Health. Working Together, Learning Together: A Framework for Lifelong Learning for the NHS. London: Department of Health, 2001.
32. Department of Health. The National Health Service Reform and Health Care Professions Act 2002 (Commencement No. 2) Order. London: Department of Health, 2002.
33. NHS Employers. Large Scale Workforce Change.
34. Department of Health. Press release: Health minister announces plans to regulate support workers and complementary therapists. London: Media Centre, Department of Health, 2004.
35. Department of Health. Regulation of health care staff in England and Wales: a consultation document. London: Department of Health, 2004.
36. Tomassini C, Glaser K, Douglas AW, Marjolein IB, Grundy E. Living arrangement among older people: an overview of trends in Europe and the USA. *Population Trends* 2004;115(Spring):24 - 34.
37. Department of Health. National Service Framework for Older People: Supporting Implementation. Intermediate care moving forward. London: Department of Health, 2002.
38. Howe A. Trends in aged care service utilisation: Interpretations and implications of compression of morbidity. *Compression of Morbidity Workshop Papers, Occasional Papers Series No. 4*. Canberra, Australia: Commonwealth Department of Health and Aged Care,, 1999:5 - 32.
39. Hutt R, Rosen R, McCauley J. Case-managing long term conditions. What impact does it have in the treatment of older people? London: King's Fund, 2004:28.
40. Nancarrow S. Dynamic role boundaries in intermediate care services. *Journal of Interprofessional Care* 2004;18(2):141-151.
41. Martin G, Peet S, Hewitt G, Parker H. Diversity in intermediate care. *Health and Social Care in the Community* 2004;12(2):150-154.
42. Department of Health. NHS Professionals A coordinated, NHS-led approach to temporary staffing. London: NHS, 2002:40.
43. Department of Health. Agenda for Change - Proposed Agreement. London, 2003:80.
44. Department of Health. Delivering HR in the NHS Plan 2004. London: Department of Health, 2004:60.
45. Nancarrow S, Mountain G. Staffing intermediate care services : a review of the literature to inform workforce development. *Published by: Sheffield Hallam University, Sheffield, 2002, 80p., ISBN: 1843870037*. 2002.
46. Department of Health. Delivering the NHS Improvement Plan: the workforce contribution. London: Department of Health, 2004.
47. Buchan J, Dal Poz MR. Skill mix in the health care workforce: reviewing the evidence. *Bulletin Of The World Health Organization* 2002;80(7):575-580.
48. Nancarrow S. Improving intermediate care: giving practitioners a voice. *Journal of Integrated Care* 2004;12(1):33-41.

49. Department of Health. The New NHS Modern Dependable. London: Department of Health, 1997.
50. Department of Health. Modernising Social Services. London: Department of Health, 1998.
51. Department of Health. Choosing health: Making healthy choices easier. London: Department of Health, 2004.
52. Audit Commission. The Coming of Age: Improving Care Services for Older People. London: Audit Commission, 1997.
53. Department of Health. Shaping the Future of the NHS: Long Term Planning for Hospitals and Related Services. Consultation document on the findings of the National Beds Inquiry. London: Department of Health, 2000.
54. Department of Health. HSC 2001/01: LAC (2002) The Single Assessment Process for Older People. London: Department of Health, 2002.
55. Department of Environment and Heritage. Quality and Choice for Older People's Housing: A Strategic Framework. London, 2001.
56. Bourne J. Developing effective services for older people. In: Office TNA, editor. London: The Stationary Office, 2003.
57. Department of Health. A Compendium of Solutions to implementing the Working Time Directive for Doctors in Training from August 2004, 2004.
58. Select Committee on Health. Report on Future Staffing Requirements for the NHS. London: House of Commons, 1999.
59. Wanless D. Securing Our Future Health: Taking a Long-Term View. London: HM Treasury, 2002.
60. Department of Health. Making a Difference: Strengthening the Nursing, Midwifery and Health Visiting Contribution to Health and Healthcare London: Department of Health, 1999.
61. Department of Health. Foundation Degree. London, 2001.
62. Department of Health. Social Care Workforce: Developing a New National Agenda – Report. London: Department of Health, 2004.
63. Department of Health. Meeting the Challenge: A Strategy for Allied Health Professions. London: DoH, 2000.
64. Department of Health. Creating an interprofessional workforce: Learning to work together.
65. Department of Health. Working Together: Securing a Quality Workforce for the NHS. London: Department of Health, 1998.
66. Department of Health. A Workforce Response to Local Delivery Plans: A Challenge for NHS Boards. London: Department of Health, 2005.
67. Department of Health. Shifting the Balance of Power: Securing Delivery - Human Resources Framework. London: Department of Health, 2001.
68. Department of Health. A National Framework to Support Local Workforce Strategy Development: A Guide for HR Directors in the NHS and Social Care. London: Department of Health, 2005.
69. Department of Health. Establishing the new Health Professions Council: Report on the statutory consultation. London: Department of Health, 2002.
70. Department of Health. Delivering the NHS Plan: Next Steps on Investment, Next Steps on Reform. London: Department of Health, 2002.
71. Skills for Health. Career Framework.
72. Skills for Health. About us.
73. Department of Health. Agenda for Change – What will it mean for you? A guide for Staff. London: Department of Health, 2004.
74. Skills for Health. National Institute for Mental Health England: National workforce programme.
75. Waddilove D. Case notes: the project officer's observations on topics and issues emerging from the New Types of Worker project. Leeds: Skills for Care, 2006.
76. Waddilove D. Organisational change and workforce development: some vignettes from the New Types of Worker project. Leeds: Skills for Care, 2006.
77. Workforce Review Team. Christmass Tree Leaflet: NHS Healthcare Workforce.

78. Johnson T. Governmentality and the Institutionalisation of Expertise. In: Johnson T, Larkin G, Saks M, editors. *Health Professions and the State in Europe*. London: Routledge, 1995.
79. Macdonald KM. *The Sociology of the Professions*. London: Sage, 1995.
80. Saks M. The Limitations of the Anglo-American Sociology of the Professions: A Critique of the Current Neo-Weberian Orthodoxy. *Knowledge, Work and Society* 2003;1(1):13-31.
81. Saks M. *Professions and the Public Interest: Medical Power, Altruism and Alternative Medicine*. London: Routledge, 1995.
82. Berlant JL. *Profession and Monopoly*. Berkley: University of California Press, 1975.
83. Johnson T. *Professions and Power*. Basingstoke: Macmillan, 1972.
84. Larkin GV. *Occupational Monopoly and Modern Medicine*. London: Tavistock, 1983.
85. Larkin GV. The Regulation of the Professions Allied to Medicine. In: Allsop J, Saks M, editors. *Regulating the Health Professions*. London: Sage, 2002.
86. Salter B. Who Rules?: The New Politics of Medical Regulation. *Social Science & Medicine* 2001;52:871-883.
87. Larkin GV. Medical Dominance and Control: Radiographers in the Division of Labour. *Sociological Review* 1979;26(4):843-858.
88. Larkin GV. Professional Autonomy and the Ophthalmic Optician. *Sociology of Health and Illness* 1981;3(1):15-30.
89. Pilgrim D, Treacher A. *Observing Clinical Psychology*. London: Routledge, 1992.
90. Larkin GV. Medical Dominance in Britain: Image and Historical Reality. *The Millbank Quarterly* 1988;66(Supplement 2):117-132.
91. Elston M. The Politics of Professional Power: Medicine in a Changing Health Service. In: Gabe G, Calnan M, Bury M, editors. *The Sociology of the Health Service*. London: Routledge, 1991.
92. Hugman R. *Power in the Caring Professions*. Basingstoke: Macmillan, 1991.
93. Turner BS. *Medical Power and Social Knowledge*. London: Sage, 1995.
94. Turner BS. Knowledge, Skills and Occupational Strategy: The Professionalisation of Paramedical Groups. *Community Health Studies* 1985;9(1):38-47.
95. Löyttyneimi V. Doctors Drifting: Autonomy and Career Uncertainty in Young Physicians' Stories. *Social Science & Medicine* 2001;52:227-237.
96. Schepers RMJ. The Belgian Medical Profession Since the 1980s: Dominance and Decline? In: Johnson T, Larkin GV, Saks M, editors. *Health Professions and the State in Europe*. London: Routledge, 1995.
97. Schepers RMJ, Hermans HEGM. The Medical Profession and Alternative Medicine in the Netherlands: Its History and Recent Developments. *Social Science & Medicine* 1999;48:343-351.
98. Tousijn W. Medical Dominance in Italy. *Social Science & Medicine* 2002;55(733-741).
99. Barnett JR, Barnett P, Kearns RA. Declining Professional Dominance?: Trends in the Proletarianisation of Primary Care in New Zealand. *Social Science & Medicine* 1998;46(2):193-207.
100. Exworthy M, Halford S. *Professionals and the New Managerialism in the Public Sector*. Buckingham: Open University Press, 1999.
101. Saks M. Removing the Blinkers? A Critique of Recent Contributions to the Sociology of the Professions. *Sociological Review* 1983;31(1):1-21.
102. Parkin F. *Marxism and Class Theory: A Bourgeois Critique*. London: Tavistock, 1979.
103. Carr-Sanders AM, Wilson PA. *The Professions*. London: Frank Cass and Co., 1933.
104. Goode WJ. Community within a Community. *American Sociological Review* 1957;22:194-200.
105. Millerson G. *The Qualifying Associations*. London: Routledge and Kegan Paul, 1964.
106. Pilgrim D, Rogers A. *A Sociology of the Mental Health and Illness*. Buckingham: Open University Press, 1993.

107. Larkin GV. Continuity in Change: Medical Dominance in the United Kingdom. In: Hafferty FW, McKinlay JB, editors. *The Changing Medical Profession: An International Perspective*. London: Oxford University Press, 1993.
108. Larkin GV. State Control and the Health Professions in the United Kingdom: Historical Perspectives. In: Johnson T, Larkin G, Saks M, editors. *Health Professions and the State in Europe*. London: Oxford University Press, 1995.
109. Murphy R. Exploitation or Exclusion? *Sociology* 1985;19:225-243.
110. Murphy R. Weberian Closure Theory: A Contribution to the Ongoing Assessment. *British Journal of Sociology* 1986;37:21-41.
111. Allsop J, Saks M. Introduction: The Regulation of the Health Professions. In: Allsop J, Saks M, editors. *The Regulation of the Health Professions*. London: Sage, 2002.
112. Fournier V. Boundary Work and the (Un) Making of the Professions. In: Malin N, editor. *Professionalism, Boundaries and the Workplace*. London: Routledge, 2000.
113. Larson MS. *The Rise of Professionalism*. California: University of California Press, 1977.
114. Friedson E. *Professionalism Reborn: Theory, Prophecy and Policy*. Oxford: Polity Press, 1994.
115. Friedson E. *Profession of Medicine: A Study of the Sociology of Applied Knowledge*. Chicago: Chicago Press, 1970.
116. Friedson E. *Professional Dominance: The Social Structure of Medical Care*. New York: Atherton Press, 1970.
117. Kronus CL. The Evolution of Occupational Power. *Sociology of Work and Occupations* 1976;3(1):3-37.
118. Weber M. *Economy and Society: An Outline of Interpretive Sociology*. Berkeley: University of California Press, 1978.
119. Friedson E. *Professionalism: The Third Logic*. Oxford: Polity Press, 2001.
120. Johnson T. Expertise and the State. In: Gane M, Johnson T, editors. *Foucault's New Domains*. London: Routledge, 1993.
121. Abbott A. *The System of Professions: An Essay on the Division of Expert Labour*. Chicago: Chicago University Press, 1988.
122. Light D. Countervailing Powers: A Framework for Professions in Transition. In: Johnson T, Larkin GV, Saks M, editors. *Health Professions and the State in Europe*. London: Routledge, 1995.
123. Hartley H. The System of Alignments Challenging Physician dominance: An Elaborated Theory of Countervailing Powers. *Sociology of Health and Illness* 2002;24(2):178-207.
124. De Voe JE, Short SD. A Shift in the Historical Trajectory of Medical dominance: The Case of Medibank and the Australian Doctors' Lobby. *Social Science & Medicine* 2003;57:343-353.
125. Marjoribanks T, Lewis JM. Reform and Autonomy: Perceptions of the Australian General Practice Community. *Social Science & Medicine* 2003;56:2229-2239.
126. Boyce R, Rowe PA, Boyle MV, O'Reilly K. A Comparative Analysis of Entrepreneurial Approaches within Public Healthcare Organisations. *Australian Journal of Public Administration* 2004;23(4):478-496.
127. Miles A, Hampton JR, Hurwitz B, editors. *NICE, CHI and the NHS Reforms: Enabling Excellence or Imposing Control?* London: Aesculapius Medical Press, 2000.
128. Casey R, Allen C. Social Housing Managers and the Performance Ethos: Towards a 'Professional Project of the Self'. *Work, Employment and Society* 2004;18(2):395-412.
129. Armstrong D. Clinical Autonomy, Individual and Collective: The Problem of Changing Doctors' Behaviour. *Social Science & Medicine* 2002;55:1771-1777.
130. Cole A. Patients are at the Heart of New Medical Professionalism. *British Medical Journal* 2005;331:1355.
131. Royal College of Physicians. National Sentinel Stroke Audit 2005. London, 2005:96.
132. Stacey M. *Regulating British Medicine: The General Medical Council*. Chichester: John Wiley and Sons, 1992.

133. Parry N, Parry J. Professionalism and Unionism - Aspects of Class Conflict in the National Health Service. *Sociological Review* 1977;25(4):823-840.
134. Jones RK. Shism and Heresy in the Development of Orthodox Medicine. *Social Science & Medicine* 2004;58:703-712.
135. Willis E. *Medical Dominance: The Division of Labour in Australian Healthcare*. Sydney: George Allen and Unwin, 1983.
136. Cox D. Health Service Management - A Sociological View: Griffiths and the Non-Negotiated Order of the Hospital. In: Gabe G, Calnan M, Bury M, editors. *The Sociology of the Health Service*. London: Routledge, 1991.
137. Flynn R, Williams G, Pickard S. *Markets and Networks: Contracting in Community Health Services*. Buckingham: Open University Press, 1996.
138. Alaszewski A. Restructuring Health and Welfare Professions in the United Kingdom: The Impact of Internal Markets on the Medical, Nursing and Social Work Professions. In: Johnson T, Larkin G, Saks M, editors. *Health Professions and the State in Europe*. London: Routledge, 1995.
139. Hunter DJ. From Tribalism to Corporatism: The Managerial Challenge to Medical Dominance. In: Kelleher D, Gabe J, Williams G, editors. *Challenging Medicine*. London: Routledge, 1994.
140. Malin N, editor. *Professionalism, Boundaries and the Workplace*. London: Routledge, 2000.
141. Rosenthal MM. Medical professional autonomy in an era of accountability and regulation. In: Dent M, Whitehead S, editors. *Managing Professional Identities. Knowledge, Performativity and the "New" professional*. London: Routledge, 2002:61-80.
142. Stacey M. The GMC and professional accountability. *Public Policy and Administration* 1989;4:12-27.
143. Larkin GV. Professionalism, Dentistry and Public Health. *Social Science & Medicine* 1980;14a:223-229.
144. Ham C. *Management and Competition in the New NHS*. Oxford: Radcliffe Medical Press, 1994.
145. Pollock AM. *NHS plc: The Privatisation of Our Health Care*. London: Verso, 2004.
146. Strong P, Robinson J. *The NHS: Under New Management*. London: Oxford University Press, 1990.
147. Malin N, Wilmot S, Manthorpe J. *Key Concepts and Debates in Health and Social Policy*. Maidenhead: Open University Press, 2002.
148. Exworthy M, Wilkinson E, McColl A, Moore M, Roderick P, Smith H, et al. The Role of Performance Indicators in Changing the Autonomy of the General Practice Profession in the UK. *Social Science & Medicine* 2003;56:1493-1504.
149. Ham C. *Management and competition in the New NHS*. Oxford: Radcliffe Medical Press, 1995.
150. Allsop J. Shifting spheres of opportunity: the professional powers of general practitioners within the British National Health Service. In: Johnson T, Larkin G, Saks M, editors. *Health Professions and the State of Europe*. London: Routledge, 1995.
151. Borthwick AM. Challenging Medicine: The Case of Podiatric Surgery. *Work, Employment and Society* 2000;14(2):369-383.
152. Department of Health. *Working for Patients*. London: HMSO, 1989.
153. Davies C, Owen JW, editors. *The Future Health Workforce*. Basingstoke: Palgrave Macmillan, 2003.
154. Alaszewski A. The Impact of the Bristol Royal Infirmary Disaster and Inquiry on Public Services in the UK. *Journal of Interprofessional Care* 2002;16(4):371-378.
155. Kennedy I. Learning from Bristol - The Report of the Public Inquiry into Children's Heart Surgery at the Bristol Royal Infirmary 1984 - 1995. London: The Stationary Office, 2001.
156. Merry P, editor. *Wellard's NHS Handbook 2005 / 6*. Wadhurst: JMH Publishing, 2005.
157. Department of Health. *Agenda for Change*. London: DoH, 2001.
158. Cameron A, Masterton A. Reconfiguring the Clinical Workforce. In: Davies C, Owen JW, editors. *The Future Health Workforce*. Basingstoke: Palgrave Macmillan, 2003.

159. Allsop D. Regulation and the Medical Profession. In: Allsop J, Saks M, editors. *Regulating the Health Professions*. London: Sage, 2002.
160. Department of Health. Protecting staff, delivering services: Implementation of the European Working Time Directive for Doctors in Training. London: Department of Health, 2003.
161. Department of Health. Hours of work of doctors in training. The new deal. London: Department of Health, 1991.
162. Department of Health. A policy framework for commissioning cancer services (the Calman/Hine report). Prepared by an expert advisory group on cancer to the Chief Medical Officers of England and Wales. London: Department of Health, 1995.
163. Williams A. Challenging Identities: Working Together Differently in Primary Care. In: Davies C, Owen JW, editors. *The Future Health Workforce*. Basingstoke: Palgrave Macmillan, 2003.
164. Horrocks S, Anderson E, Parry K, Clement J, Archard L, Turton P, et al. A Randomised Controlled Trial of the Nurse Practitioner Versus General Practitioner Care for Patients Requesting "Same Day" Consultations in Primary Care. *British Medical Journal* 2000;320(1043-1048).
165. Geldman A. NHS Staff: The Issue Explained. *Guardian* 2002 26th June.
166. Pearson K, Reilly P, Robinson D. Recruiting and Developing an Effective Workforce in the British NHS. *Journal of Health Services Research and Policy* 2004;Supplement 1(SI):17-23.
167. Katikireddi V. UK Universities to Train Physician Assistants. *Student British Medical Journal* 2004;12:96.
168. Thornley C. What Future for Health Care Assistants: High Road or Low Road? In: Davies C, Owen JW, editors. *The Future Health Workforce*. Basingstoke: Palgrave Macmillan, 2003.
169. Cant S, Sharma U. The Reluctant Profession - Homeopathy and the Search for Legitimacy. *Work, Employment and Society* 1995;9(4):741-762.
170. Welsh S, Kelner M, Wellerman B, Boon H. Moving Forward? Complementary and Alternative Practitioners Seeking Self-Regulation. *Sociology of Health and Illness* 2004;26(2):216-241.
171. Nancarrow SA, Borthwick AM. Dynamic Professional Boundaries in the Healthcare Workforce. *Sociology of Health and Illness* 2005;27(7):897-919.
172. Øvretveit J. Medical Dominance and the Development of Professional Autonomy in Physiotherapy. *Sociology of Health and Illness* 1985;27(7):76-93.
173. Witz A. *Professions and Patriarchy*. London: Routledge, 1992.
174. Copeland-Griffiths MC. Protection of Title and the Chiropractic Profession. *British Journal of Therapy and Rehabilitation* 1998;5(5):253-256.
175. Fielding S. The Long Road to Protection of Title. *British Journal of Therapy and Rehabilitation* 1998;5(5):249-252.
176. King TI. Professions, Power and Therapeutic Responsibility. *European Journal of Chiropractic* 1998;46:11-16.
177. Wilson FJH. A Survey of Chiropractors in the United Kingdom. *European Journal of Chiropractic* 2003;50:185-198.
178. Price RC, Miller LR, Mellor F. Longitudinal Changes in Extended Roles in Radiographers. *Radiography* 2002;8:223-234.
179. Webster C. 50 Years of the NHS. *The NHS Handbook 1998 / 1999*. Tunbridge Wells: JHM Publishing, 1998.
180. Smith S, Roberts P, Balmer S. Role Overlap and Professional Boundaries: Future Implications for Physiotherapy and Occupational Therapy in the NHS. *Physiotherapy* 2000;86(8):397-400.
181. Timmons S, Tanner J. A Disputed Occupational Boundary: Operating Theatre and Operating Department Practitioners. *Sociology of Health and Illness* 2004;26(5):645-666.
182. Britten N. Prescribing and the Defence of Clinical Autonomy. *Sociology of Health and Illness* 2001;23(4):478-496.
183. Edmunds J, Calnan MW. The Reprofessionalisation of Community Pharmacy? An Exploration of Attitudes to Extended Roles for Community Pharmacists Among Pharmacists and General Practitioners in the United Kingdom. *Social Science & Medicine* 2001;53:943-955.

184. Gilbert L. Pharmacy's Attempts to Extend its Roles: A Case Study in South Africa. *Social Science & Medicine* 1998;47(2):153-164.
185. Gilbert L. Dispensing Doctors and Prescribing Pharmacists: A South African Perspective. *Social Science & Medicine* 1998;46(1):83-95.
186. Borthwick AM. Predicting the impact of new prescribing rights. *The Diabetic Foot* 2001;4(1):4-8.
187. Borthwick AM. Drug Prescribing in Podiatry: Radicalism or Tokenism? *British Journal of Podiatry* 2001;4(2):56-64.
188. Borthwick AM. Attaining Prescribing Rights: Miracle or Mirage? *British Journal of Podiatry* 2002;5(4):158.
189. Borthwick AM. Prescribing Rights for Allied Health Professions: Temporary Lull or Quiet Abandonment? *Podium* 2003;1(4):4-6.
190. Borthwick AM. The Politics of Allied Health Prescribing: Reflections on a New Discourse. *British Journal of Podiatry* 2004;7(2):31.
191. Luker KA, Hogg C, Austin L, RFerguson B, Smith K. Decision Making: The Context of Nurse Prescribing. *Journal of Advanced Nursing* 1998;27:657-665.
192. Lugan M, Secker-Walker J. *Clinical Governance - Making it Happen*. London: The Royal Society of Medicine Press Ltd, 1999.
193. French GJ. International Qualifications. *British Journal of Podiatry* 2000;3(4):90.
194. Sheaff R, Rogers A, Pickard S, Marshall M, Campbell S, Sibbald B, et al. A Subtle Governance: 'Soft' Medical Leadership in English Primary Care. *Sociology of Health and Illness* 2003;25(5):408-428.
195. Johnston K, Kennedy C, Murdoch I, Taylor P, Cook C. The cost-effectiveness of technology transfer using telemedicine. *Health Policy And Planning* 2004;19(5):302-309.
196. Buchan J, Ball J, O'May F. If changing skill mix is the answer, what is the question? *Journal Of Health Services Research & Policy* 2001;6(4):233-238.
197. Midy F. Efficacite et efficience du pratage des competences dans le secteur des soin primaires. *Centre d'Etude et de Documentations en Economie de la Sante (CREDES), Paris* 2003.
198. Hong Y, Lee I. Evaluation of Community Nurse Practitioners in Korea. *Journal of Korean Academy of Nursing* 1994;24:568-583.
199. Buchan J, Calman L. Skill Mix and policy Change in the Health Workforce: Nurses in Advanced Roles. *OECD Health Working Paper 17*. Paris: OECD, 2004.
200. McPherson K, Kersten P, George S, Lattimer V, Ellis B, Breton A, et al. Extended Roles for Allied Health Professionals in the NHS. London: NHS Service and Delivery Organisations (SDO), 2004.
201. Brown SA, Grimes DE. A meta-analysis of nurse practitioners and nurse midwives in primary care. *Nursing Research* 1995;44(6):332-339.
202. Feldman MJ, Ventura MR, Crosby F. Studies of nurse practitioner effectiveness. *Nursing Research* 1987;36(5):303-308.
203. Calpin-Davies PJ, Akehurst RL. Doctor-nurse substitution: the workforce equation. *Journal Of Nursing Management* 1999;7(2):71-79.
204. Carr Hill R, Currie L, Dixon P. The potential for improving the effectiveness of the workforce in secondary care: What is the evidence? A scoping exercise, 2003.
205. CNA. Nursing Staffing Mix: A literature review. Ottawa: Canadian Nurses Association, 2004.
206. Crisp J. Standards for Nursing Care and Relationships Between Skill Management and Patient Outcomes. *National Review of Nursing Education*. Canberra: Commonwealth Department of Education, Science and Training, Commonwealth of Australia, 2002.
207. Currie V, Harvey G, West E, McKenna H, Keeney S. Relationship between quality of care, staffing levels, skill mix and nurse autonomy: literature review. *Journal Of Advanced Nursing* 2005;51(1):73-82.
208. Dellefield ME. The relationship between nurse staffing in nursing homes and quality indicators. *Journal Of Gerontological Nursing* 2000;26(6):14-28.

209. Dowswell T, Renfrew MJ, Hewison J, Gregson BA. A review of the literature on the midwife and community-based maternity care. *Midwifery* 2001;17(2):93-101.
210. Ferguson K. Extended Roles for Allied Health Professionals in the NHS. London: NHS Service and Delivery Organisations (SDO), 2004.
211. Jenkins-Clarke S, Carr-Hill R, Dixon P. Teams and seams: skill mix in primary care. *Journal Of Advanced Nursing* 1998;28(5):1120-1126.
212. Kernick D, Scott A. Economic approaches to doctor/nurse skill mix: problems, pitfalls, and partial solutions. *The British Journal Of General Practice: The Journal Of The Royal College Of General Practitioners* 2002;52(474):42-46.
213. Lankshear AJ, Sheldon TA, Maynard A. Nurse staffing and healthcare outcomes: a systematic review of the international research evidence. *ANS. Advances In Nursing Science* 2005;28(2):163-174.
214. McKee M, Dubois C-A, Sibbald B. Changing Professional Boundaries. In: Dubois C-A, McKee M, Nolte E, editors. *Human Resources for Health in Europe*. Buckingham: University Press, 2005:63-78.
215. Richards A, Carley J, Jenkins-Clarke S, Richards DA. Skill mix between nurses and doctors working in primary care-delegation or allocation: a review of the literature. *International Journal Of Nursing Studies* 2000;37(3):185-197.
216. Richardson G, Maynard A, Cullum N, Kindig D. Skill mix changes: substitution or service development? *Health Policy (Amsterdam, Netherlands)* 1998;45(2):119-132.
217. Sibbald B, Shen J, McBride A. Changing the skill-mix of the health care workforce. *Journal Of Health Services Research & Policy* 2004;9(Supplement 1):28-38.
218. Siehoff AM. Impact of unlicensed assistive personnel on patient satisfaction: an integrative review of the literature. *Journal Of Nursing Care Quality* 1998;13(2):1-10.
219. Winch PJ, Gilroy KE, Wolfheim C, Starbuck ES, Young MW, Walker LD, et al. Intervention models for the management of children with signs of pneumonia or malaria by community health workers. *Health Policy And Planning* 2005;20(4):199-212.
220. Laurant M, Reeves D, Hermens R, Braspenning J, Grol R, Sibbald B. Substitution of doctors by nurses in primary care. *Cochrane Database Syst Rev* 2004(4):CD001271.
221. Zwarenstein M, Reeves S, Barr H, Hammick M, Koppel I, Atkins J. Interprofessional educations: Effects on professional practice and health care outcomes. *The Cochrane Library*. 4 ed. Oxford: Update Software, 2002.
222. Aiken LH, Clarke SP, Sloane DM. Hospital staffing, organization, and quality of care: cross-national findings. *International Journal for Quality in Health Care* 2002;14(1):5-13.
223. Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K. Nurse-staffing levels and the quality of care in hospitals. *The New England Journal Of Medicine* 2002;346(22):1715-1722.
224. Bond CA, Raehl CL, Franke T. Interrelationships among mortality rates, drug costs, total cost of care, and length of stay in United States hospitals: summary and recommendations for clinical pharmacy services and staffing. *Pharmacotherapy* 2001;21(2):129-141.
225. Tourangeau AE, Giovannetti P, Tu JV, Wood M. Nursing-related determinants of 30-day mortality for hospitalized patients. *The Canadian Journal Of Nursing Research = Revue Canadienne De Recherche En Sciences Infirmieres* 2002;33(4):71-88.
226. Ticker J. Patient volume, staffing and workload in relation to risk-adjusted outcomes in a random stratified sample of UK neonatal intensive care units: A prospective evaluation. *The Lancet* 2002;359(9301):99-107.
227. Kovner C, Jones C, Zhan C, Gergen PJ, Basu J. Nurse staffing and postsurgical adverse events: an analysis of administrative data from a sample of U.S. hospitals, 1990-1996. *Health Services Research* 2002;37(3):611-629.
228. Jenkins Clarke S, Carr Hill R. Workforce and Workload: Are nursing resources used effectively? *Nursing Times Research* 2003;8(4):238-248.

229. McGillis Hall L, Doran D, Pink GH. Nurse staffing models, nursing hours, and patient safety outcomes. *The Journal Of Nursing Administration* 2004;34(1):41-45.
230. Bostrom J, Zimmerman J. Restructuring nursing for a competitive health care environment. *Nursing Economics* 1993;11(1):35-41, 54.
231. Hesterly SC, Robinson M. Alternative Caregivers: Cost effective utilisation of RNs. *Nursing Administration Quarterly* 1990;14(3):45-57.
232. Garfink CM, Kirby KK, Bachman SS. The University Hospital Nurse Extender Program. Part IV, What have we learned? *The Journal Of Nursing Administration* 1991;21(4):26-31.
233. Huston CJ. Contemporary staffing-mix changes: the impact on postoperative pain management. *Pain Management Nursing: Official Journal Of The American Society Of Pain Management Nurses* 2001;2(2):65-72.
234. Powers PH, Dickey CA, Ford A. Evaluating an RN/co-worker model. *The Journal Of Nursing Administration* 1990;20(3):11-15.
235. Zimmerman P. The use of unlicensed assistive personnel: An update and skeptical look at a role that may present more problems than solutions. *Journal of Emergency Nursing* 2000;26(4):312-317.
236. Vargos-Lagos V. How should resources be allocated between physicians and nurses in Africa and Latin America? *Social Science and Medicine* 1991;33(6):723-727.
237. Kinnersley P, Anderson E, Parry K, Clement J, Archard L, Turton P, et al. Randomised controlled trial of nurse practitioner versus general practitioner care for patients requesting "same day" consultations in primary care. *BMJ (Clinical Research Ed.)* 2000;320(7241):1043-1048.
238. Shum C, Humphreys A, Wheeler D, Cochrane MA, Skoda S, Clement S. Nurse management of patients with minor illnesses in general practice: multicentre, randomised controlled trial. *BMJ (Clinical Research Ed.)* 2000;320(7241):1038-1043.
239. Venning P, Durie A, Roland M, Roberts C, Leese B. Randomised controlled trial comparing cost effectiveness of general practitioners and nurse practitioners in primary care. *BMJ (Clinical Research Ed.)* 2000;320(7241):1048-1053.
240. Black N. Why we need observational studies to evaluate the effectiveness of health care. *BMJ (Clinical Research Ed.)* 1996;312(7040):1215-1218.
241. Masys DR. Effects of current and future information technologies on the health care workforce. *Health Affairs (Project Hope)* 2002;21(5):33-41.
242. Lewin S, Dick J, Pond P, Zwarenstein M, Aja G, van Wyk B, et al. Lay health workers in primary and community health care. *Cochrane Database Syst Rev* 2005;4.
243. Mackey H, Nancarrow S. *Enabling Independence: A guide for rehabilitation workers*. Oxford: Blackwell Publishing, 2006.
244. Hornby P, Forte P. Guidelines for Introducing Human Resource Indicators to Monitor Health Service Performance. Keele University: Centre for Health Planning and Management, 2002.
245. Graham B, McGregor K. What does a GP consultation cost? *The British Journal Of General Practice: The Journal Of The Royal College Of General Practitioners* 1997;47(416):170-172.
246. Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K. Nurse-staffing levels and the patient outcomes in hospitals. Washington DC: US Dept of Health and Human Services, Health Resources and Service Administration, 2002.
247. Irvine D, O'Brien-Pallas LL, Murray M, Cockerill R, Sidani S, Laurie-Shaw B, et al. The reliability and validity of two health status measures for evaluating outcomes of home care nursing. *Research In Nursing & Health* 2000;23(1):43-54.
248. Cohen M, Village J, Ostry AS, Ratner PA, Cvitkovich Y, Yassi A. Workload as a determinant of staff injury in intermediate care. *International Journal of Occupational and Environmental Health* 2004;10(4):375-383.
249. Enderby P, Wade D. Community rehabilitation in the United Kingdom. *Clinical Rehabilitation* 2001;15:577-581.

250. Griffiths J, Austin L, Luker K. Interdisciplinary teamwork in the community rehabilitation of older adults : an example of flexible working in primary care. *Primary Health Care Research and Development* 2004;5:228-239.
251. Griffiths P. Nursing-led in-patient units for intermediate care: a survey of multidisciplinary discharge planning practice. *Journal of Clinical Nursing* 2002;11(3):322-330.
252. Jones J, Wilson A, Parker H, Jagger C, Spiers N, Parker G. Economic evaluation of hospital at home versus hospital care: cost minimisation analysis of data from a randomised controlled trial. *British Medical Journal* 1999;319:1574-1550.
253. Parker S. A survey of Day Hospital and Home Based rehabilitation services in England. *Personal communication* 2006.
254. Rudd AG, Wolfe CDA, Tilling K, Beech R. Randomised controlled trial to evaluate early discharge scheme for acute stroke. *British Medical Journal* 1997;315:1039-1044.
255. Shield F. Developing a therapy-led community rehabilitation team. *Managing Community Care* 1998;6(4):160-168.
256. Vaughan B, Lathlean J. Intermediate Care Models in Practice. London: King's Fund, 1999.
257. Wiles R, Postle K, Steiner A, Walsh B, Southampton NLUET, Wiles R, et al. Nurse-led intermediate care: patients' perceptions. *International Journal of Nursing Studies* 2003;40(1):61-71.
258. Ostry AS, Yassi A, Ratner PA, Park I, Tate R, Kidd C. Work organisation and patient care staff injuries: the impact of different care models for "alternative level of care" patients. *American Journal of Industrial Medicine* 2003;44(4):292-299.
259. Booth J, Hewison A. Role overlap between occupational therapy and physiotherapy during in-patient stroke rehabilitation: an exploratory study. *Journal of Interprofessional Care* 2002;16(1):31-40.
260. Parker S, Martin G, Regen E, Forster S, Parker H, Stirling B, et al. Systematic review: Evidence of the Effectiveness of Intermediate care. Manuscript in preparation.
261. Bansal A, Young J. A survey of community training and experience for specialist registrars in elderly-care medicine. *Age and Ageing* 2001;30(6):533-534.
262. Boston NK, Boynton PM, Hood S. An inner city GP unit versus conventional care for elderly patients: prospective comparison of health functioning, uses of services and patient satisfaction. *Family Practice* 2001;18(2):141-148.
263. Grande GE, Todd CJ, S.I. B, Farquhar MC. A randomized controlled trial of a hospital at home service for the terminally ill. *Palliative Medicine* 2000;14(5):375-85.
264. Grant JA, Dowell J. A qualitative study of why general practitioners admit to community hospitals. *British Journal of General Practice* 2002;52:628-634.
265. Young J, Sharan U. Medical assessment and direct admissions to a community hospital. *Clinical Governance: An international Journal* 2003;8(3):213-217.
266. Manthorpe J, Andrews J, Agelink M, Zegers S, Cornes M. Volunteers in intermediate care; flexible friends? *Journal of Integrated Care* 2003;11:31-39.
267. Waddington E, Henwood M. Home and away; Home from Hospital, progress and prospects. *Journal of Integrated Care* 2003;11:40-42.
268. Griffiths P, Edwards M, Forbes A, Harris R. Post-acute intermediate care in nursing-led units: a systematic review of effectiveness. *International Journal of Nursing Studies* 2004;42:107-116.
269. Richardson G, Griffiths P, Wilson-Barnett J, Spilsbury K, Batehup L. Economic evaluation of a nursing-led intermediate care unit. *International Journal of Technology Assessment in Health Care* 2001;17(3):442-450.
270. Shepperdson B, Phelps K, Turner D. District nurse-led beds: an alternative to care at home. *British Journal of Community Nursing* 2001;6(9):472-479.

271. Hartig MT, Engle VF, Graney MJ. Accuracy of nurse aides' functional health assessments of nursing home residents. *Journals of Gerontology Series A-Biological Sciences & Medical Sciences* 1997;52(3):M142-M148.
272. Wiles R, Postle K, Steiner A, Walsh B. Nurse-led intermediate care: an opportunity to develop enhances roles for nurses? *Journal of Advanced Nursing* 2001;34(6):813-821.
273. Jette DU, Warren RL, Wirtalla C. The relation between therapy intensity and outcomes of rehabilitation in skilled nursing facilities. *Archives of Physical Medicine and Rehabilitation* 2005;86:373-379.
274. Ryan T, Enderby P, Rigby A. A randomized controlled trial to evaluate intensity of community-based rehabilitation provision following stroke or hip fracture in old age. *Clinical Rehabilitation* 2006;20:125-131.
275. Andrews J, Manthorpe J, Watson R. Involving older people in intermediate care. *Journal of Advanced Nursing* 2004;46(3):303-310.
276. Gallagher EM. Capitalize on elder strengths. *Journal of Gerontological Nursing* 1985;11(6):13-17.
277. Nancarrow S, Shuttleworth P, Tongue A, Brown L. Support workers in intermediate care. *Health and Social Care in the Community* 2005;13(4):338-344.
278. Ryan-Woolley B, Wilson K, Caress A. The implementation and evaluation of a community rehabilitation team: a case study. *Disability and Rehabilitation* 2004;26(13):817-826.
279. Young J, Robinson M, Chell S, Sanderson D, Chaplin S, Burns E, et al. A prospective baseline study of frail older people before the introduction of an intermediate care service. *Health & Social Care in the Community* 2005;13(4):307-312.
280. Brown L, Tucker C, Domokos T. Evaluating the impact of integrated health and social care teams on older people living in the community. *Health & Social Care in the Community* 2003;11(2):58-94.
281. Audit Commission. *The Way to Go Home: Rehabilitation and Remedial Services for Older People*. London: Audit Commission, 2000.
282. Department of Health. Winter planning circular HSC2000/016,LAC 2000/14. London: Department of Health, 2000.
283. Department of Health. *Better Services for Vulnerable People: Maintaining the Momentum*. London: Department of Health, 1998c.
284. Barton P, Stirling B, Glasby J, Hewitt G, Jagger C, Kaambwa B, et al. *A National Evaluation of the Costs and Outcomes of Intermediate Care for Older People*. Birmingham & Leicester: The University of Birmingham and The University of Leicester, 2005.
285. Godfrey M, Keen J, Townsend J, Moore J, Ware P, Hardy B, et al. *An evaluation of intermediate care for older people. Final Report*. Leeds: Institute of Health Sciences and Public Health Research. University of Leeds, 2005.
286. Enderby P, Stevenson J. What is Intermediate Care? Looking at Needs. *Managing Community Care* 2000;8(6):35-40.
287. Manthorpe J, Cornes M. What is Intermediate Care?: More than a health service term. *British Medical Journal* 2004;329(7467):686.
288. Melis R, Rikkert M, Parker S, Eijken M. What is intermediate care? *British Medical Journal* 2004;329(7462):360-361.
289. Steiner A. Intermediate care - a good thing? *Age and Ageing* 2001;30(Supplement 3):33-39.
290. Wade DT. Community rehabilitation, or rehabilitation in the community? *Disability and Rehabilitation* 2003;25(15):875-881.
291. Carpenter I, Gladman J, Parker S, Potter J. Clinical and research challenges of intermediate care. *Age and Ageing* 2002;31:97-100.
292. Enderby P, Wade D. Community rehabilitation in the United Kingdom. *Clinical Rehabilitation* 2001;15:577 - 81.

293. Geddes JM, Chamberlain MA. Home-based rehabilitation for people with stroke: a comparative study of six community services providing co-ordinated, multidisciplinary treatment. *Clinical Rehabilitation* 2001;15(6):589-599.
294. Parker G, Bhakta P, Katbamna S, Lovett C, Paisley S, Parker S, et al. Best Place of Care for older people after acute and during subacute illness: a systematic review. *Journal of Health Services Research & Policy* 2000;5(3):176-189.
295. Barton P, Bryan S, Glasby J, Hewitt G, Jagger C, Kaambwa B, et al. A national evaluation of the costs and outcomes of intermediate care for older people. Final Report: University of Birmingham and University of Leicester, 2005.
296. Geddes J, Chamberlain M. Home-based rehabilitation for people with stroke: a comparative study of six community services providing co-ordinated, multidisciplinary treatment. *Clinical Rehabilitation* 2001;15:589-599.
297. Hoenig H, Sloane R, Horner RD, Zolkewitz M, Duncan PW, Hamilton BB. A taxonomy for classification of stroke rehabilitation services. *Archives of Physical Medicine & Rehabilitation* 2000;81(7):853-862.
298. King N. Template analysis. In: Symon G, Cassell C, editors. *Qualitative Methods and Analysis in Organizational Research*. London: Sage, 1998.
299. Steiner A. Intermediate care - a good thing? *Age Ageing* 2001;30(Supp 3):33 - 9.
300. Bellingham C. Improving medicines management in intermediate care and social services. *Pharmaceutical Journal* 2004;273(7316):349-350.
301. Bernhaut J, Mackay K. Extended nursing roles in intermediate care: a cost-benefit evaluation. *Nursing Times* 2002;98(21):37-39.
302. Mason S, Wardrope J, Perrin J. Developing a community paramedic practitioner intermediate care support scheme for older people with minor conditions. *Emergency Medicine Journal* 2003;20(2):196-198.
303. Zaatar A, Zaatar A. Intermediate care. A suitable case for treatment? *Health Service Journal* 2001;111(5751):26-27.
304. Lichtenberg PA, Heck GC, Turner AB. Medical psychotherapy with elderly psychiatric inpatients: Uses of paraprofessionals in treatment. *Medical Psychotherapy: An International Journal* 1988;1:87-93.
305. Ottley E, Tongue A, McGill M. Redefining the role of support workers in intermediate care : key findings from a national project. *Journal of Integrated Care* 2005;13(1):28-34.
306. Kotiadis K, Carpenter GI, Mackenzie M. Examining the effectiveness and suitability of referral and assessment in intermediate care services. *Journal of Integrated Care* 2004;12(4):42-48.
307. Negus J. Improving care of older people through intermediate services. *Nursing Times* 2004;100(28):34-36.
308. Sherratt C, Younger-Ross S. Out of sight, out of mind. *Community Care* 2004(1520):40-41.
309. Schwab M, Rader J, Doan J. Relieving the anxiety and fear in dementia. *Journal of Gerontological Nursing* 1985;11(5):8-15.
310. Uglow J, Dewing J. Introducing a physical activity group on an intermediate care ward. *Nursing Older People* 2004;16(6):19-22.
311. Manthorpe J, Cornes M. Intermediate care : older people's involvement and experiences. *Journal of Integrated Care* 2004;12(6):43-48.
312. Hesse S, Schulte-Tigges G, Konrad M, Bardeleben A, Werner C. Robot-assisted arm trainer for the passive and active practice of bilateral forearm and wrist movements in hemiparetic subjects. *Archives of Physical Medicine & Rehabilitation* 2003;84(6):915-920.
313. Rummery K, Coleman A, Rummery K, Coleman A. Primary health and social care services in the UK: progress towards partnership? *Social Science & Medicine* 2003;56(8):1773-1782.
314. Ward D, Severs M, Dean T. Care home rehabilitation schemes; further findings from a national survey. *Journal of Integrated Care* 2004;12(5):36-45.

315. Young J, Robinson M, Chell S, Sanderson D, Chaplin S, Burns E, et al. A whole system study of intermediate care services for older people. *Age and Ageing* 2005;34:577-583.
316. Cornes M, Manthorpe J. Making partnership work. *Working with Older People* 2004;8(3):19-24.
317. Fear T, De-Renzie BH, Cheesley A. Provision of intermediate care by the independent sector. *Journal of Community Nursing* 2004;18(12):4-7.
318. Steiner A. Intermediate Care: A Conceptual Framework and Review of the Literature. London: King's Fund, 1997.
319. Green J, Young J, Forster A, Mallinder K, Bogle S, Lowson K, et al. Effects of locality based community hospital care on independence in older people needing rehabilitation: randomised controlled trial. *British Medical Journal* 2005;331:317-322.
320. Young J, Forster A, Green J. An estimate of post-acute intermediate care need in an elderly care department for older people. *Journal of Health and Social Care in the Community* 2003;11(3):229-231.
321. Barratt J, Goh S, Todd C, Barclay S, Daz-Rimierez P, Vardulaki K. A description of an intermediate care service using routinely collected data. *Journal of Nursing Management* 2002;10(4):221-227.