MASTER PLANNING AND INTEGRATED SERVICE PROVISION WITHIN THE HEALTHCARE SECTOR:
A LITERATURE REVIEW

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Abstract

Health care services within the UK are being reconfigured to provide high quality, person centred services to renew the NHS for the 21st century with improved capacity and performance and simultaneously meet the rising aspirations of the public and the demand set by the demographics. This is taking place in a context of moves towards increased local autonomy in the provision of services and the introduction of national, evidence-based standards and inspection. With the changing healthcare services scenario and advent of policies such as World Class Commissioning within the NHS there is a drive to deliver sustainable services. As there is a growing need for flexible operational mechanisms to cohort commissioning competencies along with the Master Planning process of healthcare service; the following literature review was conducted using document analyses and mini case studies to evaluate the existing data, tools and knowledge for effective Master Planning.

This review revealed that there is an enormous potential for a step change within the planning process when a rigorous approach to commissioning using World Class Commissioning competencies is combined with the provision of care closer to home for patients and at critical stages in their lives. It also illustrated the need to develop a comprehensive planning process to include dynamic community engagement to enhance estates strategy and have a community driven service with greater integration. The lack of systematic academic literature on the topic of Master Planning within the healthcare sector was also noted. There is a potential body of national and international evidence that depicts the benefits of providing integrated service provision. Although the underlying key issue is the relationship between Master Planning and provision of integrated care. This review provided the backdrop for developing a conceptual framework for the Master Planning process. The scope of this study also includes an action based research to determine the multi- intuitive, multi-stream and multi-stakeholder approach to Master Planning within a local Primary Care Trust which is also undergoing service reconfiguration.

Keywords:

Master Planning, Strategic Asset Management, World Class Commissioning, care models, integrated care

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List of Abbreviations

A&E- Accident and Emergency

APNs- Advanced Practice Nurses

CCS- Care Co-ordination Service

COPD- Chronic Obstructive Pulmonary Disease

CSR- Comprehensive Spending Review

DH- Department of Health

EMR- Electronic Medical Record

FESC- Framework for procuring External Support for Commissioner

GIS- Geographical Information System

GP- General Practitioner

GPwSI- General Practitioner with a Special Interest

HES- Heath Episodes Statistics

HFMA- Healthcare Financial Management Association

ISP- Integrated Service Provision

ISIP- Integrated Service Improvement Programme

JSNA- Joint Strategic Needs Assessment

KPI- Key Performance Indicators

LHC- Local Health Community

LIFT- Local Improvement Finance Trust

MP- Master Planning

NAO- National Audit Office

NHS- National Health Service

OECD -Organisation for Economic Co-operation and Development

OGC- Office of Government of Commerce

PBC- Practice Based Commissioning

PCT- Primary Care Trust

PFI-Public Finance Initiative

PMDU- Prime Minister's Delivery Unit

PMR- Personal Medical Record

PPP-Public Private Partnerships

QoF -Quality and Outcomes Framework

SAM- Strategic Asset Management

SHA- Strategic Health Authority

SHAPE- Strategic Health Asset Planning and Evaluation Tool

UHG- United Health Group

WCC- World Class Commissioning

1 Introduction to the Research

1.1 Introduction:

With the advent of the Darzi review, there has been an inert need to impede the focus from traditional aspects of diagnosis and treatment to promotion of better health and well-being. The NHS has invested billions of pounds to drive up quality, and provide better choice with modern services. Policies such as World Class Commissioning support redesigning of services to meet local needs and expectations and also enhance the Master Planning process within the PCTs, in order to meet future challenges. Technological and clinical advancements have enabled services that were once provided in specialist care to be provided within the community and locally. The prime aim of this report is to develop a framework for improving the Master Planning of regional healthcare infrastructure through a combination of academic and industry literature, to explore the intuitive multi-stream, multi-stakeholder approach to Master Planning as adopted by the PCTs.

1.2 Research Background:

Health care services within the UK are being reconfigured to provide high quality, person centred services to renew the NHS for the 21st century with improved capacity and performance and simultaneously meet the rising aspirations of the public and the demand set by the demographics. Lord Darzi suggests, in his NHS Next Stage Review Interim Report 'Our NHS Our Future' (Darzi, 2007; Darzi, 2008) the development of a more strategic, long-term and community focused approach to commissioning services, where commissioners and health and care professionals work together to deliver improved local health outcomes. There has been considerable activity surrounding the Master Planning and Strategic Asset Management of healthcare services and facilities, especially with the current move towards World Class Commissioning. Such policies encourage innovative and open partnerships with the patients, public, local authorities, clinicians and providers. Thus, the NHS strives to deliver a World Class service which is clinically-driven, patient-centred and responsive to local needs (Department of Health, 2007b). This changing environment not only produces new challenges for the local health care organisations but also provides a rich source of knowledge and learning.

Chris Whitehouse, chair of LIFT[1] (Local Improvement Finance Trusts) Council recently stated in a Community Health Partnership Conference speech that "Healthcare is not recession proof as it is often publicised. Huge cash injections during boom times have brought the UK health spending at par with the OECD (Organisation for Economic Co-operation and Development) average. The Department of Health has turned a sizeable deficit into a £3 billion surplus. The government should continue to engage with the private sector in order to drive health improvements forward and continue to embed choice and contestability and empower patients and integrate primary, social and acute care" (Whitehouse, 2008).

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[1] LIFT is a government-endorsed finance scheme based on long term joint ventures at national and local level to improve investment in primary and social care services in England since 2000.

In the last few years, there has been series of policies and initiatives to promote the achievement of value for money in the procurement of construction projects for the public sector clients across diverse sectors, including healthcare. These have largely been driven by the increasing recognition of the greater benefits that can be achieved from the procurement process. While the initial focus was on the optimisation of costs associated with the design, construction, operation and decommissioning of infrastructure projects (whole-life costs), there is now a shift towards the consideration of the needs and requirements of a broader range of stakeholders and encompassing wider economic, social and environmental issues (whole-life value). However, there have been difficulties related to a real understanding of the whole-life value concept and the dearth of suitable assessment tools, methods and techniques to assist clients in making these evaluations at the various stages of infrastructure procurement (Bourke et al., 2005; Mootanah, 2005). Value is a term that has currency both in construction and healthcare service delivery, and construction providers are seeing the significance of working more closely with their clients in order to be able to design and build assets that can deliver Whole Life Value. As such this long-term interpretation of value is emerging and many organisations and institutions are building the impetus behind service life planning (Achieving Excellence, 2007, BSI, 2000, BSI, 2001, BSI, 2002, BSI, 2004a, BSI, 2004b). The challenge for the NHS at a local level is to evade the temptation to opt for the lowest unit cost over and above proper value for money assessments, risks developing schemes which do not serve the best interests of the patient or the tax payer (Whitehouse, 2008).

Wootton (2008) suggests that the Department of Health, SHAs and PCTs should understand and present their estates better in a manner which brings together effective identification of the operational facility and links it clearly with future services and strategic direction. He further elaborates that 60% of NHS estates is more than 25 years old and hence is not 'fit for purpose'. Thus, the NHS is undergoing major reconfiguration of services and estate assets in order to provide high quality services to all. Gareth Hoskins (Design Champion) of Scotland's Healthcare described "good design" as not being merely a question of style or taste but what arises from the intelligent and creative synthesis of many interrelated factors such as: strategic planning of healthcare provision; social and physical regeneration; the local urban (or rural) context and forms; links to infrastructure and transport; sustainability agendas; the building's sense of welcome; intelligibility of layout; security; unobtrusive supervision; ease of use and maintenance; efficiency; and, promotion of human dignity. Traditionally, while designing a hospital the clinical model is explored architecturally from the 'inside out'. It is vital to consider the hospital building as part of a wider whole and additional attention should be paid to places around the building through master planning and urban design. Thus, designing from the 'outside in' (The Prince's Foundation for the Built Environment, 2008). There is a need to develop better planning systems in order to cope with the pressures that have been placed on the PCTs due to current healthcare scenario. Although traditional forms of planning focus on internal factors of administration there is a growing need to incorporate other sophisticated systems to support the planning process.

1.3 Aim:

The aim of this report is to collate underpinning literature in order develop a framework for improving Master Planning of regional healthcare infrastructure which can be utilised by practitioners and decision makers to facilitate the Master Planning process. This framework will provide an understanding of the scale and relationship between services and estates design based on a range of system dynamic tools that help explore different approaches and strategies.

1.4 Justification:

With the advent of the Darzi Review, there has been a fundamental shift in the way the NHS functions, from a hospital driven service to one that is more community based with a greater integration of various services (Department of Health 2005; Department of Health 2006a; Department of Health 2006b; Department of Health 2006c). Shifting the balance of care has significant implications on the management of estates; hence it is imperative to have a clear understanding of the current infrastructure provision, including size, location and condition for future planning of healthcare facilities. There are a number of government guidance documents and other publications which describe the master planning and strategic asset management process (BSI, 2000; BSI, 2001; BSI, 2002; BSI, 2004a; BSI, 2004b; BSI, 2008; Department of Health, 2004; Department of Health, 2007c; Department of Health, 2007d; Hoskings, 2004; Hoskins, 2008). But there is no single framework or process which encompasses all the various factors and needs for healthcare planning. Apparent weaknesses in strategic healthcare planning have long been recognised and steps have been taken to strengthen the links between needs and projects (Challis, 2008). Figure 1.1 illustrates the importance of strategic and master planning within healthcare organisations, as it is in this stage that there is the highest possibility of influencing the project with the minimum consumption of resources. This reinstates the significance of improving the master planning process within healthcare.
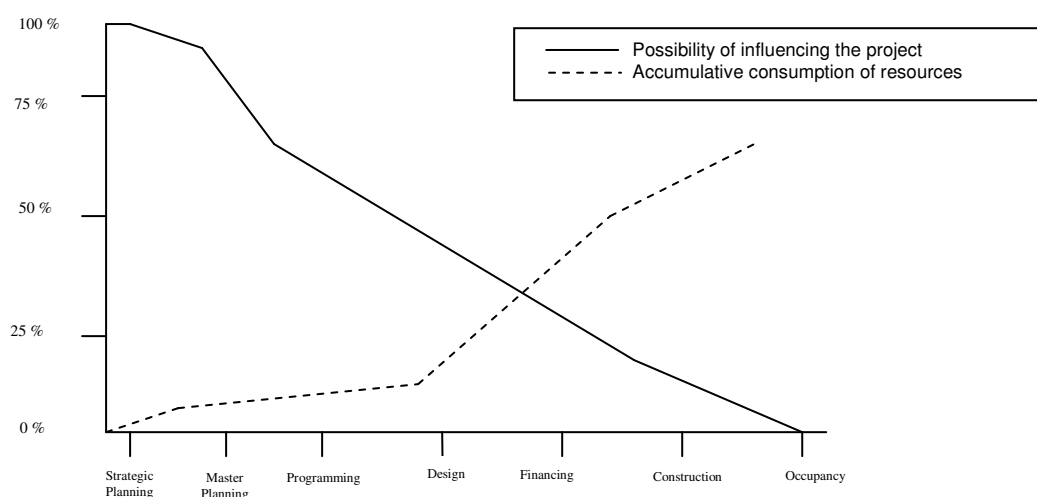
**Figure 1.1: Conceptual Diagram of Resource Consumption
(Source: Hosking, 2004)**

In a recent document 'Enquiry by Design for Health' by the Prince's Foundation for the Built Environment and Department of Health; they identified the lack of a clear method for strategic healthcare planning in relation to its physical location (The Prince's Foundation for the Built Environment, 2008). They further elaborated that there is a general shortage of good urban design and strategic master planning skills in the UK. Hospital designers have a good understanding of designing from 'inside out' but less consideration is given to the public realm adjacent to the hospital.

2 NHS Background and Current Policies

2.1 Introduction:

The delivery of health and social care in the UK is undergoing profound change and being redesigned to provide high quality, person-centred services and improved capacity and performance. This is taking place in a context of moves towards increased local autonomy in the provision of services and the introduction of national, evidence-based standards and inspection. The following chapter provides a brief description of the background of the NHS and also describes the current policies which affect the Master Planning of healthcare facilities.

2.2 Background of the National Health Service (NHS):

The United Kingdom's National Health Service (NHS) was established in post-war Britain (1948) as a social contract between the government and the people, based on explicit values of universality and equity. The Commonwealth Fund paper *Mirror, Mirror on the Wall: An International Update on the Comparative Performance of American Healthcare* (May 2007) claimed that the UK has one of the most progressive and high-performing health systems in the world, scoring highly in quality, efficiency and equity (Davis et al. 2007). The UK health system is considered to be an icon worldwide, both as a social insurance system and as a nationalised health delivery service (Baggot, 2004). In a recent publication the NHS Chief Executive reported "The NHS has been undergoing one of its biggest reorganisations in history; almost halving the number of primary care trusts (PCTs), reducing the number of strategic health authorities from 28 to 10 – and in the process taking £250 million out of management costs and back into frontline care" (Nicholson, 2008). The Department of Health (DH) has overall responsibility for health and social care in England, and aims to improve people's health and well-being. This includes setting standards and shaping the strategic direction of the NHS and social care services, and promoting healthier living. The Department also develops new policies in collaboration with stakeholders (Department of Health, 2009). Current policy drivers particularly relevant to health and planning include: moving healthcare from acute to community settings, and partnership working to reduce inequalities in health. There are a number of challenges that will affect healthier living and healthcare provision.

2.3 Governance and Structure of the NHS:

Corporate governance is defined by the Audit Commission as 'the framework of accountability to users, stakeholders and the wider community, within which the organisations take decisions and lead and control their functions to achieve their objectives' (Audit Commission, 2003). The NHS has a wide range of separate

regulatory frameworks and ethical codes in operation for different bodies within the NHS; this has been developed with the recognition of the importance of good governance within the healthcare sector. Figure 2.1 below depicts the relationships within various bodies in the NHS and the Department of Health (Healthcare Financial Management Association, 2006).
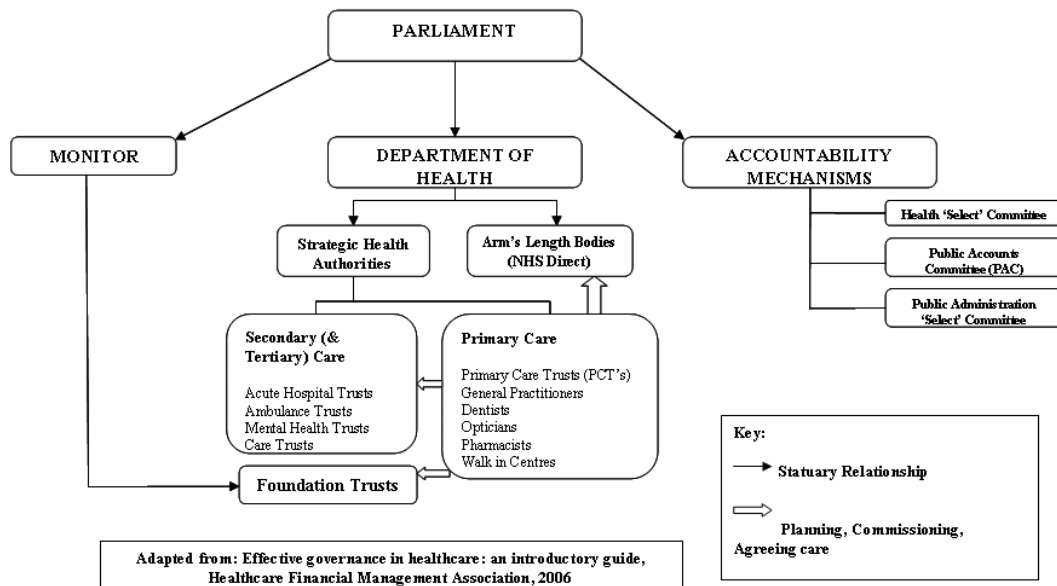
Figure 2.1 : Governance within the NHS

(Source: Healthcare Financial Management Association, 2006)

A key link between the Department of Health (DH) and the NHS, at regional level, is provided by the strategic health authorities (SHAs). SHAs take a strategic overview of the local health economies in their region and work closely with primary care trusts (PCTs). They do not deliver NHS services, but provide strategic leadership; organisational and workforce development; and ensure that the PCT-led health systems operate effectively and deliver improved performance. There are ten SHAs in England, and their boundaries closely mirror those of the Government Regional Offices, with the exception of the South Central and South East Coast SHAs, which are included within the boundary of the South East Government Region (shown in Figure: 2.2). Within each SHA, the NHS is split into various types of trust that take responsibility for running the different types of NHS services (Department of Health, 2007c).

Figure 2.2 : Location of Strategic Health Authorities in England

(Source: NHS Choices, 2008)

The main providers of NHS services include:

- Primary Care Trusts;

- Hospital Trusts (also known as Acute Trusts);

- Mental Health Trusts;

- Care Trusts and

- Ambulance Trusts.

Primary care centres around the treatment of minor injuries and illnesses, and deals with minor surgery and the ongoing management of chronic conditions. It also deals with preventive care, such as smoking cessation services. Being the first point of contact most people have with the NHS, it is delivered by a wide range of professionals, including family doctors (GPs), nurses, dentists, pharmacists and opticians. Primary care is concerned with a patient's general health needs, although specialist care and treatments are increasingly being offered alongside mainstream GP services, in specially commissioned new or refurbished premises closer to home (NHS Choices, 2008). Secondary care caters to hospital care for conditions which cannot be dealt with by primary care trusts. This includes hospital trusts (or acute trusts); mental health trusts;

foundation trusts; care trusts; and ambulance trusts (Department of Health, 2007c). PCTs commission primary care services from GP practices, dentists, opticians and pharmacies, and secondary care services from the acute, mental health and care trusts in their area. In addition, when required, they may commission healthcare services from the private and voluntary sectors. PCTs work with local authorities and other agencies that provide health and social care locally to make sure that the local community's needs are being met.

The Department of Health (Department of Health 2007c; Department of Health 2007d; NHS choices, 2008) provides the following brief explanation of the various trusts with the NHS:

3.3.1 Hospital trusts (or acute trusts) provide acute and specialist services. They provide elective care, which includes planned and emergency specialist medical care or surgery. Patients may be admitted either as in-patients or as day case patients or they may attend an out-patient consultation or clinic. Some acute trusts are regional or national centres for more specialised care, for example cancer treatment centres, dental hospitals, healing sick children, and teaching and training children's specialists. Others are attached to universities and help to train health professionals. They are also responsible for strategic decision making for the development of the hospital (NHS Choices, 2008).

3.3.2 Mental health trusts are the same type of organisation as acute trusts except that they specialise in providing health and social care services for people with mental health problems. Provision of mental health services is achieved through GPs, other primary care services, or through more specialist care; which may also include counselling and other psychological therapies. More specialist care is provided in purpose-built, possibly "hospital-type" facilities (NHS choices, 2008). Services range from psychological therapy to very specialist medical and training services for people with severe mental health problems.

3.3.3 Foundation trusts are acute and mental health trusts which have been given much more financial and operational freedom than other NHS trusts but otherwise provide the same types of service (NHS Choices, 2008).

3.3.4 Care trusts are organisations that work in both health and social care. There are a few care trusts in NHS at the moment, although more may be set up in the future. These carry out a range of services, including social care, mental health services or primary care services. Care trusts are set up when the NHS and local authorities agree to work closely together, and it seen that such a relationship would benefit the local care services.

3.3.5 Ambulance trusts provide emergency access to healthcare. There are currently 13 such trusts in England. The NHS is also responsible for providing transport to get patients to hospital for treatment, and in many areas it is the ambulance trust that provides this service. Ambulance trusts frequently operate from conventional offices and garages and may co-locate with other emergency services.

Due to the political environment and in light of the current changing policies and the ever higher expectations from the public the NHS faces additional pressures. Nye Bevan once claimed that 'every time a bedpan was dropped in a hospital ward the clang echoed through Whitehall' (Healthcare Financial Management Association, 2006). Thus, the NHS moves to devolve responsibility and introduce greater choice and plurality in order to provide change. Baggott (2004) explained that centralisation of the NHS has not produced satisfactory balance between central and local responsibilities. There is a managerial accountability of the NHS to Government, the political accountability of the government to the parliament and the public, and the clinical accountability of the professionals to the patients.

2.4   Recent Developments within the National Health Service (NHS):

In the NHS, the Department of Health, including the NHS Executive, sets the national framework within which services are delivered. The Department uses a range of policy instruments in this process including legislation, white papers, circulars and guidance, corporate contracts, review meetings and financial levers (Department of Health, 2007a). The NHS Plan in 2000 set out a 10-year programme of reform for the NHS, for developing an NHS characterised by free choice across a range of providers, competing on quality and outcomes. Furthermore, as the NHS environment is tax funded this serves the entire population; shaping improvements for the overall population and at the same time catering to individual patient needs. Hence enabling better commissioning to move from diagnosis and treatment to prevention and promotion and investing NHS funds to secure the maximum improvement in health and well-being outcomes from the available resources by developing World Class Commissioning (Department of Health-Commissioning, 2007a). The recent Prime Ministers Delivery Unit's (PMDU) review and the earlier Fitness for Purpose (2006-07) exercise have enabled the NHS to identify a number of opportunities to improve their commissioning processes (OGC 18th July 2006; Department of Health, 2005). There has been a growing need to shift the long-term focus from diagnosis and treatment to prevention and the promotion of wellbeing. The Department of Health identified that PCTs would have a unique role in driving this shift by maximising the use of resources they directly receive and investing it to shape the local health economy (Department of Health-Commissioning, 2007a). A priority review of Practise Based Commissioning (PBC) was also undertaken with the PMDU. The review found widespread support for PBC in the NHS, but also frustrations that implementation had been affected by reconfiguration and the need to achieve financial balance (NHS Finance Performance and Operation DH, 2007). Lord Darzi in his NHS Next Stage Review Interim Report 'Our NHS Our Future' suggests a more personalised NHS which will require services that are locally designed (Darzi, 2007; Darzi, 2008). His vision for a world class NHS is focussed on improving the quality of care and promotion of working in partnerships with other agencies to improve access and integration of care in order to facilitate the development of a more strategic, long-term and community focused approach to commissioning

services, where commissioners and health and care professionals work together to deliver improved local health outcomes. In order to achieve a world class services across the NHS, there is a need to implement World Class Commissioning where PCTs working with practice-based commissioners and local authorities commission services based on the models of care that the local clinical pathway groups devise. Through World Class Commissioning, the NHS aspires to achieve outstanding performance in the way health and care services are commissioned. The responsibility of applying World Class Commissioning locally, in a way that ensures that the needs and priorities of the local population are met lies with the local PCTs. This can be achieved by developing open and innovative partnerships with the patients, public, local authorities, clinicians and providers. Following this, an assurance system was developed to ensure that appropriate frameworks are in place to develop World Class Commissioning milestones and reward performance along the way.

2.4.1   World Class Commissioning:

"World Class Commissioning is a statement of intent, aimed at delivering outstanding performance in the way we commission health and care services"

-Department of Health, Commissioning (2007b)

Process of World Class Commissioning

The three key components of World Class Commissioning are: outcomes, competencies and governance. Each PCT is assessed against the following.

- The fit of the outcomes with the strategic plan.

- Individual PCT's position on each of the metrics compared against the national performance and other PCTs.

- Gradual improvement of each PCT over time.

- Improvement of each PCT against locally agreed stretch targets.

- Outcome measures are based on improvement rather than absolute performance.

    (Belfield, 2008)

PCTs are required to state their vision for World Class Commissioning locally and their intended targets which they plan to achieve through continually commissioning better services and better outcomes based on local priorities. Stanton (2007) presents the following diagram to describe the framework for World Class Commissioning (Figure 2.3).

Figure 2.3 : World Class Commissioning Framework

(Source: Stanton, 2007)

2.4.2 Commissioning Competencies:

Commissioning competencies are the knowledge, skills, behaviours and characteristics that underpin effective commissioning. When put into practice they become capabilities (Department of Health-Commissioning, 2007c). Commissioning competencies provide the appropriate stage for improved health outcomes through stimulation of provider and clinical innovation. The improvement of each PCT is judged on 'relative' outcomes, as compared to the national average (Belfield, 2008). In order to foster dynamic and effective commissioning, the Department of Health has developed eleven competencies. These are presented below along with their example outputs as described in the World Class Commissioning: Competencies Report (Department of Health: Commissioning, 2007c).

Competency	Example Outputs

Locally lead the NHS

- Having a clear and concise communications policy in order to respond to enquiries (individual/organisational/media) regarding the local NHS
- Regular reports, findings, commissioning plans and other communications depicting consultation on issues representing the entire NHS community
- Interacting with all local NHS organisations, assuring, developing, and promoting their functions
- Effective stakeholder management and reputation management along with participation of all the key decision makers

Work with Community Partners

- Innovative local strategic partnerships and workforce planning processes to facilitate better local engagement
- Robust and aligned local area agreements informed by JSNAs (Joint Strategic Needs Assessment)
- Evidence of collaboration with other commissioning agencies, optimising cost efficiency through shared service arrangements, such as joint commissioning plans, shared monitoring arrangements and single audit systems
- Maximising the use of local community intelligence and engagement through open and effective shared knowledge and information processes

Engage with Public and Partners

- Meeting national and local requirements and a PCT prospectus stating the same
- A clear and well-managed public information strategy and the use of social marketing techniques
- Training available for all staff in appropriate techniques, including media handling
- Evidence of proactive PCT engagement with communities and representative bodies, such as Local Involvement Networks, practice patient participation groups, disease-specific patient groups and relevant third sector organisations
- The publication of health and well-being educational material specific to local health needs and aspirations
- Evidence of engaging hard-to-reach groups, such as through the Healthcare Commission's 'Data quality on ethnic groups' indicator
- Patient and public survey data and evidence of its impact on commissioning activity
- Local community profiles that proactively identify and seek out communities that experience the worst health outcomes, and through dialogue and engagement raise local health aspirations

| **Competency** | **Example Outputs** |

Collaborate with Clinicians

- Evidence of developed mechanisms for clinical engagement, such as lists and local awareness of formal and informal opportunities, terms of reference for relevant committees, board papers, and clear frameworks for assessing PBC plans and business cases
- Evidence of appropriate and timely information dissemination, such as correspondence and communication protocols
- Strong whole-community clinical networks, led by a well-functioning PEC that proactively communicates and supports the decisions they make
- Well-governed and effective clinical reference groups, with minuted meetings and clear links to other plans, such as children and young people's plans
- Production and timely dissemination to practices of indicative PBC budgets, together with regular activity and financial information in accessible formats
- Evidence of regular and active dialogue with local clinicians, seeking their data and information needs, supporting engagement that turns information into knowledge and action

Manage Knowledge and Assess Needs

- Robust ongoing JSNA demonstrating a full working understanding of the current and future local population's health and well-being needs, especially relating to relative inequalities in health outcomes and experience
- Shared health equity audits
- A comprehensive map of local service provision
- Mapping and identification of areas of greatest need and relatively poorest health and well-being access and outcomes
- Jointly owned and understood local area agreements linked to a comprehensive area agreement
- A commissioning strategy that demonstrates clear links to partner strategies

Competency	Example Outputs

Prioritise Investment

- Adoption of rigorous and clearly defined short-, medium-and long-term commissioning strategies enabling local service design, innovation and development
- Development of and adherence to an agreed financial plan
- A summary report of the provision of care to the population included in the PCT prospectus
- Dissemination and use of programme budgeting and health outcomes data
- Relevant benchmarking data

Stimulate the Market

- Rigorous and clearly defined commissioning strategy
- Summary and analysis of patient, public and staff data; surveys; focus groups; complaints and concerns
- Analysis of provider networks and development of joint workforce planning and profiling
- Summary and analysis of provider data: economics; capacities; capabilities; and outcomes
- Demonstrable methods by which providers are rewarded for consistent high performance
- Processes for quality assurance
- Reports to Board on provider development and management issues

Promote Improvement and Innovation

- Established local best practice and innovation networks
- Demonstrable methods by which providers are rewarded for innovation and improved quality
- Evidence of processes to engage users and others in feedback that drives further change and reconfiguration and delivers improved quality and outcomes
- Reports to Board with a focus on quality and outcomes, not cost and volume
- Evidence of local whole-system involvement in knowledge development and innovation

Competency	**Example Outputs**

Secure Procurement Skills
- Clear and written governance for tender process according to type of contract, length, risk and value
- Clear contract specifications linked to expected outcomes
- Written strategy for intervention when decommissioning is necessary
- Appropriate contracts with a variety of providers, including commercially and clinically viable clinical services contracts and service-level agreements
- Evidence of use of negotiation when necessary, such as strategy, process map and documentation
- Evidence of timely contracting

Manage the Local Health System
- Robust local monitoring and reporting plan and/or process, including timetable of performance conversations
- Evidence of provider monitoring and comparison, such as provider scorecard
- Board reports on risk areas and performance issues

Make sound Financial Investments
- Robust annual, medium-term and longer-term financial plans that complement strategic plans
- Evidence of regular tracking of performance against its plans, accounting for any variation and implementing effective rectification where necessary
- Clearly identified financial risk areas and resultant mitigation strategies
- Income and expenditure forecasts
- Clear, accurate and transparent reports for external stakeholders, to ensure accountability
- Disinvestment strategies for non-recurrent spending

Each of these competencies has three key indicators; which have four levels of rating. Each PCT is assessed against these competencies through a combination of self assessment, self certification, feedback from partners (360 degree review), evidence and data review and interviews at the panel day. Each PCT will score themselves against three measures within each competency and the outcome of this will be fed into an organisational development plan which will address the actions the PCT needs to take to enable it to continue on its journey to becoming a world class commissioner (Department of Health, 2009). Governance reflects the underlying grip that the Board and the organisation have on their core business (Belfield, 2008). The governance will establish if the board has a coherent strategy which is underpinned by a robust financial plan. A panel of experts tests the board executives and non-executives through an interview process. The assessment is based on the following:
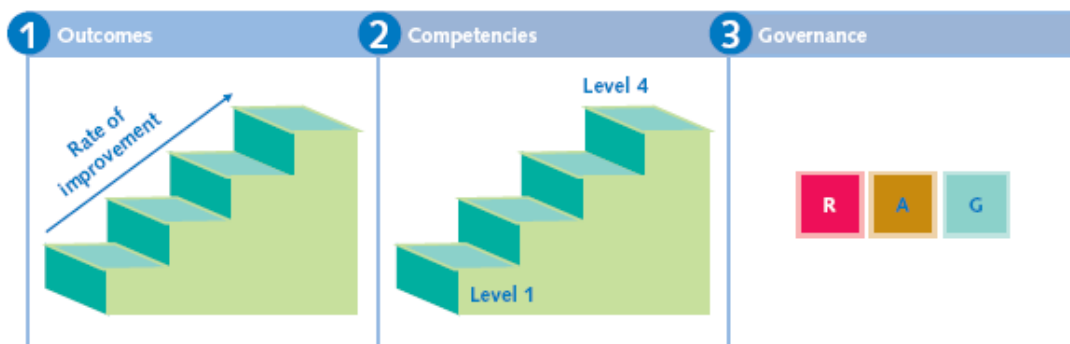
Figure 2.4 : World Class Commissioning Assessment

(Source: Department of Health, 2009)

Ratings for each PCT will be across all the components and will be included in a final scorecard, as shown in Figure 2.5.
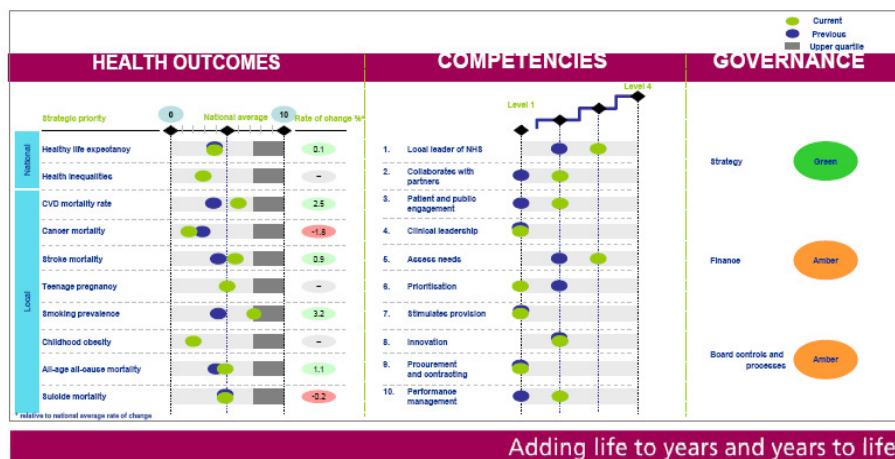
Figure 2.5 : World Class Commissioning Scorecard

(Source: Belfield, 2008)

Defining and validating commissioning competencies is incredibly challenging as existing evidence informs little whether these competencies do or do not lead to improved health outcomes (Woodin and Wade, 2007). A one-size-fit-all approach for developing these competencies is inadequate and each PCT will require innovation, risk taking and learning from implementation. Developing these competencies is dynamic and commissioners require effective strategic capability and capacity to develop closer links with local community planning and designing services to meet long term priorities and reduce health inequalities. They should proactively seek and build continuous and meaningful engagement with the public and patient. The Department of Health has also introduced the Framework for procuring External Support for Commissioners (FESC) to enable PCTs to access expertise from the private sector in order to learn to commission more effectively (Department of Health, 2007b). The PCTs must use the FESC wisely; identify where and why the expertise is needed and how to keep the knowledge within their organisation once the private sector leaves (Mooney, 2007).

The Department of Health and the NHS Executive consider commissioning as the driving force for change in the NHS. It is, therefore, vital to understand the ways in which it is currently an effective or ineffective change agent and to seek to identify ways in which its own development can be steered in order to increase the possibility that it can exercise positive influence to secure more evidence-based practice (Ibrahim and Price, 2007). 'NHS hospitals will be eligible for bonuses worth billions of pounds if they can demonstrate top quality clinical performance and hospitals would be required to publish "quality accounts" alongside the financial balance sheet' (Carvel, 2008). The 'Our NHS, Our Future, NHS Next Stage Review' report set no new national targets and included no master plan for the reorganisation of services (Carvel, 2008). The link between planning and health has long been established, expectations of the planning system have changed substantially in recent years. Planning is no longer seen as a relatively narrow dogmatic function. Instead, "spatial planning" has a wider facilitating character which brings together policies for land use and development, to influence the nature and function of each area (Department of Health, 2007c).

2.5   Summary:

Current policy drivers pertaining to healthcare planning such as moving healthcare from acute to community setting and partnership working to reduce inequalities in healthcare pose a number of challenges that affect healthier living and healthcare provision. There is an inert need to impede the focus from traditional aspects of diagnosis to treatment to promotion of better health and well-being. Each of the local PCTs have to apply World Class Commissioning in order to achieve the vision as set out by the Darzi review to achieve outstanding performance in the commissioning of health and care services. There is an enormous potential for a step change when a rigorous approach to commissioning using World Class Commissioning competencies is combined with the provision of care closer to home for patients and at critical stages in their lives. The NHS investment alone in community services is around £10 billion a year along with local authority expenditure, such a significant sum of money must continually seek to drive up quality, promote personalised care outside of hospital, offer better choice and provide modern services (Department of Health, 2009). There is also a growing trend towards more locally-based facilities; which requires NHS planners to work closely with their local planning partners as there is a need to ensure that key issues are taken into consideration at an early stage of the planning process. Therefore, there is a strong need for flexible operational mechanisms to cohort commissioning competencies along with the Master Planning process of healthcare services which needs to be enhanced to facilitate the changing roles of the PCTs.

3 Master Planning and Strategic Asset Management

3.1 Introduction:

With the changing healthcare services environment within the NHS there is a drive to deliver sustainable services. Policies such as World Class Commissioning support redesigning of services to meet local needs and expectations and also attempt to enhance the Master Planning process within the PCTs, in order to meet future challenges. The issues for a public sector organisation like the NHS are different and are likely to be more complicated. Challenges include: identifying a single bottom line measure of success, need to achieve efficiency savings and value for money, being subject to national standards and policies (Robinson and Mercer, 2008). This chapter provides an overview of the Master Planning process, dealing with Strategic Asset Management within the PCT.

3.2 The Master Planning Process:

3.2.1 Definition

The initial planning phase undertaken towards the realisation of a physical hospital plan is often referred to as master programming/planning. This establishes the framework for addressing the health program's potential site and facility needs over a specified period of time. Gareth Hoskins (Design Champion) of Scotland's Healthcare described '***good design*** as not being merely a question of style or taste but what arises from the intelligent and creative synthesis of many interrelated factors such as: strategic planning of healthcare provision; social and physical regeneration; the local urban (or rural) context and forms; links to infrastructure and transport; sustainability agendas; the building's sense of welcome; intelligibility of layout; security; unobtrusive supervision; ease of use and maintenance; efficiency; and, promotion of human dignity. It envelopes the way in which buildings sit within and, contribute to, their community as well as how they work and look' (Hoskins, 2008). Issel (2004) defined planning within health programs as: 'the set of key activities in which the key individuals define a set of desired improvements, develop a strategy to achieve those desired improvements and establish a means to measure the attainment of those desired improvements'. Dr Kevin Woods Director General Health, Chief Executive NHS Scotland (2008) defined master planning as 'the act of managing and making the most of change... of understanding how the context of a large, complex site will develop over time; of considering potential and realising best value from investment'. Master planning establishes a shared vision of the future; a flexible framework that guides individual developments and promotes a sense of place (Architecture and Design Scotland, 2008). Issel (2004) adds that the focus

should not be on strategic planning rather on tactical planning which is a set of planning activities undertaken to implement a broader global strategy. He described it as a cyclic activity rather than a linear process with recursive events requiring additional or refreshed courses of action for the health program. The following diagram (Figure 3.1) represents this planning and evaluation cycle. The indirect trigger for planning could be the information generated from an evaluation that reveals either the failure or success of a health program or the need for additional programs.
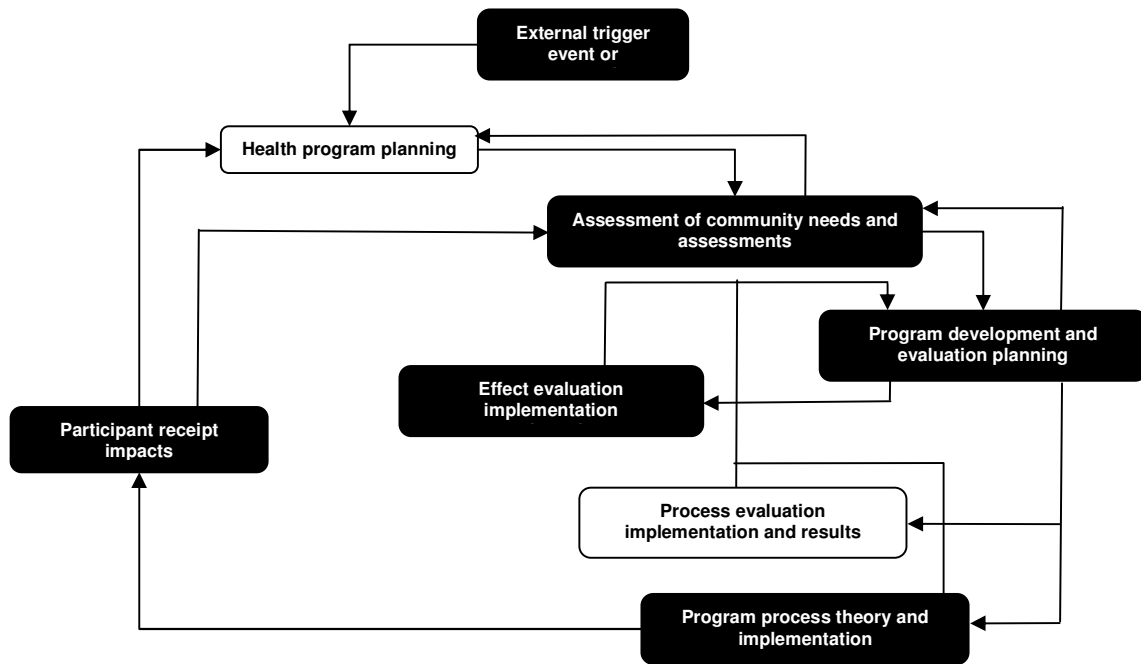
Figure 3.1: The Planning and Evaluation Cycle
(Source: Issel, 2004)

Figure 3.1 can be adopted to gain a better understanding of the current scenario within the NHS. The external triggers are the changing policies and environment within NHS. The participants in this case is the community which is affected by the various service reconfigurations of the hospital facilities within that particular region. This study focuses around health program planning and process evaluation and implementation; which is the Strategic Asset Management and Master Planning process. It can be inferred from figure 3.1 that this process is highly iterative and interdependent on various activities such as planning considerations and capabilities. Planning is a key element of a Strategic Asset Management process. Hoskins (2008) further elaborates that a masterplan should contain the details of the proposed development process or delivery strategy; which includes the following:

- The mechanism for assessing detailed proposals against the master plan.

- The mechanism for changing the masterplan if circumstances change.

- The delivery strategy, e.g. costs, phasing, funding, timing and delivery organisations.

- The key partners in the development and their respective roles: regeneration agencies, developers, funders, designers, the community, transport providers, the local planning authority, etc.

- Key steps required for implementation.

A master plan is developed based on the strategic plan describing programs and services at a high level and completing basic workload and staffing projections. Detailed information is gathered regarding the site or possible sites (existing or new) for the development of the facility. Tannis et al. (2005) suggest investigations to include:

- adequacy of site to accommodate anticipated use;

- location relative to the existing population;

- proximity to major highways for emergency vehicle access;

- sufficient size of the facility and real estate to ensure changes, growth, renewal is possible in the future; and

- analysis such as soil testing, topographical analysis, traffic flow patterns, capacity to access municipal services (water, sanitation, power).

At various points within a planning process different competencies and capabilities are required. Effective execution of planning activities requires a number of resources, these have been summarised in the following tables (Table 3.1 & Table 3.2) as described by Goldman (2002).

Table 3.1 : Recommended Components of a Planning Database (Internal Information)

(Source: Goldman, 2002)

INTERNAL INFORMATION
Organisational charts and incorporation status of all entities.
Current mission, vision and value statements.
List of board members and their affiliation.
List of board committees and responsibilities.
Organisational structure of Medical Staff.
Management structure for each operating entity.
Most recent strategic plan and annual goals and objectives for each operating entity.
Financial statements for the past 3-5 years and current budget for operating entity.
Descriptions of programs and services, locations and hours of operation.
Service statistics- capacity, volume and profit- by location (3-5 years of history). This information should be sortable by major diagnostic code (MDC), diagnosis-related group (DRG), department, relevant acuity levels, referral sources and payer mix.
Statistics-buyers, volumes and profitability- for clinical, management or support services purchased from others.
Medical staff information-volume of admissions, procedures and outpatient visits, age and office location.
Workforce information by job type- current full time equivalents . FTEs and vacancies, expected retirements, turnover and hiring in the next 5 years.
Customer satisfaction monitoring methods and results for each operating entity.
Summary of important accreditation or rating surveys.

Table 3.2 : Recommended Components of a Planning Database (External Information)

(Source: Goldman, 2002)

EXTERNAL INFORMATION
A base map of the area identifying current major roads, waterways, bridges, mountains, retail centres, business parks and population density.
A base map as described above with changes anticipated over the next five to ten years.
Local and state government planning and development reports and related documents.
Demographics- total population, age breakdowns, income levels and ethnicity by zip code.
Demographics as described above, projected for five to ten years as available.
Competitor information for each operating entity- competitor programs and services, capacities, locations and hours of operation, costs and quality indicators.
Market share information for the relevant market area- for the organisation and its competitors which should be sortable by zip code, age group and payer as available.
Physicians in the market who are not currently in the organisations medical staff.
Contracting organisations in the market- participants and contracts held.
Payer information- enrolment, key operating statistics, financial performance and financial strength.
Community health needs assessments conducted in the past 5 years.
List of key community organisations, unions and other organised groups- their current offices and agendas.
City, council and state health plans.
Local, state and regional economic development plans.
Current state regulations regarding healthcare service development or change.
List of healthcare organisations in the market that are not competitors- their services, volumes, financial performance, key executives and board members.

Wolper (2004) further elaborates that facility planning is the planning, designing and building of the physical facility. Generically, the planning process can be applied to all types of healthcare facilities. Issel (2004) proposes various approaches which could be adopted, these are summarised in Table 3.3 below:

Table 3.3: Various Approaches to Planning

(Source: Issel, 2004)

Incremental approach	Apolitical Approach	Advocacy Approach	Communicative Action Approach	Comprehensive Rational Approach	Strategic Planning Approach
It addresses the immediate concerns and hopes that disconnected plans and actions have a cumulative effect on the problem. This is helpful when the resources are limited and this method can lead to small gains in immediate problems. The major disadvantage is that small planning efforts may lead to conflicting plans and confusing or non - integrated programs.	This is a problem solving approach which relies solely on technical knowledge to arrive on a solution and assumes that technical knowledge makes it possible to achieve compromises among those involved in the health problem and the planning process. It is implicitly the gold standard for planning. Forester (1993) criticises this approach as it does not account for interpersonal dynamics and neglects cultural issues involving the potential	The planning is client focussed and includes mandated citizen participation in the planning activities. It is a bottom up form of comprehensive rational planning. Planners would speak on behalf of those with the health problem. The advantages of this approach are most evident in situations where the clients or citizens are not empowered to convey their own preferences or concerns. The disadvantages are that the clients or citizens may not agree with the opinions or views of the advocate. This	It is concerned with the distribution of power and communication. Those involved in planning make efforts to empower those with the problem through communication and sharing of information. This approach is predicated on making those with the problem equals in the planning process. A major advantage in this method is that members of the target audience gain skill knowledge and confidence in addressing their own problems. However the planner involved needs to have a different set of skills from those needed to do rational or incremental planning.	This is fundamentally a systems approach involving problem analyses by drawing upon ideas from the systems theory-namely feedback loops, input and output, systems and subsystems. It assumes that factors affecting the problem are known and virtually all contingencies can be anticipated. It is comprehensive in the sense that planners can take into account those contingencies and peripheral influences. The planners set goals, identify alternatives, implement programs and monitor results. One advantage of this method is that it facilitates	This focuses on the organisation and its ability to accomplish its mission in a fiscally responsible manner. It is particularly applicable to the infrastructure level. The resources needed for addressing the health problems are identified through strategic planning and are considered in terms of mission of the organisation. This approach is advantageous as it takes into account the context and also has a long term focus. Despite having the capability to quantify the

	program participants and staff.	approach implicitly entails some degree of conflict which may have negative repercussions in the long term.		obtaining information from stakeholders who may otherwise be reluctant to share information because it diffuses power from an authority base to information base. This approach yields more information for decision making and allows planners to face issues faced by the entire system.	decision making process, knowing the best option does not always guarantee the best decision or program plan. One of the disadvantages could be the lack of flexibility to respond to new environmental opportunities or threats.

Key factors that need to be taken into account within service and facility planning are the population growth and the changing demographics. The ongoing challenge in the UK is to continue to reconfigure services to match changing population and service needs and to provide an asset base which maximises this responsiveness. Francis (2007) draws out the following key issues for Master Planning considering the new healthcare landscape:

- optimise design;
- masterplan healthy neighbourhoods;
- integrate quality buildings;
- sustainable design;
- future proof investment;
- master the site (look beyond the immediate site boundaries and make optimum use of local amenities);
- plan layout and infrastructure strategically;
- optimise investment (make best use of resources, people and infrastructure);
- invest in quality real estate;
- maximise potential to expand and contract buildings;
- distinguish between parts of the building;

- create clear and unobstructed circulation routes;

- design shape and form to change over time;

- standardise and plan for uncertainty; and

- use space as a resource.

She further proposed the following diagram (Figure 3.2) to depict the various links for the future healthcare landscape.
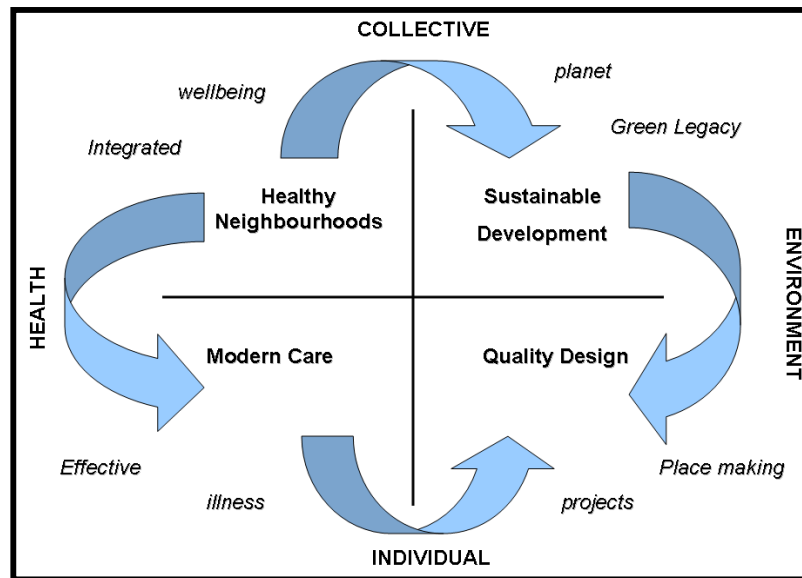

Figure 3.2: Future Health-making the links

(Source: Francis, 2007)

Traditionally in the healthcare sector, the focus has been on clinical needs and the designed environment has played a marginal role. There is a growing trend towards 'evidence based design' and the effect of good quality healing environment on patients and staff (CABE, 2003). Healthcare buildings may be in use over substantial periods of time and hence there is potential to constrain changes in the delivery practice (Architecture and Design Scotland, 2008). Thus, it is essential that the design and planning process within a PCT is an integral part of a robust procurement mechanism to ensure that hospital buildings (assets) are functional and at the same time they are flexible and adaptable over their entire lifetime. The following section examines the concept of asset management and its relationship with the planning process.

3.3 Asset Management:

3.3.1 Definition

The literature on asset management is vast and ever-growing; some of the definitions that can be used to describe this process within the NHS are discussed further. Asset Management can be defined as a process that guides the gaining of assets, along with their use and disposal in order to make the most of the assets and their potential throughout the life of the assets. Woodhouse (2001) further elaborates that 'asset management is a set of processes, tools, performance measures and shared understanding that glues the individual improvements or activities together'. Assets could refer to financial and personal assets or physical and public assets. Assets can be generically categorised as financial assets and non-financial assets. For the purpose of this research when we refer to assets, we mean tangible fixed assets (non-financial) like infrastructure. This classification is based on European System of National and Regional Accounts (1996). The term asset management is referred to in different ways by various organisations. Generally, practitioners tend to define asset management in terms of the infrastructure for which they are accountable. It is imperative that the assets are well maintained and have favourable locations that would positively support service delivery and enhance user experience. Benefits would also include:

- improving outcomes for people utilising services;

- provision of safe, secure and appropriate buildings that support service requirements;

- means of identifying and disposing of surplus or poorly used assets;

- to achieve value for money in the costs associated with holding, managing and disposing of the NHS estate; and

- clear evidence of estate performance (Audit Scotland Report, 2008).

The publicly available specification (PAS 55-1:2008, Asset Management Part 1: Specification for the optimised management of the physical assets) developed by BSI defines asset management as "systematic and coordinated activities and practices through which an organisation optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their lifecycles for the purpose of achieving its organisational strategic plan." Furthermore, an organisational strategic plan is defined as "overall long term plan for the organisation that is derived from, and embodies, its vision, mission, values, business policies, stakeholder requirements, objectives and the management of its risks" (BSI, 2008). The effective planning and management of NHS assets is essential to the provision of safe, secure, high quality services

capable of supporting current and future service needs. Asset Management must take place at a number of different levels- starting at the strategic level and then running down at a more operational level. The following asset management process in Figure 3.3 is adapted based on a description provided in the 'Audit Scotland Report, 2008'.
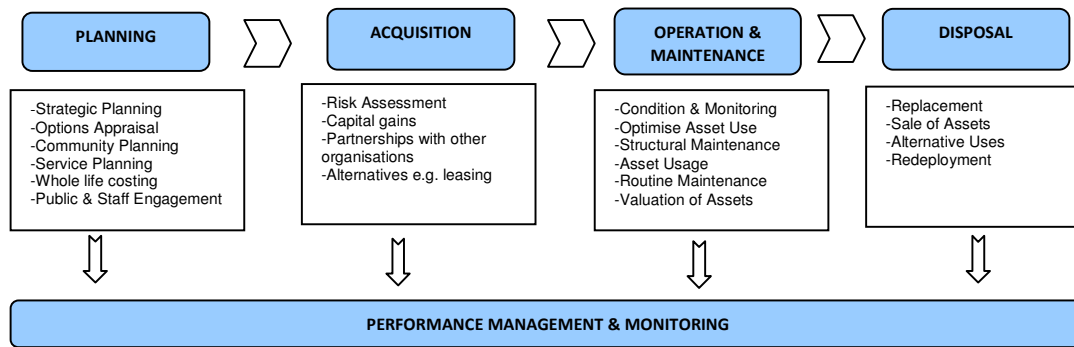
PLANNING	ACQUISITION	OPERATION & MAINTENANCE	DISPOSAL
-Strategic Planning -Options Appraisal -Community Planning -Service Planning -Whole life costing -Public & Staff Engagement	-Risk Assessment -Capital gains -Partnerships with other organisations -Alternatives e.g. leasing	-Condition & Monitoring -Optimise Asset Use -Structural Maintenance -Asset Usage -Routine Maintenance -Valuation of Assets	-Replacement -Sale of Assets -Alternative Uses -Redeployment

PERFORMANCE MANAGEMENT & MONITORING

Figure 3.3: Asset Management Process
(Source: Audit Scotland Report, 2008)

Figure 4.3 depicts the key elements namely, planning, acquisition, operation and maintenance, performance management and monitoring of the asset management process. Each of these elements has a number of nested issues within them which also have to be considered. Ruparel (2001) further adds that the procurement of new assets is only one phase in the asset management cycle; in order to provide safe, efficient and functional assets it is imperative to prepare a strategic asset management plan which includes development plans, investment plans, disposal and maintenance plans. Such strategic plans are aimed at ensuring that the overall costs of prevailing assets owned is within the stipulated budget and the level of assets held by trusts do not exceed its service delivery needs. Also, the service potential of existing assets needs to be maximised, and the demand for assets/facilities reduced by disseminating effective use of alternative solutions.

Traditionally asset management is only related to managing the current assets of an organisation but in order to ensure the long term viability of the organisation it is imperative to consider the continual improvement of this process along with the strategic direction of the organisation. This is where the overarching term of **Strategic Asset Management** is introduced, which includes elements of asset management tied into the strategic objectives of the organisation. Various definitions of Strategic Asset Management are proposed by building, utility, healthcare and other infrastructure organisations. There are fundamental differences in the usage and interpretation of these terms. Each of these organisations develops a Strategic Asset Management plan based on the organisational needs and drivers. Maheswari (2006) defined strategic asset

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management as 'a process of developing, creating, maintaining and disposing assets through a complex series of interlinked well-defined processes that are continually improved, over the life cycle of an organisation, with an aim of achieving the objectives of the organisation.' Strategic Asset Management can also be defined as the planned alignment of physical assets with product or service demand. It is achieved by the systematic management of all decision-making processes taken throughout the life of the physical asset (Griffith University, 2005; Knowledge Group Consulting, 2006). The real indicator of the success of Strategic Asset Management is enhanced product or service delivery. Strategic Asset Management encompasses not only planning for reconfiguration of services to meet the current and future needs, but also to enable informed decision making which depends on the collection of a consistent data set. It is up to the management to organise planning, provide analytical support and coordinate planning efforts throughout the organisation. For planning to be effective as an organisational management tool, Goldman (2002) suggested the following activities to be performed.

- *Conduct environmental scans and forecasts*- to provide information regarding the demographic, social, economic, technological and political trends, competitor initiatives and market structure and direction.

- *Educate key participants in planning techniques*- to ensure that individuals involved in the planning process have clear expectations as to the purpose, order and expected outcomes of each activity.

- *Design and administer a planning process*- to organise activities to take place and function as a co-ordinating mechanism for business line and operating unit plans.

- *Develop policies and procedures to support the planning activities*- to ensure that consistent standards and approaches are used across the organisation for all the planning activities.

- *Reconcile planning outcomes with other key organisational processes such as budgeting and recruitment*- to ensure effective management of resources.

- *Monitor and evaluate plans*- to provide an impact on the initiatives.

- *Plan for planning*- to ensure adequate resources for planning are retained and developed.

In order to support the delivery of an integrated healthcare infrastructure solution it is vital to develop a Strategic Asset Management framework for investment and also ensure compliance with government policies and directives.

3.3.2 NHS Assets:

In the NHS, about 60% of the NHS estate is more than 25 years old. The total NHS estate is worth around £40 billion and the total maintenance costs are about £5.5 billion. The PCT estate is about 15% of the total area of about 9 billion square meters (Wotton, 2008).
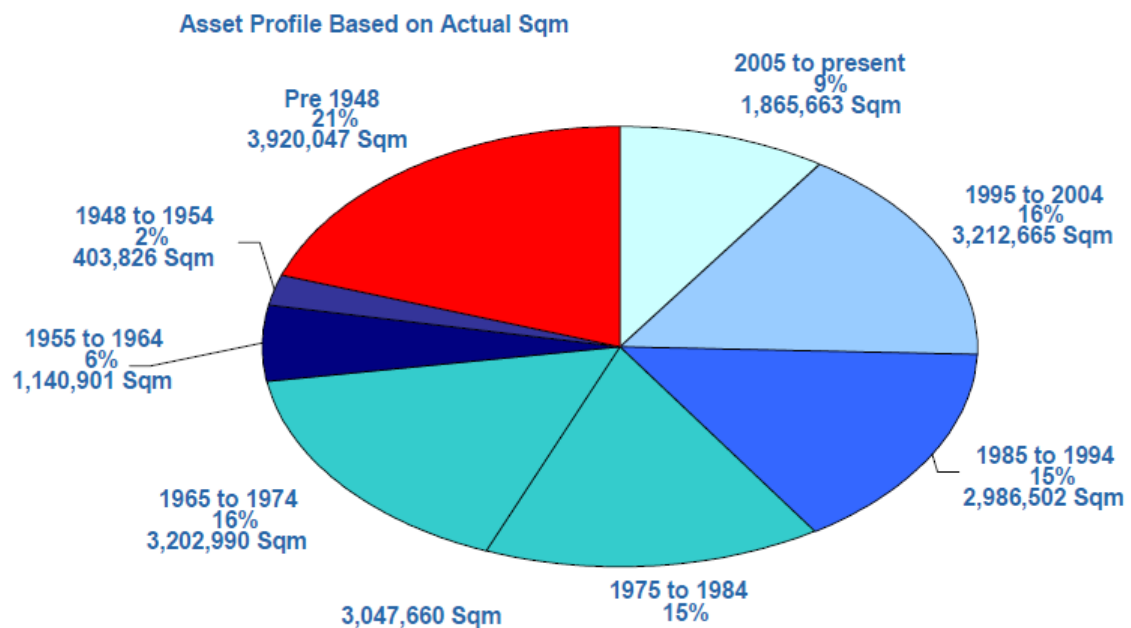

Figure 3.4: NHS Estates

(Source: Wotton, 2008)

3.3.3 Asset Ownership:

A variety of different ownership and service delivery approaches are available for the PCTs consisting of different funding options reflecting the range of services provided, these include the following:

- Public Ownership – publicly owned assets and services run by either PCTs or acute providers.

- Not-for-Profit Ownership – assets owned and run by the third sector e.g. charities, social enterprises and co-operative ventures.

- Independent Sector Ownership – assets owned and run by the independent sector.

- Joint Venture Ownership – any combination of the above for example, privately owned assets with services run by the NHS or third sector (Department of Health, 2006a).

PCTs need to demonstrate to their SHA that they have consulted locally and have evaluated options for developing new pathways, new partnerships and new ownership possibilities. The government is encouraging partnerships and community ventures in order to create capacity, innovation and best practice; investing £750 million in new and modern community hospitals (Hartismere Health and Care, 2006; Department of Health, 2006b). For models proposing a change of ownership, there is a requirement for the transfer of land and buildings. In cases of disposal of an NHS asset; the land and/or buildings are declared surplus to NHS (following public consultation). Sale of the asset is then made at full open market value in order to maximise the benefit to the NHS (Department of Health, 2006a). For matters relating to residual role of the NHS and the definition of public ownership, this process is not always suitable; and some NHS functions may still be required so that the community hospital is not totally surplus to requirements. In such cases, the NHS service could be amalgamated with others, including social services, voluntary services, housing and facilities for the benefit of the community (Department of Health, 2006a). In cases where the community hospital is funded through public donations and subscription (e.g. war memorials), local communities often feel that they have a degree of ownership. Although test cases have depicted, that transfer of hospitals into the NHS (1948) vested the rights of ownership with the Secretary of State (Department of Health, 2006a).

The PCTs have several opportunities to explore innovation while working within the design principles for considering community services as part of a wider health and social care system across numerous services such as: service integration, workforce, buildings and technologies. Current legislation also supports principles of innovation in ownership; however such innovations have not been common. The Department of Health has proposed the following arrangements to secure innovation in ownership: (Department of Health, 2006a)

- *Joint Venture*:

  A private sector organisation manages and maintains the property, with the ability to develop or refurbish parts for alternatives to hospital use which it rents out, sharing the income with the NHS Trust, thus reducing the cost of property holding. In this case, the property remains in NHS ownership.

- *Sale and Leaseback*:

  The property is sold (at open market value), and the NHS Trust rents back the space it requires on an occupation agreement (like current PFI/PPP arrangements). Any non-required space can be used by the private sector owner. Although the NHS Trust receives a capital receipt and pays an all inclusive service occupation charge based on its utilised space; the private sector's return is likely to exceed the capital charge.

- *Freehold Sale to a Charity/Voluntary Organisation (A):*

  A free hold sale is made to a voluntary organisation at open market value. The purchaser then maintains the property while allowing the NHS Trust to use the space it requires. The balance of accommodation (if any) can be used by the charity/voluntary sector for community purposes. Similar to a sale and leaseback agreement, the NHS Trust receives a capital receipt, but it does not pay capital charges and may also receive the space at a cheaper rate as it is run by a charity organisation.

- *Freehold Sale to a Charity/Voluntary Organisation (B):*

  This agreement is similar to a freehold sale to a charity/voluntary organisation (A) agreement. The major difference being that the NHS Trust does not receive a capital receipt neither does it pay capital charges. It receives the space at a reasonable rate to reflect the 'gift' nature of the property as it is run by a charity. (Note that the 'gift' may have to be reported to Parliament, and comprises 'expenditure').

- *Sale to a Charity/Voluntary Organisation using Section 64 Grant:*

  This agreement is similar to a freehold sale to a charity/voluntary organisation (B) agreement. In this case a section 64 grant is used, which requires a business case justification. The health authority provides a section 64 grant to the purchaser to the full open market value (plus the cost of upgrading if required).

- *Clawback and Protection:*

  Under any sale, disposal terms must include a stipulation for the continued use of the property for the purposes agreed at the outset. Where that use ceases, or the purchaser sells the property, a clawback is required to ensure that the NHS receives an appropriate proportion of the increase in value from the sale.

There is a growing debate around the 'privatisation' of NHS hospitals. Pollock (2007) states that 'every privatisation mechanism within the NHS from the internal market and private finance initiative (PFI) to tariff payments by results will lead to fragmentation and service closure with widening inequalities in access to healthcare'. She believes that by transferring ownership of the NHS assets into the hands of unaccountable trans-national corporations and their shareholders (private sector) exchanges the principles of fairness and redistribution which underpin the NHS for private gain. Boyle (2007) argues that the NHS has a poor rate of delivery of care, poor figures for preventable mortality and maldistribution of access to healthcare and does not provide 'choice'. Lord Darzi also suggests

that the journey of a patient is fragmented and there is a need to integrate care (Whitworth, 2008). The evidence available does not support the claim that a state owned and run healthcare service is equitable and fair. Boyle further adds that choice and competition drives down price, encourages innovation and improves quality and also is an effective way to approach public service reform (Boyle 2007; Le Grand, 2007; Oliver 2008). For example, the introduction of competition to the ophthalmology service on a national level has dramatically improved access and reduced waiting times. Community hospitals are as diverse as the communities they serve and hence the ownership models should be developed to reflect that diversity (Tucker, 2006). There is a scope for exploring options for the ownership of community hospital land and buildings; at the same time potential risks such as fragmentation and risk transfer at a time of major change in NHS have to be taken into account. In a recent publication 'Transforming Community Services: Enabling new pattern of provision', the Department of Health has set out the strategic partnerships required to manage the estate more efficiently and effectively to provide better value and explains in brief the rules and regulations applicable to the management of estate (Transforming Community Services: Department of Health, 2009). The daunting issue currently is the effect of the changing face of commissioning and strategic planning on asset ownership; which needs to be investigated further.

Based on this initial review, it was identified that various authors refer to planning, master planning and facility planning as interchangeable terms. The various planning considerations and capabilities can be mapped against the actual process that takes place within a primary care trust. Other considerations that will be required to be taken into account include costs of repairs to existing facilities, provision of care closer to home, investment required to upgrade sites, investment decisions based on clinical quality, local need, health inequalities, risk, local health and priority access. There are a number of barriers to moving resources, including the significant amount of resources tied up in secondary care and the need to maintain hospital services during periods of change. Shifting the balance of care has significant implications on the planning process for example; reconfiguring services may imply additional combined use of facilities with other public bodies as services move into the community. The NHS faces considerable challenges in implementing these changes. Can ICT tools assist in the planning process and aid in dealing with change? The following section discusses this issue further.

3.4 Innovation within the NHS:

The NHS's performance in taking up and spreading innovations and existing best practice is variable (Barlow et al., 2008). According to Barlow the key challenges include 'NHS organisations' capacity and receptiveness for innovation, the lack of long-term strategic thinking, fragmentation between healthcare organisations, professional and cultural silos and the funding system'. In order to reduce costs

and increase the potential advantages it is imperative that evidence-informed design goals and approaches be included early in the process of facility programming and design (Ulrich, 2001). Evidence based planning with supportive ICT tools can affect the internal configuration and overall design of the facility. The 2007 Comprehensive Spending Review (CSR) linked variations in NHS productivity to variable practice and technology uptake. It stated that "reducing such unnecessary variation could potentially generate net cash savings of £1.5 billion per year by 2010-11" (Barlow et al., 2008).

Simulation and modelling tools are being used to develop virtual health systems which enable a planner to test new models of care in a hypothetical context. Such tools can also evaluate the potential impact of changes in population, demand and burden of disease (Sellers and Hankey, 2008). These tools also help illustrate the impact of service changes on the available options or models of care. There are a number of off-the-shelf simulation packages, which have been used by parts of the NHS to test future service changes, model the impact of disease outbreaks or to forecast the impact of population growth, e.g. SIMUL8. GoldSim, Powerism and Scenario Generator (NHS Institute of Innovation and Improvement, 2008). Another such tool called 'SHAPE' has been developed by the Department of Health and will be studied as a part of this research (Department of Health, 2008c). The adoption of innovations in ICT is underpinned by a vast literature on technology transfer which could also be the subject of further research.

3.4.1 SHAPE

SHAPE is a NHS web based benchmarking software. SHAPE stands for 'Strategic Health Assets and Performance Evaluation'. It allows providers and commissioners to compare costs and activity by condition, to look at length of stay, day surgery and outpatient rates through four interlinked components – Clinical Analysis, Estates analysis, GIS mapping and Demography. The software can be used to identify future services and asset requirements. The system is also linked to a geographical information system, allowing comparison between the various demographic trends of the local population. It can be used to test whether different service configurations could improve performance. The software is pre-loaded with five years of Health Episodes Statistics (HES) data, (2001 census demographics and estates information for 99 per cent of health and social care estates), including GP practices and private hospitals (Department of Health, 2004). SHAPE uses the latest ClearNET data to produce preset reports. These reports show comparative performance against the top ten high impact changes and other performance indicators which enables identification of areas for potential improvement. The clinical activity fields in SHAPE provide an analysis of Health Episode Statistics (HES) data including high and low volume activity, uncoded activity, multiple readmissions and average lengths of stay. The datasets also include Key Performance Indicators

(KPIs) relating to the Trust and PCT owned estate. All data is linked to GIS (Geographical Information Systems) mapping which also incorporates demographic data and travel time analysis (Transforming Community Services Team: Department of Health, 2009). In addition, there is a module that assesses bed, theatre and clinical equipment and space necessary to meet the growing demand. The strategic analysis component calculates the cost benefit of a health system running at optimal capacity and productivity.

3.4.2 SHAPE and the Master Planning Process:

In a recent publication 'Transforming Community Services and World Class Commissioning', the Department of Health have set out a robust commissioning cycle to lay the foundations of good practice in community services (Department of Health, 2009). This is to ensure that while re-designing and purchasing services, the local commissioners and PCTs prioritise local needs and deliver service improvements along with value for money. This cycle has been depicted in Figure 3.5:
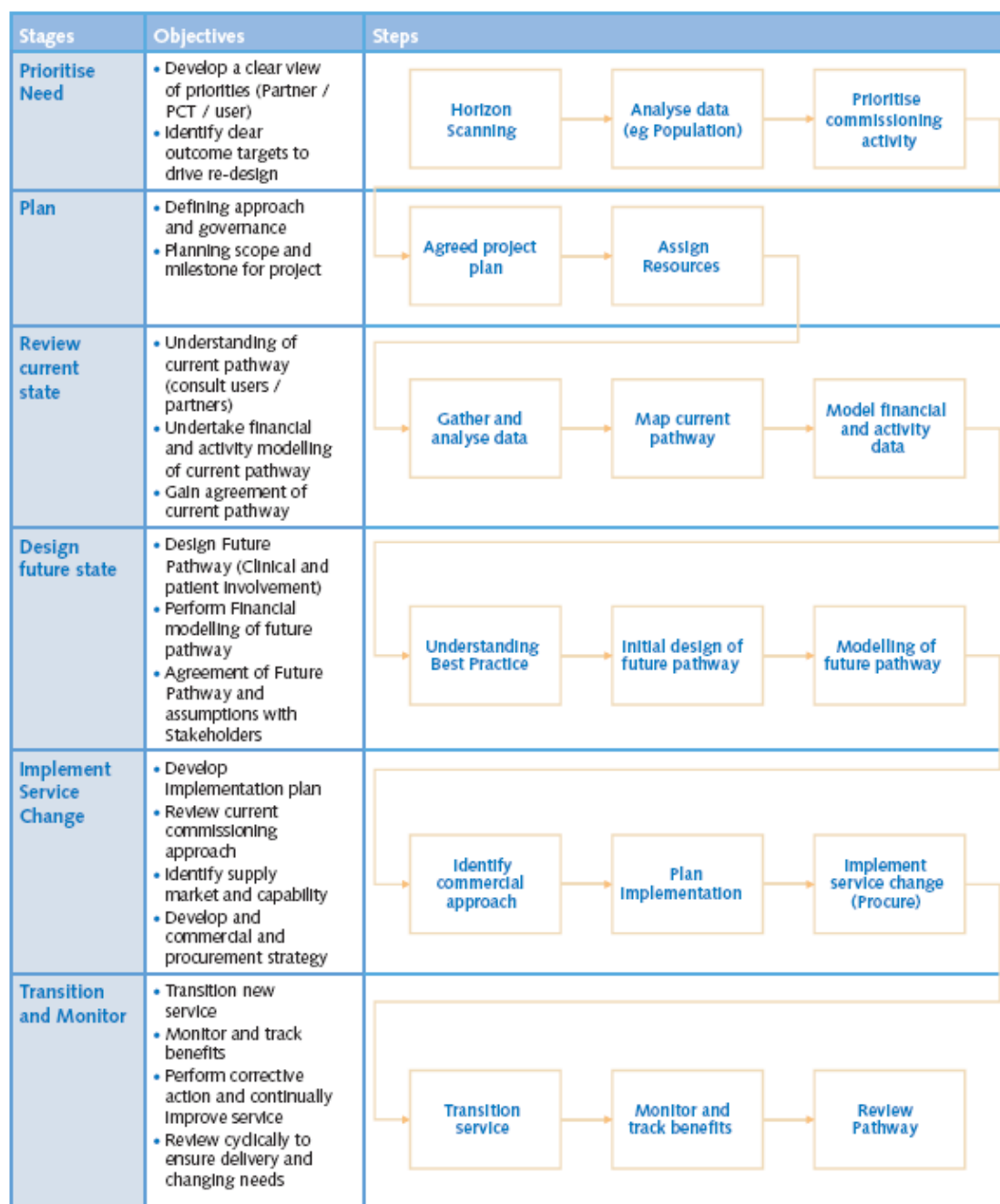
Stages	Objectives	Steps
Prioritise Need	• Develop a clear view of priorities (Partner / PCT / user) • Identify clear outcome targets to drive re-design	Horizon Scanning → Analyse data (eg Population) → Prioritise commissioning activity
Plan	• Defining approach and governance • Planning scope and milestone for project	Agreed project plan → Assign Resources
Review current state	• Understanding of current pathway (consult users / partners) • Undertake financial and activity modelling of current pathway • Gain agreement of current pathway	Gather and analyse data → Map current pathway → Model financial and activity data
Design future state	• Design Future Pathway (Clinical and patient involvement) • Perform Financial modelling of future pathway • Agreement of Future Pathway and assumptions with Stakeholders	Understanding Best Practice → Initial design of future pathway → Modelling of future pathway
Implement Service Change	• Develop Implementation plan • Review current commissioning approach • Identify supply market and capability • Develop and commercial and procurement strategy	Identify commercial approach → Plan Implementation → Implement service change (Procure)
Transition and Monitor	• Transition new service • Monitor and track benefits • Perform corrective action and continually improve service • Review cyclically to ensure delivery and changing needs	Transition service → Monitor and track benefits → Review Pathway

Figure 3.5: The stages of the Commissioning Cycle

(Source: Department of Health, 2009)

While developing a master planning process it is essential to think about the management of the buildings and infrastructure. Assets, especially estate, must be protected and should not normally transfer to providers. 'This is so that commissioners' and PCTs leverage is maximised and that providers collaborate effectively to ensure viability and value for money' (Transforming Community

Services Team: Department of Health, 2009). Based on the pre-requisites as prescribed by the World Class Commissioning cycle for considering the future options for the provision of community services, the following diagram depicts the use of SHAPE along with the planning process. This process diagram sets the basis for the development of the Master Planning Framework (Figure 3.6).
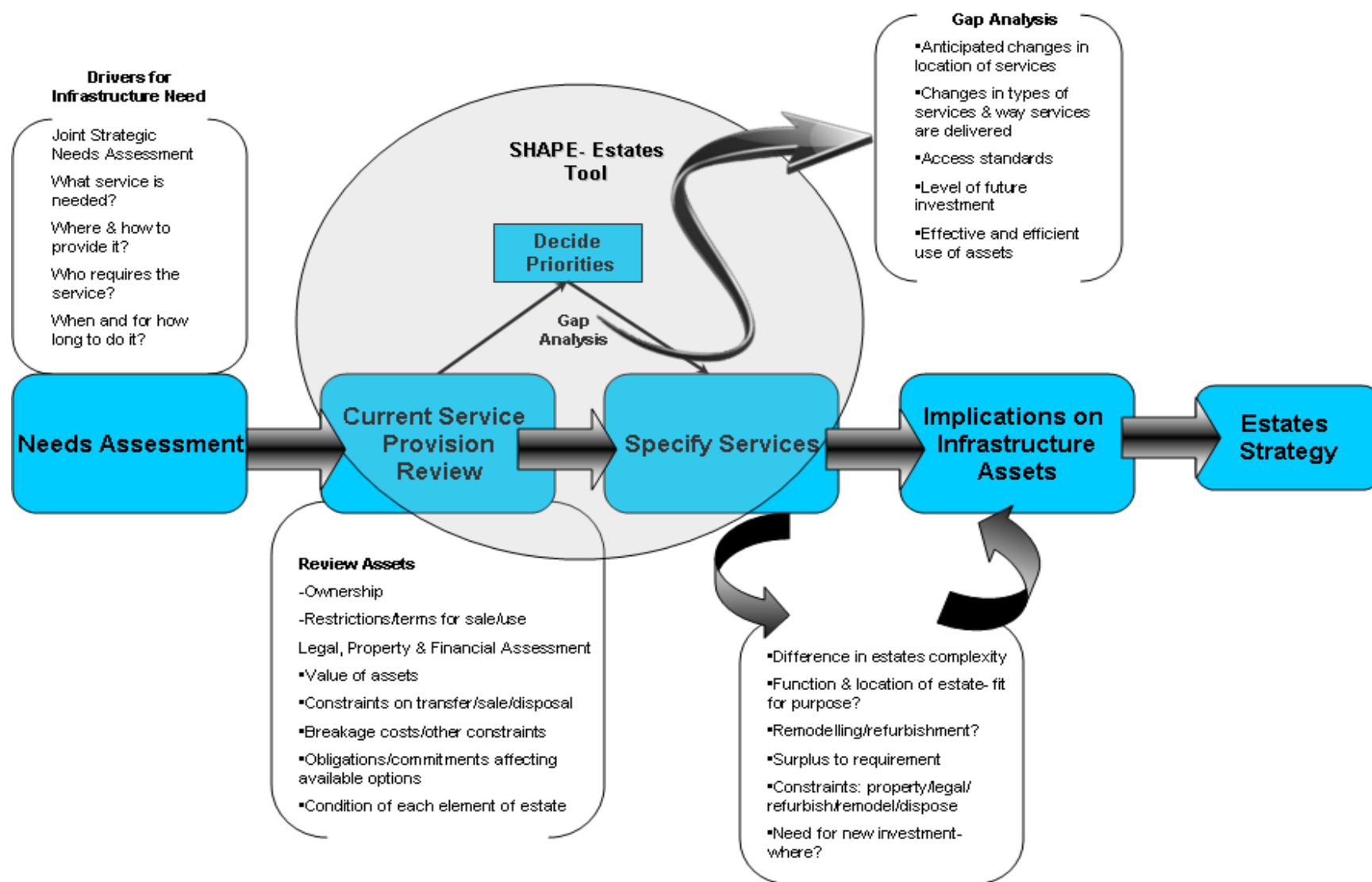
Drivers for Infrastructure Need

Joint Strategic Needs Assessment

What service is needed?

Where & how to provide it?

Who requires the service?

When and for how long to do it?

SHAPE- Estates Tool

Decide Priorities

Gap Analysis

Gap Analysis

▪Anticipated changes in location of services

▪Changes in types of services & way services are delivered

▪Access standards

▪Level of future investment

▪Effective and efficient use of assets

Needs Assessment → **Current Service Provision Review** → **Specify Services** → **Implications on Infrastructure Assets** → **Estates Strategy**

Review Assets

-Ownership

-Restrictions/terms for sale/use

Legal, Property & Financial Assessment

▪Value of assets

▪Constraints on transfer/sale/disposal

▪Breakage costs/other constraints

▪Obligations/commitments affecting available options

▪Condition of each element of estate

▪Difference in estates complexity

▪Function & location of estate- fit for purpose?

▪Remodelling/refurbishment?

▪Surplus to requirement

▪Constraints: property/legal/ refurbish/remodel/dispose

▪Need for new investment- where?

Figure 3.6: Conceptual Master Planning Framework

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3.5 Summary:

The challenges in today's healthcare environment have placed enormous pressure on PCTs to develop better planning systems. This chapter reviewed the various approaches to planning along with identifying key developmental policies which influence the master planning process within the Department of Health. The structure of healthcare delivery is changing and PCTs are now adopting an integrated/service reconfiguration approach. Although traditional forms of planning focus on internal factors of administration there is a growing need to incorporate other sophisticated systems to support the planning process. One such ICT tool 'SHAPE' which is developed by the Department of Health, will be studied as a part of this research. It is necessary to develop a comprehensive planning process to manage the complexity and enhance the iterative planning process. What this depicts is that Master Planning and Strategic Asset Management are closely interlinked and that multiple stakeholders from different organisations and agencies must work cooperatively in strategic and tactical decision making. The next step would be to develop a framework encompassing various infrastructure decisions which are driven by different planning evidence congregated by numerous activities and stakeholders in what is a very complex and interrelated system.

4 Integrated Service Provision

4.1 Introduction

The White Paper, *Our Health, Our Care, Our Say* (Department of Health, 2006b) proposed a fundamental realignment of the way in which NHS services are organised and set a vision for the future, where an increasing proportion of healthcare will be provided locally in the community. Technological and clinical advancements have enabled services that were once provided in specialist care to be provided within the community and locally. This chapter reviews the concept of integrated care and cites some of the pilot case studies implementing integrated care provision within the NHS.

4.2 Drivers

The integration of health and social services is a challenge to many health systems in England and throughout the world. Better integration has the potential to deliver improved health and care services. There have been a number of policies within the NHS which aim to provide seamless journey for patients through health and social care, placing a strong emphasis on collocation and integration of services. *Our Health, Our Say, Our Community* proposes the following range and scope of community hospitals and services (Department of Health, 2006a).

Narrower range of services

Typically limited range of health and social care services or focussed on one segment of population

Smaller Size

Typically small served populations with few/no beds

Larger Size

Typically large served populations with beds

Multi Use Community Clinic

Intermediate Care

Integrated Health and Social Care Campuses

Re modelled General Hospitals

Wide range of services

Typically wide range of health and social care services

Figure 4.1: Range and Scope of Community Hospitals and Services

(Source: Department of Health, 2006a)

The NHS Next Stage Review committed to improve all health and care services to achieve and sustain high quality care for all. This vision was reiterated in 'Our vision for primary and community care' to enable modern, consistently high quality, sustainable community services that are responsive to patients and communities whilst offering value for money for taxpayers (Darzi, 2007; Department of Health, 2008b, Department of Health, 2009). The importance for improved integration was underlined again in the NHS Next Stage Review and Primary and Community Care Strategy (Transforming Community Services: Department of Health, 2009).

The driving force to reform processes depends on demand and supply. Factors such as demographic and epidemiological changes, rising expectations of the population and equity and fairness require a reformed health system which can integrate services more effectively. The supply side constitutes of factors such as, the development of new medical technologies along with ICT tools. Restrictions from economic pressures call for reforms to contain costs and

provide the much needed facilitation required to reform the health system (Grone and Garcia-Barbero, 2001; Erskine, 2008).

Demand Side Factors
- Shifting Demographics
- Epidemiological Changes
- Chronic Illness/Long Term Conditions
- Rising Expectations
- Patients Rights, Safety
- Need for Local Services
- Accessibility
- Equity and Fairness

INTEGRATION OF SERVICES

Supply Side Factors
- Medical Technologies
- Workforce Issues: Migration, Skills Shortages
- Information Systems (ICT tools)
- Economic Pressures (Changing policy)

Figure 4.2: Driving Forces for Healthcare Reform

(Source: Grone and Garcia-Barbero, 2001; Erskine, 2008)

4.3 Definition: Concept of Integration

The White Paper, *Our Health, Our Care, Our Say* (Department of Health, 2006b) has also emphasised the need for integrated care which can be delivered through multidisciplinary networks and teams (Department of Health, 2006b). According to WHO European Office for Integrated Health Care Services Integrated Care (WHO, 2001), 'integration of services includes inputs, delivery, management and organisation of services related to diagnosis, treatment, care, rehabilitation and health promotion. It is also a means to develop and improve the services in relation to access, quality, user satisfaction and efficiency'. Building on this definition, Kodner and Spreeuwenberg (2002) adopted a patient centric view and defined integrated care as 'a coherent set of methods and models based on the funding, administrative, organisational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors'. Kodner and Kay (2000) cited in (Kodner and Spreeuwenberg, 2002) elaborate that the goal of these methods and models is to enhance the quality of care, consumer satisfaction and system efficiency for patients with complex, long term problems cutting across multiple services, providers and settings. Ham (2006a,2006b,2007) conducted a series of studies collecting evidence from outside the UK to depict the beneficial outcomes of integrated delivery systems like Kaiser Permanente[2]. He further observed that the main lesson learnt from Kaiser is its ability to minimise the use of acute hospital beds through an integrated approach to service delivery which breaks

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[2] Kaiser Permanente is America's largest not-for-profit health care organisation, serving 8.1 million members in 9 states and the District of Columbia.

down barriers between different care levels (primary and secondary care). This approach centres on management of people with chronic diseases. In comparison with the NHS, more care is delivered through various community settings such as intermediate care, home care and self care of patients. 'Care in Kaiser is actively planned and managed and this explains its ability to deliver good outcomes with a different pattern of service utilisation to the NHS' (Ham, 2006a).

Ramsay and Fulop (2008) described vertical integration as a framework where different components of a supply chain are brought together in a single organisation. They further explained two main types of vertical integration in healthcare:

- where agencies involved at different stages of the care pathway are part of a single organisation; and

- where payer and provider agencies are part of a single organisation.

Devers et al. (1994) proposed an innovative organisational delivery system incorporating vertical and horizontal integration systems that could be capable of meeting the challenges of healthcare environments (see Figure 4.3). They further explain that such systems pursue a vertical integration strategy (often defined in geographical regions); and also utilise horizontal strategies, but vertical integration is emphasised to differentiate them from multihospital systems or other chains providing services at a single stage of the delivery process. As Figure 4.3 indicates, functional and physician–system integration promotes clinical integration. They define these concepts as follows:

- *Clinical Integration*: the extent to which patient care services are co-ordinated across various functions, activities and operating units of a system;

- *Physician-system Integration*: the extent to which clinicians benefit economically through their affiliation with the system and have substantial administrative involvement; and

- *Functional Integration*: the extent to which key support functions and activities (such as financial management, human resources, information management, strategic planning etc) are co-ordinated across operating units.
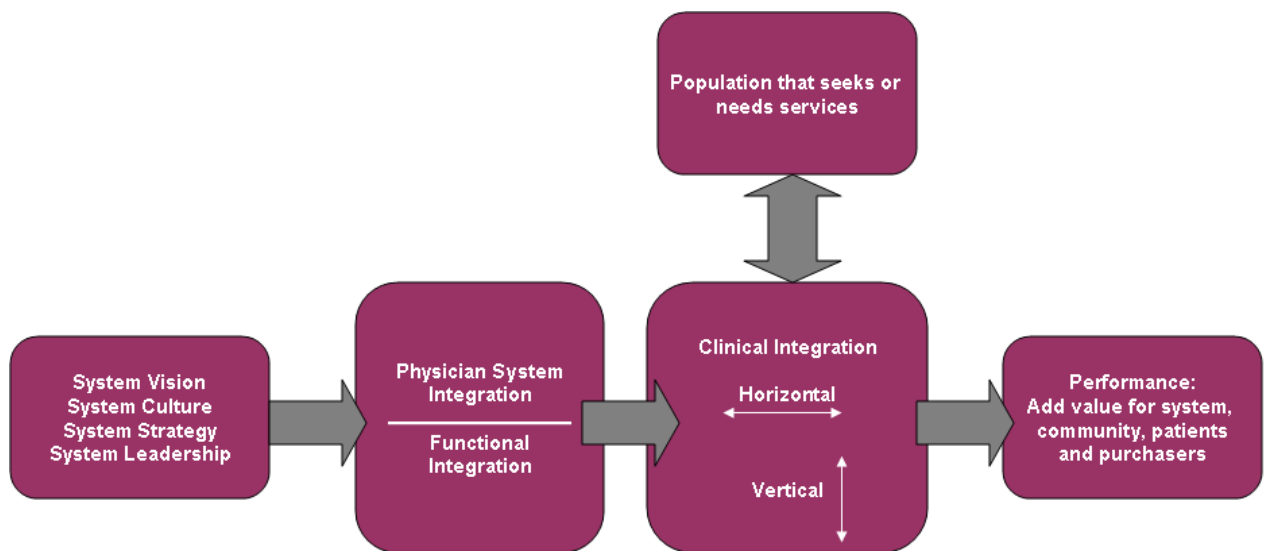
Figure 4.3: Framework for Integration

(Source: Devers et al. 1994; adapted from Gillies et al. 1993)

It is important to note that the factors depicted in the above diagram will be influenced by each healthcare system's market environment, geographical distribution of facilities, and length of time each unit has been with the system (Devers et al. 1994). Mathuna (2005) provided a key distinction between horizontal and vertical integration and defined them as:

- Horizontal Integration: involves a process that enables organisational components to retain their independence and their status as autonomous entities.

- Vertical Integration: involves the combination or coordination of different levels of healthcare provision in a vertically ascending mode of cooperation.

He further explained that most organised delivery systems are hybrid organisations, containing both owned and non-owned components. Although horizontal and vertical integration are the two main directions of healthcare integration, Fulop et al. (2006) have identified five principle forms of integration (Figure 4.4). The following typology summarises the key requirements for effective integration and proposes that process and culture are as important as structural and governance integration (Fulop et al., 2006; Ramsay and Fulop, 2008).
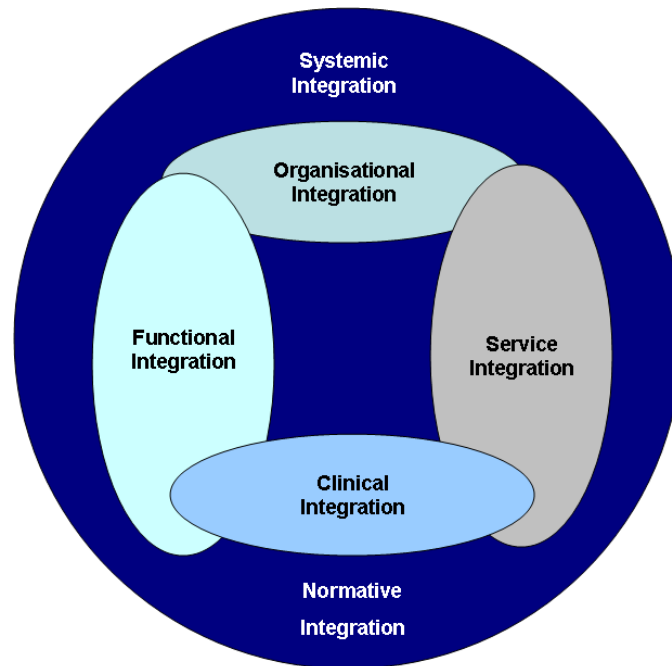
Figure 4.4: Dimensions of Integration

(Source: Fulop et al., 2006; adapted from Contandriopoulos and Denis, 2001)

- **Organisational integration**: Organisations are brought together by mergers and/or structural change; or virtually, through contracts between separate organisations.

- **Functional integration**: Non-clinical support and back-office functions are integrated.

- **Service integration**: Different clinical services provided are integrated at an organisational level.

- **Clinical integration**: Patient care is integrated in a single process both within and across professions, e.g. through use of shared guidelines.

Two additional factors which are vital for successful integration:

- **Normative integration**, where shared values exist in coordinating work and securing collaboration in delivering healthcare.

- **Systemic integration**, where there is coherence of rules and policies at numerous organisational levels (Fulop et al., 2006; Ramsay and Fulop, 2008).

4.4 Care Models:

Although there are a number of rationales and evidence for horizontal and vertical integration of hospitals; Burns and Pauly (2002) found a disjunction between integration rationales advocated by providers and those cited in academic literature. They suggested four alternative models for achieving integrated delivery of health care services which are summarised below.

4.4.1 Customised integration and disease management:

These care models are integrated around a specific disease or designed to address a complex set of conditions. Services are focused around integrated medical delivery on high-cost and chronically ill patients who account for a high share of medical expenditures. These projects rely on two types of integration programs: (1) case management programs for patients who are at high risk of hospitalisation and adverse health outcomes resulting from their diverse health, functional, and social problems; and (2) disease management programs for patients with a single diagnosis and a common set of care needs related to that diagnosis (Burns and Pauly, 2002). These services are viewed as preventative rather than acute care, and are primarily provided in the home and community. This program is targeted to reduce hospital use (Chen at al; 2000).

4.4.2 Co-location of care:

In this model, personnel from one firm relocate their offices to other firm in order to foster greater interaction, learning and mutual adjustment. Healthcare organisations can adopt this model by geographically co-locating specialties and departments. Kaiser Permanente's Chronic Disease Recovery Program, for example, has located substance abuse services in the same place as primary care provision.

4.4.3 IT-integrated health care:

This method relies on integrating IT advances such as electronic medical records (EMRs), personal digital assistants, digital imaging/storage/retrieval, automated drug and supply dispensing, beds with built-in electronic patient charts, remote patient monitoring, electronic transmission of patients' physiological data, and robotic surgery; into digital hospitals. Telemedicine offers the NHS a new approach to healthcare delivery, to improve patient management throughout the health service and shift medical expertise and skills closer to the patients in the community and primary care setting (Wallace et al., 1998; Istepanian, 1999). The benefits of this approach largely depend upon the ability to harness the technological and innovative advances within organisational and managerial frameworks.

4.4.4 *Patient-integrated health care:*

This approach empowers individuals and gives them incentives to coordinate their health information and serve as their own gatekeeper; for example personal medical records (PMRs) which are patient-centric rather than provider-centric. These represent the patients own version of EMRs and are portable across all sites of care and are also available in wireless format.

The Department of Health Integration Service Improvement Programme (ISIP) (2009) explained that a care model design provides a description of the care required to be procured for a given population. Care models provide commissioners with a description of the whole care journey. It enables care provision from the patient's perspective, challenges traditional practice, ensures that current practice is based on evidence, improves safety, quality and efficiency, and integrates workforce, estates, IT, finance and information in the process of development. It also enables Local Health Communities (LHC) to define and integrate national and local priorities for change (Department of Health: ISIP, 2007). The three key components of a care model are described below.

- **Care Elements:** They describe 'what care' is required in terms of 'interactions' (contact between the patient and health services) and 'interventions' (actions taken with the patient). They provide a menu of options for care purchased on behalf of the population, which patients and clinicians can access together, to address individual health needs. Examples of care elements include: angiography, primary assessment etc.

- **Care Pathways:** These define the route that different patients need to take through the care elements defined in the care model. Campbell et al. (1998) defined integrated care pathways as 'structured multidisciplinary care plans which detail essential steps in the care of patients with a specific clinical problem'. The European Pathways Association (2005) defined it as 'a methodology for the mutual decision making and organisation of care for a well-defined group of patients during a well-defined period.' Care pathways are governed by patient choice, clinical need and evidence based practice and also help to determine the provision of an appropriate care setting along with the necessary competencies needed to deliver it (Department of Health: ISIP, 2007).

- **Clinical Protocols:** These can inform the competencies needed to deliver care and the identification of quality indicators used for the purpose of commissioning care. These protocols are documented agreements for different types of diagnostics and treatments that will be utilised at different junctures of the care pathway for different types of patients (Department of Health: ISIP, 2007).

The Department of Health has suggested the following framework to develop Care Models based on the experience of demonstration sites of integrated care within the UK (Department of Health: ISIP, 2007).
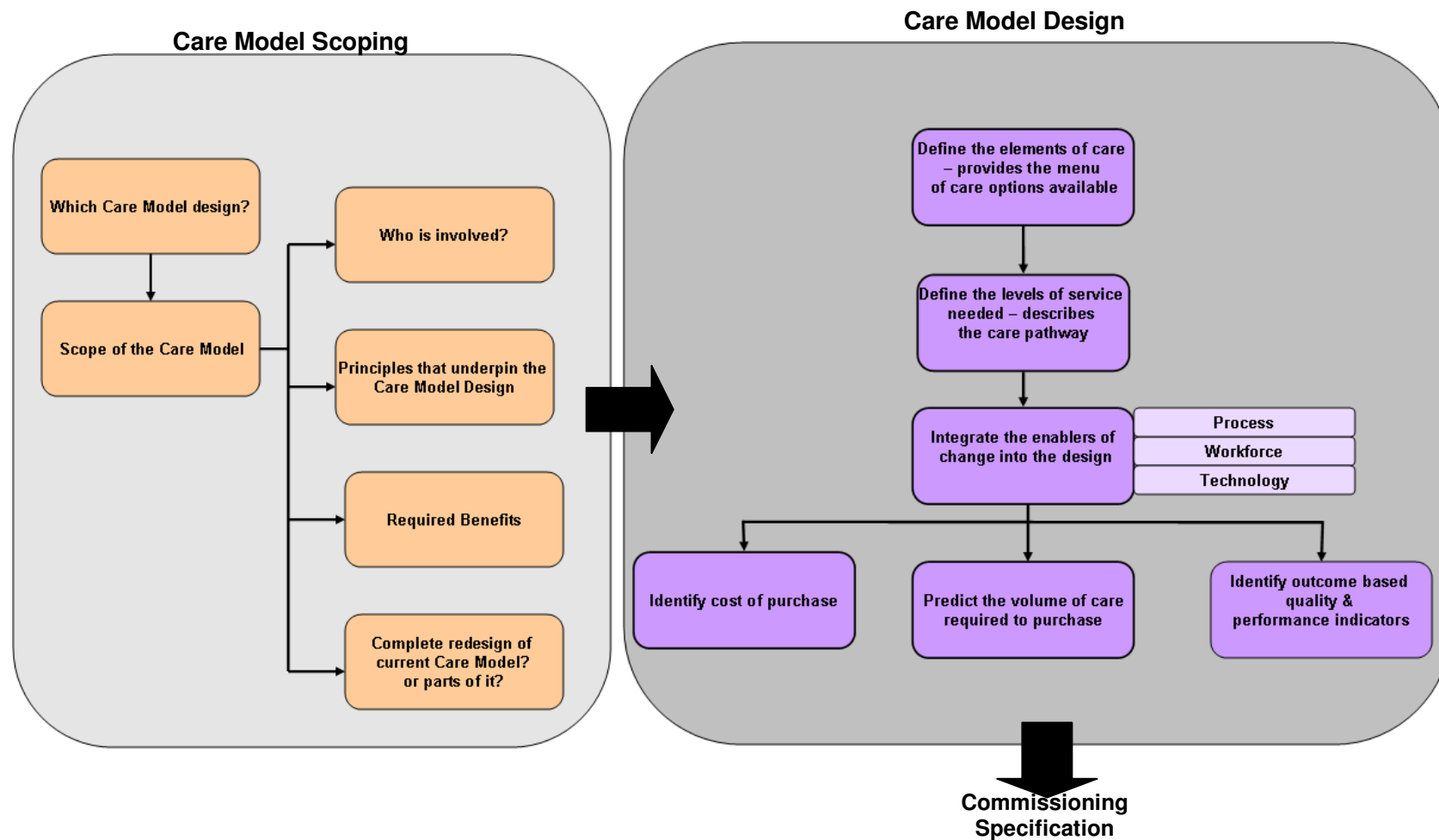
Figure 4.5 : Care Model Design
(Source: Adapted from Department of Health, ISIP, 2007)

The Department of Health-Commissioning (2008b) has also recently launched a pilot programme for integrated care. Their approach to integration is to bring different expertise and interventions closer together, for example by creating teams of primary and secondary care clinicians working together or creating teams of health and care professionals. The other dimension to this approach concerns the extent to which the resources are integrated to enable better care by creating a locus of accountability for a range of services close to patient and service user, for example delegation of a capitation sum for a group of registered patients to providers (Department of Health: ISIP, 2007).

4.5   Composition of Integrated Care Systems: Case Studies

A number of UK initiatives have explored care integration and related issues. The following case studies include off the web based case studies and also industrial documents e.g. Department of Health reports.

4.5.1   Demonstration sites of the Kaiser Permanente Model

These have been initiated in Torbay, Northumberland and Birmingham. These are described in brief below:

- **Torbay Beacon Sites:**

North Torquay has been working on integrating health and social care services in localities known as zones and is directed at reducing reliance on unscheduled care. In support of this work, patients who are most at risks are allocated a case manager and are given care plans which include treatment objectives, planned interventions, and recommended actions in the event of a crisis. Another significant project undertaken was to review the role of community hospitals, in which a traditional NHS community hospital (Paigton) was transformed into an active intermediate care service. This hospital played a crucial role in reducing pressure on beds at Torbay Hospital by providing a step down facility for post acute care. Although GPs were involved in the provision of care, the emphasis was transferred to GPs with a special interest (GPwSI) for care of the elderly. Due to this, more patients were treated and lengths of stay were also shortened (Ham, 2006a).

- **Northumberland Beacon Sites:**

Northumbria has been working on an integrated emergency care service which involved the establishment of a 'front of house' team comprising of three consultant physicians (acute care physicians) and two A&E consultants. The team operates as the Hospital at Night team after 9pm, and is supported by a single emergency care team of junior doctors (Ham, 2006b). Another aspect of integration involved differentiation of wards according to the acuity of patients treated, referred to as 'back of house care'. The idea was to concentrate on acutely ill patients on wards with senior staff, and to use other wards for the treatment and care of patients with less acute needs, but who had a predominantly skilled nursing and therapy need.

This was also supported by Interqual (McKesson Corporation, 2009), which is a clinically based software tool supplied by McKesson which assess appropriateness of hospital admissions, level of care and length of stay. Underpinning this work has been the development of the three acute hospitals in Northumbria as a hospital network; in which medical staff work across different sites and are able to sustain services in the new hospital. This hospital is a 96 bed hospital at Hexham which provides care to a population of only 70,000. The trust has also invested in a contact centre which provides a single phone number for patients to 'choose and book' service (Ham, 2006a).

- **Birmingham Beacon Sites:**

Eastern Birmingham and Solihull have focused on: 1) improving the quality of care for people with long-term conditions; and 2) development of clinical leadership in partnership and management. Particular attention had been given to heart failure, COPD, diabetes, and chronic kidney disease in the area of long-term conditions Clinical teams have undertaken process mapping to understand existing care pathways in order to bring about substantial improvement in them. They had also invested in an intermediate care diabetes team to support primary care; in order to develop the requisite skills and processes to manage the burden of disease in its most disadvantaged wards (Ham, 2005). This effectively made the SHA the highest performer under QoF (DH CSM/PC/PMC, 2008) in the registration of diabetic patients, a key requisite of structured care. In order to care for the most vulnerable patients with long term conditions 'assertive case managers' had been appointed to work across the hospital/community interface to support district nursing and to provide advanced nurse practitioner advice for the systematic review and intervention of patients with a high risk of multiple admissions, resulting in a significant reduction in hospital admissions for the patient cohort. Also, Partners in Health Centre (July 2005) is a location for the provision of innovative services for patients with long term conditions. It is neither secondary nor primary care and operates as a neutral space, where professionals can collaborate to deliver integrated care. Patients using the centre have access to self care support and educational programmes. An orthopaedic triage had also expanded in this area which offered orthopaedic assessment in primary care by an extended scope physiotherapist for all musculoskeletal conditions where a GP felt an orthopaedic consultation was required. The service also included a mobile clinic and a choice of locations for patients. This has lead to significant reduction in waiting times for treatment and the achievements of this service has received recognitions and awards.

There has been a considerable debate regarding the comparison of the NHS with Kaiser Permanente. An initial study by Feachmen et al. (2002) claimed that Kaiser performed much better than the NHS at roughly the same cost due to integration throughout the system, efficient management of the hospitals, the benefits of competition and greater investment in information technology. There was extensive criticism for the conclusions reached on the basis of the costs compared, the

currency conversion calculations and the differences in populations served between the two systems (Croasdale, 2002; Talbot-Smith et al. 2004; Ham, 2006a). Ham et al. (2003) compared the hospital utilisation for 11 leading causes of bed day use for population aged 65 and over between the NHS, Kaiser and the US Medicare programme and concluded that the overall bed day in the NHS is 3.5 times higher than Kaiser's. They further stated, 'The NHS can learn from Kaiser's integrated approach, the focus on chronic diseases and their effective management, the emphasis placed on self-care, the role of intermediate care, and the leadership provided by doctors in developing and supporting this model of care' (Feachem and Sekhri, 2004; Ham, 2005). Key supports of the system include leadership training and a strong focus on IT and communications systems. Ownership and integration are the major attributes of the Kaiser system; the challenge within the NHS is to create the sense of ownership once the priorities of service delivery take precedence over organisational issues (Shapiro and Smith, 2003). Ramsay and Fulop (2008) argue that there is not enough evidence supporting the success of the Kaiser pilot sites. The data presented are cross sectional when compared with the rest of the NHS, rather than being 'before and after'. Improvements such as leadership capacity, partnerships are not grounded in any suitable measures e.g. training evaluations or frequency of meeting with local partners. Also, it has been difficult to locate measures of impact on cost.

4.5.2 Demonstration Sites based on the Evercare Model:

The specific case management approach of the US Company United Healthcare's Evercare model has been tested in nine PCTs in 2003-04. It sought to improve care for people aged over 65 years through case management administered by specially trained Advanced Practice Nurses (APNs) (Ramsay & Fulop, 2008). Diagram 4.6 depicts the core components of Evercare which have been redesigned into three primary groups to suit the NHS. These include:

- **Data intervention**: to identify high risk older people and measure their outcomes after programme implementation;

- **Role re-engineering**: to prepare a work force skilled in addressing the needs of a complex, vulnerable population; and

- **Process re-engineering**: to improve the capability of the system to respond to the special needs of high-risk older people (Evercare, 2003).
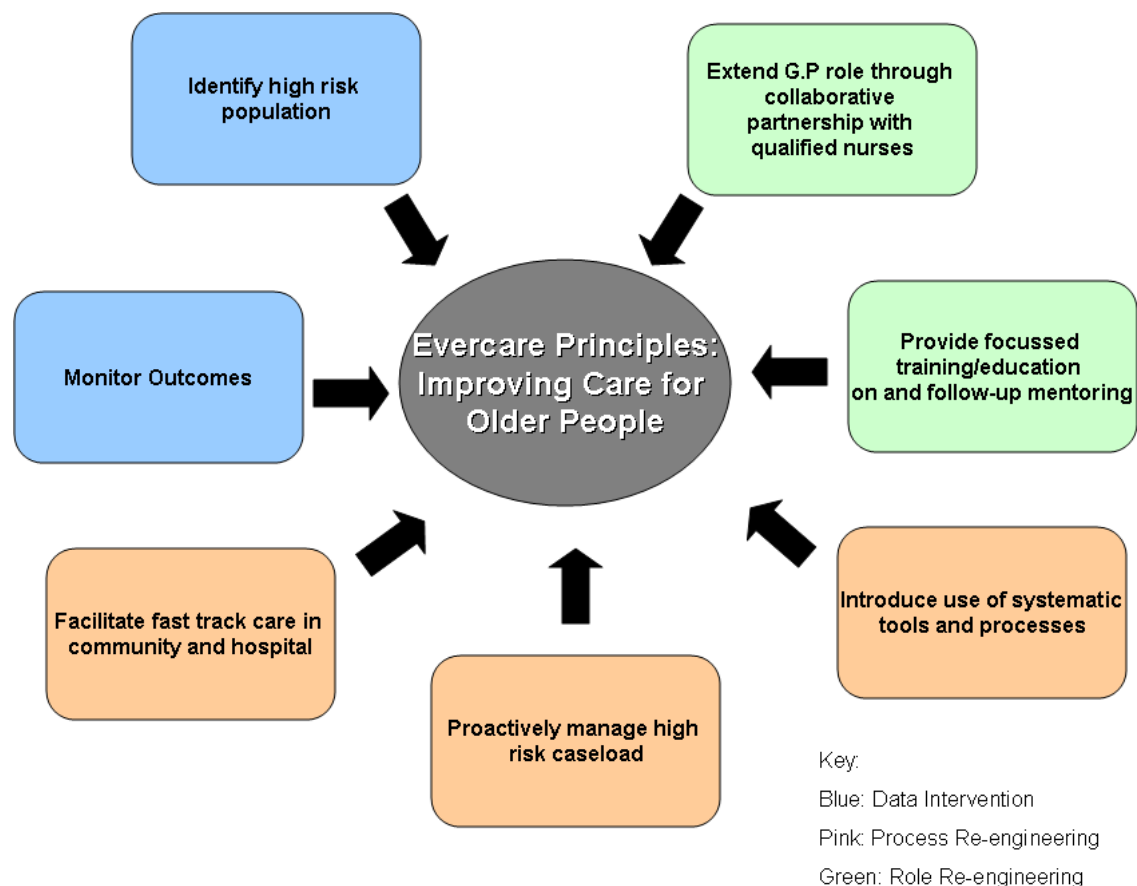
Figure 4.6: Components of Evercare

(Source: Evercare, 2003)

Boaden et al. (2005) evaluated this programme describing the changes associated with developments in project management, increased contact with patients with high risk, nurse reported improvements and patients and carers views of services. Two case studies are described briefly below.

- **Brent Care Co-ordination Service (CCS)**

The Brent Care Co-ordination Service (CCS) is not a clinical, nurse-led model of chronic disease management and care co-ordination and hence differs from Evercare. Brent CCS employs non-clinical staff as case-workers and is client centered. It claims to avert crises and the need for emergency clinical care. The 'before and after' evaluation of the pilot indicated that GP appointments, GP home visits, GP after-hours visits, A&E attendances and hospital admissions were reduced after the intervention of care coordinators (Boaden et al., 2005).

- **The Cambridge Model**

This model used a bottom up approach and was arrived at independently by nurses and two local GPs. In this model, existing health workers were designated as key-workers responsible for monitoring patients, planning and co-ordinating their care. District nurses mainly fulfilled that role; no special additional posts (e.g. that of APN) were created. This model had a strong emphasis towards practice-based. Neither DH, SHA nor UHG have played any direct role in this project. Although, cost saving has been an important motivation for the PCT to promote this project (Boaden et al., 2005).

Gravelle et al. (2007) also conducted a study to determine the impact on outcomes for patients utilising the Evercare approach for case management of elderly people. Their main conclusion was 'case management of frail elderly people introduced an additional range of services into primary care without an associated reduction in hospital admissions.' They attributed this to additional identification of cases. One of the key features of case management is the employment of community matrons. They suggested that the system required a redesign if it aimed to reduce hospital admissions.

Based on the prospectus for potential pilots for the integrated care pilot programme by the Department of Health (Department of Health, Commissioning, 2008) some other examples of integrated care include:

- Sites which focus on the achievement of improvement goals in population health outcomes, economy and quality of care which were launched in the Triple Aim Campaign of the Institute of Healthcare Improvement;

- Three Whole System Demonstrator sites in Kent, Cornwall and Newham focussing on long term conditions and on the added benefit of technology in improving integrated health and social care working; and

- Also, a number of patient centred initiatives, supporting patients in self-management of whole system care in Norfolk, Surrey, Cheshire and Birmingham.

There are a number of demonstration sites which are implementing complex service transformations to improve different aspects of patient care: Long term conditions; Urgent care; Elective care/18 weeks; and Mental health. These Local Health Community (LHC) Demonstration sites as indentified by the Integrated Service Improvement Programme (ISIP), (Department of Health- Commissioning, 2008) have been briefly summarised below in Table 4.1.

Table 4.1: Case Studies of Integrated Service Provision (Themes)

Theme	**Coronary Heart Disease (CHD)**
Location	**Hull**
Commissioner	**Hull PCT**
Provider	**Hull PCT Community Services, Hull and East Yorkshire Hospitals NHS Trust Yorkshire, Ambulance Service,** **Classic Hospital (Independent Provider)**
Aim	-Support people with CHD symptoms to access health services in a timely manner -Proactive prevention for those at high risk of developing CHD -Improved secondary care intervention in line with NSF requirements
Activities	-Securing clinical engagement -Draft of year of care model completed, 18 week pilot developed and implemented. -Referral to secondary Care Pathway developed -Commissioning of cardiac specialist nursing service -Pilot of targeted healthy hearts assessment for those at high risk of CHD established and implemented through locally enhanced service.
Outcomes	-Development of targeted screening for those at risk of CHD -Streamline care pathway for those with CHD symptoms and ongoing treatment needs meeting the 18 week target and urgent care needs -Introduction of care coordination and case management for those with CHD
Benefits	-Increased number of people are able to achieve optimum health outcomes -Increased number of patients maintained at level 1 and 2 stratification -Increased incidence of patients actively participating as co producers of their care; thus improving service utilisation
Theme	**Dermatology**
Location	**Hull**
Commissioner	**Hull PCT**
Provider	Hull PCT Community Services, Hull East Yorkshire Hospital trusts, Hull PCT GPs
Aim	-To enable people with skin disease to achieve their optimum health potential -To stimulate a range of provision which provides safe care which is of quality and value -To maximise the opportunity of service improvement resulting from relocation of service
Activities	-Prevalence and demand based Needs assessment

	-Economic evaluation of providing Dermatology care closer to home Review of in-patient requirements -Development of Model of Care for Dermatology -Commissioning intentions document completed and agreed with commissioners & development of implementation plan. -Community premises identified.
Outcomes	-Appropriately commissioned, cost effective and patient directed care pathways for sufferers of skin disease
Benefits	-Improved access for diagnosis and treatment of skin disease, meeting and exceeding national targets. -Provision of care closer to home
Theme	**Diabetes**
Location	**Derby City**
Commissioner	**Derby City PCT and First Commissioning PBC Consortia**
Provider	**Derby Hospitals NHS Foundation Trust , First Provider Limited**
Aim	- Develop and commission a model of care for adult diabetes services that will improve health outcomes, reduce complications associated with diabetes and deliver care closer to home - Develop and review integrated care pathways - Improve primary prevention and case finding in primary care setting
Activities	- Clinical Engagement Secured & model of care agreed. - Commissioning specification developed and approved. - Review of care pathways - Identifying new premises for the delivery of services
Outcomes	- Development of a comprehensive and integrated model of care for diabetes services - Development of a commissioning specification to commission 'tier two' services as part of a 3 tiered model of care
Benefits	- Reduce the increasing prevalence of diabetes - Minimise secondary complications e.g. reduction in myocardial infarctions, amputations, peripheral vascular disease etc - Optimise clinical outcomes, health and well being for people with diabetes
Theme	**Diabetes**
Location	**Nottinghamshire**
Commissioner	**Central Nottinghamshire TPCT , Ashfield and Mansfield Practice Based Commissioning Cluster,**

	Central Nottinghamshire Diabetes Network
Provider	**Sherwood Forest Hospitals NHS Foundation Trust**
Aim	- Identify the prevalence of diabetes across the population by conducting a health needs assessment of Central Nottinghamshire Teaching PCT - Develop and commission a model of care for adult diabetes services that will improve health outcomes, reduce complications associated with diabetes and deliver care closer to home
Activities	- Clinical Engagement Secured - Vision and model of care agreed - Commissioning specification under development - Health needs assessment complete & care pathways reviewed
Outcomes	- Created a vision for the development of a comprehensive and integrated model of care for adult diabetes services (including reviewed care pathways) - Development of a commissioning specification to commission new service model of care - Increased level of service delivered in a primary and community care setting - Supported PBC clusters through the commissioning process
Benefits	- Reduce the increasing prevalence of diabetes - Minimise secondary complications e.g. reduction in myocardial infarctions, amputations, peripheral vascular disease etc - Optimise clinical outcomes, health and well being for people with diabetes
Theme	**Diabetes**
Location	**South Tees**
Commissioner	**Middlesbrough PCT, Redcar and Cleveland PCT**
Provider	**South Tees Hospitals NHS Trust, Middlesbrough PCT, Redcar and Cleveland PCT**
Aim	Development of an agreed and costed model of care which describes how the 'must have' components of the diabetes service are to be delivered locally and how national specifications for diabetes services are to be met
Activities	- Needs Assessment exercise carried out in line with NDST commissioning toolkit and supplemented by local data sources - Stakeholder events held to develop high level vision of future model of care and review that model in light of needs assessment - Diabetes Retinal Screening Service review undertaken and recommendations presented to commissioning organisations - Diabetes dietetic service review underway - Costing of existing and future models of care in progress
Outcomes	- Defined levels of care within primary care and plans to develop this further

	- Integrated primary and secondary care diabetes service - Patient education and self-care skills training in place - Defined roles for specialist teams - Defined skills and workforce training plans in place - Reduction in hospital outpatient appointments as care can be effectively managed in a primary care setting - Reduced unscheduled admissions and length of stay for diabetes patients through effective case management and efficient discharge co-ordination
Benefits	-People with diabetes are supported, where appropriate, to manage their condition as best they can themselves. Quality of life is improved and people are empowered to manage their condition - Improved patient experience as patients experience a seamless, co-ordinated journey through the healthcare system - Proactive case management systems are in place across the care delivery system
Theme	**Diabetes**
Location	**Warwickshire**
Commissioner	**Warwickshire PCT**
Provider	**George Eliot Hospital Warwickshire General Hospital, University Hospital of Coventry and Warwickshire, Coventry and Warwickshire Partnership Trust**
Aim	- To commission comprehensive and integrated diabetes services on behalf of the population of Warwickshire & assist with the development of the PCT Commissioning Strategy
Activities	- to develop local service strategies for all tiers of health service
Outcomes	- Clear and unified management arrangements - Innovative service models and approaches - A service which can sustain PCT high ranking in achieving national diabetes targets - Reduce Health Inequalities
Benefits	- A seamless experience for the service user - A 'value for money' service - Clear clinical leadership and accountability across the entire provision
Theme	**End of Life Care** (EoLC)
Location	**Croydon**
Commissioner	**Croydon PCT**
Provider	**21 across LHC**
Aim	- To ensure that end of life care (EoLC) is appropriately planned and delivered for all those with life-limiting

	conditions in Croydon.
Activities	- Preliminary baseline review of existing service provision for EoLC services conducted - Improve coordination and communication across the different EoLC services and service providers - Clarify what EoLC services are needed and what the different service providers should be delivering - Analysis into how EoLC is currently been funded suggests that potentially £10 million of existing PCT money could be redeployed into commissioning more effective EoLC - Planned approach to visioning EoLC - Outcome sharing with Sutton and Merton PCT.
Outcomes	- All those with a life limiting condition have an appropriate plan for EoLC
Benefits	- All those with life limiting conditions experience a high quality of end of life care (project is still in the scoping stages)
Theme	**Long Term Conditions (LTC)**
Location	**Tower Hamlets**
Commissioner	**Tower Hamlets PCT, London Borough of Tower Hamlets**
Provider	**Tower Hamlets PCT, The Barts, London Borough of Tower Hamlets**
Aim	- To address the workforce aspects of Long Term Conditions in the context of whole care pathway redesign and ensure plurality of provision through joint health and social care and 3rd sector working.
Activities	- Developing and implementing a care model on the fly (as an interim substitute for a completed and agreed care model provided by the LTC programme) - Designing an assessment and care management framework that is compatible with the capabilities and culture of the Tower Hamlets community (and which is simpler than the originally intended 3-tier Keiser Permanente base approach) - Working within the constraints imposed by nationally deployed systems and deployment timescales - Meeting the demands of consistent content and language when developing a single standardised service menu
Outcomes	- There will be an increase in planned care and prevention
Benefits	- Better use of resources through reduced unplanned activity and admissions - Patients will experience an improved quality of life
Theme	**No Delays (18 Weeks)**
Location	**South Devon**
Commissioner	**Torbay Care Trust, Devon PCT**
Provider	**South Devon Healthcare NHS Foundation Trust**

Aim	- Eliminate unwanted and inappropriate delays and improve equity of access and care - Maximise service improvement by aligning key enablers of People, Process and Technology - Provide greater choice and community involvement - Foster world class clinical practice
Activities	- Local vision created and communicated – "No Delays, Zero Waits" - Clinical Engagement Secured - Pathway Redesign and Consensus Workshops Held: Detailed As-Is analysis, Constraints and Bottlenecks, Future State Design, Implementation Planning - Detailed Action Plans developed by specialty & Benefits realisation plan underway.
Outcomes	- More care will be delivered closer to home by a multi agency team of staff - Patient waits reduced to a minimum for key high volume, high risk specialties - Cross-community clinical engagement in planning patient care - Patient care delivered in wide range of settings depending on patient preference and clinical need
Benefits	- Patients receive treatment with no delays - Patient health improvements, higher quality clinical outcomes - Cost efficient clinical pathways - Integration and strong relationships between commissioner and provider
Theme	**Rheumatology**
Location	**Calderdale & Huddersfield**
Commissioner	**Kirklees PCT, Calderdale PCT**
Provider	**Calderdale & Huddersfield NHS Foundation Trust, Leeds Teaching Hospitals NHS Trust.**
Aim	- To develop the capacity and capability across the healthcare system in Calderdale and Huddersfield to deliver improvement in service provision and clinical outcomes to people with Rheumatoid Arthritis and their carers.
Activities	- Project mapped to national strategy and local drivers and commitment from PCT Chief Executive Board identified. - Resources and work stream leads identified and briefed - Project Gantt chart developed and level 3 service model drafted and tested. - DMARD Protocols reviewed and revised, Day case service activity data collected and analysed. - Draft business case for day case repatriation - Specified patient pathways mapped
Outcomes	- An agreed model of care for RA and improved evidence based pathways - Comprehensive periodic MDT assessment, in primary care setting - Satellite tertiary care (resistant RA / Biologics) clinics in Primary Care - Enhanced RA knowledge & clinical skills in Primary Care

	- MDT shared Care Record - Appropriate day case care repatriated from Leeds into HRI EPP type training for patients & information for patients and carers - Web resource for Primary Care & RA patient community
Benefits	- Improved access to appropriate local services - Reduction in the number of unnecessary follow-ups. Freed outpatient capacity - Reduced variation in how RA managed across LHC - There should be improved consistent information for service users and others - Commissioners and planners will have better quality information about services - Patients will feel empowered and enabled to self-care
Theme	**Scheduled Care**
Location	**Liverpool**
Commissioner	**Liverpool PCT & Sefton PCT**
Provider	**Royal Liverpool and Broadgreen UHT, Aintree Hospital FT, Walton Centre for Neurosurgery, Liverpool Womens FT, Royal Liverpool Children's Trust, Mersey Care Trust, Cardiothoracic centre**
Aim	- To develop a safe, predictable and reliable health care system,that provides a consistent quality of service for the local population
Activities	- Robust governance arrangements in place with identified leads in each Trust - Benefits Dependency Network mapped - Stakeholder Map developed - Clear communication plan in each Trust - Community-wide benefits realisation plan - Development of an agreed Generic high level Commissioning care pathway - Development of six locally agreed Care specific pathways - Clear governance arrangements for signing off pathways - Describing definitions of services (delivered in both primary and secondary care settings including explicit referral and discharge criteria) developed for inclusion in Choose and Book Directory of Services
Outcomes	- Planned care will be organised according to care pathways across organisational and professional boundaries - Day case surgery will be the norm for most routine procedures - Patients will have the information and support they need to make choices about their care - There will be an increased range of services delivered in community settings
Benefits	- Patients will be in control of their treatment plan and will experience no unnecessary delays - Improved health outcomes relating to elective care - Improved efficiency across the health and care system

	- Enhanced patient choice and convenience of treatment options, times and locations
Theme	**Urgent Care**
Location	**Eastern & Coastal Kent**
Commissioner	**Eastern & Coastal Kent PCT**
Provider	**SE Coast Ambulance NHS Trust, E K Hospitals Trust, KCC, SE Health, Stourcare, K & M Mental Health Partnership**
Aim	- To develop and implement an approach to urgent care that will deliver a step change to the management and provision of Urgent Care services improving the quality outcomes for patients, public, and staff
Activities	- feasibility complete - Urgent Care model adopted by Programme Board - Project Planning including: Objectives and Benefits, Outcomes, Metrics, Project Organisation and Governance, Risk Management, Communications and stakeholder engagement, interdependencies with other projects, use of enablers - Urgent Care Programme Board reviewed and confirmed Urgent Care strategy and direction, approved Project Portfolio and Pilot Business Case
Outcomes	- Patients empowered to self-manage - Getting patients better, faster - Providing care closer to home - Improved patient safety, experience and outcomes
Benefits	- Right response, first time, in time - Better patient journey, experience and outcome - Improve utilisation of resources - Value for money
Theme	**Whole System Change**
Location	**Walsall**
Commissioner	**Walsall tPCT, & PBC clusters**
Provider	**Walsall tPCT (community services), Walsall Hospitals Trust, Walsall Social Care & Inclusion, West Midlands Ambulance Service, WALDOC (OOH GPs), Third Sector Providers**
Aim	- To develop a whole systems benefits realisation framework and dashboard across the Urgent Care, LTC and 18 Weeks Referral to Treatment programmes, ensuring that: 1. Programmes of benefits led transformational change are delivered 2. The PCT grows capability to deliver change and realise benefits.
Activities	- Development of the service model and business case for Urgent Care

	- Financial modelling of 2 options is underway - The hospital divisions are working to stage of treatment trajectories and action plans to meet the targets - Case note audit, pathway redesign, development of booking processes and workforce redesign is ongoing to support the 18 week pathway - On track to close beds to support PFI development by redesign of stroke services, streamlining hospital processes and discharge processes - Programme level benefits and metrics are developing and the approach to developing a LHC benefits dashboard has been agreed
Outcomes	- To meet the 18 week RTT target in December 2007; Sustain 18 W RTT target by development of new VFM pathways by April 2009; Reduction in hospital beds to support PFI development by October 2007; LTC VFM pathways delivering care closer to home; Delivery of new Urgent Care Model - Capability Outcomes : Benefits and measures will be agreed across all three programmes; A benefits dashboard and realisation framework will be developed ; ISIP will be mainstreamed
Benefits	- Improved clinical outcomes - Improved patient experience - Best use of resources and VFM - Improved capability to deliver transformed change
Theme	**Year of Care (Mental Health)**
Location	**Liverpool**
Commissioner	**Liverpool PCT**
Provider	**Mersey Care Trust**
Aim	- To develop joint commissioning and joint service delivery, which will ultimately lead to improved outcomes for service users. - To implement a Year of Care approach for Schizophrenia.
Activities	-Reduction in readmission rates and delayed discharges -Reduction in outpatient waits and DId Not Attends (DNA)
Outcomes	- Integrated care pathways developed across primary, community and specialist services -Inclusive services promote positive mental health and reduce stigma and health inequalities -Medical, psychological and self management components of care are integrated across primary and secondary services -Specialist home treatment services in place with specialist in patient services for complex cases
Benefits	- Commissioners have clear outcome based service specifications -Service users have access to more varied service providers and receive care in the right setting -Improved stakeholder management and involvement in service design

Based on the review of the case studies depicting integrated care models, integrated care can be grouped into the following categories.

- Primary care
- Secondary care (community care)
- Intermediate Care
- Specialist care

Francis (2007) has distinguished between the various health care settings and provided the following diagram which co-related the spectrum of settings with the type of care provision required.
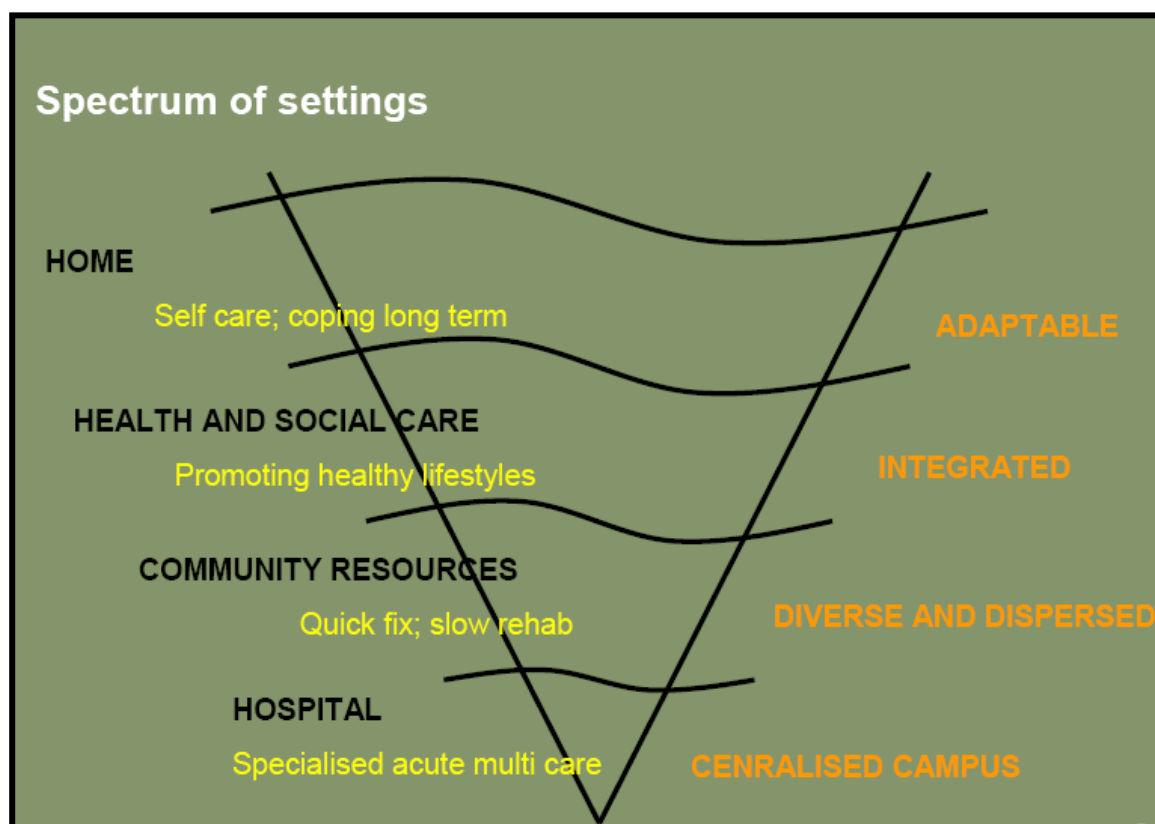

Figure 4.7: Spectrum of Care Settings

(Source: Francis, 2007)

4.6 Lessons Learnt: Implementing Integrated Care

There is a growing interest in integrated healthcare systems within the NHS and also a need for the evaluation of effectiveness of the integrated care models. Ham (2008) suggests the need for stronger incentives to support clinical integration in the future. According to Ham, the key challenge is to reconcile clinical integration with patient

choice; which could be achieved by encouraging patient choice between competing integrated systems. The following lessons are adapted from Ramsay and Fulop (2008) and Fulop et al. (2005).

- **Integrate to suit current needs**

The objectives of integration must be clear and explicit. While exploring options for integrating care based on care pathways, all aspects of the health system and dimensions of integration must be considered. For example, some caution is required with models of disease management that 'carve out' a particular condition such as diabetes. These models run significant risks of fragmenting care and losing the benefits that come from co-ordination by primary care.

- **Achieving economies of scope and scale**

It is important to note that the potential economies of scope and scale from integration take considerably time to realise; and it is imperative not to justify integration on these grounds alone. Better co-ordination of previously fragmented services could lead to significant patient improvement; such issues must be considered before resorting to vertical/horizontal integration. Evidence from merging out-of-hospital services in the United States suggests that there has been very little confirmation to propose that integration has increased efficiency. This can be attributed to the steep learning curve inherent in merging one organisation with the other (Burns and Pauly, 2002).

- **Ensuring integration of community services**

A key benefit of vertical integration is the better integration of community services. King et al. (2001) cited in Ramsay and Fulop (2008) states that the challenge in such integration is the long standing power imbalances between acute and community services.

- **Cultural differences and incentives**

In order to buy into integration of care, it is important to provide staff and clinicians with clinical and financial incentives. Also, every organisation has its own culture and this must be taken into account while integrating them. Some of the key issues for effective integration are: culture of quality improvement; a history of trust between partner organisations; existent multidisciplinary teams; local leaders who are supportive of integration; personnel who are open to collaboration and innovation; and effective and complementary communications and IT systems.

- **Time scales**

It is important to note that it takes time to effect demonstrable changes in organisational structures and processes. It should also be noted that the integration pilots that have been undertaken recently and hence the impact of integration is limited with these sites. Evidence from a number of pilot sites indicate that integration involves a complex path of development and changes take place over large time periods (Ham, 2008).

4.7 Summary

This chapter reviewed the concept of integrated care and different care models for achieving integrated delivery of healthcare services. This enables care provision from the patient's perspective, challenges traditional practice, ensures that current practice is based on evidence, improves safety, quality and efficiency, and integrates workforce, estates, IT, finance and information in the process of development. There is a potential body of national and international evidence that integration can deliver better quality of care to individual patients and service users and more economic care to communities; some of the lessons learnt from integrated care case studies have also been discussed in the above chapter. Although the underlying key issue is the linkage between provision of integrated care and the Master Planning process within the PCT and the supporting decision making framework. This initial review has not found any evidence or industrial guidance documents which depicts an appropriate relationship between the Master Planning process with the provision of care models, neither does it specify at which stage in the Master Planning process are these decisions introduced.

5 Conclusion and Emerging Issues requiring Further Research

Current policy drivers within the NHS pertaining to healthcare planning such as moving healthcare from acute to community setting and partnership working to reduce inequalities in healthcare pose a number of challenges that affect healthier living and healthcare provision. The planning process is also shifting from a procurement oriented approach to a more value based approach working closely with local planning partners. The key issue is to deal with challenges that are encountered by the estates and have a set of defined competencies, skills and strategies. There is a growing need to include dynamic community engagement to enhance estates strategy to develop a more community driven service with greater integration. Although traditional forms of planning focus on internal factors of administration there is an emergent area which incorporates other sophisticated systems to support the planning process. This need has been spawned due to the policy pressures placed on the PCTs along with need to deliver better assets, better services with flexibility. This report reviewed the various approaches to the Master Planning and Strategic Asset Management process along with key developmental policies influencing these processes. It has enabled the development of a conceptual model outlining the key activities within a Master Planning framework. It also dealt with the concept of integrated care and took an overview of different care models for achieving integrated delivery of healthcare services. This initial review has not found any evidence or industrial guidance documents which depicts an appropriate relationship between the Master Planning process with the provision of care models, neither does it specify at which stage in the Master Planning process are these decisions introduced.

Shifting the balance of care has significant implications on the management of estates; hence it is important to have a clear understanding of the current asset base, including size, location and condition for future planning. Along with monitoring and maintaining the performance of their assets, PCTs have to engage in public consultation. The next phase of this research will compare current practice of various consultation processes adopted by the Primary Care Trusts by utilising case study methodology. It will compare case studies against various criteria: depth of information provided, qualitative and quantitative data. This will aid in identifying the knowledge gaps and fragmentation within the planning process. Following this, an interview questionnaire will be developed to inform the Master Planning framework. This will mainly be subject to action research and will be largely centred around the an explanatory case study of a singular PCT. This will be carried out to allow closer scrutiny of the Master Planning process adopted by the PCT. Through initial meetings with the PCT officials it has been established that the PCTs follow a multi-intuitive, multi-stream and multi-stakeholder approach for their Master Planning process. This illustrates the need to not only have a dynamic and flexible Master Planning framework that would encompass a shared language amongst its numerous stakeholders but also be a deterministic strategic business plan that drives innovation.

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