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Twenty-Thirty

Health Care Scenarios – exploring potential changes in health care in England over the next 20 years

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Twenty-Thirty

Health Care Scenarios – exploring potential changes in health care in England over the next 20 years

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Contents

Executive summary	1
Introduction	2
Methods	2
Trend analysis	3
Developing the scenarios	4
The scenarios	5
1. The Gadget Show	5
2. Plural Provision	10
3. Stability with Integration	13
4. Modern Traditional	16
Implications for policy	19
Appendix A Trend analysis research references	21
Appendix B Contributors and workshop participants	29



Executive summary

The purpose of this report is to stimulate debate about the opportunities and risks associated with delivering an affordable health care system over the next 20 years. As there are many factors that will influence health care in the future, we have undertaken a scenario planning exercise to explore political, social, economic and technological trends and develop possible and plausible futures.

The scenarios were developed through a combination of desktop research, one-to-one interviews, and a stakeholder workshop. The scenarios were then further refined through a series of additional interviews.

The four scenarios are:

- 1. The Gadget Show** – high technology adoption with high public engagement
- 2. Plural Provision** – low technology adoption with high public engagement
- 3. Stability with Integration** – low technology adoption with low public engagement
- 4. Modern Traditional** – high technology adoption with low public engagement

The potential opportunities and risks presented by each of the scenarios are discussed, including those associated with health inequalities and access, planning, costs, market development and information. While individual scenarios present specific issues, some themes are common to all:

- the challenges of addressing health inequalities are likely to continue
- despite the possibility of new technologies, the demand for provision of long term care for older people is unlikely to fall
- the development of new technologies and improvements in software compatibility is likely to raise information governance issues.

The four scenarios described in this report are based on only two of the dimensions that are considered to be of high uncertainty and high importance. Nevertheless, the scenario development approach provides a useful framework for a group of stakeholders to explore the potential opportunities and risks of commissioning health care in the English NHS over the next 20 years.



Introduction

Many factors will influence the shape of health care in the future, so predicting the requirements of a health care system over the next 20 years will always be a subjective exercise. Rather than develop a single vision for the future of health care, a scenario planning exercise was undertaken, to inform the Department of Health and the new NHS England in strategic policy making. Four possible scenarios for health care over the next 20 years were produced, based on several of the most uncertain yet potentially important trends. Scenario planning is typically used when it is difficult to forecast important trends with any degree of certainty.

Each of the scenarios carries different implications for policy makers, health care providers and their supply chains, and patients. The presentation of each scenario has been slightly exaggerated to stimulate debate.

The scenarios described in this report are not comprehensive. For example, potential trends in internal payment mechanisms between NHS commissioners and providers have largely been excluded. While some trends can be influenced by policy makers, the scenarios also include a number of the factors that are largely outside of their direct control. Under all of the scenarios, it is assumed that health care in the NHS remains free at the point of delivery.

Methods

The development of the scenarios comprised:

1. Identification of the main technological, social, economic and political trends based on a desktop research exercise (see Appendix A for a list of the reference material used for this) and a wide range of interviews.
2. The development of briefing material on the main trends identified for a stakeholder workshop.¹
3. Shaping the scenarios in a one-day workshop, involving a wide range of stakeholders from within and outside the NHS.
4. Further refinement of the scenarios, including the development of clinical vignettes, through a series of meetings with academics, clinicians and health service managers.

The commissioning challenges and key issues for future policy from each of the scenarios were also identified.

A broad range of people were involved in the development of the scenarios including policy advisors, NHS managers, clinicians, academics, and business and management consultants. See Appendix B for a list of the people who participated in the interviews and the workshop.

¹ In particular, see www.piru.ac.uk/projects/current-projects/nhs-futures.html



Trend analysis

Using a PEST (Political, Economic, Social and Technological) analysis a broad range of trends were identified that are likely to impact on health care over the next 20 years. The trends are summarised below. See www.piru.ac.uk/projects/current-projects/nhs-futures.html for a detailed description of the trends.

Political

- More local decision making for public services
- Increased public participation in service provision
- Increasing globalisation of health markets
- Incremental increase in the use of competition
- EU moving slowing into health policy
- Growing importance of environmental sustainability
- New payment systems being developed that are more outcome focused and aim to deliver greater value for the public

Economic

- High national debt and limited economic growth likely to constrain funding allocations to the public sector for many years
- Spend on health care still expected to rise as a percentage of GDP
- Risk of rising mental health associated with the economic downturn
- Globalisation of all markets and rise of new economic powers, e.g., China, India.
- Percentage of the population working falling as life expectancy rises
- Near employment parity between the genders

Social

- An ageing population, with more people with complex needs
- More single person households and weaker social support networks
- Rising obesity and lifestyle conditions
- Systematic inequalities in health remain
- Communication revolution, social media/internet
- Localism – communities taking more control
- Democratisation from transparency and social media
- ‘Co-production’ of services
- Specialisation of the health care workforce

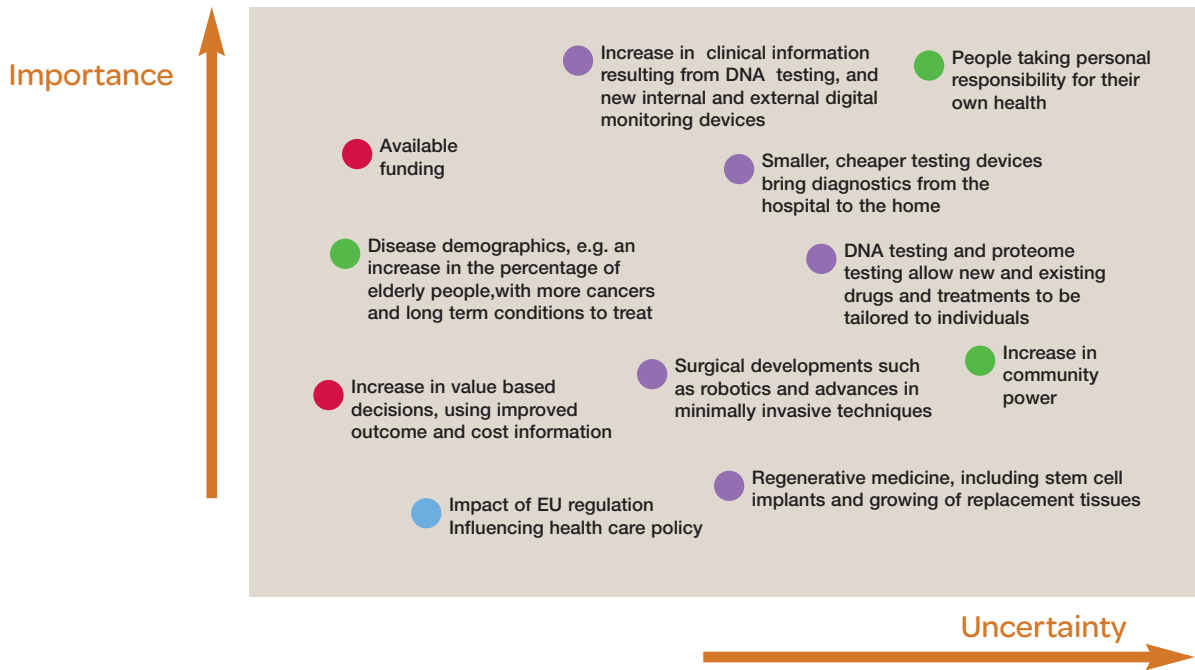
Technological

- Increased accessibility of information
- Increased diagnostic access in the community/home
- Increasing range of monitoring devices
- Minimally invasive/image-guided and robotic surgery
- DNA testing able to predict disease and personalise treatments
- Regenerative medicine
- Increasing digitisation of information

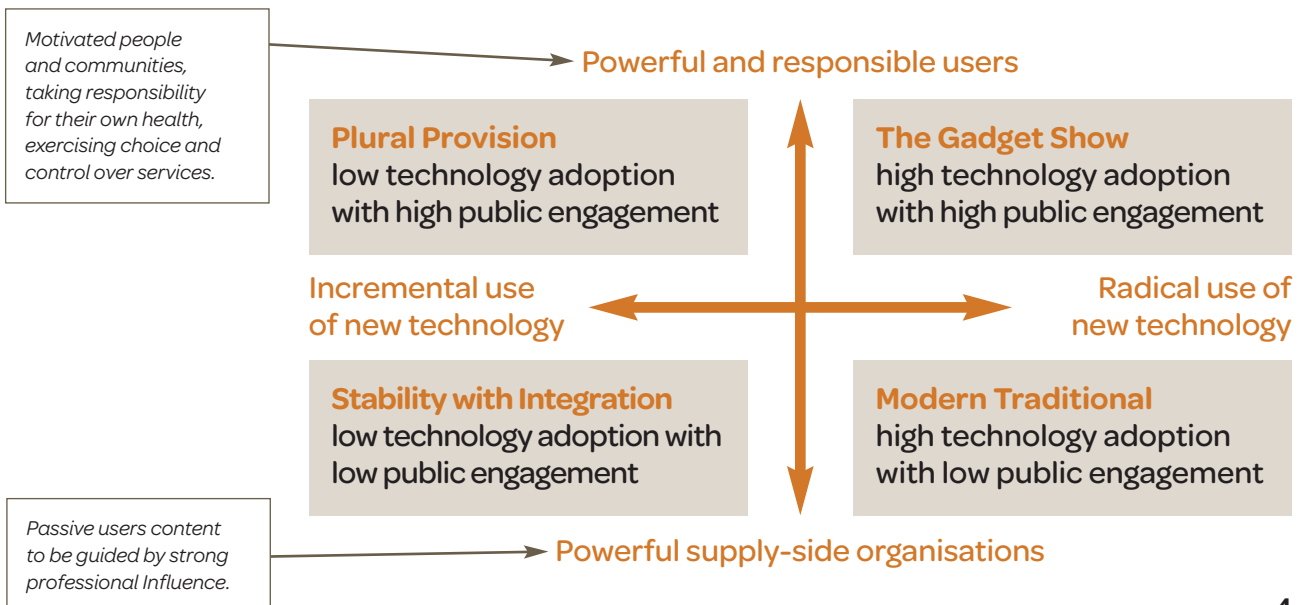


Developing the scenarios

The combination of trends was used to produce the scenarios. The relative importance of the trends in shaping the future of health care, and the degree of uncertainty associated with each of the trends, was determined as shown below.



The use of new technologies and the degree of public engagement with their own health care were identified as two dimensions with a high degree of uncertainty, but which could have a significant influence on future models of care. These two dimensions were used to develop the four scenarios, as shown below. The four scenarios are called: The Gadget Show, Plural Provision, Stability with Integration and Modern Traditional.





The scenarios

Each scenario begins with a short summary of its main characteristics, followed by a description of possible service patterns. This is further illustrated by one or more “service vignettes”. The commissioning challenges for each scenario are then described, in terms of health inequalities, planning, costs, market development and information.

1. The Gadget Show

The public’s appetite for affordable health care technologies has fuelled a revolution in attitudes towards self-care and treatment. Self-diagnosis and treatment have become as common as online shopping, significantly reducing the demand for primary care services.

An internationally agreed set of communication standards has allowed different health devices and computers to communicate with each other. Consequently, online expertise is accessed from all over the UK and abroad, 24 hours a day.

The high cost of specialist care technologies and the falling demand for District General Hospitals has resulted in centralised acute care in the English NHS. Great Ormond Street and Moorfields have been joined by other “super centres”, many of these being disease-specific and serving very large populations.

Only entrepreneurial and high-tech NHS organisations have survived, with private sector provider brands becoming household names, particularly in the field of diagnostics and self-care.

The elderly and vulnerable who have been unable to embrace the new technologies have become increasingly marginalised.

Service patterns

Greater value has been placed on the interpersonal relationships between professionals and patients, with the professionals explaining and interpreting the huge growth in available information.

New portable and affordable monitoring and diagnostic technologies have been readily available both from health care providers and over the counter. Demand for consultations with primary care, NHS Direct, out of hours, and hospital outpatients have fallen dramatically.

Consequently many community health centres have lost their medical emphasis or disappeared. However, using integrated budgets that have been devolved from the previously separate health and local authority budgets, some particularly active groups of local people have reinvented the centres into a variety of different forms to meet their local health and social care needs.



Coordinated and proactive case management of high risk and vulnerable patients has been commonplace, but service models have varied considerably. For example, acute centres have provided disease-specific case management services using the latest remote monitoring devices, whereas integrated case management has been provided locally, coordinating all the health and social care needs of individuals.

The plethora of different local models of care has made seamless management of services for patients more difficult to achieve in some places.

With the general public significantly engaged with health care and more closely involved with the running of local services, the need to centralise high cost acute care has been readily accepted. However, increasing numbers of community groups have become more confident and powerful. Planning for new services such as stem cell treatments and regenerative surgery has become increasingly piecemeal due to the numbers of stakeholders that need to align behind a particular plan. Therefore, whilst community innovations have destabilised the traditional District General Hospital model, the pattern of more specialised acute services has stagnated because of the difficulty in developing coherent plans across large catchment areas.

Mr Jones, 80, lives alone and like increasing numbers of people of his age, has benefited from switching to healthier foods and regular exercise over the past 30 years. Consequently he has avoided developing significant ischaemic heart disease, but his healthy lifestyle hasn't been able to prevent some age related changes, resulting in him needing a heart valve replacement, which is now a very common keyhole procedure for people in his age group.

His wristwatch regularly measures a range of haemodynamic parameters and has alerted him that there may be a problem with a heart valve. In his local supermarket, a rapid all-body scanner that now occupies the space of the old photo booth, confirms the diagnosis that a heart valve replacement is likely to be needed. The scanner automatically notifies his local cardiac unit, and an appointment and provisional operating date are sent to his phone and home computer by the time he drives out of the car park.

A community-based carer has been automatically scheduled to collect him from the hospital after the procedure and stay with him overnight as a precaution, and his medical records have been updated accordingly.

The procedure will be performed in the local day treatment centre, and Mr Jones will be operated on by a specialist technician, trained to perform these valve procedures to a very high standard.

Mr Brown has just turned 25 and shortly after his birthday he receives an email from his local public health officer, requesting him to attend his first comprehensive DNA profiling at the local community health centre.

After a short wait the test results are available and the computer prints out a risk profile that indicates the probability of Mr Brown developing a wide range of diseases. The results are explained by a trained counsellor/psychologist.

The profile is automatically sent to his local primary care coordinator, who contacts him to help address any lifestyle issues that might need to be changed to reduce his risk ratings. If the profile suggests that gene therapy or some form of preventative medication/treatment may be beneficial, he is referred to an appropriate specialist for further advice.

Unfortunately Mr Brown is at significant risk of developing ischaemic heart disease, and despite his best endeavours to reduce his risk factors by exercising and giving up smoking for a number of years (the profile results motivated Mr Brown to alter his lifestyle), he unfortunately requires a "pre-emptive angioplasty".

His DNA profiling enables his cardiologist to personalise his drug regime, so that only those drugs that will be most effective will be used. Smart medication helps Mr Brown comply with his drug therapy and consequently his chances of a heart attack are reduced to around 1%, which is typically the event incidence in the healthy population.



Commissioning opportunities and risks

The Gadget Show describes a high adoption of technology and high public engagement scenario, which presents the following potential opportunities and risks for commissioning of health services.

Health inequalities and access

New user-friendly communication technologies, combined with a wide range of affordable self-care and diagnostic devices could be made widely available in schools and the workplace, helping to stimulate greater interest in personal health and wellbeing. With the widespread use of mobile phones across all demographic groups, opportunities may arise to engage with previously hard to reach groups.

With a population that is much more engaged with health care issues, more powerful, self-interested groups may secure a great proportion of resources, which risks a widening of health inequalities or delivery of comparatively poor services to vulnerable or less powerful groups. Mental health disorders may increase, due to the sense of isolation of some of the more vulnerable groups in the community.

If District General Hospitals and primary care facilities are reduced in numbers, some people may find it difficult to access those treatments that cannot be provided at home.

While the new communication technologies present an opportunity to engage with a wider cross-section of society, those less familiar with the new devices may be disadvantaged, particularly if traditional services are withdrawn.

Planning

Stronger community engagement should ensure that services are more tailored to the needs of local people, therefore aiding the implementation of service changes. Furthermore, with local communities increasingly aware of service innovations through improved communications, the resulting increase in consumer demand may accelerate the adoption of innovation.

It may become more difficult for stronger community groups (where they represent a comparatively small geographical area or a particular service interest) to reach consensus on acute care service reconfigurations. With the current population catchment of a typical District General Hospital of at least 250,000 people, trying to align several smaller populations with influence and conflicting priorities may restrict the modernisation of hospital care.

Costs

Under this scenario, the availability of new diagnostic and self-care technologies is set to increase rapidly over the next 20 years. Smartphone health care applications and a wide range of other affordable digital devices could significantly reduce the need for many people to visit their local health centre or hospital outpatients for diagnosis, particularly if the devices are able to prescribe medication and authorise access to other treatments.



Currently the NHS has yet to realise the potential of digital communications to reduce postal and other administrative costs between the public and other health and social care organisations. Significant costs savings might be expected if concerns over confidentiality can be overcome.

Digital imaging is currently providing hospitals with the flexibility to obtain clinical reports from a radiologist in another country. As the codification of health care increases (whereby clinical information can be collected, transferred and interpreted by computers), commissioners and providers will have access to a competitive global market in health care, offering the potential to reduce costs.

New technologies and treatments are often associated with an overall increase in health care expenditure, particularly where there are no associated gains in productivity. It is suggested that stem cell treatments, robotic surgery and tissue regeneration are similarly likely to increase costs.

While a new wave of self-care digital devices has the potential to reduce GP and hospital consultations, the devices may have very little impact on referrals and overall demand for consultations may increase as people seek reassurance or require interpretation of the results. The complexity of health care often means that, despite the development of new services, it is not always possible to decommission a service, resulting in expensive duplication.

Although acute care continues to centralise under this scenario, the potential for fragmented service planning might leave some areas with duplicate hospital services, requiring a subsidy from commissioners.

Extensive use of personalised budgets may see funds diverted away to fund short term patient “wants” rather than priority “needs”. Middle-aged consumers, with significant influence in the system may consume too much personal resource in their early years and have too little for old age, requiring the NHS to fund additional health care thereby increasing overall costs.

Market development

Under this scenario, the entry of new community services into the market might be stimulated by empowered local communities, who are able to influence the allocation of resources and are receptive to innovative or niche services.

Conversely new acute services may be less likely to enter the market. Coupled with fragmented acute services’ planning, the sector may be dominated by a few providers and is likely to require further regulation to maintain and improve performance.

Information

Currently communication technologies present the NHS and its partners with the opportunity to develop an integrated care record, which can be accessed by patients, carers and clinicians, ensuring that all the information needed to optimise care is immediately to hand. Under this scenario, the codification of health care and the associated monitoring devices will significantly expand the amount of clinical information that can be collected and coordinated, helping clinicians target their treatments more effectively.



An increasing amount of diagnostic information is likely to be interpreted by computer (on a variety of devices), allowing patients to self-diagnose and treat themselves. A person's health record could be held by the patient or, perhaps more likely, on a central server, reflecting the current trend of embracing "cloud" technology.

Potentially, patient information could be anonymised and reported to researchers, commissioners and providers to assist in the on-going refinement and improvement of treatments and services.

With the rapid rise of new self-care medical devices and the possibility of new providers entering into the community services market, the coordination of patient-specific information in order to deliver seamless integrated care will become more complex.

Furthermore, as many aspects of diagnosis and self-care transfer to portable devices, access to this information for the purposes of clinical audit and research may become more problematic. Obtaining access to increasingly valuable information from a wide range of medical devices provided by private companies is likely to be difficult, harming effective planning and research into service improvement.

With more self-care devices and home-testing kits coming onto the market, it will become increasingly difficult for patients to choose the most appropriate and safest devices. Regulation of devices may become necessary, which may restrict the development of innovative "apps" and small medical devices, if the regulatory process is time-consuming or costly.



2. Plural Provision

With many NHS Trusts slow to adopt the latest treatments patients have been required to travel, either physically or virtually, to the more innovative NHS organisations for treatment, to use the private sector and to access more health services from abroad.

The more vulnerable or passive members of society have struggled to gain access to the best in health care, as the systems become more complex and difficult to navigate. However, this has been partly offset by the emergence of a stronger community spirit, with voluntary organisations helping people obtain the best treatment.

Duplication and fragmentation of health care have been widespread without a standardised communications platform.

Service patterns

People have placed greater value on their relationship with health professionals to help navigate their way through the growth in different service providers.

The slower update of new technologies has caused only an incremental change in many service models. Acute care has continued to centralise, with District General Hospitals being absorbed into larger Trusts. Barriers to entry in the acute sector have remained high, despite the increased influence of the public. The NHS has remained the major acute care provider. Catchment areas have significantly widened for those Trusts that have innovated.

In some areas the provision of primary care has not changed, but patient and public empowerment have influenced the range of services on offer. Many communities have used their personal and locality budgets to encourage new entrants into community care markets, particularly where existing primary and secondary care services have been slow to modernise. Consequently, there has been a wide range of different providers, offering niche condition-specific services or end of life care services. Social enterprises and voluntary groups have replaced some of the traditional GP surgeries in some areas. Disease-specific social support networks have been highly active, and some have received local funding to become providers of niche services.

With many new providers offering a wide range of new services, there is no longer a common model for the delivery of primary and community care, in stark contrast to the majority of the acute sector. Those services that can be accessed online have often been provided by overseas providers.

With the cost of pensions having risen alongside the retirement age, the very elderly have been increasingly cared for by the young elderly.



The slower uptake of technology has enabled mental health services to compete more effectively for resources and raise their profile. The high level of public engagement and interest in preventive health care have led to the development of a number of innovative social enterprises. Many schools have played a leading role in supporting pupils with behavioural problems, with some schools having shared a team of specialist psychologists. These schools have been able to commission other psychiatric services to help families with particular difficulties. Consequently school truancy rates have fallen and examination results have significantly improved.

However, with patients seeking treatments from further afield, and from a range of new providers, it has proved difficult for mental health and community services to work together effectively.

Jane is 35 and has been a member of a local women's health social network for several years. The group receives regular information on healthy lifestyles and shares their health concerns on a confidential social networking site that provides advice and support. The local maternity provider was invited to join the network recently and hospital and community clinicians have become regular contributors. The network has adapted a page on the hospital's web site that coordinates all her health issues, and Jane now receives reminders for her cervical screening sessions, and when the next pelvic floor exercise session is run. Jane's employer is also a partner in the network, and the occupational health team are, with Jane's consent, alerted to any missed appointments or any particular health issues that might require their support. Jane has also just become pregnant and has decided to use the apps facility to track all pre and post-natal appointments, recording any test results that her GP and hospital will undertake. No matter which midwife Jane visits, they always have her most up to date clinical history. Jane also receives regular mental health surveys by phone, and is reassured to know that her phone will automatically make an appointment with one of the mental health teams if necessary.

Commissioning opportunities and risks

Health inequalities and access

Plural Provision describes a low adoption of technology with high public engagement scenario, which presents the following potential opportunities and risks for commissioning of health services.

Preventive health and wellbeing strategies may compete more successfully for resources, particularly those that are less dependent on expensive technologies. Under this scenario, a new statutory responsibility is placed on schools and employers' to actively involve themselves with mental health issues. This may enable the NHS to focus a greater proportion of resources on the unemployed and vulnerable.

Powerful and vocal self-interested people and groups may access the latest treatments, securing a greater proportion of available resources, potentially leading to a widening of health inequalities. In addition, some services may be underfunded, particularly services for the elderly and vulnerable. Despite the opportunity for more preventive health and well-being strategies being adopted, mental health services for the elderly may not receive the same level of public support.



Planning

The development and implementation of new community services is likely to be more successful because of the comparatively high levels of community engagement in this scenario. New services can be promoted more easily to a more receptive and engaged community.

The planning of acute services is likely to be fragmented, particularly if more people travel further for their treatment.

Costs

With stronger public engagement challenging the NHS's general lack of innovation, new and more cost-efficient providers of community services may be encouraged into the market, particularly when companies can use the new technologies to reduce costs. The more innovative and successful NHS Trusts could eventually acquire the less successful ones, helping to drive down management costs through centralisation of support functions.

The expected centralisation of acute care may also help to improve productivity, particularly if these savings have not been used for expensive clinical technologies.

With the general public more engaged, new and existing techniques that support people to adopt healthier lifestyles could be more successful and lead to a reduction in demand for services.

Under this scenario, where a wider range of providers are accessed by the public, the payment mechanisms, incentives and measures of success may not be sufficiently developed, particularly with those providers offering innovative services. Consequently, commissioners may not always obtain the best value for money, resulting in higher overall costs for the taxpayer. Overseas tariffs are likely to be costed differently and include a different range of services, making value for money comparisons difficult.

Market development

Initially, the small number of new entrants into the market for both community and primary care is likely to lead to a wider involvement of the private and voluntary sectors, and more social enterprises are likely to emerge. Overseas organisations could become increasingly important, as people travel abroad to seek the latest treatments. Those countries with health care systems that have embraced innovation, may offer web-based services to patients and providers.

Under this scenario, the acute sector continues to centralise and barriers to entry to the market are high, therefore hospitals are more likely to be franchised or acquired by large companies, perhaps leading to less choice. Effective commissioning of alternative acute services might also be hampered by fragmented local planning groups.

Information

New entrants into the market, particularly for community based care, may bring modern information management techniques and technologies, making services more accessible and user friendly.

The increased plurality of provision in the community services may present information governance challenges for commissioners when ensuring safe delivery of seamless care.



3. Stability with Integration

Some aspects of the NHS have become out-dated and it has struggled to meet the needs of an ageing, but relatively disengaged, population.

With many self-interested providers still in play, the duplication of old fashioned services has prevailed in many places, and has resulted in inefficiencies, which commissioners have struggled to afford.

However, the comparative stability of the system and the need to improve productivity have resulted in greater integration, both across community services and with acute Trusts. Furthermore, mental health and physical health care are now better integrated.

Improved service integration has resulted in the development of more personalised services that better meet people's needs, but those seeking the latest treatments have needed to look outside the NHS.

Whilst the integration of services has brought some benefits and improved outcomes, the dominance of fewer more powerful providers has reduced the overall effectiveness of commissioning and variations in service provision have remained difficult to tackle.

Service patterns

The comparative stability of this scenario has encouraged greater integration between health care organisations and with social care providers, with both vertical and horizontal integration more common. This has improved the continuity of care, and delivered services that are better tailored to the needs of individuals.

However, the slow uptake of technology, coupled with a passive population, has resulted in many institutional or non-patient centred models of care remaining. Consequently, many providers have struggled to meet the needs of an ageing population and demand for inpatient care has been extremely high.

Where vertical integration has not occurred between hospital and community services, a "fault-line" has begun to develop through District General Hospital services, with the more powerful tertiary providers securing more acute services, and community care developing alternatives to hospital care. Acute care providers have dominated health services in the absence of a strong cohesive voice from primary care providers.

Whilst large regional providers have emerged in some areas, the degree of centralisation has varied because of the strong vested interests, despite the commissioners being given increased powers to regulate providers.



Mental and physical health services have been working more closely together than ever before. Hospitals in particular have integrated a range of psychiatric and psychology services into their treatment regimes, helping people to recover from their physical illnesses more quickly.

Mr Brown is 61 and is attending his eleventh annual health and well-being assessment with his GP and designated case worker. His wife died unexpectedly last year. The case worker is trained to assess his social, physical and mental health condition. After discussion, Mr Brown decides upon a number of goals. He is determined to socialise more often out of work to help alleviate his mild depression, and to exercise more often.

With his agreement Mr Brown's employer is notified of his intentions and the company makes arrangements for him to join their fitness sessions. The company will monitor his progress, keeping the case worker updated.

Unfortunately Mr Brown falls off his bike over the weekend. He is admitted for an overnight observation and has received treatment for concussion and a fractured collar bone. Before discharge, Mr Brown's case worker visits him in hospital to reassess his situation. Worried that he appears to have become more depressed since the last assessment, Mr Brown is referred to the hospital's psychiatric team, which discusses a revised care plan with Mr Brown and his case worker.

Commissioning opportunities and risks

Stability with Integration describes a low adoption of technology with low public engagement scenario, which presents the following potential opportunities and risks for the commissioning of health care services.

Health inequalities and access

The greater integration between physical and mental health services may enable some members of the community to access mental health services for the first time whilst receiving care for a physical condition.

Better integration of health and social services will enable more seamless care to be delivered. Navigating through the system should be less complicated, benefiting the vulnerable and frail elderly.

Patients able to seek the latest innovations and models of care from other providers may enjoy better health outcomes. The Commissioners' responses to rising health care demand, but limited productivity gains, may result in more service exclusions.

Planning

Commissioners are more likely to plan cohesive services under this scenario, particularly where both vertical and horizontal integration are present. With public engagement comparatively low, agreement in service priorities is likely to be relatively straightforward.

Whilst service integration should make service redesign easier, there remains the risk that low public engagement in health care results in services better suited to the needs of the organisation than the individual.

Powerful providers are likely to require strong commissioning to tackle variations in clinical practice and develop wellbeing strategies.



Costs

The uptake of technologies that only deliver better outcomes (without improvements in efficiency) is likely to be slow, thus constraining increases in expenditure. Examples might include stem cell treatments and regenerative surgery. The integration of care also presents an opportunity to streamline services and reduce support costs. Furthermore, costs could be controlled by the introduction of more service exclusions, and the centralisation of acute providers.

The slow adoption of innovation may prevent the service from making potential savings that might be associated with the codification of health care, particularly where clinical and administrative time can be substituted by self-diagnostic, treatment and transactional technologies (such as automated appointment systems).

Market development

With the increased profile of mental health services and many acute services offering a more integrated mental health and physical care service, the market for mental health providers might expand, particularly where integrated care can demonstrate overall improvement in both outcomes and productivity.

The acute sector market is likely to contract, as Trusts centralise to achieve cost savings. However, the existing private sector and new entrants offering the new technologies will cater for those able to buy access to the latest services.

Where vertical integration has taken place, it might be more difficult for commissioners to encourage new entrants into the community service market.

Information

Under this scenario, the inertia in the development of new services creates a stable organisational platform that encourages stakeholders to share information, which may lead to further integration and more personalised services.

A combination of dominant providers and a disengaged population is likely to hamper the publication of information, and commissioners will be relied on to address unresponsive services.



4. Modern Traditional

Strong NHS providers have had a major influence on shaping health care delivery, using technologies to both meet the needs of local people and to strengthen their own positions. However, not all of these technologies have been necessarily cost effective, with a tendency for health care professionals to buy the latest “toy”, irrespective of the evidence.

Innovative community-based diagnostics and treatments have often been delivered from large acute centres, with the private sector involved in joint ventures to deliver specific expertise. Independent companies have also been involved in the delivery of community-based care where the barriers to entry to the market have been lower.

Over-the-counter diagnostic and treatment technologies have reduced the need for community-based GPs, some of whom have now specialised and become integrated into the hospitals’ outreach services. Disease-based vertical integration structures have been prevalent.

GPs have become more specialised and linked to hospital consultants, providing an integrated outreach service. Local authorities have commissioned case management teams to coordinate health and social care, with greater use of personal budgets.

Service patterns

Numerous innovative models of care have been developed by centralised and powerful acute providers, who have secured the majority of the available resources. However, many of these providers have also harnessed new self-care and diagnostic services, offering a wide range of community services on an outreach basis (e.g. long term conditions provided by remote care models or pharmaceutical companies using IT to monitor compliance).

The most successful providers have been those that have adopted an inclusive approach and have fully engaged with patients and users.

Local people increasingly have had direct access to consultant expertise through the use of digital communication technologies, and this has eroded GPs’ gate-keeping role. Primary care is no longer perceived as an attractive medical career and has evolved into a non-medical navigation and coordination role.

With dominant hospitals consuming resources for acute care innovations such as regenerative surgery, care for the elderly and services for other vulnerable groups has faced significant funding shortages. To protect these services, local authorities have taken over responsibility for commissioning a wide range of community health services (including mental health and children’s services).



This has facilitated greater integration between health and social care provision. Personalised case management and navigation services have been commissioned by the local authorities.

The large centralised acute providers host ambulance services and out-of-hours care as part of their portfolio of urgent and episodic care services.

Mr Andrews' complex heart condition has been carefully monitored by his local hospital for a number of years, using remote monitoring. He keeps in touch with his cardiologist using a variety of social media channels. Unfortunately he is one of comparatively few people who now requires major open heart surgery and will therefore travel to one of only two specialist centres that perform complex congenital heart operations on adults and children. They will use the latest digital imaging techniques to accurately diagnose conditions and deliver personalised treatment, which will also include the stimulation of new tissue growth to replace parts of his damaged heart.

Commissioning opportunities and risks

Modern Traditional describes a high adoption of technology and low public engagement scenario, which presents the following potential opportunities and risks for the commissioning of health services.

Health inequalities and access

Integrated health and local authority commissioning could improve both public health and community services, resulting in a general reduction of health inequalities.

With acute care more centralised, those living further away from centres may be more disadvantaged, although the impact may be reduced if outreach community services coupled with telehealth enable more people to receive care in the community.

Planning

NHS acute care commissioning could mirror the pattern of acute provision and become more centralised, thus achieving greater planning coherence across wider geographical areas. Acute care commissioning would need to be strengthened to address the increasing dominance of acute providers.

The planning of many community health services will become fully integrated with social care and other local authority services.

With the population's influence limited, there is the possibility that providers lose touch with the needs of their communities, unless the providers' approach to marketing becomes more sophisticated.

Costs

The greater integration of community health and social care services provides an opportunity to reduce duplication and hospitalisation through coordinated case management.

Given the greater integration of health and social care, there is a risk that a proportion of health services previously provided free at the point of use may become subject to a means test.



The centralisation of hospital Trusts may also improve the productivity of acute care.

The high adoption of technology is not always cost-effective under this scenario, with the risk that the powerful providers will tend to focus on the latest equipment, regardless of its comparative cost-effectiveness.

Market development

The adoption of new technologies by the more entrepreneurial Trusts may stimulate new providers to invest in research and development and to enter the market place. Joint ventures between the private and public sector may become more common, particularly for new specialist or niche services.

With the commissioning of all community services now undertaken by local authorities, new entrants with experience in running integrated care systems may also be encouraged to enter the market.

Under this scenario, many primary and community care services are increasingly run from large hospitals. With vertical integration becoming more commonplace, the barriers for new entrants into the market could remain high unless the tariff structure allows commissioners to segment the service market.

Information

Over time, the joint commissioning of community services by local authorities and NHS Commissioners is likely to result in the development of new indicators of integrated care, helping them to understand and benchmark best practice.

A combination of dominant providers and a disengaged population is likely to hamper the publication of information, and commissioners will be relied on to address unresponsive services.

The joint commissioning of health and social care will be very difficult if there are problems with interoperability between the separate health and social care systems. Enhanced community provider IT systems are likely to be needed to keep pace with new service models.



Implications for policy

The four scenarios were based around two dimensions – the degree of uptake of technology and the degree of public engagement with their own health care. The four scenarios are:

1. **The Gadget Show** – high technology adoption with high public engagement
2. **Plural Provision** – low technology adoption with high public engagement
3. **Stability with Integration** – low technology adoption with low public engagement
4. **Modern Traditional** – high technology adoption with low public engagement

While each of the scenarios carries different implications for policy makers, health service providers and patients, some themes are common to all of the scenarios including:

- Even with incremental or low adoption of new technology in the NHS, more affluent patients are likely to seek enhanced services from private providers or abroad, and the challenge of addressing health inequalities is likely to continue. None of the scenarios suggests that health inequalities will diminish in the future.
- All four scenarios suggest that the acute care sector will continue to centralise, with many services provided at fewer sites.
- Although the issue of long-term care for older people did not feature prominently in the interviews and workshop (which was surprising given the demographic trends), nothing in the scenarios suggests that demand for home support, or for residential or nursing home placements will fall, even with increased use of new self-care technologies and a more engaged community orientated public. People may well live for longer in their own homes, but ultimately they will still need help with their day to day living needs.
- The impact of new digital communication and treatment technologies, coupled with an improvement in software compatibility, will continue to raise issues of information security and reliability. The regulation of information flows and quality, without stifling innovation, is likely to become increasingly difficult.
- Where clinical measurement can either be automatically taken by some form of device or entered into a computer by the patient (along with a description of her symptoms) the opportunity exists to replace or complement clinician activity. Computers could assist with interpreting results and recommending treatment plans. Some clinical disciplines may be more affected than others by the increasing codification of health care.
- DNA profiling and molecular monitoring promises the opportunity to personalise both new and existing drugs and treatments to improve patient outcomes and reduce complications. However, the extent to which provision of risk profiling information results in changed behaviour of patients is not known.



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- Improving connectivity between computers and other devices will enable information from a wider range of sources to be collated and coordinated, helping health and social care providers to deliver better integrated and seamless care. However, where public engagement is high, commissioners may struggle to reconcile views across a large number of influential groups with different priorities.

In addition, under the two scenarios with incremental or low adoption of technology, it was presumed that mental health services would become increasingly integrated with physical health services; and that there would be increased coordination across employers, schools and health care providers.

The four scenarios described in this report are based on only two of the dimensions that are considered to be of high uncertainty and high importance. Nevertheless, the scenario development approach provides a useful framework for a group of stakeholders to explore the potential opportunities and risks of commissioning health care in the English NHS over the next 20 years.



Appendix A

Trend analysis research references

Alakeson V (2007). *Putting Patients in Control: the case for extending self-direction into the NHS*. London: Social Market Foundation.

Albury D and Liddell A (2010?). Department of Health Innovation Programme: Impact Review. Slideshow – Innovation Unit and Nuffield Trust.

Appleby J (2010). The King's Fund response to the Comprehensive Spending Review www.kingsfund.org.uk/press/press_releases/the_kings_fund_25.html last accessed 01/10/10.

Appleby J and Harrison A (2006). *Spending on Health Care: How Much is Enough?* London: King's Fund.

Appleby J, Crawford R and Emmerson C (2009). *How cold will it be? Prospects for NHS funding: 2011–17*. London: King's Fund.

Bessant J and Francis D (2005). Transferring soft technologies: exploring adaptive theory. *International Journal of Technology Management & Sustainable Development*. 4(2):112.

Betrand M et al. (2006). Behavioural Economics and Marketing in aid of decision making among the poor. *American Marketing Association*. 25(1):8–23.

BIVDA (2010). Winter Newsletter.

Black A (2006). *The future of acute care*. London: NHS Confederation.

Brandt CJ, Ellegaard H, Joensen M, et al. (1997). Effect of diagnosis of “smoker's lung”. RYLUNG Group. *Lancet*. 349:253

British Medical Association (2008). *Towards a model of healthcare delivery*.

British Medical Association (2007). *A Rational Way Forward*.

Bunt L and Harris M (2009). *The Human Factor: how transforming healthcare to involve the public can save money and save lives*.

Busse et al. (2010). *Tackling Chronic Disease in Europe*. European Observatory on Health Care Systems.

Butland B, Jebb S, Kopelman P, McPherson K, Thomas S, Mardell J and Parry V (2007). *Foresight: Tackling Obesities: Future Choices*. Project report (2nd edition). Government Office for Science.

Chote R, Crawford R, Emmerson C and Tetlow G (2010). *Britain's Fiscal Squeeze – Choices Ahead*.



Christensen C, Bohmer R and Kenagy J (2000). Will disruptive innovations cure healthcare? *Harvard Business Review*. 78(5):102.

Cooper R (2001). *Winning at New Product Development: Accelerating the Process from Ideas to Launch*. New York: Basic Books.

Coulter A et al. (2008). *Where are the patients in decision-making about their own care?* Copenhagen: WHO.

Cox K, Britten N, Hooper R and White P (2007). Patients' involvement in decisions about medicines: GPs' perceptions of their preferences. *British Journal of General Practice*. 57:777–784.

Carruthers I (2011). *Innovation, Health and Wealth: Accelerating Adoption and Diffusion In the NHS*. London: Department of Health.

Cutler DM, Davis K and Stremikis K (2009). *Why Health Reform will Bend the Cost Curve*. Commonwealth Fund.

Darzi A (2007). *Healthcare for London: A Framework for Action*.

Darzi Review (2008). High Quality Care For All. NHS Next Stage Review Final Report and NHS Next Stage Review: Our vision for primary and community care. London: Department of Health.

David P (1985). Clio and the economics of QWERTY. *American Economic Review*. 75: 332–338.

Davies C, Wetherell M and Barnett E (2006). *Citizens at the Centre: deliberative participation in healthcare decisions*. Bristol: Policy Press.

Davis K (2008). Slowing the growth of healthcare costs. *The New England Journal of Medicine*. 359:17.

Denis J et al. (2002). Explaining Diffusion Patterns for Complex Health Care Innovations. *Health Care Management Review*. 27:60–73.

Department for Health (1998). *Information for Health:1998–2005*.

Department of Health (2009). *NHS 2010–2015: From Good to Great*.

Department of Health (2010). Personal Healthcare Budgets webpage www.dh.gov.uk/en/Healthcare/Personalhealthbudgets/DH_109426

Department of Health (2010a). Report by the Prime Ministers Commission on the Future of Nursing and Midwifery in England.



Department of Health (2010b). *Enabling the effective delivery of health and wellbeing*.

Dixon M (2005). *Brave New Choices? – Behavioural Genetics and public policy a discussion document*. London: IPPR.

Dodgson M, Gann D, and Salter A (2008). *The Management of Technological Innovation*. Oxford University Press.

Edwards N and Harrison A (1999). Planning Hospitals with limited evidence. *BMJ*. 319:7221.

Faculty of Public Health (2010). *Healthy Nudges: When the Public Wants Change But the Politicians Don't Know It*.

Foster R (1986). *Innovation: the attacker's advantage*. London: Macmillan.

Fuchs VR (1996). Economics, values and health care reform. *American Economic Review*. 86:1–24.

Gale WG et al. (2005). *The Automatic 401(k): A Simple Way To Strengthen Retirement Saving*. Tax Notes.

Goldsmith J (2004). Technology and the Boundaries of the Hospital. *Health Affairs*. 23:6.

Goldsmith J (2010). Healthcare IT's unfulfilled promise: What we've got here is a failure to communicate. *Futurescan 2010*.

Greener I (2004). The three moments of New Labour's health policy discourse. *Policy & Politics*. 32:3(14)303–316.

Guenther R and Vittori G (2008). *Sustainable healthcare architecture*. Hoboken, John Wiley & Sons.

Ham C (2004). *Health Policy in Britain*. London, Palgrave Macmillan.

Hancock R and Morciano M (forthcoming). *Ageing and demand for care; spending and equity implications: micro and macro modelling to 2030*. Slideshow from MAP 2030 project.

Hannah M (2010). Costing an Arm and a Leg. International Futures Forum.

Harrison A and Dixon J (2000). *The NHS: Facing the Future*. London: The King's Fund.

Harvey S, Liddell A and McMahon L (2009). *Windmill 2009: NHS Response to the Financial Storm*. London: The King's Fund.



Haycock J, Stanley A, Edwards N and Nicholls R (1999). The hospital of the future: Changing hospitals. *BMJ*. 319:1262.

Hillman K (1999). The changing role of acute care hospitals. *Medical Journal of Australia*. 170(7):325–9.

Humphries R, Forder J, and Fernandez JL (2010). *Securing Good Care for More People: Options for Reform*. London: The King's Fund.

Institute of Medicine (2001). *Crossing the Quality Chasm*.

IPPR (2007). Great Expectations.

IPPR (2007). The future hospital: Politics of change.

IPPR (2010). When I'm 94: How to fund care for an ageing population.

IPPR (2007). The future hospital: the progressive case.

IPPR (2010). Integrating Health and Social Care Budgets – a case for debate.

Johansen KS (1998). WHO Concept of Health Technology Assessment, *Health Policy* 9:349-51

Jose, et al. (2010). The effectiveness of a social marketing model on case finding for COPD in a deprived inner city population. *Primary Care Respiratory Journal*. 19(2):104–108.

Kawamoto, K, Houlihan CA, Balas EA and Lobach DF (2005). Improving clinical practice using clinical decision support systems: a systematic review of trials to identify features critical to success. *BMJ*. 330:765.

Lazarou J et al. (1998). Incidence of Adverse Reactions in Hospitalized Patients. *Journal of the American Medical Association*. 279:1200–05.

Leadbeater C, Bartlett J and Gallagher N (2008). Personal Budgets and self-directed services mobilise the intelligence of thousands of people to get better outcomes from themselves and more value for public money. Demos.

Leicester and Windmeier (2004). The 'Fat Tax': Economic Incentives to reduce obesity. Institute of Fiscal Studies Briefing Note, 49 (www.ifs.org.uk/publications/1797)

Liddell A, Adshead S and Burgess E (2008). *Technology in the NHS: Transforming the patient's experience of care*. London: The King's Fund.

Lubitz JD and Riley GF (1993). Trends in Medicare payments in the last year of life. *The New England Journal of Medicine*. 328:1092–1096.



Madrian B and Shea D (2001). Saving Behaviour and Inertia. *The Quarterly Journal of Economics*. 116(4):1149–1187.

Mann D (2010). Genetics May Personalize Quit-Smoking Methods.

Manning J (2010). *Health, humanity and Justice: Emerging technologies and health policy in the 21st Century*. London: 2020health.org.

McKee M and Healy J (2002). *Hospitals in a changing Europe*. *European Observatory on Health Care Systems*.

McKinsey and Company (2001). Patients expectations: A perspective on 2020. In *Health Trends Review: Proceedings of a conference held at the Barbican Centre, London on 18 and 19 October 2001*. London: HM Treasury.

Mitcham C (1994). *Thinking through technology: the path between engineering and philosophy*. Chicago: University of Chicago Press.

Mladovsky P, Allin S, Masseria C, Hernandez-Quevedo C, McDaid D and Mossialos E (2009). *Health in the European Union: Trends and Analysis*. European Observatory on Health Care Systems.

Mossialos E and Le Grand J (eds.) (1999). *Health care and cost containment in the European Union*. Ashgate.

NERA (1993). Financing health care with particular reference to medicines. Vol 13. The health care system in the United Kingdom.

NHS Confederation (2008). A New Vision for Mental Health.

NHS Confederation (2009). Innovation briefing.

NHS Confederation (2009). The future of community services: A briefing.

NICE Guidance PH1 'Brief interventions and referral for smoking cessation'.
<http://guidance.nice.org.uk/PH1>

NICE Guidance PH14 'Guidance on preventing the uptake of smoking by children and young people'.
<http://guidance.nice.org.uk/PH14>

NICE Guidance PH7 'School-based interventions on alcohol'.
<http://guidance.nice.org.uk/PH7>

NICE interventions included in the Health Checks (full list)
www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_085917.pdf



-
- Office of Science & Innovation (2006). *Science and Technology Cluster: overview of key trends up to 2015–2020*. London: Office of Science & Innovation.
- Orlikowski W (1992). The duality of technology: rethinking the concept of technology in organisations. *Organization Science*. 3(3): 398–427.
- Painter et al. (2002). *How visibility and convenience influence candy*. Consumption Food Brand Lab. University of Illinois.
- Park A, Curtice J, Thomson K, Phillips M and Clery E (2009). *British Social Attitudes: The 25th Report*. NatCen.
- Peckham S and Exworthy M (2003). *Primary Care in the UK: Policy, Organisation and Management*. London: Palgrave Macmillian.
- Peytremann-Bridevaux (2008). Effectiveness of Chronic Obstructive Pulmonary Disease Management Programs: Systematic Review and Meta-Analysis. *The American Journal of Medicine*. 121:433–443
- Powell M, Millar R, Mulla A, Brown H, Fewtrell C, McLeod H, Goodwin N, Dixon A, and Naylor C (2010). *Understanding ‘next steps’ reform in the English National Health Service: a realist evaluation*. Paper presented to the European Health Policy Group (EHPG).
- Rechel B, Wright S, Edwards N, Dowdeswell B, and McKee M (2009). *Investing in Hospitals of the Future*. European Observatory on Health Systems and Policies.
- Prahalad C (2006). The innovation sandbox. *Strategy + Business* 44 (autumn).
- Reeves R (2010). *Health and wellbeing and the role of the state*. London: Department of Health.
- Roberts K and Grabowksi M (1996). Organisations, technology and structuring. In S Clegg, C Hardy and WR Nord (eds) *Handbook of organization studies*. London & Thousand Oaks: Sage Publications.
- Rosen R, Smith A and Harrison A (2006). *Future Trends and Challenges for Cancer Services in England: A review of literature and Policy*. London: King’s Fund.
- Royal College of General Practitioners (2007). *The Future Direction of General Practice: A roadmap*.
- Royal College of Physicians (2009). *Innovating for health: Patients, physicians, the pharmaceutical industry and the NHS*.
- Royal College of Physicians (2010). *How doctors can close the gap: Tackling the social determinants of health through culture change, advocacy and education*.



Royal College of Physicians (2008). *Teams without Walls: The value of medical innovation and leadership*. Report of a Working Party of the Royal College of Physicians, the Royal College of General Practitioners and the Royal College of Paediatrics and Child Health.

Royal College of Physicians (2010). *Future physician: Changing doctors in changing times*. London: RCP.

Sassi F, Cecchini, M, Lauer J and Chisholm D (2009). *Improving lifestyles and tackling obesity: The health and economic impact of prevention strategies*. [www.oecd.org/officialdocuments/displaydocumentpdf?cote=delsa/hea/wd/hwp\(2009\)6&doclanguage=en](http://www.oecd.org/officialdocuments/displaydocumentpdf?cote=delsa/hea/wd/hwp(2009)6&doclanguage=en)

SCHARR (2008). Independent review of alcohol pricing and promotion.

Seshamani M and Gray AM (2004). A longitudinal study of the effects of age and time to death on hospital costs. *Journal of Health Economics*. 23:217-235.

Sherval, et al. (2008). Association of a single nucleotide polymorphism in neuronal acetylcholine receptor subunit alpha 5 (CHRNA5) with smoking status and with 'pleasurable buzz' during early experimentation with smoking. *Addiction*. 103:1544-1552.

Smith D (2010). *Exploring Innovation*. McGraw Hill Education.

Smith R (1997). The Future of Healthcare Systems: Information technology and consumerism will transform healthcare worldwide. *BMJ*. 314:1495.

Social Market Foundation (2007). *The future of healthcare*.

Social Market Foundation (2010). *Commission on long-term care funding options*.

The Faculty of Public Health, A CAP on Health? The impact of the EU Common Agricultural Policy on public health (www.fph.org.uk/uploads/r_CAP.pdf).

The Future Vision Coalition (2009). *A future vision for mental health*. London: NHS Confederation.

The King's Fund (2007). Windmill project.

The King's Fund (2008). *Making it happen: Next steps in NHS reform*.

The King's Fund (2010). *Future of social care funding*.

The King's Fund (2002). *The future of the NHS: A framework for debate*.

The Nuffield Trust (2000). *Policy Futures for UK Health*.



The Nuffield Trust and WHO Regional Office for Europe (2000). *The Future of Health – Health of the Future: Fourth European Consultation on Future Trends*.

The Technology Strategy Board (2010). *Medicines and Healthcare Strategy 2009–2012*.

Thomson S, Foubister T and Mossialos E (2009). *Financing Health Care in the European Union: Challenges and Policy Responses*. European Observatory on Health Systems and Policies.

Tudor Hart J (2006). *The Political Economy of Healthcare*. Bristol: The Policy Press.

Tidd J, Bessant J and Pavitt K (2005). *Managing Innovation. Integrating Technology, Market and Organizational Change*. John Wiley & Sons.

United States Department of Agriculture (2007). Could Behavioural Economics Help Improve Diet Quality for Nutrition Assistance Program Participants? *Economic Research Report*. No. 43.

Wanless D (2002). *Securing our Future Health: Taking a Long-Term View*. London: HM Treasury.

Wanless D (2006). *Securing Good Care for Older People: Taking a Long-Term View*. London: The King's Fund.

Wanless D, Appleby J, Harrison A and Patel D (2007). *Our Future Health Secured? A Review of NHS Funding and Performance*. London: The King's Fund.

Whelan T, Levine M, Willan A, Gafni A, Sanders K, Mirsky D, Chambers S, O'Brien MA, Reid S and Dubois S (2004). Effect of a decision aid on knowledge and treatment decision making for breast cancer surgery: a randomized trial. *JAMA*. 292(4):435–41.

WHO Regional Office for Europe (2005). *Mental Health: Facing the challenges, building solutions*.



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