# Ageing: Future planning

## Horizon scanning for those aged 65+

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# Contents

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# Ageing: Future planning

## Horizon scanning for those aged 65+

# Executive summary

# 1. Executive summary - Introduction

Commissioning in the NHS is a highly complex activity requiring a variety of skills including horizon scanning. The Directors of Public Health in the North West of England agreed that it would be beneficial for PCTs to work together by sharing their expertise and knowledge. The initial horizon scanning topic considered was the ageing population and the public health issues likely to arise from the demographic and technological changes over the next five to 25 years.

This document summarises two pieces of work: a review of the literature on ageing and its implications for health and healthcare in the future; and, the outcomes of a regional conference, *Ageing: Future Planning*, held on 6 October 2009.

This report will consider:

- Principally national, but also regional and international, trends in the age of the population, including environmental impacts
- New drugs and pharmaceuticals relevant to those aged 65+
- New technologies impacting those aged 65+
- Diagnostic tests for those aged 65+
- Rehabilitation and therapy for those aged 65+
- Public health and health promotion activities aimed at those aged 65

# 2. National, regional and international trends

## 2.1 Demographics

The “baby boomers” of the 1960s are moving into older age bands. Women born in the peak years just of the Second World War are now retiring and men born in this period will reach retirement in 2010.

People are living longer and as they do there is an increasingly greater diversity of people over 65 in terms of age, health, kin availability, income and working patterns.

For example, the black and minority ethnic population has increased from 5.5% in 2001 to over 7% in 2006. Future projections suggest a rise to 8.4% by 2020, and 9.7% by 2032, according to the North West Development Agency.

Issues linked to data collection about older populations makes providing policymakers with accurate information about, say, care planning service, challenging. For example, data is especially sparse on older people in institutions, and those over 85 who represent the fastest growing group in the over 65s.

*UK population 1971 to 2031 (estimate)*

| | 1971 | 2003 | 2031 |
|---|---|---|---|
| **Population aged 65+** | 7.4m | 9.5m | 15.3m |
| **Pop 65+ as % of total** | 13.2 | 16 | 23.2 |
| **Aged 85+** | 485,000 | 1,104,000 | 2,479,000 |

However, we can say age dependency ratios are likely to rise from 0.3 to 0.42 by 2026 with rates in Cumbria hitting 0.7. This is a figure close to matching Japan’s, the highest in the developed world.

## 2.2 Health

The North West has the highest rate of deaths from heart disease and stroke, and for long-term health problems, compared to other regions of England. It also has the second highest rate for deaths from cancer and smoking-related illnesses.

The rate of smoking in the region is 25%, compared to 22% across England, but the regional figure masks significant local variations. Mortality related to smoking is significantly higher than the England average and 60% of excess cancer deaths are due to lung cancer.

Alzheimer's disease, vascular and Lewy body dementia are currently seen as the main causes of dementia. However, up to 10% of patients diagnosed with dementia are believed to be due to prolonged alcohol misuse

This type of dementia is likely to increase because of the high levels of binge drinking in the North West (23% of adults compared to 18.2% across England). Hospital admissions linked to alcohol in the over 65s are rising too, accounting for more than 320,000 in England in 2008 – an increase of two-thirds in four years.

## 2.3 Housing

Housing is especially important to older people, not least because they spend a large proportion of their time there. Those over 85 spend 90% of their time at home.

Therefore, they place a higher value on being able to access information about housing than other groups. For example, they may need help deciding to choose between staying put and moving on; modernising or adapting their home; taking out equity from their home; or, staying independent with support at home.

Older people can also find that their access to the right information and advice is poor – for example, having no access to the internet. This can make them feel they have lost control over their future choices. Some groups, such as those with sensory impairments, people from minority groups for whom English is not their first language, can be particularly vulnerable.

A Government report, *A National Strategy for Housing in an Ageing Society*, promises to address some of these issues.

# 3. New drugs and pharmaceuticals

The National Horizon Scanning Centre has produced a large number of technology briefings, and the majority of these are concerned with new drugs and pharmaceuticals.

Those discussed in technology briefings include Apixaban for venous thromboembolism prevention after joint replacement, Denosumab for prevention and treatment of post menopausal osteoporosis, Ambegron for depression and Xaliproden for Alzheimer's disease.

# 4. New technologies

A key objective of health and social care policy is to support older people to live as independently as possible in the home of their choice. Technology can help them do this.

A number of projects are looking at how access to computers and other home automation devices can be made simpler and quicker, and how people with severely limited physical movement can be supported to control a computer in their environment. For example:

- Attention Responsive Technology can help with tasks such as the opening and closing of curtains, operating light switches, etc, through controls such as a suck/blow tube
- Adaptive Asynchronous Brain Actuated Control systems detect and analyse brain waves in order to understand a user's mental state and then translate that mental state into commands for controlling computers and other systems
- A project looking at Cell Phone Streaming in Alzheimer's disease addresses the memory problems which are the most common deficits in Alzheimer's disease by developing a system which provides a wide range of memory cues

Researchers are also looking at what older workers require in the workplace.

A research team from the University of Surrey found that motivation of older workers to continue to work could be greatly improved if more attention was paid to their physical working environments.

In healthcare, technology can support clinical staff by making records instantly available for example. However, despite its obvious benefits, it is generally acknowledged that adoption of technology within the NHS has been slow and disparate.

Key barriers to adoption of technology include funding, limitations of the assessments of technology performed by NICE and consumer fears about confidentiality/poor data protection.

# 5. Diagnostic tests

The National Horizon Scanning Centre aims to provide advance notice to policy makers of selected new and emerging technologies. This includes diagnostic tests and procedures, as well as pharmaceuticals, etc. Diagnostic tests are discussed in some of the National Horizon Scanning technology briefings, including the Mamma Print (gene test) prognostic test for breast cancer, magnetic resonance angiography (MRA) imaging, for the detection of coronary artery disease, and Lungscreen for lung cancer detection in high risk patients.

Diagnostic tests are also discussed in the in 2.2 above.

# 6. Rehabilitation and therapy

These types of developments are monitored by the National Horizon Scanning Centre.

An example of this would be its use in recovery from stroke, which affects an estimated 150,000 people a year, most of whom are aged over 65. Rehabilitation includes development of a clinically user-friendly device to measure posture after stroke, and development of an intelligent robotic system to aid physical therapy in stroke.

# 7. Public health and health promotion activities

## 7.1 Disease and disability

Cardiovascular disease (CVD) remains the main cause of death in England, although death rates are falling.

Key issues affecting the health of those aged over 65 that can be tackled by public health interventions include falls, disabilities and incontinence. This group also reports having at least one functional limitation, such as seeing, hearing, communication, walking or using stairs (37% of men and 40% women).

## 7.2 Lifestyle choices

Men aged 65+ eat only 3.9 portions of fruit and vegetables a day, and women 3.8, compared to the Government recommended five portions. 72% of men and 68% of women are also overweight or obese. In both sexes, this proportion declined with age. Hospital admission was more likely in the older age groups.

Smoking and lung cancer rates in the North West are among the highest in the country, as are levels of dangerous alcohol consumption.

## 7.3 Mental illness

Mental illness in old age is very common, and studies show that it is mainly unrecognised by the individual and the doctor, and even when it is recognised it does not receive adequate or appropriate management.

A UK inquiry also found discrimination, participation in social activities, relationships, physical health and poverty to be key issues affecting mental health and well-being.

## 7.4 Sexual health

The sexual health of older people receives less attention than that of younger people, partly because there are relatively few studies on the sexual needs of older people. A recent national study did not include anyone over 45 despite the fact 82% of people over 50 are likely to be involved in one or more sexual relationships.

## 7.5 Mobility in the community

Older and disabled people tend to be less mobile than the general population, partly because of physical impairment that may limit movement, but also because of inappropriate design of transport systems and products.

The AUNT-SUE project (Accessibility and User Needs in Transport for Sustainable Urban Environments), which builds on research showing the ways in which poor transport and urban design may reinforce the isolation of disabled and older people.

Another project, at the University of the West of England, looked at older people's views on how technology can help them drive more safely.

## 7.6 Empowerment

Older people will live longer, healthier lives, according to a scenario proposed by the Foresight National Horizon Scanning Centre.

That means they are likely to stay in work for longer, so workplaces will need to be adapted to cater for their needs. A significant expansion in part-time and flexible working is likely as well as a decline in the demand for early retirement and the upward extension of the official retirement age.

New categories of economic activity are likely to be stimulated by a shift in the demographic mix, and a whole host of new business and markets may be geared towards meeting their needs, e.g. nursing, geriatrics, spas, cosmetic surgery, fitness, travel and education are all likely to benefit from this expanding "grey" market.

Foresight also suggest people are likely to take more personal responsibility for their care in old age. Attitudes to inheritance are likely to change as older people place their children's legacy lower down their priority list. With their historical track record of cultural and attitude change, the Baby Boomer generation are likely to lead cultural attitude change.

## 7.7 Dementia

A Government strategy on dementia, *Living Well with Dementia: A National Dementia Strategy*, intended to transform the care of the rising number of sufferers and their families. It promises memory "clinics" in every town – one-stop shops offering expert assessment, support, information and advice to those with memory problems.

This may complement the North West Regional Framework for Ageing, which was launched in April 2009. It was developed by 50:50vision, the North West Forum on Ageing, and encourages the abolition of the retirement age and positive action to retain more over 50s in the workplace.

# 8. Group work results from 'Future Planning' event

On 6th October 2009, a conference on horizon scanning 'Ageing: Future Planning – Horizon scanning for those aged 65+' was held with the aim of looking at potential future implications for the NHS, of a range of public health issues that are likely to arise in the next 10-15 years as a result of an increasing proportion of the population being aged 65 and over.

During the event, three sessions of group work were held and all of the comments and suggestions were recorded and input into tables contained within the full report. To view the tables click here

# Ageing: Future planning

## Horizon scanning for those aged 65+

## Full Report

# 1. Introduction

Commissioning in the NHS is a highly complex activity requiring a variety of skills including horizon scanning. The Directors of Public Health in the North West of England agreed that it would be beneficial for PCTs to work together by sharing their expertise and knowledge. The initial horizon scanning topic considered was the ageing population and the public health issues likely to arise from the demographic and technological changes over the next five to 25 years.

This document summarises two main pieces of work: a review of the literature on ageing and its implications for health and health care in the future; and the outcomes of a Regional Conference on Ageing: Future Planning, which took place on 6th October 2009.

## Aim of the report

A steering group was established in, and aimed to look at the Horizon Scanning process, examining a range of public health issues that are likely to arise as a result of demographic and technological changes over the next 5 to 25 years, in order to inform commissioning. The first issue that was examined was changes that are likely to result from an increasing proportion of the population being aged 65 and over. It was decided that a Conference would be held in October 2009, in order to feed back the work of this steering group. The Conference took place at the DW stadium in Wigan, and group discussions at the event were recorded in order to inform the ongoing Horizon Scanning process. The primary focus of the report, and of the conference, was on the North West of England, although national and international trends are also considered.

## Objectives of the report

The objectives are to look at;

- Regional, national and international trends in the age of the population (to include environmental impacts). Focus is primarily on national trends.
- New drugs and pharmaceuticals relevant to those aged 65+
- New technologies impacting those aged 65+
- Diagnostic tests for those aged 65+
- Rehabilitation and therapy for those aged 65+
- Public health and health promotion activities aimed at those aged 65.

# 2. Summary

## Definitions

**What is horizon scanning?**

Horizon Scanning is defined as:

> "The systematic examination of potential threats, opportunities and likely future developments, including (but not restricted to) those at the margins of current thinking and planning."
>
> *Health and Safety Executive (2009)*

Horizon Scanning may explore novel and unexpected issues as well as persistent problems or trends. The government's Horizon Scanning Centre of Excellence, as part of the Foresight Directorate in the Department for Innovation, Universities and Skills, has the role of supporting Departmental activities and facilitating cross-departmental collaboration. In addition, the Health and Safety Executive (HSE) has commissioned the Health and Safety Laboratory (HSL) to coordinate and build on its existing horizon scanning activities.

Horizon scanning will consider aspects of HSE's business, and will take into account trends and developments in technology, the workplace and working practices, socio-economic trends that affect the labour market, and trends in public attitude towards health and safety risks, as well as the UK political agenda, and international developments. Horizon Scanning will be used to identify issues with the potential to present significant new or changed work-based risks over the medium to long term, i.e. three to 10 years.

Horizon Scanning may explore novel and unexpected issues as well as persistent problems or trends.

# Key horizon scanning issues - summary

## 2.1 To look at regional, national and international trends in the age of the population (to include environmental impacts)

### Demographics

According to the Office for National Statistics, the population aged 65 and over has increased from 7.4 to 9.5 million since 1971, and is projected to increase to 15.3 million in 2031. The share of those aged 65+ in the population was 13.2% in 1971, 16% in 2003 and is projected to be 23.2 in 2031. Low fertility since the 1970s and reductions in mortality have contributed to this.

The 'oldest old', those aged 85 and over, is the fastest growing group. Between 1971 and 2003 in the UK, the population aged 85 and over almost trebled (from 485 to 1,104 thousand). The population aged 85 and over is projected to double in size again by 2031, to 2,479 thousand.

The bulge of the 'baby boomers' of the 1960s are moving into the older age bands. Women born in the peak years just after World War 2 have now reached retirement age at 60. Men born during this period will reach retirement age of 65 in 2012.

The fact that more people live to older ages means a greater diversity among the older population. More than in the past, diversity among the over 65s is considerable, e.g. in age, health, kin availability, income and working patterns. For example, the Black and Minority Ethnic population has increased from 5.5% in 2001 to over 7% in 2006. Future ethnicity projections suggest a rise to 8.4% by 2020, and 9.7% by 2032, according to the North West Development Agency.

There are issues with data collection on this population, which creates issues in providing accurate information to policy makers, e.g. in planning care services. Data is particularly sparse on older people in institutions, and those aged over 85.

According to 50:50 Vision, age dependency ratios are likely to rise from 0.3 to 0.42 by 2026. Rates in Cumbria are likely to soar as high as 0.7, a figure close to matching Japan, the highest in the developed world.

The Framework also shows that older people fall into 4 distinct age groups, with different health needs and expectations. They are those aged 50-65, 65-75, 75-85 and those aged 85 plus.

In the North West, we have the highest rate for deaths from heart disease and stroke, and for long-term health problems, compared to other regions in England. We have the second highest rate for deaths from cancer and smoking-related illness. In males aged under 75, in Spearhead areas in the North West, coronary heart disease was responsible for the highest number of months of life expectancy lost (5.5), followed by digestive disease (3.5 months), when the North West was compared to England and Wales as a whole. For women, the highest number of months lost (3 months) was due to digestive disease, followed by lung cancer (2.5 months). In men, the highest number of months lost in the North West (3+ months), was in the 55-64 age group, followed closely by months lost in the 65-74 age group, according to the North West Public Health Observatory.

A third of older people in the North West are unemployed, significantly more than the proportion of unemployed among those living in the South. In addition, the rate of adults who smoke in the North West (25%) is significantly higher than the England average of 22%, but this regional rate masks a significant variation between local areas, according to the Association of Public Health Observatories. Mortality related to smoking is significantly higher than the England average. A recent report from the North West Cancer Intelligence Service shows that 60% of excess cancer deaths in the region are due to lung cancer.

Sometimes associated with Korsakoff Syndrome, alcohol dementia is a brain disorder associated with long-term heavy drinking and thiamine deficiency, causing neurological damage and memory loss.  Up to 10% of patients diagnosed with dementia are due to prolonged alcohol misuse. There are very few qualitative differences between dementia and Alzheimer's disease, so it is difficult to distinguish between the two.

Onset of alcohol dementia can be as young as 30, although age 50-70 is more common. The onset and severity of this type of dementia is directly correlated to the amount of alcohol that a person consumes over their lifetime.

Alzheimer's disease, vascular and Lewy body dementia are currently seen to be the main causes of dementia, while alcohol-related dementia is largely overlooked or seen as a co morbid factor. Alcohol-related dementia is likely to increase, as alcohol consumption levels amongst younger and middle aged generations is twice that of generations currently suffering from alcohol dementia. This could be compounded by the increasing use of recreational drugs such as ecstasy. Some authors have suggested that there is a lack of research into the effects of this type of dementia.

Alcohol misuse is a particular concern within the North West. Binge drinking is undertaken by 23% of adults within the region (25.9% of men and 11.4% of women) compared with 18.2% for England. The North West has the second highest level, after the North East, according to the Association of Public Health Observatories. This is likely to contribute to alcohol dementia, as described below. In addition, NHS Data showed alcohol-related hospital admissions in the over 65s are rising. They accounted for more than 320,000 admissions in England in 2008, an increase of two thirds over 4 years.

Consumption of alcohol has almost doubled from the early 1960s to 2000, whilst the price of alcohol, relative to UK income, has halved since the 1960s. Alcohol misuse in the elderly is also underestimated and under-diagnosed.

## 2.2 To look at new drugs and pharmaceuticals relevant to those aged 65+

The National Horizon Scanning Centre has produced a large number of technology briefings, and the majority of these are concerned with new drugs and pharmaceuticals. Those discussed in technology briefings include *Apixaban* for venous thromboembolism prevention after joint replacement, *Denosumab* for prevention and treatment of post menopausal osteoporosis, *Ambegron* for depression and *Xaliproden* for Alzheimer's disease.

## 2.3 To look at new technologies impacting those aged 65+

The Kings Fund report, published in October 2008, describes some of the ways in which technology has been adopted in the NHS, and how it may be implemented in the future. The National Programme for IT, established in 2002, included *Electronic Prescription Service,* a system to streamline the issuing, dispensing and reimbursement of prescriptions, *Choose and Book,* an electronic appointments booking service, *NHS Care Records Service*, and *NHS e-mail* for staff.

A key objective of health and social care policy is to support older people to live as independently as possible in the home of their choice, and one of the key benefits of technology is to support this, through a broad range of measures. A number of projects are looking at how access to computers and other home automation devices can be made simpler and quicker, and how people with severely limited physical movement can be supported to control a computer in their environment. For example, *Attention Responsive Technology* can help users with tasks such as the opening and closing of curtains, operating

light switches etc, through controls such as a suck/blow tube. *Adaptive Asynchronous Brain Actuated Control* systems detect and analyse brain waves in order to understand a user's mental state and then translate that mental state into commands for controlling computers and other systems. A project looking at *Cell Phone Streaming in Alzheimer's disease* addresses the memory problems which are the most common deficits in Alzheimer's disease by developing a system which provides a wide range of memory cues. Through the use of a specially equipped, easy to use mobile phone, a 'virtual' caregiver becomes a regular presence in the home. Other projects focus on designing accessible environments, such as *POLLIS*, which uses a technology called *Building Accessibility Metrics* to combine aspects including planning, legislation, building regulations etc.

Researchers are now looking at what older workers require in the workplace. A research team from the University of Surrey found that motivation of older workers to continue to work could be greatly improved if more attention was paid to their physical working environments.

Technology has the ability to support clinical staff, e.g. by making records instantly available. Despite its obvious benefits, it is generally acknowledged that adoption of technology within the NHS has been slow and disparate. Key barriers to adoption of technology include gaining funding, limitations of the assessments of technology performed by NICE and consumer fears about confidentiality/poor data protection, particularly because of media attention. Government policy also has a significant impact on the adoption of technology.

The internet has opened up a wealth of new business and leisure opportunities, from using e-mail to keep in touch with friends, to making purchases online, if online facilities are designed to take into account the needs of older people.

There is increasing evidence that assistive technology can play a significant role in helping people with cognitive impairment, e.g. those resulting from dementia or stroke, safe and well. For example, researchers have developed a service called 'NeuroPage' that sends a timed electronic alert to a patient via a pager.

The National Horizon Scanning Centre, in Birmingham, aims to provide advance notice to the Department of Health and other policy makers of selected new and emerging technologies. This includes therapeutic interventions and procedures, as well as pharmaceuticals etc. These include, *SpeechEasy Altered Auditory Feedback Device* to assist communication for patients with stammers, *Dose Verification Systems* for patients undergoing radiotherapy for breast and prostate cancer, *Smartinhaler* for personal asthma management.

## 2.4 To look at diagnostic tests for those aged 65+

The National Horizon Scanning Centre, in Birmingham, aims to provide advance notice to the Department of Health and other policy makers of selected new and emerging technologies. This includes diagnostic tests and procedures, as well as pharmaceuticals etc. Diagnostic tests are discussed in some of the National Horizon Scanning technology briefings, including the *Mamma Print* (gene test) prognostic test for breast cancer, *Magnetic resonance angiography* (MRA) imaging, for the detection of coronary artery disease, and *Lungscreen* for lung cancer detection in high risk patients.

Diagnostic tests are also discussed in the technology section, above.

## 2.5 To look at rehabilitation & therapy for those aged 65+

The National Horizon Scanning Centre, in Birmingham, aims to provide advance notice to the Department of Health and other policy makers of selected new and emerging technologies. This includes rehabilitation and therapy, as well as pharmaceuticals etc. The King's Fund report discussed in the rehabilitation and technology section below also discusses the role of technology in rehabilitation and therapy. This includes use in recovery from stroke, which affects an estimated 150,000 people a year, most of whom are aged over 65. Rehabilitation includes development of a clinically user-friendly device to measure posture after stroke, and development of an intelligent robotic system to aid physical therapy in stroke.

## 2.6 To look at public health & health promotion activities aimed at those aged 65+

Cardiovascular disease remains the main cause of death in England, although death rates are falling. According to the Office for National Statistics, key issues affecting the health of those aged over 65 that may be tackled by public health interventions include falls, disabilities and incontinence. Among people aged 65 and over, 37% of men and 40% of women reported having at least one functional limitation (seeing, hearing, communication, walking or using stairs).

Nutrition was also an issue, with men aged 65 and over consuming 3.9 portions of fruit and vegetables a day, and women 3.8, compared to the Government recommended 5 portions. Mental illness in old age is very common, and studies show that it is mainly unrecognised by

the individual and the doctor, and even when it is recognised it does not receive adequate or appropriate management.

Obesity is another key issue – 72% of men and 68% of women were overweight or obese. In both sexes, this proportion declined with age. Hospital admission was more likely in the older age groups, as might be expected, according to the Office for National Statistics. Smoking is another key issue, as smoking and lung cancer rates in the North West are among the highest in the country, as are levels of dangerous alcohol consumption. A UK inquiry also found discrimination, participation in meaningful social activity, relationships, physical health and poverty to be key issues that affect mental health and well-being.

Sexual health is also an area where needs of older people are less likely to be looked at than those of younger people – there are relatively few studies on the sexual needs of older people. More information on sexual health is available in the full report.

Projects aimed at enhancing well-being include the *AUNT-SUE* project (Accessibility and User Needs in Transport for Sustainable Urban Environments), which builds on research showing the ways in which poor transport and urban design may reinforce the isolation of disabled and older people. One aim of the project is to develop a comprehensive 'toolkit' that can be used at different levels, from city-regions down to individual streets. Another project, at the University of the West of England, looked at older people's views on how technology can help them drive more safely. Older people's issues with driving include problems with signage, maintaining a constant speed, tiredness, shorter reaction times, dazzle and glare.

Other key reports include those produced as part of the *Sigma Scan*, by the Foresight National Horizon Scanning Centre. They suggest a likely 'Age and engage' scenario, where older people are living longer and are healthier. Older people are likely to stay in work for longer, meaning that workplaces will need to be adapted to cater for their needs, and a significant expansion in part-time and flexible working is likely, as well as a decline in the demand for early retirement and the upward extension of the official retirement age. This may reduce security for workers on these contracts, however, and lead to increases in anxiety. According to this scenario, new categories of economic activity are likely to be stimulated by a shift in the demographic mix, and a whole host of new business and markets may be geared towards meeting their needs, e.g. nursing, geriatrics, spas, cosmetic surgery, fitness, travel and education are all likely to benefit from this expanding 'grey' market.

This Foresight report also suggests that people are likely to take more personal responsibility for their care in old age. Attitudes to inheritance are likely to change as older people place their children's legacy lower down their priority list. With their historical track

record of cultural and attitude change, the Baby Boomer generation are likely to lead cultural attitude change.

The current government is drawing up a green paper for launch in 2009 on options for reform of the funding system. Under existing rules, people must contribute to their care and support costs if they have assets of more than £22,500, even if that means selling the family home.

A Government Strategy on Dementia, *Living Well with Dementia: A National Dementia Strategy,* has recently been published. The 5 year strategy is intended to transform the care of the rising number of sufferers and their families, and was launched by the government yesterday with funding of £150 million, and promised memory 'clinics' in every town – the clinics would be 'one-stop shops' offering expert assessment, support, information and advice to those with memory problems. Further information on this Strategy is available in the full report.

*The European Commission* has also published a communication on the impact of the ageing population in the EU. It takes into account the context of the current economic crisis and in particular, the communication takes an in-depth look at the economic and budgetary impact of an ageing population over the long-term until 2060. The paper includes the implications for health, particularly long term health care provision and preventative health to encourage greater participation in the workforce.

This may complement the *North West Regional Framework for Ageing,* which was launched in April 2009. It was developed by 50:50vision, the North West Forum on Ageing, and encourages the abolition of the retirement age and positive action to retain more over 50s in the workplace.

# 3. Horizon scanning – full report

## 3.1 Definitions

### What is Horizon scanning?

Horizon Scanning is defined as:

'the systematic examination of potential threats, opportunities and likely future developments, including (but not restricted to) those at the margins of current thinking and planning' (HSE, 2009).

Horizon Scanning may explore novel and unexpected issues as well as persistent problems or trends. The government's Horizon Scanning Centre of Excellence, as part of the Foresight Directorate in the Department for Innovation, Universities and Skills, has the role of supporting Departmental activities and facilitating cross-departmental collaboration. In addition, the Health and Safety Executive (HSE) has commissioned the Health and Safety Laboratory (HSL) to coordinate and build on its existing horizon scanning activities. Horizon scanning will consider aspects of HSE's business, and will take into account trends and developments in technology, the workplace and working practices, socio-economic trends that affect the labour market, and trends in public attitude towards health and safety risks, as well as the UK political agenda, and international developments. Horizon Scanning will be used to identify issues with the potential to present significant new or changed work-based risks over the medium to long term, i.e. three to ten years.

# 4. Key Horizon scanning issues – full report

## 4.1 Regional, national and international trends on the age of the population (to include environmental impacts)

According to the Office of National Statistics (www.statistics.gov.uk/cci/nugget.asp?id=949), the population aged 65 and over in the UK has increased from 7.4 to 9.5 million since 1971, and is projected to increase to 15.3 million by 2031. The share of those aged 65+ in the population was 13.2% in 1971, 16% in 2003 and is projected to be 23.2% in 2031. Low fertility since the 1970s and reductions in mortality have contributed to this. The 'oldest old', those aged 85 and over, is the fastest growing group. Between 1971 and 2003, the population aged 85 and over almost trebled (from 485 to 1,104 thousand). The population aged 85 and over is projected to double in size again by 2031, to 2,479.

The *North West Regional Framework for Ageing* (2009), states that age dependency ratios will rise from 0.3 to 0.42 by 2026, with rates soaring as high as 0.7 in Cumbria, a figure close to matching Japan, the highest in the developed world. In Cumbria there are also currently 96 people aged over 100. In 20 years time, it is anticipated that there will be 3000 people aged 100 plus in Cumbria (www.cumbria.nhs.uk/YourHealth/OlderPeople/Home.aspx).

The fact that more people live to older age means a greater diversity among the older population. More than in the past, diversity among the over 65s is considerable, e.g. in age, health, kin availability, income and working patterns. More of the older people aged above 65 had experienced complex family lives, with an increasing proportion of them experiencing divorce and remarriage.

Older people are not a uniform group and they have a wide range of needs. They can be broadly seen as 3 groups;

- Entering old age – people who have completed their career in paid employment and/or child rearing. These people may be as young as 50 and are active and independent.
- Transitional phase – in transition between healthy, active life and frailty. Goals of health and social care are to identify emerging problems in order to prevent crisis and long-term dependence.

- Frail Older People – these people are vulnerable as a result of health problems such as stroke or dementia, social care problems etc (www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4003066).

## Key statistics on older people

- There are about 336,000 people aged 90 and over, according to the 2001 Census (Office for National Statistics website: (www.statistics.gov.uk/CCI/nugget.asp?ID=351&Pos=2&ColRank=2&Rank=448: last accessed September 2009), and nearly 4,000 of these are providing 50 or more hours of unpaid care per week to a family member or friend. Although only 26.2% of the people aged 90 and over living in households are men, they make up just over half the carers in this age bracket. Single-pensioner households make up 14.4% of all households, but more than two thirds of these have no access to a car. For pensioner-family households, more than three quarters have access to a car – this may be because over three quarters of single-pensioner households comprise women, many of whom were brought up in an age when fewer women learnt to drive.

- More than half of women aged 75 and over live alone – 52.5% of 75-84 year olds and 54.5% of 85 year olds and over. Only 25.7% of men aged 75-84 and 36.9% of men aged 85 and over live alone.

- 3,000 women and 2,000 men aged 75 and over have neither central heating nor sole use of a bathroom (not including residents of communal establishments). Over the age of 85, 26.5% of men and 21.9% of women say they are in 'good health' **(www.statistics.gov.uk/CCI/nugget.asp?ID=351&Pos=1&ColRank=1&Rank=374).**

- The majority of older people continue to live in the community - just under three quarters of people aged 90 and over were living in private households in 2001. The volume of home help hours purchased or provided by councils in England has increased significantly over the last 2 decades. In 2004, an estimated 3.4 million hours were provided to 355,600 households. Only 2.2 million hours were provided in 1994, although the number of households receiving council services has fallen consistently since 1994. Family members supply the majority of social care provided in the community. (www.statistics.gov.uk/CCI/nugget.asp?ID=1268&Pos=5&ColRank=2&Rank=1000).

- The Office for National Statistics 'Focus on Older People' report paints a picture of people aged 50 and over in the UK, and includes information about their characteristics, lifestyles and experiences. In 2002, 3 in 10 men aged 80 and over, and nearly 1 in 5 women aged 80 and over, said they owned a mobile phone.

Around 1 in 10 men aged 80 and over, and just over 1 in 20 women reported using the internet in 2002.

- The likelihood of being a member of an organisation such as neighbourhood groups falls with age. In 2002, around two thirds of men and women aged 50-54 were a member of an organisation, compared with half of people over 80. Participation in volunteering, sporting and cultural activities also change as people get older. People aged 65-74 have the highest levels of volunteering of all older people. Those in higher age groups are more likely to have health problems which could prevent them from volunteering.

- Many older people are also choosing to participate in education and learn new skills including the use of computers and the internet. In 2002, 51% of those aged 60 to 69 in England and Wales engaged in some form of learning, compared to 47% in 1997. Older people's lifestyles can be affected by fear of crime. Although people aged 60 and over worry less about crime than those aged 16-59, the older people were more afraid of walking alone after dark. Women aged 60 and over were more likely than men of the same age to feel unsafe. (www.statistics.gov.uk/focuson/olderpeople/).

- Women can expect to live longer than men, with life expectancy at birth in the UK being 75.9 years for men and 80.5 for women in 2002. However women are more likely to have more years in poor health (www.statistics.gov.uk/cci/nugget.asp?id=1267).

- By ages 65-69, cardiovascular disease is the most common cause of death across almost all the country, including the North West. At ages 75 and over, the leading cause of death in every neighbourhood is cardiovascular disease. Heart attack and chronic heart disease is the leading cause of death for every neighbourhood for age bands 55 to 84. For the 85-89 age group, heart attack and chronic heart disease still predominate, but there are a handful of neighbourhoods where cerebrovascular disease or pneumonia predominates. For those aged 90 and over, the leading causes of death are heart attack and chronic heart disease and pneumonia across most of the country (Shaw et al, 2008).

- Current trends are such that social and economic inequalities could become starker, despite recent initiatives to tackle social exclusion. As the value of the state pension and income support declines relative to earnings (including income from investments and income-related pensions), the material circumstances of older people living on different income sources are likely to diverge.

- Older people are important contributors to their local communities, but can face barriers to participation in community life. 21% of men and 31% of women aged over 65, and 32% of men and 61% of women aged over 75, lived alone, in 2006 (ONS, 2008). In the same year, 9% of men and 24% of women aged 65 to 74 were widowed. Those who had never been married were most likely to be socially excluded, followed by those who were widowed (ELSA, 2006).

- Those over 65 are more likely to vote - 75% of this age group voted at the last election, compared to 37% of those aged 18 to 24 (Davidson, 2006). Over 65s are also likely to identify with their local area, with 86% of this group saying that they identified strongly with their local area, compared to 75% of all adults in England and Wales.

- 43% of people aged 65 and over feel unsafe walking alone after dark. In reality, old people are unlikely to be victims of crime, although they are targets for particular sorts of crime, such as burglary (ONS, 2007).

- Transport can be a barrier to participation. Older people are less likely to own a car than their younger counterparts, and single pensioners are less likely to own a car. 66% of single adults aged 65 and over did not have access to a car in 2005, compared to 20% of couples aged 65 and over (Department for Transport, 2005). Ageism, reported by 23% of the adult population, is the most commonly experienced form of discrimination (Age Concern, 2006).

- The European Commission has published a communication on the impact of the ageing population in the EU. According to this European Commission publication, life expectancy is lower in the UK than in other European countries including France, Germany and Italy. Females in France born 2005-10 are expected to live until 84.1 years of age, whilst for those born in the UK that figure is 81.6 years, according to United Nations Data. One interesting aspect of the changes in life expectancy is that the gap between males and females has narrowed in the UK but widened elsewhere. In the UK, females born 1950-55 were expected to live 5.1 years longer than males, but for those born 2005-2010 the gap is predicted to be only 4.4 years. (http://ec.europa.eu/economy_finance/publications/publication14992_en.pdf).

- Physical activity plays a vital part in maintaining health. The Government 2012 Legacy Action Plan aims to boost sport and fitness, in the run up to the 2012 Olympics, through a £140 million fund. One of the aims of this project is for swimming to be free for everyone by 2012. Over 60s, along with under 16s, will get free swimming first. This is already in place in some areas, for example Wigan has offered free swimming for older people since 2006, and has offered free swimming for all since April 2009.The Government's 2009 Ageing Strategy aims to increase focus on preventive services for conditions which often affect people in later life, including foot care, falls prevention, continence care, depression and arthritis (Department for Work and Pensions, 2009).

A person's health in old age is influenced, but not necessarily determined, by earlier life experiences. Illness and disability in older people correlate with socio-economic status as measured in mid-life or early retirement. However, these trends can be modified. Among disadvantaged older people, especially the oldest age groups, health and social services can play an important role in improving quality of life and alleviating health inequalities (Foresight Report 'Healthcare and Ageing Population Panels: www.education.edean.org/pdf/Intro011.pdf: last accessed September 2009).

Population ageing is expected to lead to a higher need for expenditure on health and social care. In the UK temporal changes in cause-specific mortality at older ages are relatively well described. Far less is known about the incidence and prevalence of a wide range of non-fatal conditions or the extent to which these might be changing. Many of these conditions are associated with high levels of health service costs (e.g. diabetes, cataracts), poor quality of life (e.g. stroke, heart failure), and loss of independence (Foresight Report 'Healthcare and Ageing Population Panels: www.education.edean.org/pdf/Intro011.pdf: last accessed September 2009).

Advances from human genome research may lead to more targeted treatment for high blood pressure, heart failure, angina etc. Cancer will become relatively more important as a cause of mortality and morbidity in old age. For most common cancers of old age there is, at present, little indication of a downward trend in mortality. If current trends continue, there will be an increased need for all cancer services including investigation, treatment and terminal care.

Degenerative diseases of late onset will become commoner as a result of the increased numbers of the very old – the over 80s are the fastest growing age group. Considerable recent investment in dementia research will lead to new therapeutics to arrest the rate of cognitive loss but there is as yet evidence for a changed incidence.

Age-related disabilities such as hearing impairment, declines in muscle strength and stamina, incontinence etc are expected to increase in prevalence, although the more optimistic scenarios may be postponed to a later age, and mitigated through safer home environments (e.g. in the case of hip fracture), and enhanced use of drugs (e.g. increased use of HRT for hip fractures).

Emerging needs of older cohorts include the health impacts of climate change, ozone depletion, globalisation etc. Older people, especially in poor housing, will be vulnerable to the expected scenarios of climate change in the UK (thermal extremes, flooding and gales). Ozone depletion along with increased sun seeking behaviours are likely to lead to increased skin cancers, cataracts and immune-related diseases. Climate change along with increased population mobility may lead to the introduction of new infectious diseases, rapid spread of flu and other respiratory infections which older people are least likely to withstand (Foresight Report 'Healthcare and Ageing Population Panels: www.education.edean.org/pdf/Intro011.pdf: last accessed September 2009).

## Tackling ageism

Age Concern feels that the Default Retirement Age, introduced in 2006, allows employers to use mandatory retirement age to force those aged 65 and over out of a job. This law can also be a barrier to promotion, training and job mobility for people in their late 50s and 60s. According to the Office for National Statistics, around 900,000 people aged 50 and over are not in work, but want to find jobs (ONS Labour Force Survey, Age Concern Calculations 2006).
www.ageconcern.org.uk/

A Government review of the Default Retirement Age has been brought forward to 2010, in order to reflect recent changes in economic circumstances, and to allow those who want to, to continue working (Department of Health, 2009).

In order to prepare for population ageing, it is useful to look at other countries where populations are older. Finland has one of the most rapidly ageing populations in Europe. 40% of the workforce were aged over 50 in 2000, but they are being encouraged to stay at work. Pensions have been reformed, under *Work ability*, launched in 1998, in order to facilitate this. Workers are given extra training, and moved to more appropriate jobs where possible. Workers are given reviews at ages 53 and 59.
**http://news.bbc.co.uk/1/hi/world/europe/4006973.stm**

## Housing

Opportunity Age (DWP, 2005) the over-arching Govt Strategy for an Ageing Population, led by the Department for Work and Pensions, sees housing as central to well-being in later life. Older people spend a large proportion of their time in the home – according to one report; those aged over 85 spend 90% of their time in the home (Help the Aged, 2006). Households including an older person comprise a third of households (Dept for Communities and Local Government, 2007). However, 28% of households including one person over 60 are living in a non-decent home. In 2006/07 there were 24,000 excess winter deaths in England and Wales, and more than 90% of these were in those aged over 65 (ONS, 2007).

Older people have a need for advice and information – they are no different from other groups in wanting to make active and informed decisions about their housing, at the right time. Older people place a higher value on being able to access information than other groups. The information they may need might include helping people to choose between staying put and moving on; modernising their homes, rather than moving; adapting a ground floor, rather than moving into sheltered housing; or taking out equity from their home, using a reputable product, and staying independent with support at home, rather than moving into a residential care home.

Older people can also find that their access to the right information and advice is poor for a range of reasons (Gilroy, 2005), including lack of access to the internet. With limited access to information setting out their possible options, older people can feel they have lost control over their future choices. It is not uncommon for a decision to move to specialist housing to be made after an older person has been hospitalised, and without the proper involvement of the older person in the decision-making process. Some groups of older people face additional barriers to making the right choice, e.g. those with sensory impairments or mobility problems (ODPM, 2006), those with learning disabilities or mental health problems and the homeless. Older people from black and minority ethnic groups may also face particular difficulties in accessing info and advice. For example, BME participants in a recent study by the Scottish Executive (Croucher et al, 2007) reflected on the lack of experience among migrant communities, of ageing within the UK context, and a lack of knowledge regarding the type and availability of services for older people, and the various agencies involved. Language could be an additional barrier.

There is a need for a single, simple and accessible route to obtaining independent, impartial information and advice on housing and related issues, including finance and care options (early findings – Link-Age Plus and Partnerships for Older People

The Government report, ‘A National Strategy for Housing in an Ageing Society’, promises that the government will work internally and with external partners to fund and develop approaches to a national advice and info service. A Web-based telephone service will

operate and be tested at a national level. The government will develop a one-stop shop for older people, progressively developing links to the Pensions and Benefits Service. Some older people like to have someone local who will listen to them, so local housing advice will be strengthened.

Many older people face additional financial barriers to improving or adapting their homes. Some may have little disposable income, even if they have equity in their homes – the 'asset rich but income poor'. Equity release might be an option, through a loan scheme or by moving to a smaller, cheaper property, which is easier to maintain. Many more people would consider the option of modernising their current homes or of moving to smaller properties, if there were products available that they felt they could rely on.

Extra help for older people wishing to remain in existing homes – most older people would prefer to stay put. However, as health declines, many need an 'extra bit of help' to remain living at their home in safety and comfort. This report details govt plans to develop new rapid repairs and adaptations services, expanding coverage of handypersons schemes across the country from 2009.
(www.communities.gov.uk/documents/housing/pdf/lifetimehomes.pdf)

## Work and learning

The government's employment strategy continues to focus on improving employment rates for traditionally disadvantaged groups, including people aged over 50. Discrimination is still an issue – in 2005, 37% of employers operated workplaces with mandatory retirement ages (Metcalf et al, 2006). One of the clearest trends on the horizon is the ageing of the UK population By 2031 the numbers in all UK age groups up to 44 is expected to fall whilst those aged between 60-74 will rise by 50% and those over 75, by 70% (Capital Economics, 2005). The Government's Sigma Scan report casts the spotlight on uncertainties facing the economy: changes in retirement age and the overall ratio of people in work; impacts on productivity; the savings/spending impact for old and young; and the new markets (for example, the grey market meeting older people's needs).

Ageing is likely to impact on financial dimensions of the economy in several ways. While there is some contention as to the validity of the life-cycle hypothesis, generally ageing reduces savings, impacts on investment and worsens the current account balance and lowers the tax take (International Monetary Fund, 2004).

Medical care spending is an obvious point of change: demographics are expected to increase medical spending by 2-3% by 2050, much of which is likely to be accounted for by chronic care costs. However improved health behaviour is not expected to alter the growth of spending as the composition of care changes (Wanless, 2002). However the economic

burden of dependency of an ageing workforce may be counterbalanced by less child dependency, due to the reduced number of children (MORI interview, 2005).

Finally, the obvious pension challenge will require higher savings if the effect is not to be borne purely by an inter-generational transfer (MORI interview, 2005). The policy implications range from the immediate (pensions reform, promoting labour mobility including inward migration) to the medium to longer term (e.g. health service planning, benefits reassessment as costs rise). Pressures for means testing rises as the working population decreases. Rising female participation in the workforce may ease the pressure though UK female participation is already at record levels and comparatively high (UK Government, 2001).

More widely, since virtually all economies are ageing (rich and poor) the relative effects on future UK economic competitiveness are highly uncertain. By 2050, for example, the gap in size between the UK and German economy, based on population changes alone, would fall from 20% to 7% and if UK productivity were to run 1% faster than Germany, the UK economy would be larger by 2025. [1] Given the multiple changes, the "issue" is whether the economy will need to change radically or will adjust far more smoothly than expected (Capital Economics, 2005).

## Climate change, global warming and sustainability

According to the World Health Organisation (2007), climate and weather have powerful and direct impacts on human life. Extremes of heat and cold can cause potentially fatal illnesses. Other weather extremes, such as heavy rains, floods and hurricanes, also have severe impacts on health. Over the last 50 years, human activities have released enough CO2 to affect the global climate. Global temperature is increasing, e.g. 11 of the last 12 years (1995-2005) rank among the 12 warmest years since records began in the 1850s. Many countries have experienced increases in rainfall and there has been a general increase in frequency of extreme rainfall.

Changing climate has the potential to impact upon the basics of public health – safe drinking water, sufficient food, secure shelter, and good social conditions. Climate change might bring some localized benefits, such as decreased winter deaths in temperate climates. However, the health effects of climate change are likely to be overwhelmingly negative. Some of the health effects include increased frequency of heatwaves, rising sea levels increasing the risk of coastal flooding, rising temperatures/variable precipitation are likely to decrease the production of many staple foods (WHO, 2007).

## The economy and the credit crunch

Historically, recession has been shown to be bad for human health. The risk of unemployment increases in a recession, and there is a wealth of research linking poor health to unemployment. There is also an impact on housing: Shelter, the housing charity, has had a vast increase in consultations about this. The government will issue guidance in an attempt to ease repossession rates. There is concern about 'sale and lease back' firms, and the government are planning to bring them back under the Financial Services Authority'. There has been an Increase in number of people in fuel poverty. Concern about the economy is resulting in increased anxiety – NetDoctor noticed a big increase in hits on insomnia on their website. American research shows people are turning to unhealthy ways of coping, e.g. drinking more, reliance on unhealthier food. There has also been an effect on charity giving – one in four charities reported a fall in the last year – at a time when many charities are seeing more demand for their services because of the credit crunch.

The credit crunch is likely to hit the discovery and production of new medicines. For example, the biotech industry relies heavily on venture capital to back early research in return for shares. However, such risk taking investment has been hit by the credit crunch.

## Fuel poverty

Someone who spends more than 10% of their income keeping themselves warm is said to be in fuel poverty. Fuel poverty is not just about low income, but is a complex picture, linked to multiple deprivation, unaffordable fuel prices, and poor housing stock characterised by inadequate insulation and inefficient heating systems. As fuel prices rise, numbers of people in fuel poverty increase. Fuel prices rose by an average of 15% for gas and 13% for electricity in early 2008, and 30% for gas and 14% for electricity in summer 2008.

The government has introduced measures to tackle this, such as free insulation for certain vulnerable groups, with a target of eradicating fuel poverty by 2016. Ofgem launched Social Action Strategy in Oct 2005 to help govt tackle fuel poverty. Issues involve tackling fuel differentials – 18% of fuel poor pay for electricity by pre-payment meter, and 12% for gas. Households that use pre-payment meters typically pay more - £55 more per year than those paying by standard credit, and £144 a year more than those paying by direct debit. Energy companies voluntarily provide a range of help to vulnerable customers, including social tariffs, benefit checks etc. In 2008, the government also secured agreements with 6 of the leading energy suppliers, to increase their social programmes to at least £150m a year by 2010/11.

## The NHS

It is expected that female doctors in the NHS are likely to outnumber males – by 2017, according to research (http://news.bbc.co.uk/1/hi/health/8077083.stm). This may mean that more doctors are looking to work flexible hours in order to fit in with childcare arrangements, and that certain specialties, where working hours are more predictable and conducive to family life, such as general practice and public health, become oversubscribed, while specialties such as surgery, where hours are less predictable, are under subscribed. This is something that needs to be examined in advance to ensure that there is sufficient capacity to deal with the issues of the ageing population.

## Data collection

There are issues with data collection on this population. The majority of data collected are from cross-sectional surveys that are not specifically targeted at the older population, e.g. General Household Survey, Labour Force Survey. Lack of data on aspects of the life of older people creates several problems for the provision of accurate information to policy makers, e.g. in planning care services. Under-represented groups include older people in institutions – almost all surveys are population based and therefore only include the population resident in private households. For the very old or those suffering from certain types of ill health, this may bias the findings, e.g. according to the 2001 census, 18% of those aged 85 and over live in institutions, and the majority of them suffer from long-term illness. They also include oldest old and older people from ethnic minorities – few studies have sufficient people aged over 85 to obtain reliable results. Also, interviews/surveys with oldest old people involve additional issues, e.g. the need to accommodate visual problems, hearing impairments. Interviewing very old people takes longer. Very old people may also be less likely to participate in surveys, especially door to door surveys. There are also very few surveys with people from ethnic minorities. Another area where more data is needed is on lower level geographies in the UK – there is great demand for data for older people from small geographical areas.

# 4.2 To look at new drugs and pharmaceuticals aimed at those aged 65+

The National Horizon Scanning Centre's main output is technology briefings, many of which are concerned with drugs and pharmaceuticals. These are available on the NHSC website, and are listed by disease group**.** Those discussed in technology briefings include *Apixaban* for venous thromboembolism prevention after joint replacement and acute medical illness (August 2008), *Denosumab* for prevention and treatment of post menopausal osteoporosis (April 2008), *Ambegron* for depression (April 2008), *Tarabant* for obesity (April 2008). In 2007, *Rivaroxaban* for prevention of venous thromboembolism after major orthopaedic surgery, *Tolvaptan* for heart failure, Xaliproden for Alzheimer Disease. (www.pcpoh.bham.ac.uk/publichealth/horizon/outputs/chronological.shtml)

Information on drugs and pharmaceuticals is also available at on the NICE website, (www.nice.org.uk/), and Cancer Research UK (www.cancerresearchuk.org/) provides information on drugs for specific cancers, and information on clinical trials.

Drugs are also mentioned in a number of the Foresight Reports, (www.foresight.gov.uk/index.asp) e.g. *Age and Engage: 'Global greying' to 2030 and the rise of the empowered citizen*', for example, use of cognitive enhancement drugs, as older people compete for jobs with younger workers (Office of Science and Technology, 2005).

# 4.3 To look at new technologies impacting those aged 65+

The National Horizon Scanning Centre **(**www.pcpoh.bham.ac.uk/publichealth/horizon/) describes new technologies as those that have only been available for clinical use for a short time, in launch or early post-marketing stages. In its Science and Innovation Investment Framework 2004-2014, the government committed to establishing a Centre of Excellence in Horizon Scanning, to be based in the **Foresight** directorate of the Government Office for Science (www.foresight.gov.uk). The aim of the centre is to provide visions of the future using robust science to be used by policymakers to inform government policy and strategy, and to improve how science and technology are used within Government and by society.

According to the Health and Safety Executive (HSE) (www.hse.gov.uk/index.htm), a government department which aims to prevent injury and ill-health at work, Human Performance Enhancement (HPE) is the science of enhancing the performance of the human body by artificial means. The pace of advancement in 4 disciplines – nanotechnology, biotechnology, IT, and cognitive science – means that we are in the early stages of a new period of human technological potential. Health Technology Assessment plays an essential role in modern health care by supporting evidence based decision making in health care policy and practice.

There have also been a number of evaluation projects, e.g. a team at Imperial College undertook modelling of the impact of service innovation in chronic disease management using simulation modelling and economic analysis to explore the possible impact of telecare on a local health and social care system in Greenwich, funded by the Department of Health. The HSE also runs Evaluation programmes - NHS Purchasing and Supply Agency (PASA) Centre for Evidence Based Purchasing (CEP) funds assistive technology evaluations through the Assistive Technology Assessment Centre at Derby Hospital NHS Foundation Trust.

Technology is widely used in many areas of life, and the NHS Next Stage Review highlighted the role that technology can play in improving health outcomes. However, the use of everyday technologies such as email and online booking systems is poor in the health service. This report (www.kingsfund.org.uk/document.rm?id=8076 ) aims to improve the uptake by analysing the main barriers to adoption and suggesting measures to overcome them. It sets out an ideal scenario for the use of health care technology and the potential benefits to patients. Using examples from other sectors, it makes recommendations at national and local level to encourage the use of technology. The report states that, despite the potential benefits of technology, it is generally acknowledged that its adoption within the health care sector is slow and disparate.

Demographic changes are placing an increasing burden on the health service. An ageing population and an increase in chronic disease and behaviours that are detrimental to health mean that there is an increasing demand for health care services. In his first review of future spending, Derek Wanless concluded that over the next 20 years the UK would need to devote substantially more resources to its health care system in order to ensure high-quality services that meet public expectations (Wanless 2002).

In 1998, the NHS Executive published *'Information for Health: An Information strategy for the modern NHS 1998-2005 (Dept of Health 1998a)*. This strategy laid the groundwork for more recent initiatives, and set out a commitment to develop electronic patient and health records, and guidelines to promote greater use of telemedicine and telecare, among other measures.

The National Programme for IT (now called Connecting for Health) was formally established in 2002, and the main elements of the programme included;

- NHS Care Records Service – a system of individual electronic health records for patients linked to a national spine through which summary records can be accessed by authorised professionals and consumers through HealthSpace.
- Choose and Book – an electronic appointments booking service, allowing a choice of hospital and appt dates and times. More than 97% of GP practices can now use Choose and Book to make referrals, and approx 40% of referrals to specialist care go through the system.
- Electronic Prescription Service (EPS) – a system to streamline the issuing, dispensing and reimbursement of prescriptions. Progress so far has been slow: where the EPS has been implemented, only 10% of prescriptions are being sent through the EPS, and only 2% of these are being dispensed via the EPS
- N3 – A National broadband IT network for the NHS that is in the process of roll-out.
- Picture Archiving and Communications Systems (PACS); a large storage database for digital images such as MRI scans and x-rays
- NHS e-mail-an e-mail system for NHS staff. The system currently has 153,000 active users (12 per cent of the 1.3million NHS Workforce)

The National Programme for IT has experienced problems with implementation, interoperability, costs and timescales. The programme's focus on infrastructure services has tended to eclipse the development of more consumer-facing technologies, such as telemedicine and telecare, the full potential of which has yet to be realised.

In Lord Darzi's *Next Stage Review* of the NHS (Dept of Health, 2008a), he examined how to overcome the 'NHS reluctance' to adopt new technologies and how to achieve better use of IT. Key commitments include extension of the NHS Choices website to provide more information about services, development of NHS Evidence, a new portal through which anyone will be able to access clinical and non-clinical evidence and best practice. It also includes a new legal duty to promote innovation. This includes consideration of e-health (health care practice supported by electronic processes and information communication systems), telecare (the continuous, automatic and remote monitoring of real life emergencies and lifestyle changes over time in order to manage the risks associated with independent living), telemedicine (the practice of medical care using interactive audiovisual and data communications), and telehealth monitoring (the remote exchange of physiological data between a patient at home and medical staff at a hospital or clinic to assist diagnosis and monitoring).

Technology also has the ability to support clinical staff, e.g. by making records instantly available, and to meet patient needs (e.g. by enabling online appointment booking). These include contribution to clinical outcomes and improved patient experience, as well as economic benefits

Key barriers to adoption of technology include gaining funding – there are high costs involved, e.g. the National Programme for IT was initially costed at estimated 2.3billion, but this has since been revised by the National Audit Office to 12.4 billion. They also include lack of strong leadership and direction – within the NHS, there is little evidence of real impetus and drive for the adoption of technology. The limitations of the assessments of technology performed by NICE mean that there is a compromise in the number and variation of technologies that are recommended for implementation at a national level. Another barrier is Consumer fears about lack of confidentiality/poor data protection, particularly because of the media attention. The desire to devolve centrally procured processes within the NHS means that centrally mandated initiatives might not work in practice (www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_076552).

In November 2006, the Dept of Health published 'Our health, our care, our say; making it happen', an update on progress on implementation of the White Paper 'Our health, our care, our say'. The update report gives examples of progress at local level and gives a timetable of future developments including some large-scale integrated care and assistive technology pilots.

Also in 2006, the Department of Health announced the award of funding to 10 pilot projects to support independence for older people, in Stage 2 of the Partnerships for Older People

Projects (POPP) programme. Interventions include prevention, handyperson services, equipment, adaptations and assistive technologies.

Over the past decade, computer technology has transformed most people's way of life. Facilities such as online banking and shopping offer advantages to old and disabled people who may have limited mobility. Online forms may be confusing or difficult to follow for people with the onset of dementia, for example, while some options requisite too many keyboard strokes to be used by people with motor problems. A number of projects, listed below, are looking at how access to computers and other home automation devices can be made simpler and quicker, and at how people with severely limited physical movement can be supported to use a computer to control their environment.

DIADEM – goal is to provide an adaptable web browser interface that monitors the ability of the user to interact with the system, and offers personalisation of the interface to optimise assistance to that specific user.

ART – Attention Responsive Technology – there are a number of commercial systems available for home automation, to help users with tasks such as opening and closing of curtains, operating light switches etc. These typically offer the disabled a complex menu of operational controls which are selected using various tailored interface devices, such as a suck/blow tube.

AABAC – Adaptive Asynchronous Brain Actuated Control – Brain-Computer Interface (BCI) systems detect and analyse brain waves in order to understand a user's mental state and then translate that mental state into commands for communicating with and controlling computers, robots and other systems. Previous research has produced BCI systems that only recognised 2 mental states, so more work needs to be done. The current research project will run until April 2009. More info is available at www.fastuk.org.

Two projects developing brain/machine interfaces are TOBI and BRAIN. The TOBI project aims to develop practical technology for brain-computer interaction, i.e. non-invasive BCI prototypes combined with other assistive technologies, that will have a real impact on improving quality of life of disabled people. The BRAIN project aims to improve the reliability, flexibility and accessibility of brain-computer interfaces, and to reduce the dependence on outside help when using them.

Another innovation is Cell Phone Video Streaming in Alzheimer 's disease. Remaining at home as long as possible can be personally, socially and economically beneficial for many people with dementia and their families. Assistive home technologies may reduce the isolation many people with dementia experience and help to improve the ability to cope with everyday life. Such technologies may ease the demands on caregivers and help people who might otherwise need to consider institutional care remain at home for longer. This

project addresses the memory problems which are the most common deficits in Alzheimer's disease by developing a system which provides a wide range of memory cues. Through the use of a specially equipped, easy to use mobile phone, a 'virtual' caregiver becomes a regular presence in the home. (www.fastuk.org/home.php: last accessed Dec 2008).

## Designing accessible environments

A key objective of health and social care policy is to support older people to live as independently as possible in the home of their choice. For the majority this will mean continuing to live in their existing home but for some the most suitable option will be extra social housing (sheltered housing with extra facilities such as additional communal space, meals and the availability of care). Measures include;

- An assessment tool for older peoples' housing – EVOLVE (Evaluation of Older people's Living Environments) being developed, funded by EPSRC and will end in Sept 2010
- POLLIS – Integrated approach to evaluating accessibility of building services through a technology called Building Accessibility Metrics (BAM), to combine aspects including planning, legislation, building regulations, etc
- Design of the workplace for the older worker – researchers are now looking at what older workers require in the workplace, how employers view the prospect of an older workforce etc. A research team from the University of Surrey found that motivation of older workers to continue to work could be greatly improved if more attention was paid to their physical working environments.

## Improving online accessibility.

The internet has opened up a wealth of new business and leisure opportunities, from using e-mail to keep in touch with friends and family, to making purchases online. Online technology can make it easier for disabled people to participate in the wider world, but only if online facilities are designed to take account of their needs (http://fast.isledev.co.uk/pagedocuments/file/research/fast_reports_and_papers/Section%2022%202008.pdf).

One example of this is from the Institute of Future Studies, in Sweden, where the population is already more elderly. Senior Learning is about adapting e-learning techniques for integrating senior citizens in the new digital world. Among the 50& age group, only 50% of computer users have advanced skills or use computers frequently. Older people from disadvantaged social groups are in danger of being totally excluded from the modern information society. Senior Learning is a web-based learning system adapted for those aged

50 and over
(http://www.futurestudies.org/english/index.php?option=com_content&task=view&id=46&Itemid=83)

Advances in technology also includes use of medical devices. This includes support for people with a cognitive impairment. People with cognitive impairments, for example those resulting from dementia or stroke, may have difficulty managing everyday tasks. There is increasing evidence that assistive technology can play a significant role in helping keep people with cognitive impairment safe and well. For example, text messaging reminders for brain injured patients - researchers have developed a service called 'NeuroPage' that sends a timed electronic alert to a patient via a pager.

As discussed, one of the main outputs of the National Horizon Scanning Centre, which aims to provide advance notice to the Department of Health and policy makers of selected key new and emerging themes, 2-3 years prior to launch on the NHS, is to produce technology briefings. A number of these briefings relate to therapeutic interventions. These include, *SpeechEasy Altered Auditory Feedback Device* to assist communication for people with stammers *(Sept 2007), Dose Verification Systems* for patients undergoing radiotherapy for breast and prostate cancer (April 2007), *Smartinhaler* for personal asthma management (August 2006).

The increased capacity of computerised devices have created new opportunities for healthcare provision – telemonitoring, for example (http://fast.isledev.co.uk/pagedocuments/file/research/fast_reports_and_papers/Section%2022%202008.pdf).

# 4.4 To look at diagnostic tests for those aged 65+

The National Horizon Scanning Centre (NHSC) (www.pcpoh.bham.ac.uk/publichealth/horizon/) aims to provide advanced notice to the Department of Health and national policy makers of selected key new and emerging technologies, 2 to 3 years prior to launch to the NHS. This includes diagnostic tests and procedures, as well as pharmaceuticals, medical devices, therapeutic interventions, rehabilitation and therapy, and public health and health promotion activities.

The National Horizon Scanning Centre's main output is technology briefings. These are available on the NHSC website, and are listed by disease group. Many of the briefings are concerned with drugs and pharmaceuticals. Diagnostic tests are also discussed in some of the briefings. These include; *The Mamma Print (gene test)* prognostic test for breast cancer (Sept 2007), *Magnetic resonance angiography (MRA) imaging*, for the detection of coronary artery disease (April 2007), *Lungscreen* for lung cancer detection in high risk patients (April 2007), *Prostate Cancer Gene 3,* for diagnosis of prostate cancer (December 2006). Health promotion is listed as one of the disease groups.

Other examples of diagnostic tests include;

- PCA test –this is designed to look for signs of *prostate cancer* in the urine. It is still experimental, and not yet widely available. Prostate cancer is the most common cancer in men in the UK, excluding non melanoma skin cancer, and nearly 2 out of 3 cases of prostate cancer are in men aged 70 and over (www.cancerbackup.org.uk/QAs/78168981).
- Hearing tests – The Royal National Institute for Deaf People (RNID) commissioned research which shows that the majority of the public supports the idea of hearing tests. It estimates that 4m people who could benefit from hearing aids are not wearing them, which can lead to social isolation, and has called for the introduction of hearing tests for those over 55 (http://news.bbc.co.uk/1/hi/health/7848010.stm)

# 4.5 To look at rehabilitation & therapy for those aged 65+

This includes rehabilitation for those who have had a stroke. Every year, an estimated 150,000 people have a stroke, most people of them over 65. Stroke is the third most common cause of death in the UK. It is also a leading cause of severe adult disability. Rehabilitation and therapy can help people who have had a stroke recover some of their functionality, including, development of a clinically user-friendly device to measure posture after stroke, and development of an intelligent robotic system to aid physical therapy in stroke (http://fast.isledev.co.uk/pagedocuments/file/research/fast_reports_and_papers/Section%2022%202008.pdf).

# 4.6 To look at public health & health promotion activities aimed at those aged 65+

According to the Health Survey for England, the key issues include;

- Disabilities and incontinence. Among people aged 65 and over, 37% of men and 40% of women reported having at least one functional limitation (seeing, hearing, communication, walking, or using stairs).Fewer men (39%) than women (47%) aged 65 and over reported having any difficulty with walking a quarter of a mile. Both the prevalence and severity of this problem increased with age.

- *Nutrition*. Men aged 65 and over consumed 3.9 portions of fruit and vegetables per day, and women consumed 3.8 portions. Fresh fruit was eaten by 72% of the men and 80% of the women on the previous day Prevalence of anaemia is higher in older age groups, although this is primarily caused by chronic illness, rather than iron deficiency.

- Falls.  Falls are a major cause of disability and one of the major causes of mortality from injury in older people in the UK. 23% of men and 29% of women aged 65 and over had fallen in the last 12 months. 5% of falls among this age group result in fractures.

- Cardiovascular disease. Cardiovascular disease remains the main cause of death in England, although death rates are falling.

- Mental illness. Mental illness in old age is very common; epidemiological and clinical studies have shown that it is mainly unrecognised by the individual and the doctor, and even when recognised often does not receive adequate or appropriate management.

- Obesity. 72% of men aged 65 and over and 68% of women were overweight or obese. In both sexes, this proportion declined with age. A greater proportion of men than women were overweight, but a greater proportion of women were obese. In adulthood, obesity increases the risk of type 2 diabetes by up to 80 times the risk of the non-obese. Diabetes is a pre-disposition for hypertension and CHD as well as other morbidity. Obesity increases the risk of CHD by 2-3 times, and mortality from cancer among non-smoking people is increased by about 40% compared to non-obese people.

- Health Service Use: According to the Health Survey for England, 2005, GP attendance was not related to age. Hospital admission was more likely in the older age groups, as might be expected.

## Occupational therapy & physical activity interventions

Recommendations include;

- Occupational therapy – increase older people's awareness of where to get reliable information
- Physical activity  - in collaboration with older people and their carers, offer tailored exercise and physical activity programmes in the community

- Walking schemes – in collaboration with older people and their carers, offer a range of walking schemes of low to moderate intensity, with a choice of local routes to suit different abilities. Offer opportunities for local walks at least 3 times a week, to last about 1 hour.
- Training – for health and social care professionals, residential care home managers, support workers, voluntary sector.
  (www.nice.org.uk/Guidance/PH16)

NICE Guidance also shows that, despite better health and increases in wealth in the last 50 years, there is evidence that many older people are increasingly dissatisfied, lonelier and more depressed, many living with low levels of life satisfaction and wellbeing (Allen, 2008). 40% of older people attending GP surgeries, and 60% of those living in residential institutions are reported to have 'poor mental health' (UK Inquiry into Mental Health and Well-being in Later Life 2006). A decline in mental wellbeing should not be viewed as a natural and inevitable part of ageing.

In addition, services should be culturally appropriate, and in addition recognise the greater prevalence of some illnesses among specific groups, e.g. the increased rates of hypertension and stroke among African-Caribbeans, and of diabetes among South Asians.

## Mobility in the community

Older and disabled people tend to be less mobile than the general population, partly because of physical impairment that may limit movement, but also because of inappropriate design of transport systems and products. Maintaining safe driving in old age enables people to keep up with social activities and continue links with friends and family. Being able to drive is also a way to access essential services, such as shops, which are increasingly placed away from residential centres. However, car designers do not necessarily take account of the needs of older people. Research projects looking at these issues include;

- **AUNT-SUE** (Accessibility and User Needs in Transport for Sustainable Urban Environments) Funded by EPSRC. Research has highlighted the ways in which poor transport and urban design may reinforce the isolation of disabled and older people. One aim of the project is to develop a comprehensive 'toolkit' that can be used at different levels, from city-regions down to individual streets.

- **Prolonging safe driving behaviour through technology**. From July 2006-Oct 2007, a team from the University of the West of England looked at older people's views on

how technology can help them drive more safely. Older people's issues with driving include problems with signage, maintaining a constant speed, tiredness, shorter reaction times, dazzle and glare. The research revealed differences between the views of older people, and those of technology experts/ researchers.

## Empowerment

www.foresight.gov.uk/Ageing%20Population/Age_Shift_Priorities_for_Action_Dec_2000.pdf

The 'Age and Engage' mini-scenario put forward by this paper sketches out a world in which the senior citizens of 2030 (the 65+ cohort) have grasped new means to pursue their social, political and economic interests. This has been achieved through their new found electoral, technological and cultural strength. We might also expect a parallel shift in which societies rediscover their appreciation for the value of older citizens. In the Age and Engage world of 2030, this now confident and assertive age group have been offered a new lease of life through a combination of advances which render current associations with 'old age' obsolete. These advances are likely to arise in science, healthcare and technology, equipping people previously considered ready only for retirement with the intellectual, economic and physical means to compete for positional, social and material goods on a much more equal footing with those much younger than themselves – less 'retirement' and more 'engagement'.

New categories of economic activity are likely to be stimulated by a shift of the demographic mix towards those over 65 years, and a host of new business and markets may be geared towards servicing their needs. Areas such as nursing, geriatrics, holistics, longevity spas, cosmetic surgery, fitness, travel and education are all likely to benefit from this expanding 'grey' market (Finnigan, 2004).

Older employees will be looking to compete in the same markets as younger workers, creating more competition for scarce job opportunities. A growth in stress-related problems among the elderly and strains on their relationships are anticipated as a result of these practices.

Cognitive enhancement drugs (Office of Science and Technology, 2005), cosmetic surgery and other physical enhancement are likely to be in high demand among those seeking to negate the effects of ageing, and overcome physical and mental barriers. These technologies may offset some of the likely health problems encountered by the current 'unhealthy' cohort as they age, in terms of obesity, alcohol and stress-related infirmity (Harper, 2004)

Medical treatment would be likely to develop in a globalised market as medical tourism takes off, leading to competition and lower costs (e.g. Sterling, 2005).

Governments could remove tax, social security, pension and other impediments to the employment of the elderly. Heavy penalties would be imposed on those exhibiting discrimination, but this might become less prevalent anyway as the population aged and lifelong working became normalised.

The 'Age and Engage' scenario presupposes a great expansion in flexible and part-time working (The Institute of Fiscal Studies, 2002), a decline in the demand for early retirement and the upward extension of the official retirement age. This would partly compensate for the rigours of the workplace, but may not provide as much security.

See also report '*Crossroads after 50: Improving choices in work and retirement',*

(www.jrf.org.uk/knowledge/findings/foundations/d13.asp#top)

As people live longer, it may be less socially acceptable to demand intensive 'end of life' (last 30 days) treatment from the state, as these are highly cost intensive (Wired magazine, 2000), and account for most of the cost of sustaining an ageing population.

Greater responsibility for care in old age is likely to emerge as a norm. Attitudes to inheritance are likely to change as older citizens place their children's legacy lower down their priority list (MORI interview, 2005).With their historical track record of protest and culture change, the Baby Boomer generation are likely to lead cultural attitude change, e.g. the current phenomenon among Boomers of SKlers – Spend the Kids Inheritance.

*Drivers* – improvements in health care, breakthroughs in combating diseases that affect the elderly such as Alzheimer's, cultural shifts towards valuing the elderly

*Drivers of declining fertility* include better education, family planning, the role of the mass media, access to TV, wider career options for women, economic pressures on incomes, higher expectations for living standards and peer pressure for women to have fewer children

*Inhibitors* – few commentators have suggested significant inhibitors to this scenario. Might include serious environmental and health shocks or pressures greatly impacting on life expectancy, e.g. rise of drug resistant killers such as TB, severe resource (e.g. water) scarcity, and/or major disruption to food caused by rapid climate change. Further inhibitors include ongoing discrimination in the workplace, continued inflow of young migrant workers undercutting potential older employees, and the prohibitive expense of the public and private sectors in creating markets and services to cater for the ever increasing demands of older citizens, potential inadequacy of financial provision for old age (e.g. through pensions)

## The built environment

Planning and design of new buildings and new transport infrastructure has a very significant impact on human health and wellbeing (Health is Wealth). Greenery near our home can protect us from strokes and heart disease, possibly by cutting stress and boosting exercise. Other initiatives that have recently been developed include the idea of 'playgrounds' for over 65s, in order to encourage physical activity (www.dailymail.co.uk/news/article-511253/Playtime-Grandma-Council-opens-new-playground-60s.html).

## Role of grandparents

Grandparenthood is quite a recent phenomenon. In the past, intergenerational relations extending across the generations were very rare and usually lasted for only a short time. Today, 3 generational family networks are the norm. Most people become grandparents and see their family grow up. The combined effects of rising life expectancy combined with falling fertility (fewer grandchildren) may have the effect of fit and wealthy grandparents competing for the attention of fewer grandchildren. Grandparent/ grandchild relationship has not been well researched. Financial transfers to grandchildren was higher in 2002 than 6 years earlier **http://news.bbc.co.uk/1/hi/health/7868979.stm**

## Dementia

In February 2009, the Department of Health published 'Living Well with Dementia: A National Dementia Strategy'. The 5 year strategy is intended to transform the care of the rising number of sufferers and their families. It has funding of £150 million, and has promised memory 'clinics' in every town, which would be 'one-stop shops' offering expert assessment, support, information and advice to those with memory problems. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_094058

The report acknowledges that dementia presents a huge challenge to society, and will increasingly do in the future. There are currently 700,000 people in the UK with dementia, of whom 70,000 live in England. Dementia is a terminal illness, but people may live with their dementia for 7-12 years after diagnosis. Most people with dementia are over 65 years old, although there are at least 15,000 people under 65 with dementia. The current number of people in ethnic minority groups is around 15,000 but this is set to rise sharply.

Dementia costs the economy £17 million a year, and in the next 30 years, the number of people with dementia in the UK will double to 1.4 million, with costs trebling to over £350 billion a year.

International comparisons suggest that the UK is in the bottom third of European performance in terms of diagnosis and treatment, with less than half the activity of France, Sweden and Spain. Contrary to social misconception, there is a great deal that can be done to help people with dementia. Currently only a third of people with dementia receive a formal diagnosis or contact with specialist services. Such diagnoses often occur late in the illness or in crisis, when opportunities for harm prevention and maximisation of quality of life have passed.

Stigma may be one of the factors that prevents people with dementia and their carers from seeking help. Another factor may be that symptoms are mis-attributed to old age. In addition, only 31% of GPs believe they have received sufficient basic and post-qualification training to diagnose and manage dementia (NAO, 2007).

People with dementia generally want to stay in their own homes, and their carers also prefer them to do this. Available evidence suggests that early provision of support at home can decrease institutionalization by 22% (Gilley et al, 2004). Older people's mental health services can help with behavioural disturbances, hallucinations and depression in dementia, reducing the need for institutional care.

One third of people with dementia live in care homes, and at least two thirds of people living in care homes have a form of dementia. 54% of carers reported that their relative did not have enough to do in a care home, although the availability of activities and opportunities for occupation is a major determinant of quality of life, affecting mortality, depression and physical function.

One issue of particular concern is the use of anti-psychotic medication in care homes for the management of behavioural and psychological symptoms in residents with dementia. There are particular risks in the use of anti-psychotic medications for this group of people, including increased mortality and stroke. There is increasing evidence that they are initiated too freely and not reviewed appropriately. In response to widespread concern, a review of this was announced in June 2008, and a full public report is expected in Spring 2009.

## Sexual Health

Sexual health research usually focuses on young people. There are relatively few studies on the sexual behaviour of older people – in fact recent national surveys do not include those

aged 45 and older (Bodley-Tickell et al 2008). This is despite the fact that the majority of older people are likely to be currently involved in one or more sexual relationship (82% of people over 50 in Gott, 2001).

There have been various changes in social and behavioural patterns over the years that suggest the need for an emphasis on the sexual health needs of older people, especially those aged 45+. Societal and behavioural changes putting older people at risk include:

- the increasing likelihood of older people being single, or in relationship change;
- more international travel, with more likelihood of unprotected sex;
- increased use of the internet to identify casual sexual relationships;
- the introduction of drugs to counter erectile dysfunction

(Bodley-Tickell et al 2008, Mercer 2008).

Older people can be at increased risk of sexual ill-health because:

- they are less likely to use condoms;
- they are less likely to attend sexual health clinics, possibly out of embarrassment/ fear of stigma;
- older patients and their GPs are both likely to be reluctant to initiate discussions about sexual health issues and risk factors for STIs;
- when they do attend GUM clinics, there is a longer delay period between symptom recognition and clinic attendance than with younger people

( Gott 2001, Bodley-Tickell et al 2008,

Mercer et al, 2008).

# 5. Group work from 'Future planning' event

On 6th October 2009, a conference On Horizon Scanning was held at the JW Stadium in Wigan. The aim was the conference was to look at potential future implications for the NHS, of a range of public health issues that are likely to arise in the next 10-15 years as a result of an increasing proportion of the population being aged 65 and over. The conference was attended by a wide range of delegates, including, among others, commissioners, policy makers, medical personnel, researchers, chief executives, health improvement workers and representatives from patient and carer groups.

The Conference was chaired by Professor John Ashton, CBE, Director of Public Health for Cumbria, and there were then excellent presentations given by Professor Ray Tallis, Professor Heinz Wolff, Tom Hennell, Dr Anil Sharma, and Peter Ashley. Copies of their presentations are attached in the appendices.

Tables 1-4 below show comments that were made during the three sessions of group work that were carried out during the conference. Groups were invited to feed back three main points from each session, following their discussions. Delegates were also invited to leave 'post-it' notes detailing any additional feedback that they wished to give, along with any 'good ideas', and relevant action that they were going to carry out, or ask others to carry out, following the conference. Where it has not already been covered, this information is detailed in table 5.

| Table 1 | The future in old age |
|---|---|
| Planning for old age | • Planning should begin an early age. Education about this should be throughout life, and could begin in schools. Expert older people could be involved in teaching and educating.<br>• Social marketing techniques could be used with adults, to convey the importance of early planning<br>• Topics that might be included in planning for older age include financial planning, nutrition, taxation, and volunteering opportunities. Housing is a key issue, and clear housing strategies are needed. Concepts such as lifetime homes need to be explored. Changes such as moving house/downsizing, or moving to a new area are better if made sooner rather than later. Equity release schemes need to be safe and available. Transport is another key issue – enabling older people to continue to drive for longer, and managing transition to driving less, both need to be considered. Healthy messages being delivered to older people via children (e.g. safety messages) is a good idea. Advance training needs to be provided for patients/carers, rather than waiting for onset of crisis<br>• Use 'blue sky' thinking to develop services for older people<br>• Successful aging needs to be defined, e.g. how to maintain wellness. Engage with the 2008 Foresight Report '5 steps to wellbeing'<br>• Plan for getting older, because getting older can be fun! |
| Build capacity in the community | • Put exchange systems in place - those who volunteer in younger life, e.g. looking after the elderly or children, receive credits for care in older age<br>• Build capacity in communities, to reverse the trend for them to become less important. We may need to revive the culture of the old terraced streets. Community assets should be mobilised to release resources. Traffic free streets could help promote community spirit<br>• Networking is important, in order to raise awareness of what services are available for older people, and to enable them to make choices<br>• In difficult economic times, supportive and stimulating social activities and opportunities are relatively inexpensive, so these should be promoted |
| Commissioning services | • Commissioners should be aware that older people are not a homogenous group, and have differing needs<br>• Services commissioned based on a locality are more effective in meeting local need<br>• Allow local population groups to commission, as in, for example the 'Stronger Together in Warrington' initiative, which allows service users and groups to provide input on which services work best in their area, or 'Older People's Voice' in Knowsley, which allows older people in the borough to have their say in influencing services and policies. Empowerment of older people is vital to this process |

| | |
|---|---|
| | • Understand voluntary sector provision and commission what already works<br>• Integrated working, e.g. between health and social care providers, is important. A holistic approach should be taken, looking at everything that could affect the aging process<br>• We need to think how to invest to achieve the 'compression' scenario described by Ray Tallis<br>• Commissioning should be positive and aimed at maintaining good health, and reducing ill-health. Future planning should be about people, not systems<br>• Remember the 80% of people who are 'well enough'<br>• Many people in the community do not know what a PCT is. They need to reinvent themselves in order to be more effective |
| Perceptions of old age | • We need to change our perceptions of when someone becomes old, and to challenge negative perceptions of old age, and challenge stereotypes, e.g. in the media, in politics etc.<br>• The process needs to start with children, e.g. in schools, and other youth groups such as brownies/scouts, in order to bridge the generation gap.<br>• Opportunities in the community for older people to develop their potential should be maximised<br>• Labels we give to people, e.g. 'elderly need to be examined, to ensure that they are not derogatory<br>• Look forward to old age – the alternative is worse! |

| Table 2 | Future demography |
|---|---|
| Commissioners should develop a clear understanding of local data on demographics/population change | • Examine reasoning behind lifestyle choices - develop understanding of what causes people to move area, for example – do they really want to move, or is it a consequence of their infrastructure – do they feel they need to move to feel safe, for example<br>• Consider needs of different ethnic and cultural groups<br>• Develop links with other agencies, e.g. housing and transport, to develop services |
| Changes may need to be made at regional or national level to reflect population changes | • Financial allocation to PCTs may need to be reviewed in line with ageing population trends |

| Table 3 | Stroke |
|---|---|
| The profile of stroke needs to be raised | • There was concern that stroke did not have the same high profile and resources given to other conditions such as heart disease<br>• Mandatory training should be established for key health and social care workers across public, independent and voluntary sector<br>• The importance of providing speedy interventions for those who experience a stroke needs to be addressed both with the public, medical staff, and, commissioners, through promotions such as 'FAST' – the message needs to be conveyed that stroke is a medical emergency<br>• Awareness needs to be raised on the damage that can be caused by stroke, and that it is the commonest cause of disability<br>• Awareness needs to be raised among public, and health care professionals, on issues such as trans-ischaemic attack (TIA), which is still considered minor, and relevant treatment. There needs to be a strategic approach to TIA related issues, and clearer service provision<br>• Social marketing techniques could be used where appropriate, as well as mass media campaigns<br>• There is a need to understand the local picture with regards to demography and stroke incidence, to ensure services meet demand<br>• Implications of the current economic crisis on stroke care need to be examined. There has been little investment in this area while economic conditions were more favourable. Need to examine possibilities for improving stroke care in a difficult economic climate<br>• There is a need to stop talking about stroke issues, and take action! |
| Commissioners and other relevant agencies need to work together to carry out forward planning with regards to stroke care | • Decisions need to be made on how best to deliver stroke care, e.g. establishing regional centres<br>• In conjunction with the above, commissioners need to examine the use of new technology in delivering care more effectively, e.g. use of telemedicine to link those in more rural areas with specialist centres<br>• Health and social care should pool budgets to tackle stroke care – money will thus be saved by social care services in the longer term, as early treatment investment should result in savings<br>• Services should be tailored to meet demand based on local demographics<br>• This planning process could link into the (Department of Health) Joint Strategic Needs Assessment (JSNA), where PCTs describe future health needs of the local population, and service delivery to meet those needs. The JSNA needs to be holistic and comprehensive<br>• Plans should be made for demographic movement. For example, as the population of Warrington is ageing more than in other areas, it will need a larger number of homes suitable for older people |

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|---|---|
| | • Data on demographics should be shared more effectively among different organisations, e.g. housing organisations, the voluntary sector, in order to improve service delivery<br>• Patient choice also needs to be paramount, in provision of services. Care to be provided in the community, e.g. home care, where appropriate. Where this is the case, acute and community services to work in partnership<br>• Housing strategy should consider stroke care, and take into account the concept of 'Lifetime Homes' – homes built at the outset to suit older people's needs. For example, older people like to live in bungalows, but very few are now built<br>• Cheshire and Merseyside needs to finalise the model for the 24/7 stroke unit<br>• Wider range of staff should be enabled to carry out interventions to underpin a more rapid response<br>• Improve staff training, including that of paramedics<br>• Commission post-stroke provision from voluntary care sector, as well as social support for individuals and carers<br>• Tackle ageism in the treatment of stroke<br>• Stroke strategy monies may need to be ring-fenced to ensure maximum capacity |

| Table 4 | Dementia |
|---|---|
| The profile of dementia needs to be raised | • Dementia is poorly understood and poorly resourced even more than stroke. It is not seen as life threatening therefore not seen as a priority<br>• The stigma surrounding dementia needs to be addressed, and educators and policy makers need to ensure that it is not lost under the mental health umbrella<br>• Education and training n the workforce on dementia should be improved<br>• Foundation degrees in dementia care should be offered. Dementia care should be made more visible in nurse and social work training<br>• There needs to be a better awareness of the signs and symptoms of dementia among the general population |
| Commissioning services | • Levels of dementia are likely to increase as the population ages, so planning should encompass this<br>• Good data on incidence is vital to build up a picture of incidence at local level<br>• There is a need for a transparent needs-based system or prioritization at local level, not just responding to |

| | |
|---|---|
| | government targets<br>• Primary Care Trusts should target funding, to ensure the recommendations of the National Dementia Strategy, and Gold Standards Framework, are implemented<br>• Commissioners need more information about drivers for dementia<br>• Commissioners should consider cultural differences in designing services<br>• There should be greater investment in admiral nurses, who provide specialised support<br>• We need to find ways to measure outcomes of self-help/group activities and peer support, as these are valued by those with dementia<br>• Informal and formal local intelligence are both needed in order to inform service delivery |
| Early diagnosis and treatment | • Better training about dementia is needed in primary care, in order to increase early identification and treatment of dementia, and avoid misdiagnosis<br>• There should be a 'cognitive test' as part of the over 50 wellbeing test. This could be introduced at pre-retirement courses<br>• Early diagnosis of dementia is key, using family members as a benchmark –what is normal for one is not normal for everyone. Early diagnosis also allows the individual to make choices whilst they are still clear about their preferences |
| Housing is a key issue | • There is a need to consider those people whose dementia makes them no longer able to live safely at home, but who are unable to adjust to change<br>• Extra care housing needs should be addressed<br>• People's rooms in care homes could be decorated with the same wallpaper as they had in their homes |
| End of life care | • This needs to be considered in relation to dementia |

| Table 5 | Other actions that people will take as a result of attending the horizon scanning conference |
|---|---|
| Data | • Obtain more local data, e.g. on demography, dementia etc<br>• Share data |
| Research | • Design a research project to explore approaches to healthy ageing<br>• Check work streams to ensure that I am providing opportunities to hear service users' views<br>• Look up dementia statistics per PCT |
| Commissioning | • Co-ordinate commissioning work streams for stroke, dementia and other areas for older people, to feed into strategy for ageing population<br>• Set up meetings to establish partnership working<br>• Look at spending on dementia services in the locality<br>• Ask others to demolish the division between health and social care |
| Training | • Get Local Authority marketing officer to look at stroke awareness for staff<br>• Work with carers centre to develop marketing strategy for raising awareness of stroke identification<br>• Develop dementia awareness afternoon, in partnership with other organisations<br>• Try to attend other conferences on ageing where available |
| Other issues | • Bring some of today's learning to a housing needs assessment<br>• Ask others to go that 'extra mile' to assist one older people that they know, e.g. helping with shopping<br>• Promote older people's services to staff<br>• Share learning from the conference with colleagues and others<br>• Promote peer support for older people<br>• I am going to look at measurements/metrics for outcomes for patients receiving/accessing third sector 'self-care' interventions to help with commissioning. Any advice support welcome (Sara.collins@bolton.nhs.uk) |

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**For further information on relevant organisations and websites, please see Appendix 3.**


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# Appendix 1 – Programme for 'Future planning' event, 6th October 2009

| | |
|---|---|
| 09.00 –10.00 | Registration and coffee |
| 10.00 -10.05 | Welcome and outline of the day – Chair – Professor John Ashton CBE, Director of Public Health NHS Cumbria |
| 10.05 -10.45 | The future of health in old age: good news or bad? Professor Ray Tallis |
| 10.45 -11.05 | Horizon Scanning for those aged 65 and over – an introduction Professor Heinz Wolff, Brunel University |
| 11.05 –11.20 | Refreshment break |
| 11.20 -11.45 | Group work at tables– The future in old age |
| 11.45 -12.00 | Future Demography. Tom Hennell, Regional Analyst, Department of Health North West |
| 12.00- 12.25 | Group work at tables – Future Demography |
| 12.25 -13.20 | Lunch, networking, poster displays |
| 13.20 -13.40 | The Future of Stroke Care. Dr Anil Sharma, Consultant Physician, Honorary Senior Lecturer, University of Liverpool and Clinical Lead, Cheshire and Merseyside Stroke Network |
| 13.40 – 14.05 | Group work at tables – The future of stroke care |
| 14.05 – 14.20 | The Challenges of Dementia in the Future. Peter Ashley, National Ambassador Alzhiemers Society |
| 14.20 – 14.45 | Group work at tables - Dementia in the future |
| 14.45 – 14.55 | Refreshment break |
| 14.55 – 15.25 | The Challenges of an ageing Population. Gillian Crosby, Director, Centre for Policy on Ageing |
| 15.25 – 15.50 | Panel questions/answers |
| 15.50 – 16.00 | Summary and Close |

# Appendix 2 – PowerPoint presentations from the 'Future planning' event, 6th October 2009

## Presenter at 'Ageing: Future planning'

Click on the presenter to view the presentation

**Peter Ashley – Delivering the national dementia strategy**

**Tom Hennell – Future demography of persons over 50**

**Anil Sharma – The future of stroke care**

**Ray Tallis – The future of old age; good or bad?**

If you have any problems downloading the presentations please contact ChaMPs on 0151 201 4152 or email info@champs.nhs.uk

# Appendix 3 – Relevant organisations

## 50:50 Vision

www.5050vision.com

50:50 Vision, the North West Forum on Ageing, with partners led by the North West Development Agency, managed the development of a *Regional Framework for Ageing.*

## Age Concern

www.ageconcern.org.uk

The UK's largest charity working with and for older people have produced a number of relevant documents – see first section on trends.

## Cancer Research UK

www.cancerresearchuk.org

Cancer Research UK provides information on cancer statistics and research.

## Foresight –Horizon Scanning Centre

www.foresight.gov.uk

The aim of the centre is to provide visions of the future using robust science to be used by policymakers to inform government policy and strategy, and to improve how science and technology are used within Government and by society. In its Science and Innovation Investment Framework 2004-2014, the Government committed to establishing a **Centre of Excellence in Horizon Scanning**, to be based in the Foresight directorate of the Government Office for Science. Work on establishing the Centre started in November 2004. Its output is feeding directly into cross-government priority-setting and strategy formation. The work of the Centre is strongly informed by the science base and by the best of existing work in Government, the private sector and elsewhere. The HSC covers a wide range of activities, including;

**Strategic Horizon Scans: The Sigma scan** (now merged with another scan, the Delta Scan), is a set of 271 briefing papers exploring potential future issues and trends over the next 50 years which may have an impact on UK policy. A number of these papers are relevant to those aged over 65.

**Wider Implications of Science and Technology (WIST):** an expert and stakeholder appraisal combined with a public-facing engagement process, to explore the wider implications of new and emerging areas of science and technology.

**FAN Club**: **the Futures' Analysts Network**. The FAN Club is a forum where those who have an interest in horizon scanning and futures analysis can meet to exchange new ideas, innovative thinking and good practice. Meetings, which are open to all, are held four times a year.

## Gap Minder

www.gapminder.org

Gapminder is a non-profit venture promoting sustainable global development and achievement of the United Nations Millennium Development Goals by increased use and understanding of statistics and other information about social, economic and environmental development at local, national and global levels.

## HSE Health & Safety Executive

www.hse.gov.uk

The Health and Safety Executive (HSE), a public body which aims to 'prevent death, injury and ill-health to those at work and those affected by work activities' , describes **Horizon Scanning** as the process by which it;
"ensures that it is aware of developments, trends and changes in the medium to long-term future that could have an impact on its ability to act as an effective and efficient promoter and regulator of health and safety in Britain" (www.hse.gov.uk): last accessed September 2009). Horizon Scanning may explore novel and unexpected issues as well as persistent problems or trends.

## Health Technology Assessment International Society

www.htai.org

Health technology assessment (HTA) plays an essential role in modern health care by supporting evidence based decision making in health care policy and practice. There is a vibrant and growing community around the world of those who develop and use HTA. HTAI's mission is to support the growth of that community by providing a global forum for the exchange of information, methods, and expertise.

## Institute of Future Studies, Sweden

www.futurestudies.org

In Sweden, the population is already more elderly. The Institute has developed 'Senior Learning', which is about adapting e-learning techniques for integrating senior citizens in the new digital world for those aged 50 and over. Among the 50 plus age group, only 50% of computer users have advanced skills or use computers frequently. Older people from disadvantaged social groups are in danger of being totally excluded from the modern information society.

## International Longevity Centre

www.ilcuk.org.uk

A think tank dedicated to addressing issues of longevity, ageing and population change.

## National Horizon Scanning Centre

www.pcpoh.bham.ac

The National Horizon Scanning Centre (NHSC) aims to provide advanced notice to the Department of Health and national policy makers of selected key new and emerging technologies, 2 to 3 years prior to launch to the NHS. Health care technology - encompasses all methods used by health professionals to promote health, prevent and treat disease, and improve rehabilitation and long-term care. These methods include pharmaceuticals, devices, procedures, programmes, settings, and public health activities. It provides an early warning system - a stable unit with reliable connections and sources which aim to identify new and emerging health technologies, filter and prioritise those technologies most likely to have a significant future impact, and make an assessment of either potential impact or clinical and cost effectiveness. An early warning system and an early warning assessment may be an integral part of the prioritisation process for health technology assessment (HTA) activities.

## NIHR (National Institute for Health Research) www.nihr.ac.uk

The National Horizon scanning centre research programme is part of the National Institute for Health Research (NIHR). Established in April 2006 NIHR carry's forward the vision, mission and goals outlined in Best Research for Best Health (Department of Health, 2006).

## NICE www.nice.org.uk

NICE's main functions are to assess new drugs and treatments as they become available, and to provide guidelines on how a particular condition should be treated. NICE considers whether a treatment benefits patients, will help the NHS meet its targets, for example by improving cancer survival rates, and is value for money, or cost effective

## North West Cancer Intelligence Service www.nwph.net/NWCIS

The Cancer Intelligence Service collects data from many sources to provide population based cancer information for the North West of England.

## Oxford Institute of Ageing www.ageing.ox.ac.uk

The Oxford Institute of Ageing aims to produce cutting edge research, create dynamic partnerships disseminate policy relevant findings, and to train future professionals and researchers. The Institute is addressing these challenges through thematic research programmes; Economic Security, Work and Retirement; Intergenerational Relationships and Communities; Health, Longevity and Bio-demography and Technology; Education.

## The Tomorrow Project www.tomorrowproject.net

The Project is an independent charity, undertaking a programme of research, consultation and communication about people's lives in Britain in the next 20 years.

## NWDA (North West Development Agency) www.nwda.co.uk

The Agency leads the economic development and regeneration of England's North West. As a business-led organisation, the NWDA provides a crucial link between the needs of business and Government policies. As such, a major responsibility for the Agency is to help create an environment in which businesses in the region can flourish through offering business support, encouraging new start-ups, matching skills provision to employer needs and bringing business investment into the region.

## Stroke Association www.stroke.org.uk

The Stroke Association is involved in research into stroke prevention, treatment, rehabilitation and long-term care. Recently a number of changes have taken place within the stroke research community following the creation of the Stroke Research Network, the UK Stroke Forum and the National Institute for Health Research, plus the development of a National Stroke Strategy and a new single health research fund. The Research and Development Strategy 2007-2012 includes objectives on increasing spending on stroke research in the UK, and increasing public engagement and awareness of stroke research. Current research projects include a project predicting risk of falls in those who have had a stroke, a feasibility study of the use of a robotic aid for delivering arm rehabilitation, and a study on the role of depression in stroke. The Stroke Association also supports a

research centre to investigate rehabilitation for stroke patients, based at Southampton General Hospital.

## West Midlands Public Health Observatory

www.wmpho.org.uk

Part of the Association of Public Health Observatories, the West Midlands Public Health Observatory leads on ageing, and produces a range of publications, including *'Indications of Public Health in the English Regions 9: Older People', (*www.wmpho.org.uk/resources/APHO_OP.pdf).

## Wider implications of science and technology (WIST)

www.foresight.gov.uk

The Government's horizon scanning function, located in the Government Office for Science, provides the strategic context to horizon scanning activity in government departments and elsewhere. It also informs the Government's strategy for public engagement with science to identify at the earliest possible stage areas where potential, safety, health, environmental, ethical, regulatory and social (SHEERS), issues may arise, and advise on how these might be addressed.

To help prepare for the future, the government is sponsoring a coherent and coordinated programme of engagement and dialogue between the public, experts and stakeholders to explore the wider implications of new and emerging areas of science and technology.

This WIST programme comprises an expert and stakeholder appraisal integrated with a public-facing engagement process (www.sciencehorizons.org.uk) to explore the SHEERS issues. A set of shared understandings and perspectives will be developed which will be disseminated broadly across government, and among stakeholders and the wider public.

For more information, or to request a copy of this report, please contact clewis@liv.ac.uk or call 0151 794 5581.

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