

August 2009

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## Telecare

a crucial opportunity to help save  
our health and social care system

**Professor Sue Yeandle**

*With a Foreward by Andrew Lansley CBE, MP  
Shadow Secretary of State for Health*

In association with 'Circle' and the 'University of Leeds'

  
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## **Professor SUE YEANDLE**

Sue Yeandle is Professor of Sociology and Co-Director of the Centre for International Research on Care, Labour and Equalities (CIRCLE) at the University of Leeds.

Sue has a long-standing interest in the relationship between work, care and family life and in gender and the labour market and has published numerous books, articles and research reports on these topics.

Between 2005 and 2007 she led a major study of Carers, Employment and Services at the University of Leeds, and in 2008 she advised both the Department of Health and the House of Commons Work and Pensions Committee on different aspects of the social care system.

## **ANDREW LANSLEY CBE MP, Shadow Secretary of State For Health**

Andrew Lansley has been MP for South Cambridgeshire since 1997 and since 2003 has been the Shadow Secretary of State for Health.

Mr Lansley is well respected across healthcare for his extensive knowledge of the NHS and health services and in 2008 was named 8th most influential person in the Health Services Journal's "The 50 People with the Greatest Influence on NHS Policy and Practice" ahead of Health Ministers.

Mr Lansley previously served as a member of the Health Select Committee and the Trade and Industry Select Committee and is currently the Chairman of the All Party Parliamentary Group on Stroke.

From June 1999 to 2001 he was Shadow Minister for the Cabinet Office and was responsible for policy co-ordination in the Conservative Party. He is a Vice-President of the Local Government Association.

Mr Lansley was Director of the Conservative Research Department from 1990-1995. He has also been Deputy Director-General of the British Chambers of Commerce (1987-1990). He was a civil servant from 1979-1987, including between 1984-85 Private Secretary to the Secretary of State for Trade and Industry; and from 1985-1987 he was Principal Private Secretary to the Chancellor of the Duchy of Lancaster.

## **Telecare: a crucial opportunity to help save our health and social care system**

***Professor Sue Yeandle***

CIRCLE,  
Centre for International Research on Care, Labour and Equalities  
University of Leeds, UK

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## **ALREADY TODAY, TELECARE IS MAKING AN IMPRESSIVE IMPACT:**

### **■ Saving money in the health and social care system**

- *Fewer hospital bed days used*
- *Fewer days in residential/nursing care homes*
- *Fewer admissions to A&E*
- *Fewer care stays overnight*

### **■ Helping sick, disabled, and older people remain at home for longer**

- *Supporting them 24/7 with alarms, alerts, monitoring and communication*

### **■ Offering a low cost option to service commissioners**

- *The average cost of installing a telecare package is just £450*

### **■ Supporting unpaid carers**

- *Reducing stress and giving them peace of mind*
- *Enabling them to get a good night's sleep*
- *Helping them combine work and care*
- *Enabling them to get out and live 'normal lives'*
- *Assisting parents of disabled children*

### **■ Reassuring and protecting people who live alone**

- *Keeping them safe and 'in touch' 24/7*
- *Relieving pressure on their neighbours*
- *Maintaining their contact with family and friends*

### **■ Delivering efficiencies in the health and social care system**

- *Improving co-ordination/morale, cutting out unnecessary practices*
- *Contributing to early intervention and prevention*
- *Making more effective use of limited health and care resources*

### **■ Directly benefiting people with many different conditions**

- *Dementia, epilepsy, learning difficulties, mental health problems*
- *Physical and sensory impairments*
- *Chronic heart failure and other heart disease*
- *Bronchitis, emphysema and COPD*
- *Stroke, MS, diabetes and many other long-term conditions*

### **■ Reducing falls and their associated costs**

- *Less pain and suffering among frail older people*
- *Quick response times which cut hospital costs*
- *Fewer hip fractures, key triggers for entry to residential care*

## **Mainstreaming telecare would massively increase its impact, but progress is held back because:**

- *Only a tiny minority of sick, disabled and older people have telecare in place*
- *There is low awareness of telecare's benefits among health and social care staff*
- *Access to telecare is limited by unnecessary eligibility criteria*
- *Systems are not adequately in place to ensure telecare is available throughout the country*
- *On current trends, telecare will never reach everyone over 85*

**TELECARE OFFERS A PROVEN 'WIN-WIN' FOR THE HEALTH AND SOCIAL CARE SYSTEM  
CHOOSING ONLY SLOW, GRADUAL, AND PATCHY TELECARE IS NOT A VIABLE OPTION  
THE TIME FOR A UNIVERSAL, MAINSTREAMED APPROACH TO TELECARE IS NOW**



## FOREWORD

We are at a pivotal moment in the history of the NHS. Changing demographics. An ageing population. Rising expectations. All at a time of crisis in our public finances. In this uncharted territory, the challenge to secure increasing productivity and enhanced quality from the resources already provided is pressing.

It is clear that effective use of technology will be key to achieving this goal. Although the role of Information Technology in the NHS has been a fractious issue, there are few who doubt that technology can bring huge benefits to patients and frontline healthcare professionals.

Already, there are notable success stories. Mobile technology now allows paramedics to send patient ECGs directly to an emergency department, enabling rapid diagnosis and treatment. The advent of integrated, digital radiography systems means that radiographs are no longer delayed or lost in the mail.

But I believe that we can go further and faster in harnessing new technology to deliver better services for patients and greater value for taxpayers. All the evidence suggests that people prefer living independently at home for as long as possible. In a service that purports to be centred on the needs and wishes of patients, the challenge to policymakers, politicians and NHS staff is to come up with innovative and creative solutions to enable people to realise this aim.

Telecare is one such new and exciting solution. The opportunity is great. Disparate NHS services could become more joined up. Clinicians could be freed to prioritise their workloads more effectively. Carers could receive additional support and reassurance. Patients could attain greater independence and awareness of their condition. Crucially, individuals could be offered greater choice and control over the care they receive.

This publication provides a timely contribution to an important debate about the role of technology in reforming health and social care provision. The test of every policy, innovation or reform must be how far it organises the NHS around the needs and wishes of patients. By that measure, telecare looks set to play a pivotal role in the NHS in the future.

**Andrew Lansley CBE MP**  
**Shadow Secretary of State for Health**

August 2009

## **Introduction**

This paper is about one of the most important challenges facing our country – how the growing demand for health and social care at home, which arises from some of the great successes of the last century, can be met in the 21<sup>st</sup> century without unsustainable cost or demand for caring labour which cannot be met<sup>1</sup>.

The successes inherited from the past are numerous. They include:

- **Sustained increases in longevity**, with life expectancy now higher than ever before and continuing to rise by one month every 6 years<sup>2</sup>.
- **Better survival in the face of illness, disability or injury**, thanks to massive improvements in the skill of health professionals and in healthcare practice and technologies, including better: drug therapies; medical equipment; perinatal, emergency and preventative medicine; screening services and health monitoring; and surgical procedures.
- The development of our **national health service**, now 65 years old and with most of its services available to all citizens irrespective of means, and a highly valued component of our national infrastructure.
- The establishment of **rights and responsibilities in relation to social care**, via a range of legislation, placing statutory obligations on local authorities to procure or provide care services, and giving disabled people and carers a range of rights and entitlements to support.
- A trained and regulated **health and social care workforce** some **1.8 million** strong<sup>3</sup>, employed by public, private and voluntary sector organisations in a well-established mixed economy of care.
- Throughout England, **4.85 million unpaid carers**, providing regular unpaid support to family members, friends and neighbours. Each year, over 2 million people start caring, with a similar, slightly smaller proportion ceasing their caring role, following bereavement or other changes in their caring situation<sup>4</sup>.
- The transfer of many people with learning difficulties, mental health problems and other conditions out of the asylums and long term hospitals of the past, into **supported living in the community**, now accepted as a humane and positive policy development.

**These widely applauded successes nevertheless create great challenges for the future.** Population ageing is now fast changing the country's age structure, expanding the older population (which makes the heaviest demands on the health and social care system) at the same time as the relative size of the working age population (needed to supply labour, skills and much of the nation's tax base, and striving to invest in their own pensions) is shrinking. Key aspects of these challenges

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<sup>1</sup>This paper presents the author's independent assessment of available evidence. All references are to publicly available data and publications, except where indicated. The work of Dr Lisa Buckner, Dr Gary Fry and Kara Jarrold (CIRCLE, University of Leeds), who provided research and data presentations for the paper, is gratefully acknowledged. Thanks also to Alison Rogan, Lynn Blair and David Kelly (Tunstall Healthcare) for additional information.

<sup>2</sup>*The Guardian* newspaper, 4 July 2009, commenting on the Department of Health's *Health Profiles 2009*, published 30<sup>th</sup> June 2009.

<sup>3</sup>Wilson, R, Homenidou, K & Gambin, L (2008) *Working Futures 2007-2017: Evidence Report 2*, UK Commission for Employment and Skills. (Figures in the following paragraph are also from this source.)

<sup>4</sup>Evidence presented to the House of Commons *Work and Pensions Committee*, HC 485-II, (2008), Ev 139, para.5.1 fn. 78.

include a much larger, fast ageing population, the rising costs of care, and the search for cost containment. Historic in scale, these challenges call upon us to embrace new approaches, radical ideas and all the technological ingenuity we can muster. This paper argues that telecare - '**remote or enhanced delivery of health and social services to people in their own homes by means of telecommunications and computerised systems**<sup>5</sup> - offers a critically important contribution to our health and social care system, and must be more speedily adopted, on a larger scale and with greater vigour, to avoid compromising quality in our system while growing unmet demand overwhelms us.

Most of the care support needed by older, sick and disabled people living at home is supplied by two specific groups of people: **unpaid carers**, many of whom struggle to combine paid work and unpaid care - and some of whom have to give up their paid work, careers or educational opportunities in order to care; and **workers in health and social care personal service occupations** (already a workforce some 965,000 strong in 2007, more than double its size in 1997, expected to rise to 1.2 million by 2017), supplying personal care, services and support to those in the greatest need. Both these groups are predominantly female - 58% of all unpaid carers and 88% of paid care workers, are women. One in every 9 people in the entire population is, at any given time, an unpaid carer (among women in their 50s this rises to almost 1 in 4 people), and for every 1,000 people in England, there are 9 paid care workers<sup>6</sup>.

With many people living longer and/or with illness or disability, the future scenario for **care at home** – where most people wish to be supported during periods of illness, disability or infirmity – **threatens to be increasingly costly**. Its costs will fall three ways: on individuals and families (mainly through foregone earnings and pensions); on employers (who risk losing large numbers of high value employees at the peak of their careers if they have to give up work to care, wasting past investments in skills and incurring significant labour replacement costs); and on the public purse (through expenditure on personal social services and carers' benefits/income replacement, and through lost tax revenue).

The reason these costs are rising is *not* because those who provide care are generously rewarded. Care work is persistently among the **lowest paid**

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<sup>5</sup> This is the Scottish Government's abbreviated definition, used in its telecare development programme. A telecare service involves a 24-hour telephone link between the home and a response centre, with trained operators monitoring all alerts and responding appropriately round the clock.

<sup>6</sup> Data from 2001 Census: Buckner, L and Yeandle, S (2005) *We Care: Do You* London, Carers UK; and Yeandle, S, Shipton L, & Buckner, L (2006) *Local Challenges in Meeting Demand for Domiciliary Care: synthesis report* Sheffield: Centre for Social Inclusion, Sheffield Hallam University. Care worker data include those identified as 'care workers and home carers'.

**occupations**, and unpaid carers who give up work to care receive only modest **replacement income benefits**. Carers Allowance was paid to just over 400,000 people in England in November 2008 (less than 10% of all carers), about 74% of them women. No recipient of Carers Allowance gets more than the current maximum payment of £53.10 pw<sup>7</sup>, although the number of claimants has been rising (up from a little over 300,000 people five years previously<sup>8</sup>). Most carers receive no state benefits<sup>9</sup>, however; the real cost of their unpaid care is in **personal incomes foregone, pension contributions not made and taxation lost to the public purse**, because carers become clustered in lower paid occupations, cannot achieve their career potential, reduce their working hours or leave the labour market, often retiring prematurely<sup>10</sup>. Against these costs can be set carers' saving to the health and social care economy, in England recently estimated to be worth some £70bn per annum<sup>11</sup>.

Gross current **expenditure on personal social services** by councils with social services responsibilities (CSSRs) in England was £20.7 billion in 2007-8, three quarters of it spent on adults and older people's services. Of this, 43% was spent on domiciliary care, delivered as 3.7m hours of care provided to 358,000 households<sup>12</sup>. Consistent trends have included more intensive home care provided to smaller numbers of households, and home care increasingly 'rationed' to the most needy. Most home care is now delivered by private sector providers, many of whom have reported persistent difficulties in recruiting and retaining labour in the past decade. In 2007-8, 73% of CSSRs provided home care only to those assessed (using FACS<sup>13</sup> guidelines) as having 'critical' or 'substantial' care needs, with *'just over 600,000 older people using council-supported community-based services'*, a quarter of them paying a charge towards the cost of their care (CSCI estimates). About 150,000 older people in England are thought to purchase their care at home privately, while a quarter of those receiving council-funded community-based care 'top up' their care package<sup>14</sup>.

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<sup>7</sup> DWP website, [http://83.244.183.180/100pc/ca/cnage/ccsex/a\\_carate\\_r\\_cnage\\_c\\_ccsex\\_nov08.html](http://83.244.183.180/100pc/ca/cnage/ccsex/a_carate_r_cnage_c_ccsex_nov08.html)

<sup>8</sup> In its 2009 Departmental Report, the DWP reported: 'Disability and carer benefit expenditure grows by 4.1% a year on average ....reaching £17 billion in 2008-9', DWP (2009), p 117.

<sup>9</sup> In evidence to the *House of Commons Work and Pensions Committee*, DWP reported that 222,000 people in the UK received the carer premium with Income Support in 2008, and that over 221,000 carers over age 60 received the additional amount for carers with their Pension Credit payments, HC 485-II, (2008), Ev. 106, para 3.12.

<sup>10</sup> Yeandle, S and Buckner, L (2007) *Carers, Employment and Services: time for a new social contract?* London: Carers UK.

<sup>11</sup> Buckner, L and Yeandle, S (2007) *Valuing Carers – calculating the value of unpaid care*, London Carers UK – calculating hours of care at unit cost per hour of £14.50, as per guidance from NHS Information Centre in 2005-6.

<sup>12</sup> "Since 1997, the numbers of households receiving supported home care has fallen from 479,000 to 358,000 in 2006. At the same time, the total number of hours of care has increased from 2.6 million to 3.7 million; the average hours per household in 2006 was 10.8 hours, double the 1997 figure."(CSCI [2008] *The State of Social Care in England*, London: Commission for Social Care Inspection, p118).

<sup>13</sup> Fair Access to Care Services.

<sup>14</sup> CSCI (2008) *op. cit.* p113.



In recent years, the shortfall in social care staff has been met in some localities by recruiting migrant labour; it is not known how many migrant workers are providing care in private households but this practice is now widespread in some other EU states (including Italy and Spain). A study of immigration in the social care sector for the UK's *Migration Advisory Committee*<sup>15</sup> noted 'strong demand for labour', with immigration used as a 'way of dealing with recruitment problems in social care', including through increased recruitment from the European Economic Area (EEA), especially Poland. This report expressed doubts about how long EEA workers would remain in the UK, however. It noted that 16% of the UK's 640,686 workers employed as care assistants and home carers (some of whom work in residential care) were born outside the UK, and that this figure was far higher in London, at 68%.

The most costly care is of course that provided to sick, disabled or older people in residential or nursing care establishments. Of the £15.3bn spent on adult social care in 2007-8, 48% was spent on residential care<sup>16</sup>. Costs here average £559 per week per adult<sup>17</sup>. Reducing unnecessary admissions to residential care has understandably become a key priority for most councils, which have been encouraged by central government to support care at home wherever possible, under policies designed to achieve both cost containment and better client outcomes.

**Cost containment** in the provision of social care is **certain to remain on the public policy agenda** in coming years; this is heavily underscored already in discussions of the public finances in the context of the current recession. Even before this, the search was on for new options which can cut costs without harming services:

- Enabling people to remain at home who would otherwise need to be placed in residential or nursing care establishments;
- Reducing the number of preventable injuries, accidents or risks encountered by sick, disabled or vulnerable people living at home;
- Supporting unpaid carers to care without experiencing such intense pressure or stress that they themselves become ill or have to give up their caring role;
- Improving the efficiency of home care services, especially by reducing those costs (e.g. travel costs and time; checking visits, overnight sleepovers) which deliver no direct benefit to the person cared for;
- Offering additional choice, independence and dignity to sick, frail or disabled people by giving them information, safety, control, and practical assistance.

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<sup>15</sup> Moriarty, J, Hussein S, and Cornes, M (2008) *Staff shortages and immigration in the social care sector*, UK Borders Agency,

<http://www.ukba.homeoffice.gov.uk/sitecontent/documents/aboutus/workingwithus/mac/moriarty2008>.

<sup>16</sup> Health and Social Care Information Centre (2009) *Personal Social Services Expenditure and Unit Costs, England, 2007-8*.

<sup>17</sup> CSCI (2008) *The State of Social Care in England*, London: Commission for Social Care Inspection.

Projects up and down the country in the past decade have demonstrated that **telecare can deliver almost all of the above, at remarkably low cost**. Telecare is not a panacea, and cannot, alone, meet the challenge of creating an effective, high quality social care system, capable of supporting much larger numbers of sick, frail and disabled people in the future. But there is now impressive evidence that **telecare can sustain people with a wide range of conditions in their own homes, and offer support to their carers**, enabling resources which would otherwise be spent on hospital, residential or nursing care to be allocated elsewhere in the health and social care system. Remarkably:

***“... no study (of telecare) has yet demonstrated any negative or adverse effects<sup>18</sup>.”***

This paper presents evidence of the challenges outlined above, and documents the evidence base about the potential role of telecare in shaping a more sustainable and cost-effective way of tackling them. Section 1 provides more detail on the rising demand for care, and the likelihood that it will outstrip available supply of caring labour. Section 2 summarises some of the costs of the present health and social care system, arguing that, unchecked, the expected rise in these is unsustainable. This section briefly notes the direction of policy trends and public opinion in relation to social care, while Section 3 highlights the growing evidence that, in tackling the crucial social, economic and organisational challenges we face in the future provision of health and social care, **telecare offers a set of low-cost options, not yet adequately mainstreamed and exploited**, which can significantly reduce avoidable pressures in the system, releasing precious financial and human resources to be deployed elsewhere, and offering a ‘win-win’ response.

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<sup>18</sup> Williams, I (2008) *Telecare: a rapid review of the evidence 2005-2008*, report prepared for the West Midlands Strategic Health Authority (May 2008), Birmingham: NHS West Midlands and University of Birmingham.

## 1 ***Rising demand for care is outstripping the capacity to care***

This part of the paper presents more detailed information about the coming crisis in matching supply and demand in the social care system<sup>19</sup>. First, some indicators of the growing need for care are examined, as it is the anticipated large increase in the numbers of sick, disabled and very old people which is expected to fuel most of this demand. Second, evidence about the limits on our country's capacity to care, arising not only from rising costs and funding pressures but also from our likely inability to source a sufficient supply of caring labour, either paid or unpaid, is discussed.

### ***The growing need for care***

Here we review the picture as it relates to four groups: the 'aged' population, those aged 85 or above; the rising numbers of people in the retired (65+) population who need some support to live independently at home; younger disabled adults (aged 18-64), who increasingly want and expect to be supported to lead socially included lives; and sick and disabled children, almost all of whom today live at home with their parents. Table 1 shows population projections for the first two of these groups.

**Table 1 Population projections for England 2008-2025**

<b>2008</b>	<b>England 2008</b>	<b>England 2025</b>	<b>Difference 2008-2025</b>
All	51,487,500	58,310,700	6,823,200
Aged 65+	8,279,800	11,587,600	3,307,800
Aged 85+	1,125,600	1,912,900	787,300
Percentage of whole population aged 65+	16.1	19.9	+40.0%
Percentage of whole population aged 85+	2.2	3.3	+70.0%

*Source: 2004-based national population projections, Government Actuary's Department, Crown Copyright*

### ***People over 85***

By 2025, the **number of people aged 85 or older in England is set to increase by 70% to 1.9 million**, by well over three-quarters of a million people (Table 1). In this age group, more than a third of men (37%) and more than half of women (55%) live alone<sup>20</sup>. Most have a limiting long-term illness - over three-quarters of women (78%), and 70% of men - and about a third (36% of women, 32% of men) are in persistently poor general health<sup>21</sup>. In 2001 about 1 in 8 of these aged men (12%) and almost a

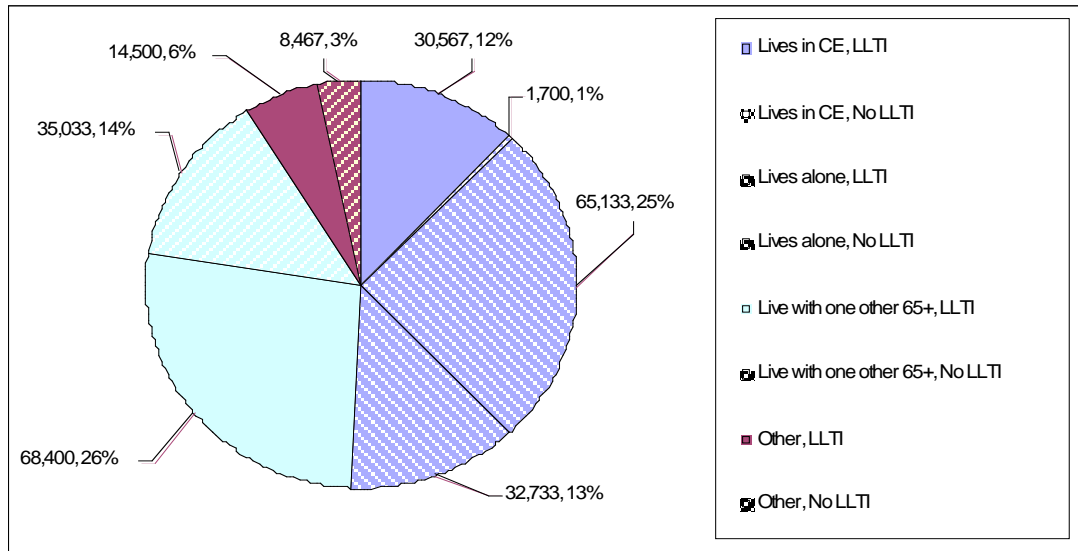
<sup>19</sup> Data in this section are from the POPPI database, DH, Crown copyright, based on 2006-based population projections and 2001 Census (accessed May 2009).

<sup>20</sup> Yeandle, S, Shipton, L and Buckner, L (2006) *Local Challenges in Meeting Demand for Domiciliary Care: Synthesis Report*, Sheffield: Centre for Social Inclusion, figures from 2001 Census of Population.

<sup>21</sup> Describing their 'general health' in the past year as 'not good' (in the 2001 Census).

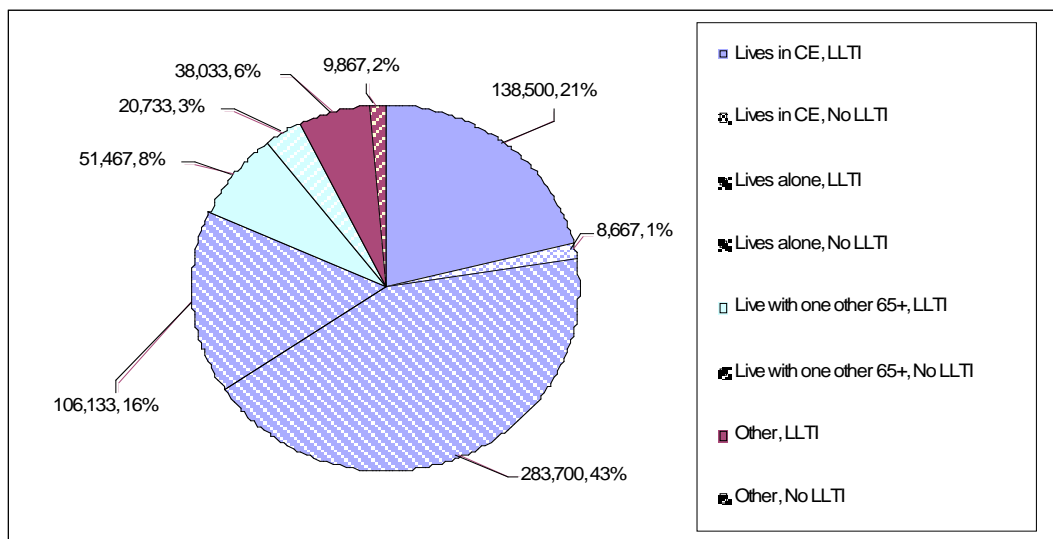
quarter of the women (23%) were no longer living in their own homes. (See Figures 1-4, showing the different circumstances of aged men and women. The numbers in these figures are for 2001, and all have already risen, with further large increases forecast, as shown in Table 2.)

**Figure 1 Men aged 85 years and older, by living arrangement and limiting long-term illness, England**



Source: Office for National Statistics (2006) 2001 UK Sample of Anonymised Records, Individual Licensed File [computer file] distributed by the Cathie Marsh Centre for Census & Survey Research, University of Manchester<sup>22</sup>  
 KEY: CE = communal establishment; LLTI = limiting long-term illness

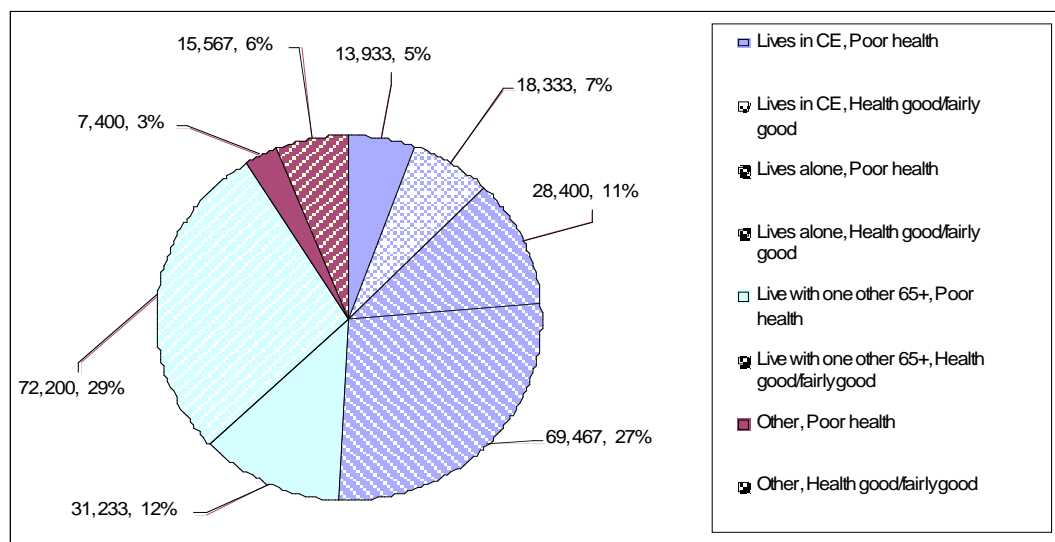
**Figure 2 Women aged 85 years and older, by living arrangement and limiting long-term illness, England**



Source: as for Figure 1

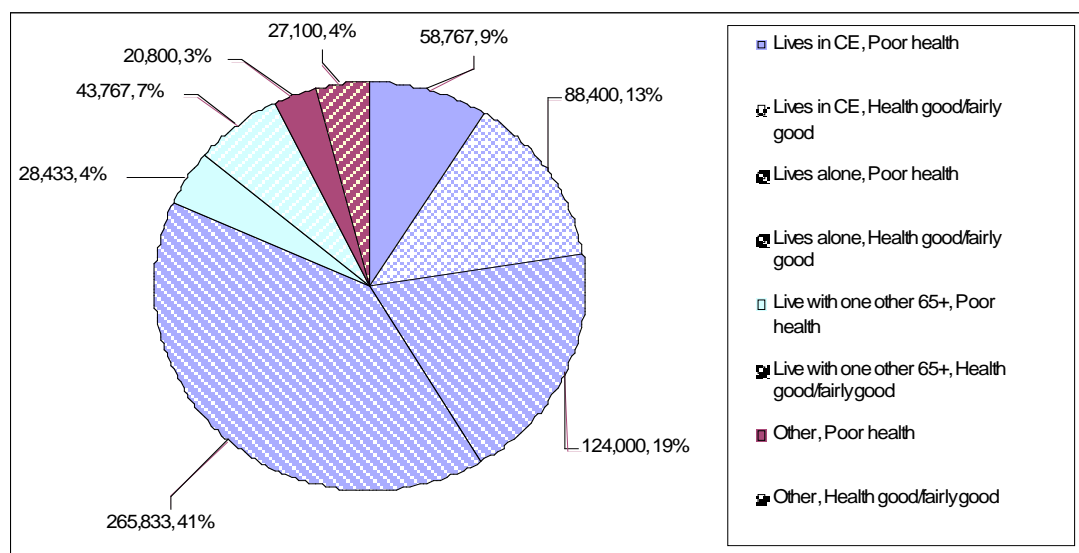
<sup>22</sup> 2001 SARs provided through the Cathie Marsh Centre for Census & Survey Research (Univ. of Manchester), with the support of the ESRC and JISC. Tables containing Census data, and the results of analysis, are reproduced with the permission of the Controller of Her Majesty's Stationery Office & the Queen's Printer for Scotland.

**Figure 3 Men aged 85 years and older, by living arrangement and health status, England**



Source: as for Figure 1

**Figure 4 Women aged 85 years and older, by living arrangement and health status, England**



Source: as for Figure 1

**Table 2 People aged 85 years and older, by living arrangements, limiting long-term illness and poor health, England**

<i>Numbers</i>	<b>Men</b>		<b>Women</b>	
	<b>2008</b>	<b>2025</b>	<b>2008</b>	<b>2025</b>
<b>ALL</b>				
<i>Lives in a communal establishment</i>	45,105	99,190	171,780	251,803
<i>Lives alone</i>	136,805	300,848	455,033	667,006
<i>Lives with one other person aged 65+</i>	144,586	317,961	84,275	123,534
<i>Lives with at least one other person</i>	32,104	70,601	55,911	81,957
<b>People with a LLTI</b>				
<i>Lives in a communal establishment</i>	42,728	93,964	161,664	236,974
<i>Lives alone</i>	91,048	200,224	331,149	485,412
<i>Lives with one other person aged 65+</i>	95,614	210,266	60,074	88,060
<i>Lives with at least one other person</i>	20,269	44,574	44,394	65,075
<b>People in poor health</b>				
<i>Lives in a communal establishment</i>	19,477	42,832	68,595	100,550
<i>Lives alone</i>	39,699	87,303	144,739	212,164
<i>Lives with one other person aged 65+</i>	43,660	96,013	33,189	48,650
<i>Lives with at least one other person</i>	10,344	22,748	24,279	35,589

Source: 2001 Individual SAR and 2006-based population projections (ONS).

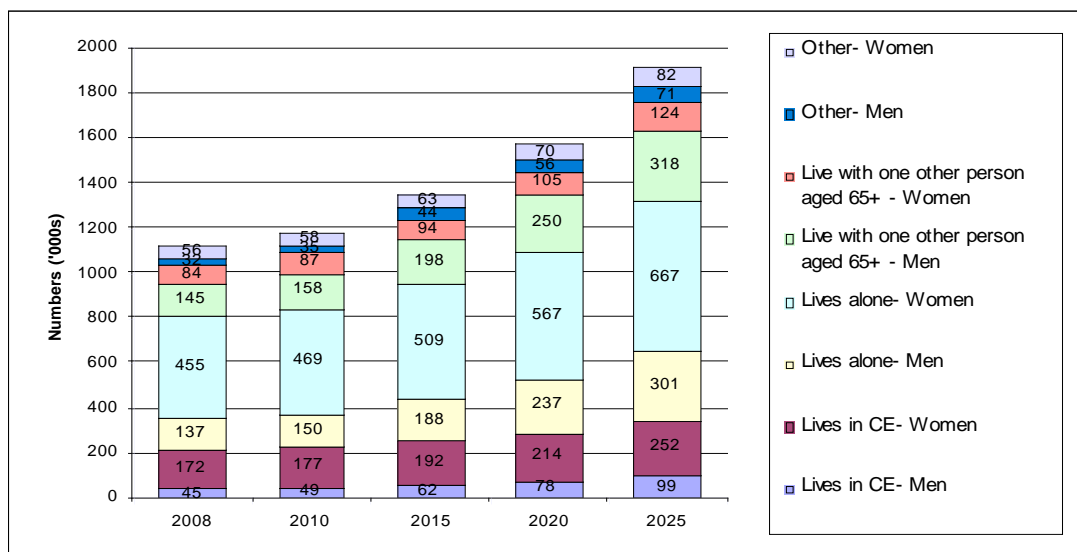
Official estimates predict that England's greatly expanded group of 'very old' people will by 2025 include:

- **1.1 million people with a limiting long-term illness** (up from 643,000 in 2008 )
- **439,000 people** with a diagnosis of dementia (up from 264,000), and
- **77,000 people** caring for another sick, frail or disabled person (up from 45,000)

By 2025 the number of people aged 85+ who **have a limiting long-term illness and live alone will rise by 70%**, from 422,000 in 2008, to almost 686,000 in 2025. This home-based group will continue to be significantly larger than the group of people aged 85+ who live in 'communal establishments' (CEs) (a care home, with or without nursing care). In 2008 the number living in CEs stood at about 200,000 and it is expected to rise, to almost 350,000, by 2025.

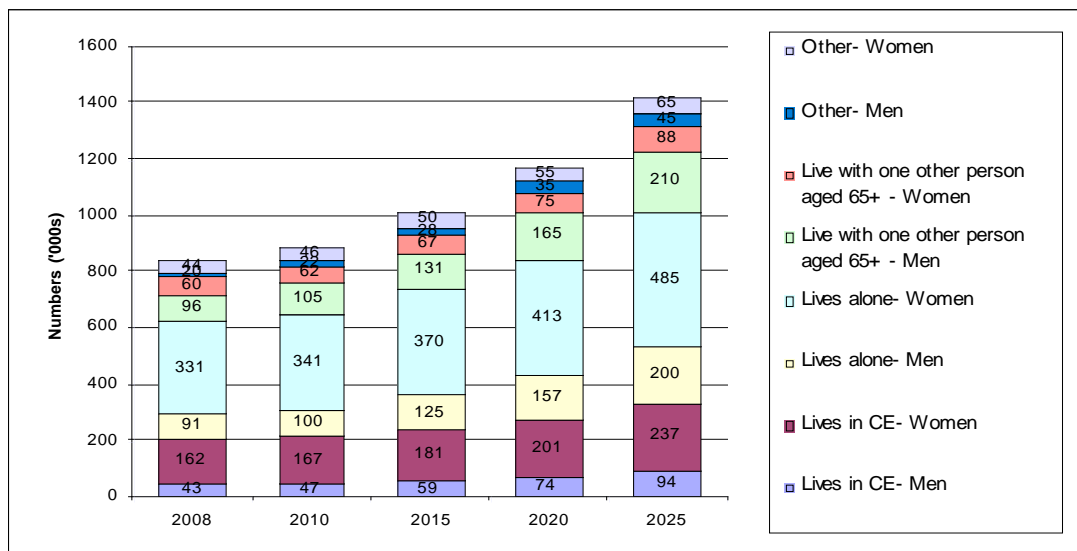
Among the 85+ group in 2008, over 45,000 people provided unpaid care for another person, 28,000 of them for 20 or more hours per week. These figures are also set to rise – to a total of almost 77,000 in 2025, among whom half are expected to be caring for 50 or more hours each week. Even in the 85+ age group, by 2025 about two-thirds of those likely to have significant needs for care and support will be living in their own homes. **They will need modern, efficient services offering them (and their carers) dignity, independence and reliable access to immediate assistance when it is required.**

**Figure 5 All people aged 85 years and older, England**



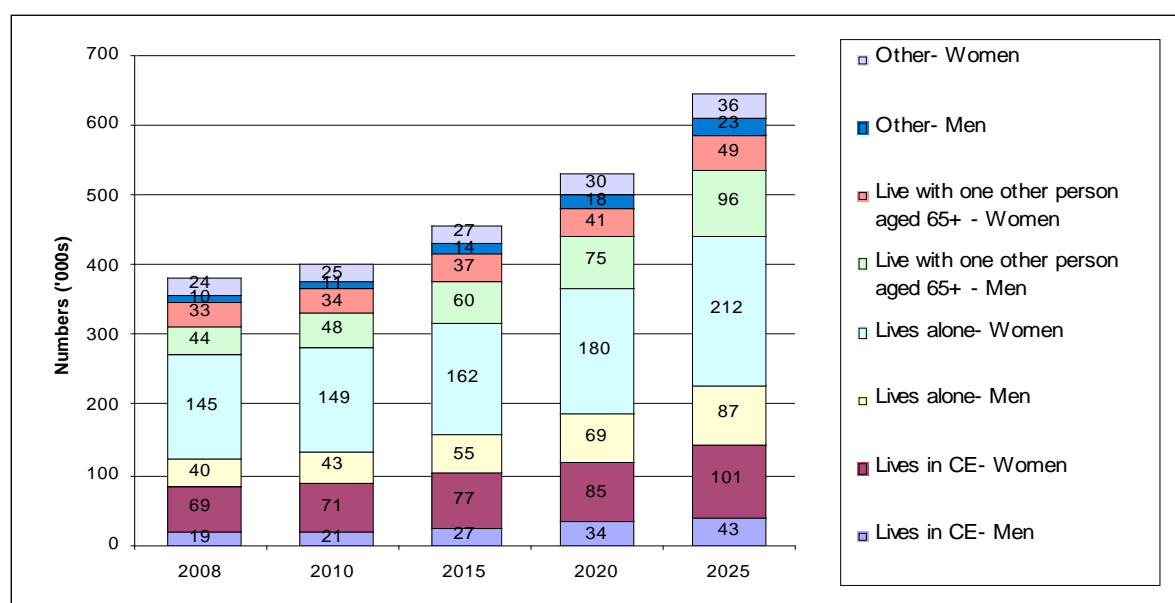
Source: as for Figure 1

**Figure 6 People aged 85 and older with a limiting long-term illness (LLTI), England**



Source: as for Figure 1

**Figure 7 People aged 85 and older in poor health, England**



Source: as for Figure 1

## People over 65

England's total population **aged 65+** will have grown to **11.6 million people by 2025**, up 40% from the 8.3 million in this age group in 2008. By 2025 people aged 65 and older will represent 1 in 5 of the total population. Many will be ageing well, living active and independent lives, and some will still be participating in the labour market. They will include (as they do today) a large number of **unpaid carers**, providing support for their family members, friends and neighbours. **In the 65-74 age group about 14% of both men and women are carers**, about half of them providing 20 or more hours of unpaid care each week. A strong statistical association between long hours of caring and poorer health was confirmed in England's 2001 Census, and other research has shown that carers have a particular need for more support to deal with stress, anxiety, isolation and financial pressures<sup>23</sup>.

By 2025 the **65+ age group** will include **5.5 million people with a limiting long-term illness** (up 42% on the 2008 figure, 3.9 million), including:

- **819,000 people whose illness is caused by a heart attack** (446,000 men and 372,000 women) – up 41% from the 2008 figure
- **893,632 people with a diagnosis of dementia** (up 51% from the 2008 figure)
- **321,000 people with illness caused by a stroke** (192,000 men and 129,000 women) – up 49% from the 2008 figure
- **256,000 people with illness caused by bronchitis and emphysema** (165,000 men and 90,000 women) - up 41% from the 2008 figure)

<sup>23</sup> Buckner, L and Yeandle, S (2006) *We Care: Do You?* London: Carers UK, analysis of Census 2001 data.



- **31,000 people with a moderate or severe learning difficulty** (compared with 23,000 in this age group today).

As evidenced later in this paper, although people with conditions of these types require costly health and social care, recent trials have shown that **telecare and telehealth support** can be of significant help to them and to their carers in managing their conditions and alleviating the impact of their disabilities.

The cost of the care needed by this group of people is very significant and set to rise. To take just one example, in 2025, almost **264,000 people aged 65+ will be admitted to hospital as a result of a fall** (compared with about 175,000 in 2008 – official estimates). In 2007-8 a total of **1.78 million hospital bed days** were associated with **an injury to the hip or thigh**, up 28% on the 1.39 million bed days recorded in 1998-9. They represented almost 114,712 ‘finished consultant episodes’ (up 40% over the same period). In 2007-8 in these cases the mean **average length of stay was 20.8 days** (compared with 20.4 days at the earlier date)<sup>24</sup>. In 2007-8:

- 89% were recorded as **emergency admissions** (80% in 1998-9)
- 75% were admissions of **people aged 75+** (72% in 1998-9)
- 71% were admissions of **women** (74% in 1998-9)

**Falls prevention strategies, using telecare and other assistive technology, have been shown to significantly reduce the incidence, severity and associated costs of falls in older people**<sup>25</sup>. For some time, the Department of Health has been emphasising both that ‘falls can precipitate admission to long-term care’, as following osteoporotic fracture ‘half of patients can no longer live independently’<sup>26</sup>, and that hip fracture is the most common serious injury related to falls by older people. This cost the NHS £1.7bn in England in 1999, of which 50% was the cost of social care and long-term hospitalisation (DH 2001: 77). Hip fracture rates in the over 65s in England vary considerably between local authorities (from 699.8 to 431.4), with an English average age-standardised rate for emergency admissions of 479.8<sup>27</sup>, suggesting that appropriate action to reduce falls in older people can be highly effective. As shown in

<sup>24</sup> Health and Social Care Information Centre (2009) *Hospital Episode Statistics: primary diagnosis summary, 2007-8 and 1998-9*.

<sup>25</sup> Help the Aged (2007) *Preventing Falls: Policy Statement 2007*: ‘Falls represent the most frequent and serious type of accident in the over-65s, with one older person dying every five hours as a result of a fall. Falls destroy confidence, increase isolation and reduce independence. About 30% of older people living in the community fall each year, rising to approximately 50% for those aged 85 and over. Over half of all those aged 75+ who have fallen say that their fall had a major impact on their daily activities for a month or more. After a fall, an older person has a 50% probability of having seriously impaired mobility and a 10% probability of dying within a year. The UK population is ageing and therefore the cost of falls incurred by the NHS and other agencies is expected to escalate; already falls cost our society almost £1.8 billion a year’ (p2).

<sup>26</sup> Department of Health (2001), *National Service Framework for Older People*.

<sup>27</sup> Department of Health (2009), *Health Profile 2009*.

Section 3, **telecare offers real support to some people in this at risk group**, with significant financial implications for the health and social care system.

Expert analysis of over 200,000 admissions to hospital among people aged 60+ in 1999 (informing current policy and guidance on falls) showed much higher A&E attendance rates for the 75+ age group (945 per 10,000 population, compared with 274 for the 60-64 years age group). In the 75+ age group the cost was estimated at £1.5 million (2000 prices) per 10,000 population, with the total cost to the UK government from unintentional falls almost £1bn, of which 59% was incurred by the NHS. With England's population aged 75+ estimated to be 5.9 million in 2025, **any action taken to reduce the risk of falls, or to minimise their consequences**, especially for this age group **is highly desirable**. Falls can be expected, in 2025, to cost £885 million per annum (*year 2000 prices*), of which some £522 million will fall to the NHS and about £363 million to Adult Services departments<sup>28</sup>.

The 65-84 age group today includes 1.16 million people who **live alone with a limiting long-term illness**<sup>29</sup>. This group is set to increase (by 38%) to 1.6 million people in 2025. Indications of the kind of support this growing group will need by 2025 include, for the total population aged 65+ (including those aged 85+):

- **3.9 million people unable** to manage at least one **self-care activity** on their own: (up from 2.7 million in 2008)
- **4.2 million people unable** to manage at least one **domestic task** on their own: (up from 2.9 million in 2008)
- **756,000 people predicted to attend hospital A&E departments** as a result of falls: (up from 517,000 in 2008)

Today, much of the support needed by people in this age group is provided by their own families and friends. Only about 6% of people aged 65+ receive a council-supported homecare service.

### **People aged 18-64**

Care and support needs are not, of course, confined to older people. Recent figures suggest that in the 18-64 age group:

- **4.65 million** people have a **limiting long-term illness** (2008)
- just over **1.3 million** were receiving **Disability Living Allowance**
- almost **1.5 million** were judged to have 'a moderate or serious **personal care disability**'.

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<sup>28</sup> Scuffham, P, Chaplin, S and Legood, R (2003) 'Incidence and Costs of Unintentional Falls in Older People in the United Kingdom', *Journal of Epidemiology and Community Health* Vol. 57: pp540-44.

<sup>29</sup> POPPI estimates.

In this age group, too, the numbers of people needing care and support are set to grow (see Table 3). By 2025, it is projected that **over 5 million people aged 18-64 will have a limiting long-term illness** (5,097,266 or 14.8%), almost half a million more than in 2008 (4,650,923 - or 14.4%). They will include:

- **1.63 million people with a moderate or severe disability requiring personal care** (up from 1.48 million in 2008)
- **192,000 people with a moderate or severe learning disability** (compared with 179,000 in 2008)
- **34,500 people who as the result of a stroke** will require help with daily activities (compared with 30,000 in 2008)

**The potential role of telecare and telehealth in supporting these disabled adults to live relatively independently in their own homes** has also been highlighted in a number of recent studies, discussed below. For example, significant reduction in the need for overnight (supervisory) care stays has been achieved in some cases, offering cost savings and freeing up care resources in short supply, without adverse impact on the disabled person concerned. Some disabled people and their carers report the benefit of enhanced independence and dignity when telecare providing additional safety measures, new communications options and a reliable alerts service (activated automatically when there is cause for concern) has been installed.

Official projections suggest that between 2008 and 2025, the number of people aged **18-64 'helped to live at home' (with services)** will rise:

- by an additional 6,400, to almost 100,000, among people with a **learning disability**
- by an additional 10,000, to almost 155,000, among people with a **physical or sensory disability**

By 2025, about 40,000 people (aged 18-64) with a learning disability will be receiving residential or nursing care (supported by a CSSR), along with just under 13,000 people with a physical or sensory disability. Their numbers will thus remain relatively small compared with those indicated for people needing support at home. Both now and in the future, the vast majority of sick or disabled adults in the 18-64 age group will be people living independently or with their families, where both for them and for service providers, it will be of benefit for the care they receive to be offered **with the support of any available technology which is cost-effective and enhances their independence, dignity or quality of life.**

**Table 3 People aged 18-64: estimated numbers of people who may require additional support and of the number of carers, England**

	2008	2010	2015	2020	2025
<b>Population projections*</b>					
18-24	4,901,600	5,001,000	4,838,200	4,518,500	4,605,700
25-34	6,738,500	7,001,100	7,806,400	8,053,500	7,769,100
35-44	7,726,600	7,496,500	6,943,100	7,199,900	7,993,900
45-54	6,786,900	7,112,900	7,618,700	7,356,500	6,817,000
55-64	6,059,200	6,081,500	6,054,700	6,743,800	7,240,000
<b>ALL 18-64</b>	<b>32,212,800</b>	<b>32,693,000</b>	<b>33,261,100</b>	<b>33,872,200</b>	<b>34,425,700</b>
<b>Proportion of total population*</b>					
18-24	9.5	9.6	8.9	8.0	7.9
25-34	13.1	13.4	14.4	14.3	13.3
35-44	15.0	14.3	12.8	12.8	13.7
45-54	13.2	13.6	14.0	13.1	11.7
55-64	11.8	11.6	11.1	12.0	12.4
<b>ALL 18-64</b>	<b>62.6</b>	<b>62.5</b>	<b>61.2</b>	<b>60.1</b>	<b>59.0</b>
<b>Carers 18-64**</b>					
18-24	233,353	238,018	230,158	214,968	219,131
25-34	471,681	489,789	545,116	561,723	541,695
35-44	930,094	902,135	835,777	865,672	959,445
45-54	1,317,576	1,380,894	1,478,930	1,427,431	1,323,117
55-64	1,206,807	1,211,450	1,205,829	1,343,352	1,442,029
<b>ALL 18-64</b>	<b>4,159,510</b>	<b>4,222,287</b>	<b>4,295,809</b>	<b>4,413,146</b>	<b>4,485,417</b>
<b>Limiting long-term illness **</b>					
18-24	283,050	288,807	279,433	260,963	265,996
25-34	506,862	526,663	587,382	606,077	584,702
35-44	852,680	827,300	766,227	794,553	882,193
45-54	1,208,122	1,266,142	1,356,154	1,309,387	1,213,447
55-64	1,800,208	1,806,695	1,798,826	2,003,461	2,150,927
<b>ALL 18-64</b>	<b>4,650,923</b>	<b>4,715,608</b>	<b>4,788,021</b>	<b>4,974,443</b>	<b>5,097,266</b>
<b>Moderate or severe personal care disability ***</b>					
18-24	49,016	50,010	48,382	45,185	46,057
25-34	121,293	126,019	140,516	144,963	139,843
35-44	270,431	262,378	243,009	251,996	279,786
45-54	407,214	426,774	457,122	441,391	409,020
55-64	636,216	638,558	635,744	708,099	760,200
<b>ALL 18-64</b>	<b>1,484,170</b>	<b>1,503,739</b>	<b>1,524,771</b>	<b>1,591,634</b>	<b>1,634,907</b>
<b>Moderate or severe learning disability<sup>+</sup></b>					
18-24	30,391	31,065	30,187	28,345	29,153
25-34	36,040	37,438	41,755	43,096	41,582
35-44	47,410	46,081	42,854	44,558	49,684
45-54	35,275	37,117	39,973	38,809	36,337
55-64	29,681	29,704	29,895	33,382	35,596
<b>ALL 18-64</b>	<b>178,796</b>	<b>181,405</b>	<b>184,664</b>	<b>188,190</b>	<b>192,353</b>
<b>People aged 18-44, 45-54 &amp; 55-64 predicted to have had a stroke &amp; require help with daily activities<sup>++</sup></b>					
Males aged 18-44	0	0	0	0	0
Males aged 45-54	1,949	2,042	2,188	2,118	1,960
Males aged 55-64	9,278	9,297	9,273	10,311	11,080
<b>ALL MALES 18-64</b>	<b>11,227</b>	<b>11,339</b>	<b>11,462</b>	<b>12,429</b>	<b>13,040</b>
Females aged 18-44	2,118	2,128	2,130	2,142	2,199
Females aged 45-54	5,347	5,604	5,999	5,779	5,363
Females aged 55-64	11,602	11,662	11,590	12,930	13,870
<b>ALL FEMALES 18-64</b>	<b>19,067</b>	<b>19,395</b>	<b>19,719</b>	<b>20,851</b>	<b>21,432</b>

For Sources for Table 3 see footnote.<sup>30</sup>

<sup>30</sup> Data from POPPI / PANSI, DH, Crown copyright; numbers may not sum due to rounding (note conts. over)

## Sick and disabled children

The number of **disabled children under 16** rose by 62% from 476,000 in 1975 to **772,000 in 2002**. Since then their number (based on official survey data<sup>31</sup>) has fluctuated considerably, with the figures for 2003-6 in the region of 650,000-700,000. Even when their needs are extremely complex, the overwhelming majority of these children (**99%**) are **cared for at home by their families**. Fewer than 4,000 children under 16 with a long-term illness or disability lived away from their families in residential school or care homes in 2001<sup>32</sup>. Parents of disabled children often provide complex and intensive care to seriously ill or disabled children at home (sometimes over very long periods); recent research, for example, showed rapid growth in the number of children needing **artificial feeding at home**<sup>33</sup>. Young disabled people are particularly likely to have a **learning difficulty** or an **autistic spectrum disorder**, and the initial onset of **mental health problems** often occurs in children under 16<sup>34</sup>. Each year, about 18,000 children aged 0-19 need palliative care (not including neonatal deaths), and among these children, 11,000 (63%) have a need for social care services<sup>35</sup>.

Parents of disabled children already report significant stress, often related to loss of sleep and high levels of anxiety, and say that services fall well short of their needs<sup>36</sup>. They are less likely than other parents to be in employment. Yet in a survey week in February 2005, just 22,300 disabled 'children in need' received services provided through their local authority's *Children and Families* team to support them in their

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\* ONS 2006-based sub-national population projections.

\*\* ONS 2001 Census, Standard Tables. Numbers have been calculated by applying percentages of people providing unpaid care (or LLTI) in 2001 to projected population figures.

\*\*\* Based on the prevalence data on adults with physical disabilities requiring personal care by age and sex in the Health Survey for England, 2001. These include: getting in and out of bed, getting in and out of a chair, dressing, washing, feeding, and use of the toilet. A moderate personal care disability means the task can be performed with some difficulty; a severe personal care disability means the task requires someone else to help.

<sup>†</sup> Prevalence rates from 'Estimating Future Need/Demand for Supports for Adults with Learning Disabilities in England', June 2004, E Emerson & C Hatton (Institute for Health Research, Lancaster University). Numbers have been calculated by applying prevalence rates to projected population figures.

<sup>††</sup> These prevalence rates are based on Prevalence of Stroke and Stroke-Related Disability: Estimates From the Auckland Stroke Studies, Bonita, R., Solomon, N. & Broad, J. B., Stroke, 1997, 28.

<sup>31</sup> General Household Survey, annual estimates.

<sup>32</sup> Buckner, L and Yeandle, S (2006) *Managing More than Most: a statistical analysis of families with disabled children* London: Carers UK.

<sup>33</sup> British Artificial Nutrition Survey (2004) *Trends in artificial nutrition support in the UK between 1996 and 2002* cited in PMSU (2005 – see following note).

<sup>34</sup> Prime Minister's Strategy Unit [PMSU] (2005)(with DWP; DH; DES; and ODPM) (2005) *Improving the Life Chances of Disabled People: final report* pp.35-36.

<sup>35</sup> Cochrane, H. Liyanage, S. & Nantambi, R. (2007) *Palliative Care Statistics for Children and Young Adults: Health and Care Partnership Analysis*, London: Department of Health.

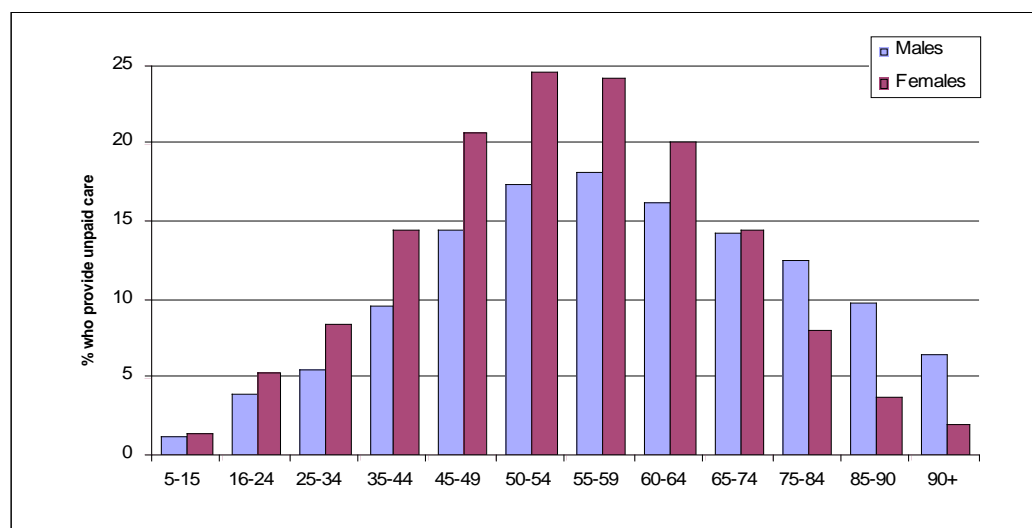
<sup>36</sup> Stiehl, B, Shipton, L and Yeandle, S (2006) *Caring for Sick or Disabled Children: parents' experiences of combining work and care* London: Carers UK.

families or independently<sup>37</sup>. The pressures on families with a sick or disabled child are often great. Among the 195,000 women who recorded in the 2001 Census that they were carers, living with a sick or disabled child aged 0-15, 1 in 4 were lone parents. Overall, about one in five 'parent carers' has a limiting long-term illness, more than two thirds provide 20 or more hours of care each week, and this group is considerably less likely to be in paid employment, with obvious consequences for their household incomes, than other parents<sup>38</sup>.

**Capacity: who cares for sick, disabled and older people living at home?**

In England, most of the care needed by sick, disabled and older people living at home is provided by members of their own families, or (more rarely) by their friends or neighbours, in total **almost 5 million unpaid carers**<sup>39</sup>. The numbers of unpaid carers are expected to increase substantially, to well over 6 million by 2025<sup>40</sup>. Already **almost 1 million carers provide 50 or more hours of care each week**, with a further 530,000 regularly providing care for 20-49 hours per week. Official estimates suggest that in 2008 over 925,000 of England's carers were themselves older people aged 65 or above (Table 4), and that by 2025 the number of older carers will have increased to 1.25 million.

**Figure 8 Carers providing unpaid care to a sick, disabled or older person, by age and sex: England**



Source: 2001 Census Standard Tables, Crown Copyright 2003.

<sup>37</sup>National Statistics (2006), *Children in Need in England: results of a survey of activity and expenditure, as reported by Local Authority Social Services Children and Families teams in a survey week in Feb 2005*, Issue No. vweb-02-2006. The figure here excludes services provided to 11,800 'looked after children'.

<sup>38</sup>Buckner, L and Yeandle, S (2006) *Managing More Than Most: a statistical analysis of families with disabled children*, London: Carers UK.

<sup>39</sup>The 2001 Census recorded 4.85 million carers in England.

<sup>40</sup>Carers UK estimates, cited in House of Commons Work and Pensions Committee (2008) HC 485-II.

Most carers, however, are people of working age (Figure 8); in England in 2001 they numbered over 3.6 million, among whom over 1 million were caring for 50+ hours per week (Table 5). At that point, one in ten men of working age, and one in seven women, was a carer. Two-thirds of these carers were combining their care with paid employment - 74% of male carers, and 60% of female carers. This group of 'working carers' faces particular challenges in providing support for sick or disabled people, as most are, for part of the day, away from their homes. Research suggests they can benefit from a range of telecare and remote systems, as we show later in this paper, and that **some carers are enabled to sustain their paid work when telecare technology is in place.**

**Table 4 People aged 65 and over providing unpaid care to a partner, family member or other person, by age (65-74, 75-84, 85 and over), projected to 2025**

	2008	2010	2015	2020	2025
People aged 65-74 providing unpaid care to a partner, family member or other person	607,104	636,227	738,156	773,438	776,745
People aged 75-84 providing unpaid care to a partner, family member or other person	273,144	277,094	300,349	335,891	398,981
People aged 85 and over providing unpaid care to a partner, family member or other person	45,177	47,489	54,200	63,254	76,776
Total population aged 65 and over providing unpaid care to a partner, family member or other person	925,425	960,810	1,092,704	1,172,584	1,252,502

Source: POPPI data base, accessed June 2009. Figures may not sum due to rounding, Crown copyright 2008.

NOTE: Figures are from the 2001 Census Standard Tables, Table S025 Sex and age by general health and provision of unpaid care. The term "unpaid care" covers any unpaid help, looking after or supporting family members, friends, neighbours or others because of long-term physical or mental ill-health or disability or problems related to old age. Numbers were calculated by applying percentages of people providing unpaid care in 2001 to projected population figures.

### **Pressures on carers**

Of the 4.85 million carers recorded in England in 2001, 1.6 million were people of working age caring for 20 or more hours each week. Research has demonstrated that the care they give is associated with deterioration in their health, their financial situation, and their ability to continue with the normal activities of everyday life. Many give up paid work or reduce their hours of employment and/or their career aspirations; some lose precious pensions entitlements or miss out on education and training opportunities which others take for granted. Carers who give up work to care have been found to be a particularly poorly-supported group; their health and wellbeing appears to be particularly difficult to sustain<sup>41</sup>.

<sup>41</sup> Yeandle, S, Bennett, C, Buckner, L, Fry, G and Price, G (2007) *Managing Caring and Employment*, CES Report No. 3, London: Carers UK.

As indicated above, only a minority of carers in this age group receive *Carers Allowance* (£53.10 weekly). To be eligible, carers must be caring regularly for a severely disabled person on qualifying benefits for 35 or more hours per week, and in 2008 just over 401,000 carers in England (0.8% of the population), their numbers having risen steadily over the past thirty years, were recipients of this benefit. A few Carers Allowance claimants combine their caring with low-paid part-time employment<sup>42</sup>. However, most working age carers (58% of them women, 42% of them men) receive no state benefits and manage their caring roles alongside their regular paid jobs. Recent studies have demonstrated that most feel poorly supported in combining their work and caring roles, and believe more could be done by the state and by employers to relieve the pressures on them<sup>43</sup>. In this age group, 10% of men and 14% of women are carers, with

- 72% of male carers in paid employment (65% FT, 7% PT); and
- 62% of female carers in paid employment (32% FT, 30% PT)

**Table 5 Key data about carers of working age, England**

Number of carers - all with caring roles		3,637,856
Carers who provide 20+ hours of care per week		1,012,721
Carers who provide 50+ hours of care per week		614,948
% of people of working age who are carers	<i>All</i>	12
	<i>Men</i>	10
	<i>Women</i>	14
% of all carers who provide 20+ hours of care	<i>All</i>	28
	<i>Men</i>	25
	<i>Women</i>	30
% of those caring 20+ hrs pw who are in poor health	<i>All</i>	15
	<i>Men</i>	18
	<i>Women</i>	14
% of all carers who provide 50+ hours of care	<i>All</i>	17
	<i>Men</i>	15
	<i>Women</i>	18
% of those caring 50+ hrs pw who are in poor health	<i>All</i>	17
	<i>Men</i>	20
	<i>Women</i>	15

Source: 2001 Census Standard Tables, Crown Copyright 2003.

Research has shown that flexible working practices, appropriate employer attitudes, and responsive services are effective in enabling carers to combine work and care<sup>44</sup>. Evidence is also emerging which shows that **some working carers find having**

<sup>42</sup> *Carers Allowance*, then a weekly payment of £50.55p, was paid to 481,000 carers in the UK in May 2008. To be entitled to this benefit, carers had to be earning no more than £95 per week, caring for at least 35 hours per week, and looking after a person receiving one of a specified range of disability benefits. [NAO (2009) *Supporting Carers to Care*, Report by the Comptroller and Auditor General HC 130, Session 2008-2009, pp9-10). *Carers Allowance* was first introduced (with different eligibility criteria) as *Invalid Care Allowance* in 1976.

<sup>43</sup> Yeandle, S et al (2007) *Carers, Employment and Services Report Series*, London: Carers UK.

<sup>44</sup> Yeandle, S, Bennett, C, Buckner, L, Shipton, L and Suokas, A (2006) *Who Cares Wins: the social and business benefits of supporting working carers*, London: Carers UK.

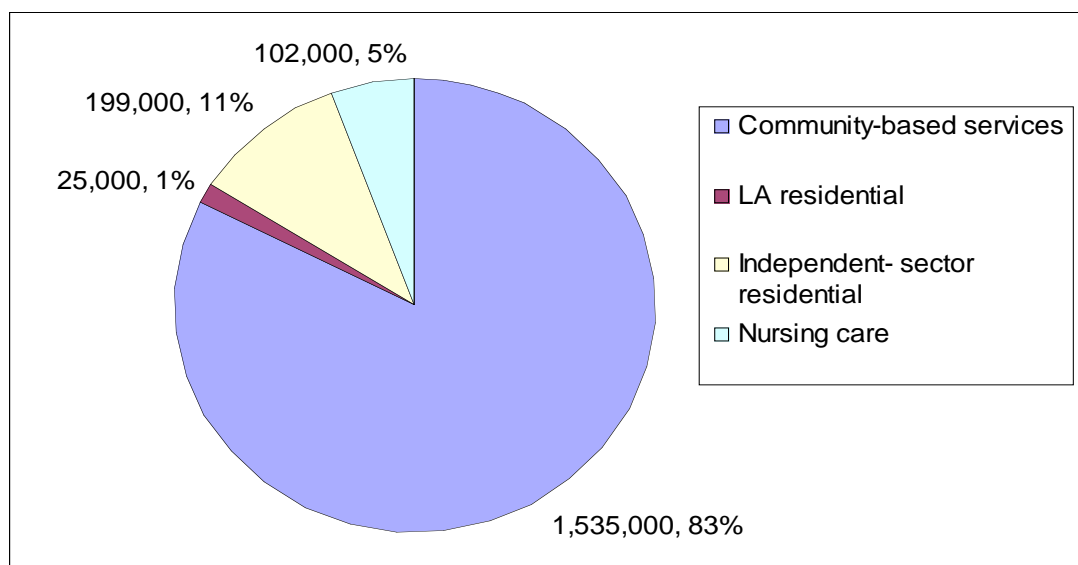


**telecare in place is beneficial to their situation**, helping to make their two roles compatible.

### **Home care services**

Only a minority of people who have an illness or disability requiring support receive home care arranged through their local authority's Children's or Adults' Services department. Fewer still 'self-fund' their own care, purchasing it privately from an independent sector care provider or recruiting their own care worker or personal assistant. No comprehensive data exist to show precisely how widespread the private employment of care workers by sick and disabled people has become, although recent estimates suggest their number is growing. In practice, as both eligibility criteria and charging policies for home care differ between council areas (although all must apply the national FACS guidelines), in most localities those whose needs are assessed as 'low' or 'moderate' are not currently receiving any publicly funded home care services, although some councils now offer certain home adaptations, community alarms and some other types of telecare to a wider range of clients. Some of the schemes developed in recent years to provide this telecare support are referred to in Section 3 of this report.

**Figure 9 Estimated numbers of clients receiving services during the period by service type (2007-2008): England**



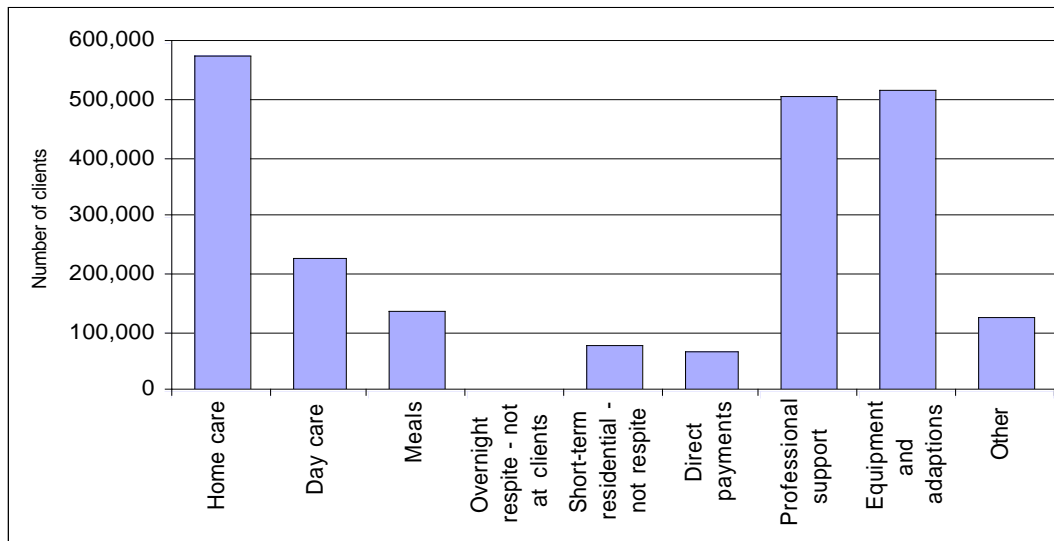
Source: *Community Care Statistics 2007 - 08: Referrals, Assessments and Packages of Care for Adults, England, National report and CASSRs.*

Note: Since movement between services is possible, a client may have received more than one type of service during the year and thus there may be some double counting across service categories.

As shown in Figure 9, the vast majority of clients receiving services, some 1.5 million adults, access community-based services (83%). Only 102,000 (5%) receive nursing

care, with some 224,000 supported in other residential care establishments. A breakdown of the support offered to sick, disabled and frail adults living at home is provided in Figure 10. Here we can see that almost 600,000 clients were receiving homecare, and a little over 500,000 had supporting equipment and adaptations in their homes.

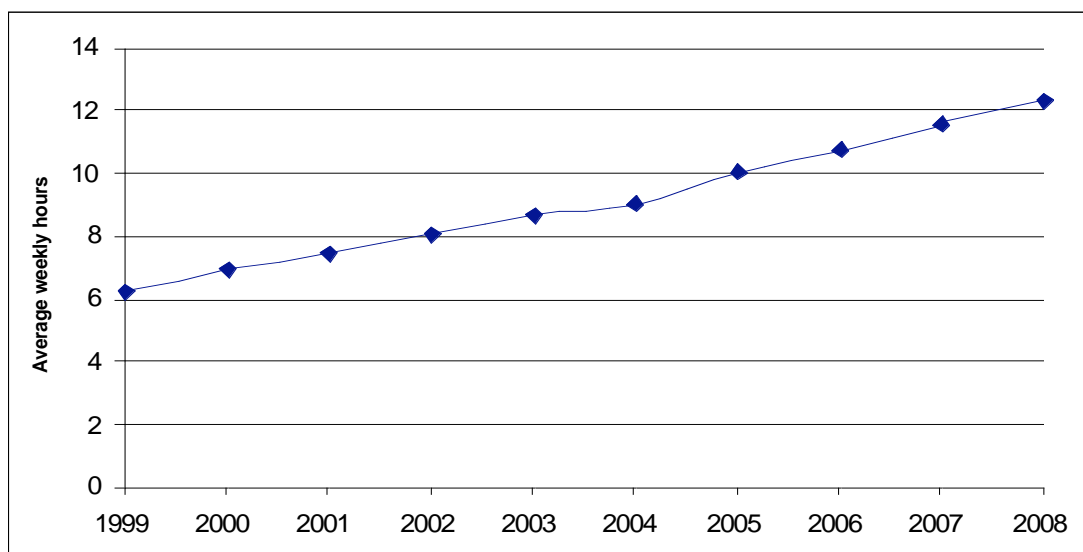
**Figure 10** Estimated number of clients receiving community based services during the period 1st April 2007 to 31st March 2008, by components of service.



Source: *Community Care Statistics 2007 - 08: Referrals, Assessments and Packages of Care for Adults, England, National report and CASSRs.*

Note: The figures for the number of clients receiving the different services do not necessarily sum to the 'Total of clients' as a client may receive services of more than one type.

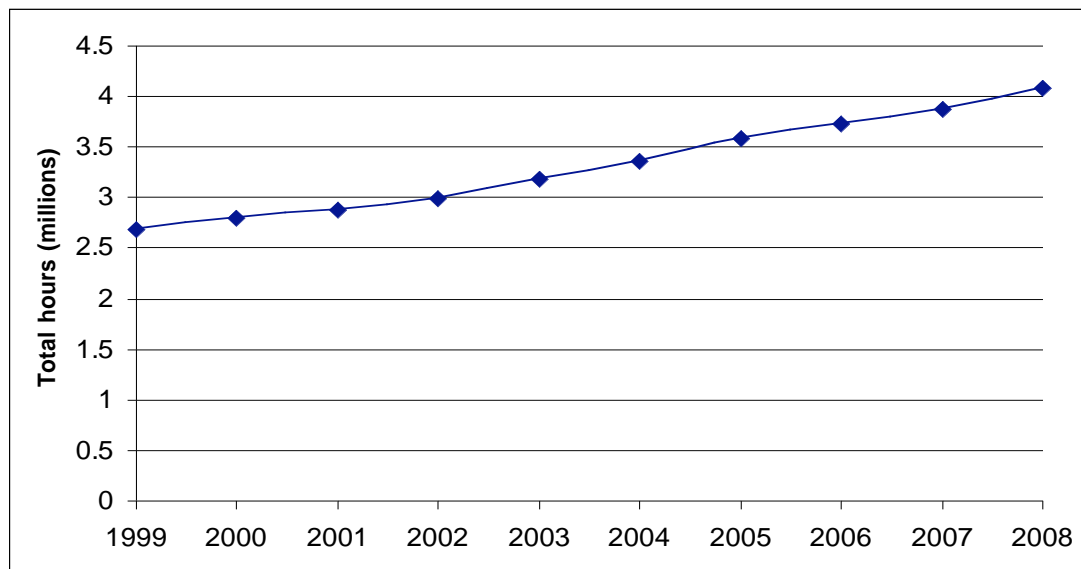
**Figure 11** Average number of contact hours per household per week, from 1999 to 2008, England (survey week in September)



Source: *Community Care Statistics 2008: Home Help/Care services for adults, England.*

Figures 11 and 12 show consistent upward trends over the past decade, towards more 'intensive packages' of weekly support, with total contact hours provided continuing steadily to rise.

**Figure 12** Estimated number of contact hours of home care provided, from 1999 to 2008, England (survey week during September)



Source: *Community Care Statistics 2008: Home Help/Care services for adults, England*.

Note: These data are Crown Copyright 2009, Department of Health. Figures contain estimates for missing data. Households receiving home care purchased with a Direct Payment are excluded.

Details of the number of weekly hours of home care supplied in the public (CASSR) and independent sector, rising year on year since 1999, are shown in Table 6.

**Table 6** Estimated number of contact hours of home care provided by sector, 1999 to 2008<sup>1, 2</sup> England, survey week during September

*rounded numbers*

	All sectors	CASSR	Independent
1999	2,684,200	1,324,200	1,360,100
2000	2,791,300	1,241,100	1,550,200
2001	2,881,700	1,161,900	1,719,800
2002	2,983,200	1,078,600	1,904,600
2003	3,174,800	1,043,700	2,131,100
2004	3,359,000	1,022,400	2,336,600
2005	3,576,800	952,100	2,624,700
2006	3,726,000	920,000	2,806,000
2007	3,874,300	843,100	3,031,200
2008	4,082,900	764,100	3,318,800

Source: *Community Care Statistics 2008: Home Care Services for Adults, England*, Health and Social Care Information Centre, 2009, p8. Notes: 1. Contains estimates for missing data. Components may not add to totals due to rounding. 2. Households receiving home care purchased with a Direct Payment are excluded.

As already mentioned, for every 1,000 people in the population in 2001, there were 9 paid care workers. (In some local authorities, this figure rose to above 13, while in others it fell below 7.) Their detailed numbers (at that time, as recorded in the 2001 Census) are shown in Table 7. Care workers are statistically much more likely than other workers to also be providing unpaid care to their families, friends or neighbours<sup>45</sup>.

**Table 7 Care workers and care assistants, by form of employment and sex: England, 2001**

<b>Women</b>	<b>Numbers</b>
Part-time employees	215,383
Full-time employees	170,613
Self-employed	7,354
<b>Total women</b>	<b>393,350</b>
<b>Men</b>	
Part-time employees	11,636
Full-time employees	38,153
Self-employed	1,797
<b>Total men</b>	<b>51,586</b>
<b>ALL</b>	<b>444,936</b>
<b>Number per 1,000 people</b>	<b>9.1</b>

Source: 2001 Census, Crown copyright.

Recent exploratory research<sup>46</sup> suggests very few home care providers are currently using telecare to deliver their services more effectively. Some working in this field seem to fear telecare might supplant their jobs or ‘depersonalise’ their services, although there is no reliable evidence supporting this view. There is almost certainly scope to enhance the efficient organisation of homecare services, at the same time improving client safety and wellbeing, **through more widespread use of well-managed and integrated telecare systems.**

<sup>45</sup> Yeandle, S, Shipton, L and Buckner, L (2006) *Local Challenges in Meeting Demand for Domiciliary Care: synthesis report*, Sheffield: Centre for Social Inclusion, p43.

<sup>46</sup> Yeandle, S and Fry, G (2009, in press) *The Potential of ICT in Supporting the Provision of Domiciliary Care, with particular attention to the case of immigrant care workers and informal carers in England* Seville, Spain: Institute for Prospective Technological Studies.

## **2 The current system of care and support: unsustainable?**

There are two main reasons why the current system of care and support, without significant change and new approaches to the delivery of care, is unsustainable in the future: its **rising cost** and the **lack of sufficient human resources** to deliver care in the same way as today. The squeeze on costs, already indicated, has been sharply exacerbated by the financial crisis which emerged in 2008; the shortage of human resources affects both unpaid carers and paid workers in the healthcare system, and has been quite widely signalled in research and policy documents, although it has been less widely discussed.

The costs of the existing system of care and support are direct, indirect and in some cases 'hidden'. They were comprehensively examined (insofar as they relate to older people), in the Wanless Review 2005-6, which clearly demonstrated the scale and importance of the challenges ahead in this field<sup>47</sup>. In all three categories, expenditure is continuing on a consistent upward trajectory, even though wages in home care work remain extremely low (the average legally employed home care worker currently gets only £6.56 per hour, marginally above the National Minimum Wage), and access to services is increasingly tightly rationed, through local authorities' application of the FACS criteria relating to needs assessment, and through means-testing of each individual's eligibility for publicly funded support.

### **Social Care spending**

In recent years, real term increases have been recorded in spending on social care (see Box 1), although the rate of increase slowed in 2006-7. Budgets in coming years will be tighter (because of pressures on public spending arising from the 2008-09 financial crisis / recession) at a time when the number of people needing care and support will be rising. This means that finding cost savings and efficiencies will be crucial. **In delivering these efficiencies, the role of telecare could be especially important.**

For councils, the volume of social care activity is high, and continuous client turnover, both in terms of sick, disabled and older people, and of their carers, creates significant pressures in terms of recording, assessing, monitoring and reviewing each highly individual case for support or services. As shown in Box 2, councils deal with

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<sup>47</sup> Sir Derek Wanless's review was published in 2006 as *Securing Good Care for Older People: taking a long-term view* London: The Kings Fund.

almost 40,000 new referrals every week and carry out very large numbers of assessments and reviews.

### **Box 1 Adult Social Care Spending**

*English CASSRs<sup>48</sup>, 2006-7*

- **Councils spent £16.5 billion (gross) on social care for adults**  
*Up 1.2% in real terms from 2005-06; annual rises of 4% in 2004-05, 8% in 2005-06.*
- **£9.7 billion (59%) was spent on services for older people**  
*Down from 61% in 2005/6*
- **£3.6 billion (22%) was spent on people aged 18-64 with learning disabilities**  
*21% in 2005/6. Between 2003-04 and 2006-07, expenditure on adults with learning disabilities rose by 17% and on adults with physical and sensory impairments by 15% (in real terms).*
- **Half of councils' net spending on services was on care in care homes**  
*The annual shift of net expenditure from residential and nursing care to community services was about 1% in each of the previous five years.*
- **£2.36 billion (net) was spent on home care**  
*46% of all community services expenditure, and a 2% increase (real terms) on 2005/6. From 2002-03 to 2005-06 the annual increase was almost 10% p.a.*
- **£291 million (net) was spent on supported accommodation and £557 million (net) on Supporting People funds (in 'ordinary housing')**  
*Representing 24% of net council spending on community services for adults with learning disabilities and 32% of spending on adults with mental health needs.*
- **£344 million (net) was spent on Direct Payments**  
*7% of net community services spending. £2.50 in every £100 of gross adult social care spending was on DPs (compared with £2 in 2005-06). Numbers of DP users have been rising: from 32,200 adults and older people in March 2006, to 40,600 in 2007 and 55,900 in 2008<sup>49</sup>.*
- **£55m<sup>50</sup> was spent on Individual Budgets held by 4,800 people**  
*The average annual gross value of an IB was £11,450, and about half of IB users had a DP as part of their IB arrangement. (March 2008)*

*Source: CSCI (2009)<sup>51</sup>*

Throughout the social care system (as evidenced, year on year, in the CSCI *State of Social Care in England* annual reports), shortages of caring labour and of social care professionals, visible in continuing high vacancy and turnover rates, already jeopardise the quality, consistency and accessibility of care services. While innovations and improvements have been achieved (e.g. in support for carers funded through local authorities' use of their Carers Grant allocations<sup>52</sup>, and through increased uptake of Direct Payments), CSCI inspections of social care service

<sup>48</sup> *Councils with Adult Social Services Responsibilities.*

<sup>49</sup> Rising to 67,000 the following year, according to official data on referrals, assessments and packages of care.

<sup>50</sup> 4,800 users @ average £11,450 = £54.96m.

<sup>51</sup> Commission for Social Care Inspection (2009) *The State of Social Care in England*, p17.

<sup>52</sup> Fry, G, Price, C and Yeandle, S (2009 forthcoming), *Local Authorities' Use of Carers Grant*, report prepared for the Department of Health.

provision have also reported evidence of some poor quality services, and voluntary agencies continue strongly to emphasise their concerns about the quality, reliability and flexibility of social care services (for example in their submissions to the House of Commons Work and Pensions' Committee's 2008 Inquiry on Carers, published in Volume II of its report).

### **Box 2 Providing Services – England, 2007- 2008**

**Councils recorded 2.07 million contacts from new clients during the year** (up 1% from 2.04m in 06-7). These originated as referrals of the following kinds:

▪ self-referrals	29%	591,000 - 11,365 per week
▪ secondary health services (e.g. hospital wards)	23%	475,000 - 9,135 per week
▪ family, friends or neighbours	14%	287,000 - 5,519 per week
▪ primary/community	13%	263,000 - 5,058 per week
▪ other (including other LA departments)	22%	424,000 - 8,154 per week

**1.05 million of these contacts led to further assessment of the client's needs or to the commissioning of ongoing services**

- 661,000 new clients were assessed for the first time – averaging 12,712 per week
- 1.34 million reviews for existing clients were carried out – averaging 25,769 per week

**1.77 million clients received services funded by CASSRs:** among them:

- 27% were new clients (477,000 people)
- 69% were older people (65+) (1.22 million)
- 87% received community services (1.53 million clients)
- 11% received independent sector residential care (199,000 clients)
- 6% received nursing care

**The 1.53 million clients supplied with community services received:**

▪ home care	577,000 clients
▪ equipment and adaptations	519,000 clients
▪ professional support (e.g. OT)	507,000 clients
▪ day care	227,000 clients
▪ meals	136,000 clients

*(extracted from Community Care Statistics 2007-8<sup>53</sup>)*

In the policy sphere, following the emphasis on developing a mixed economy of care, first set in train 20 years ago at the time of the *NHS and Community Care Act 1989*, there has been a strong more recent emphasis on encouraging and supporting the development of a new vision for the national social care system, emphasising independence and choice for individuals who need care and support, calling for arrangements which accord dignity and respect to disabled people, those using health and social care services and their (unpaid) carers, and arguing for a more integrated health and social care system capable of tailoring support and services to the needs of individuals and their families. Box 3 summarises some of the key recent developments highlighted in official documentation.

<sup>53</sup> NHS Information Centre (2009) *Community Care Statistics 2007-8: referrals, assessments and packages of care for Adults, England, National Report and CASSRs* London: Government Statistical Service.

**Box 3 Social Care Policy Change: England, 2007- 09**

The Department of Health's stated aim is 'to define policy and guidance for delivering a social care system that provides care equally for all, whilst enabling people to retain their independence, control and dignity'. A framework for cross-sector reform was set out in *Putting People First: A shared vision and commitment to the transformation of Adult Social Care*, a 'Ministerial Concordat', launched December 2007.

<p><b>Putting People First</b> <i>a shared vision and commitment to the transformation of adult social care</i> 10/12/2007</p> <p>This established the collaboration between central and local Government, the sector's professional leadership, care providers and the regulator. It set out shared aims and values to guide the transformation of adult social care, and recognised that the sector will be working across agendas with users and carers to transform people's experience of local support and services.</p>	<p><b>Personalisation</b></p> <p>Government has emphasised its ambition to 'put people first' through radical reform of public services. It intends that people should be able to live their own lives as they wish, confident that services are of high quality, are safe and promote their own individual needs for independence, well-being and dignity.</p>
<p><b>Dignity in Care</b></p> <p>The stated aim of the <i>Dignity in Care</i> campaign is to eliminate tolerance of indignity through raising awareness of the issues and inspiring people to take immediate action.</p>	<p><b>Transforming social care</b> Local Authority Circular, 17/01/2008</p> <p>Information was issued to councils to support the transformation of social care, including a copy of the Social Care Reform Grant Determination, and details of a new ring-fenced grant to help councils redesign and reshape their systems over 3 years.</p> <p><b>Independent living</b></p> <p>The focus of this policy is on enabling disabled people to fulfil the roles and responsibilities of citizenship from youth through to old age, while supporting their dignity, independence and choice.</p>

**Care services efficiency delivery**  
*Supporting the implementation of independent recommendations to improve public sector efficiency.*

A Care Services Efficiency Delivery programme (CSED) was established by the Department of Health in June 2004. Its aim is to support implementation of the recommendations of the Gershon review of public sector efficiency. The programme works collaboratively with local councils, the NHS and service providers, to develop and support initiatives which provide sustainable efficiency improvements in adult social care. CSED has a target to assist councils to deliver £684 million in efficiency improvements in 2007 and 2008, via six workstreams for efficiency improvement, focused on:

- *effective monitoring and modernisation of home-based care*
- *assessment and care management*
- *demand forecasting and capacity planning*
- *homecare re-enablement*
- *improved procurement practices*
- *transforming community equipment and wheelchair services.*

The programme is being rolled out through a regional strategy and covers all 150 CSSRs in England.

*(adapted from official Department of Health website, accessed spring 2009)*



In one of its final publications, CSCI, its functions now carried out by the new Care Quality Commission, set out a new framework for social care, highlighting weaknesses in the current system and identifying key aims for the new arrangements needed in the future. This is included in Box 4.

<b>Box 4 A New Framework for Social Care<sup>54</sup></b>	
<i>Assessment of Current Situation</i>	<i>Aims of New Framework</i>
Social care is seen as stigmatising and narrowly focused	Social care is part of a new universal system of care and support
Some people are not getting good advice and information about the options for support	Everyone, including self-funders, has access to good advice and help to make decisions
Mainstream services are not always geared up to improve the quality of life for all local citizens	To achieve a more concerted approach to community well-being and support for all
An inadequate emphasis on human rights and dignity and respect for everyone	An increased emphasis on human rights, by levering in all community resources
Carers' rights are not always recognised or addressed	Carers' rights are highlighted and practice improved
Some people are being assessed as to their eligibility <i>for services</i> and/or being financially assessed before their needs are assessed	To clarify that priorities for intervention by social care are based on barriers to people's dignity and quality of life, not on eligibility <i>for services</i> , nor – in the first instance – financial means
There is confusion that people with complex needs always need expensive complex support, and that people with 'low-level' needs need 'low-level' services	To ensure certain services are not equated with 'levels' of need. Simple services may meet the needs of a person with complex needs; and a person with 'low-level' needs may need a complex package of services
People seeking services find the current system of eligibility – and the gradations between bands – complex to understand and lacking in transparency between different groups and different council areas.	The new 'priorities for intervention' are less mechanistic, but could still be used to control expenditure, whilst a national resource allocation formula should make eligibility decisions more transparent and 'portable'
FACS is an explicitly hierarchical system which excludes people from services	The new approach seeks to be much more inclusive

*Shaping the Future of Care Together*, the government's Green Paper on reform of the care and support system, was published on 14<sup>th</sup> July 2009. It highlighted the challenges faced by the current system and emphasises the need for radical reform. Proposals for consultation outlined in this document include a 'National Care Service'

<sup>54</sup> Reproduced from Commission for Social Care Inspection (2008) *Cutting the cake fairly: CSCI review of eligibility criteria for social care* (Ref. CSCI-SSR-157-3000-CWP-102008).

that 'is fair, simple and affordable for everyone'. In the Green paper (endorsed by the Secretaries of State for Health, Work and Pensions, Communities and Local Government, Children, Schools and Families, Business, Innovation and Skills and the Cabinet Office, plus the Chief Secretary to the Treasury), telecare is identified as '*particularly helpful in keeping people safe in their own homes, and giving them confidence. Using technology to enable delivery of high-quality support will be a vital element of the future care and support system. We will continue to promote telecare so that people feel more confident about staying in their own homes for longer*'<sup>55</sup>.

In the health service, this shift in policy, away from hospital and residential care except when genuinely needed, has already led to very considerable change. Over the past 30 years there has been a dramatic reduction in the number of beds in wards open 24 hours a day in English hospitals – from around 360,000 available daily in 1979, to around 160,000 in 2008. This trend has been affected by big falls in the number of beds available for people with a learning disability or mental illness (for whom care outside hospital is now widely considered to be more appropriate). It has continued throughout the past decade and includes a reduction in the total number of geriatric and acute beds. Official data show that between 1997/8 and 2007/8, the **number of hospital beds available daily** fell as follows:<sup>56</sup>

- learning disability – down 62% from 8,200 to 3,147
- mental illness – down 26% from 36,600 to 26,929
- maternity - down 22% from 10,800 to 8,441
- acute – down 6% from 107,800 to 101,080
- geriatric – down 31% from 30,200 to 20,700

Despite these developments, the cost of the NHS has continued to rise (in part because of explicit public policy commitments to invest in it); by 2007/8 **public spending on health represented some 7.3% of UK GDP** (up from 5.4% a decade earlier), with non-public spending on health bringing this figure up to about 8.4% (putting the UK in the middle rank of EU states on this measure)<sup>57</sup>. This trend may be at an end, however, with the new pressures on public finances which have emerged in 2008/9. The NHS Confederation warned in a recent report (June 2009) that the health services '*needed to prepare for cuts of between £8bn and £10bn between 2011 and 2014, due to "extremely challenging" conditions caused by the*

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<sup>55</sup> Department of Health (2009) *Shaping the Future of Care Together*, Cm 7673, London: TSO, p 51.

<sup>56</sup> House of Commons Library, 2009, 'Beds and Activity' SN/SG/2641, p29

<sup>57</sup> House of Commons Library, 2009, 'Health expenditure' SN/SG/2640, p30

*economic downturn*,<sup>58</sup> while the NHS Chief Executive reportedly told health service finance directors that between £15bn and £20bn of efficiency savings were needed in 2011-2014, the equivalent of 6% of the NHS budget.<sup>59</sup>

Policies now in place, and those envisioned for the future (by local authorities and political parties of different complexions), all favour continuing to emphasise care and support at home as a key priority; timely hospital discharge, so that no-one occupies a costly hospital bed or a residential care place when they could be safely supported at home; and the management of a growing range of health conditions outside hospital and residential settings. These policies are widely seen as offering ways of supporting people at home with conditions as varied as dementia (at least in its earlier stages), heart disease, epilepsy, respiratory and circulatory conditions, mental health problems, learning difficulties, and progressive disabling illnesses such as multiple sclerosis. In the past decade, in part responding to new technological developments, an increasingly energetic discussion about **the role of telecare and telehealth in enabling this support at home to be safe, dignified and independent** for sick, disabled and older people has come to the fore. Most recently, its potential to support their carers as well has begun to be more widely debated too. Section 3 of this paper summarises some of the key messages from **a growing evidence base demonstrating how telecare can help sick and disabled people and their carers**. It also considers the strength of the evidence that, because telecare can do this at the same time as reducing unnecessary expenditure (mainly by reducing the need for residential or hospital care, but also by sustaining and supporting carers, and maintaining the wellbeing of sick, disabled or frail people, for whom entry to residential care or hospital is typically their least preferred option), **it is timely, if not urgent, to invest heavily in rapid expansion of telecare development programmes**, enabling telecare to become a routine and normal part of the infrastructure of support for everyday life for all whose illness, disability, frailty or vulnerability means that they would benefit from its support.

Other social, economic and technological developments underscore the fact that the context for supporting sick and disabled people at home has greatly changed over the past twenty years. In surveys, most people express a strong view that they want to live independently at home for as long as possible<sup>60</sup>; indeed many say they would

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<sup>58</sup> NHS Confederation (2009) *Commissioning in a Cold Climate*, Discussion Paper, p2.

<sup>59</sup> Reported in *Daily Telegraph*, 13 June 2009.

<sup>60</sup> Poole, T (2006) *Telecare and Older People*, Wanless Social Care Review Background Paper, London: The Kings Fund, p16.

also prefer to die at home, although at present that is the experience of only a minority of those at the end of their lives, as 60% actually die in hospitals<sup>61</sup>.

Increasingly, those needing care or support at home, especially older people, live some distance from their closest family members, often relying on contact by phone and the internet for some of their family support, and needing a mixed system comprising home adaptations, technology to support their safety and security, community contacts to maintain their social inclusion, and a wide range of local services, including but not confined to homecare, to assist them with personal care, and the management of their households and everyday lives.

Change and variability in older and disabled people's proximity/dependence on family support also needs to be taken into account in planning future care and support, as does consumer choice, which most expect to feature more strongly in the requirements future generations of older and disabled people will make of the health and social care system. Rapid changes are also likely in the extent to which the group of people needing support has access to, and uses modern communications technology, via telephones, including mobile phones, new systems making use of their televisions to aid their access to information and personal contacts, and the development of new ways of using computers and the internet for social networking, communication with professionals and remote monitoring of health conditions and vital signs.

One indication of the pace of change in this area can be seen in data on internet access among the 65+ age group. Between 2006 and 2008 the number of people aged 65+ who had *never* used the internet fell from 82% to 70%. In this age group, 1 in 4 people (26%) had used the internet in the past 3 months (up from 15% two years before). The next cohorts of older people will certainly include many more regular internet users. Already by 2008, only a third of people aged 55-64 had *never* used the Internet (down from 43% in 2006), and in this age group almost two thirds (63%) had used it in the past 3 months (up from 52%). In the next age group (45-54) only 1 in 6 (17%) in 2008 had never used the Internet (down from 26%), and the vast majority (78%) had used it in the previous three months (up from 68% in 2006). By 2008 (and for the first time), over half of those over 65 year olds who were recent

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<sup>61</sup> Department of Health (2009) *End of Life Care Strategy: first annual report*, p8.

Internet users reported that they used the Internet every day or almost every day (54%)<sup>62</sup>.

Social change of this kind is certain, in time, to be transformative of the experiences of many older, sick and disabled people and their carers. The third section of this paper now turns to evidence about the specific benefits of telecare systems, for different users, and from different perspectives across the health and social care system. This section highlights the most robust evidence from a growing body of evaluations, studies and reports, beginning with a summary of the recent policy developments and investments which have brought telecare systems into use, albeit affecting only a minority of their clients, in local authorities up and down the country.

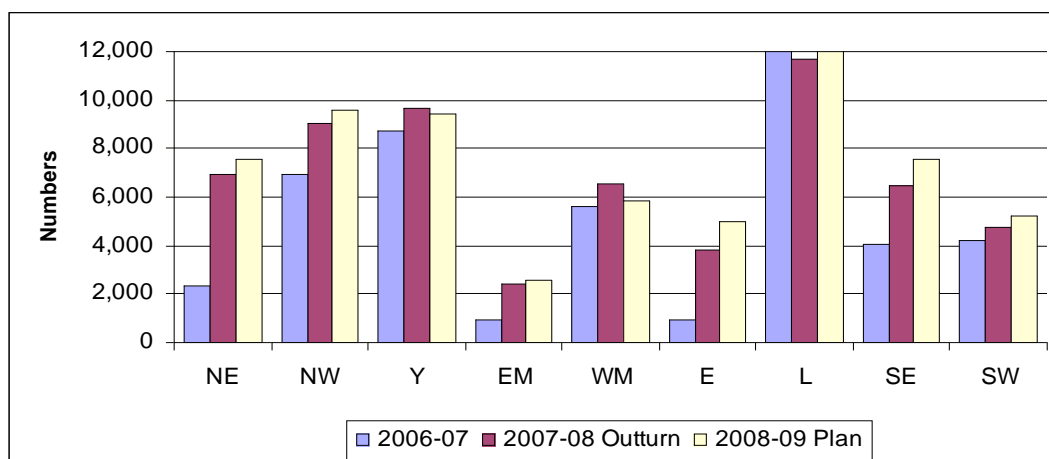
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<sup>62</sup> ONS (2009) *First Release: Internet Access 2008*, pp4-5.

### 3 Technology can help

Telecare initiatives, beyond the simple community alarm systems first established well over 30 years ago, have existed in England now for over a decade, with various local pilots and projects put in place in the 1990s, and telecare mentioned in the government's first National Strategy for Carers, in 1999. In 2006 there were estimated to be around 1.4m telecare users in England (the vast majority using simple pendant alarms)<sup>63</sup>. By 2009, this figure had increased to above 1.5 million telecare users<sup>64</sup>. In total, councils in England reported just over 140,000 new telecare service users in 2006-7 and about 150,000 new service users in 2007-8, with plans to add almost 160,000 more in 2008-9<sup>65</sup>. Details of the regional distribution of these telecare users, and the numbers supported by councils, by other agencies (and in partnerships) are presented, for each of three years, in Figures 13-15.

**Figure 13 New service users aged 65+ provided/to be provided with item(s) of telecare equipment at homes (by CASSR )**



*Source: Telecare performance reports from social care authorities (2008)*  
[www.dhcarenetworks.org.uk/IndependentLivingChoices/Telecare/TelecareOutcomes/](http://www.dhcarenetworks.org.uk/IndependentLivingChoices/Telecare/TelecareOutcomes/)

Telecare systems support people in their homes and are tailored to meet their needs. They include: detectors; monitors; alarms; pendants; monitoring; call centres; and response services<sup>66</sup> – one broad definition sums up what telecare offers as ‘*the delivery of health and social care to individuals within the home or wider community, with the support of information or communication technologies*’<sup>67</sup>. In England, the

<sup>63</sup> Department of Health (2004) *Building Telecare in England*.

<sup>64</sup> The number of telehealth installations remained very small, at approximately 5,000.

<sup>65</sup> Some experts consider these figures too high, suggesting they may not all be new users of telecare in the year indicated. Even if accurate, they still represent only a very small fraction of potential telecare beneficiaries. Also, each year some users cease to use telecare, on death, entry to residential/hospital care, or for other reasons.

<sup>66</sup> Systems in which sensors are installed around the home, and used in conjunction with a 24/7 web browser screen, usually to check safe use of kitchens and bathrooms are also now available and in use.

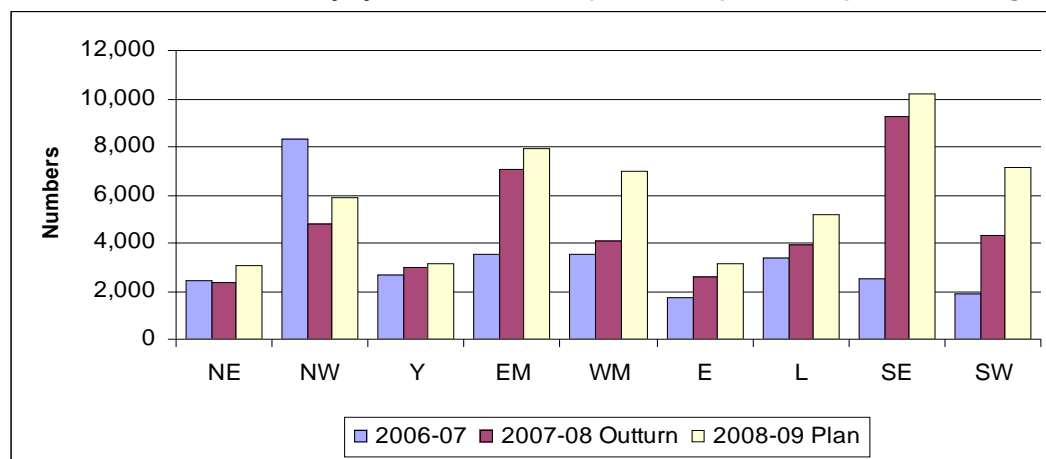
<sup>67</sup> Bayer, S, Barlow, J and Curry, R (2007) ‘Assessing the Impact of a care innovation: telecare’, *System Dynamics Review*, 23 (1) pp 61-80, cited in Williams (2008) *op. cit.*

recent growth in telecare use arises from a significant public policy initiative for telecare developments, the *Preventative Technology Grant*, announced in 2004, and from the Department of Health's document '*Building Telecare in England*' published in 2005. At the time of its publication, the Department noted:

*Telecare offers the promise of enabling thousands of older people to live independently, in control and with dignity for longer.*

Also associated with this initiative, a *Telecare Learning and Improvement Network* (LIN) was set up, and later (in 2008) three *Whole Systems Demonstrators* (see Box 6) were established (with others added in 2009/10). Through the *Preventative Technology Grant* (PTG), £80 million was invested to help English local authorities develop telecare programmes. The overall aim of the PTG was to provide telecare support to an additional 160,000 older people nationwide. £30 million was made available in 2006/7, and £50 million in 2007/8 (PTG is no longer available); the grant was designed to 'pump-prime' telecare projects which could, in the longer term, become 'sustainable'. In implementing this initiative, local authorities were expected to work with their partners in housing, health, and in the voluntary and independent sectors as well as with service users and carers<sup>68</sup>. The key aims of the PTG are set out in Box 5.

**Figure 14** New service users aged 65+ provided/to be provided with items of telecare equipment at homes (CASSR in partnership with other agency)



Source: as Figure 10

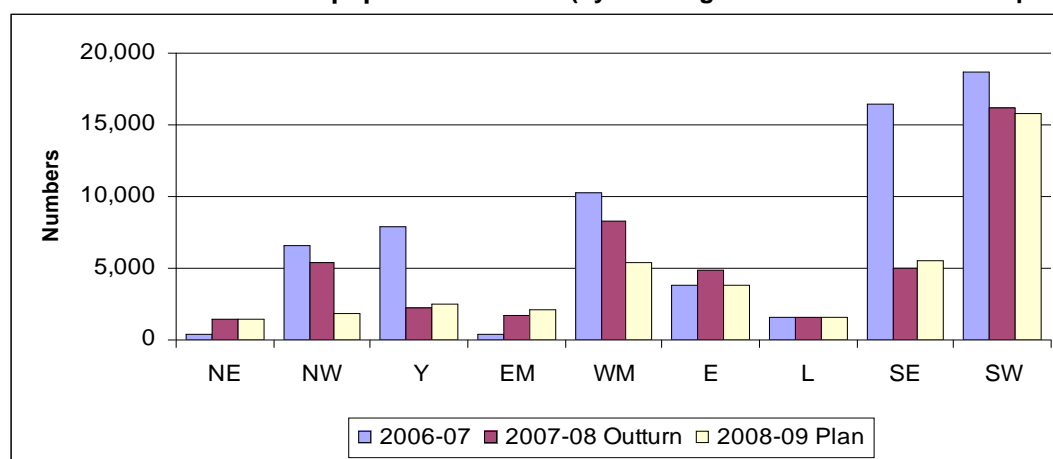
In 2006 a National Framework was negotiated by the *NHS Purchasing and Supply Agency* (NHS PASA) to support the development of a strong telecare infrastructure<sup>69</sup>.

<sup>68</sup> There is evidence this is beginning to happen. For example, in the city of Leeds the Telecare Service established using the Preventative Technology Grant, which now has around 3,000 users, has since 2009 been funded from mainstream local authority budgets, including *Supporting People* (Leeds Telecare Service, presentation to WSDAN conference, 11 June 2009).

<sup>69</sup> <http://www.pasa.nhs.uk/PASAWeb/Productsandservices/Telecare/NFA.htm>

NHS PASA also launched a four-year (2006-10) contract for telecare products and services, covering telecare equipment, installation, maintenance, monitoring and response services.

**Figure 15** New service users aged 65+ provided/to be provided with item(s) of telecare equipment at home (by other agencies without CASSR input)



Source: as Figure 10

### Box 5 Preventative Technology Grant

*The grant is designed to help local authorities and their partners address the challenges of a changing and ageing society with increased expectations, such as the right to have choice about services, control over their delivery and the right to be able to live independently at home with dignity for life. By helping co-ordinate our approach, the grant seeks to create the best possible atmosphere for the new telecare industry to flourish.*

*Expected outcomes:*

*The grant should be used to increase the numbers of people who benefit from telecare, by at least 160,000 older people nationally. Its use will:*

- *Reduce the need for residential/nursing care;*
- *Unlock resources and redirect them elsewhere in the system;*
- *Increase choice and independence for services users;*
- *Reduce the burden placed on carers and provide them with more personal freedom;*
- *Contribute to care and support for people with long term health conditions;*
- *Reduce acute hospital admissions;*
- *Reduce accidents and falls in the home;*
- *Support hospital discharge and intermediate care;*
- *Contribute to the development of a range of preventative services;*
- *Help those who wish to die at home to do so with dignity.*

*Increased reassurance for service users and carers resulting from the use of telecare will release services from constraints created by risk-averse policies and practices. In doing so, this will enable them to become more responsive to the lifestyles of individuals.*

*Deployment of the grant is also expected to contribute to the wider health, housing and social care policy agenda, including delivering on National Service Frameworks (NSFs), the NHS system reform agenda and the new Vision for Adult Social Care.*

Extract from *Building Telecare in England* (Department of Health, 2005)



The Telecare LIN continues to support local service redesign through the application of telecare and telehealth to aid the delivery of housing, health, social care and support services for older and vulnerable people. It also collates statistical data and evaluation evidence about the effectiveness and impact of telecare. In its December 2008 report, it concluded that, based on professional assessments and observational data, evidence indicated that most of the programme 'intentions' (as set out in Box 5), had been achieved.

To date, most telecare users have been older people (usually with needs assessed as critical or substantial) who - prior to the implementation of telecare - already have a care plan in place, and who also need personal care. They are thus typically clients for whom telecare is *additional* to other support (from a carer or home care worker). Experts increasingly consider that to support people who do not (yet) need this high level of personal care with telecare installations would also be highly desirable (see below). It is nevertheless true that telecare can also *reduce* certain kinds of support (e.g. some overnight stays by carers/care workers otherwise needed by people with learning difficulties or with dementia may no longer be necessary, some waking nights can be reduced to sleeping nights; and 15 minute medication checks can potentially be reduced to single (longer) visits through the use of medication reminder technology).

**Box 6      The Whole Systems Demonstrators (WSD) Programme**

The three WSD sites (Kent, Cornwall and the London Borough of Newham) are recruiting GP practices to take part in the WSD programme, through targeted information, practice visits and roadshows. Aiming to have over 7,000 telecare and telehealth installations in individuals' homes, this will be the largest trial of telecare and telehealth in the UK. Each site will recruit over 1,000 patients/users for telehealth and over 1,000 patients/users for telecare.

The aim of the Programme is to assess the true benefit of integrated health and social care supported by advanced assistive technology (telehealth & telecare); a robust evaluation has been identified as the key to proving the business case for the investment needed.

The evaluation, provided by a consortium of UK universities, uses a methodology which features a Randomised Control Trial, and the programme is focusing on people with Chronic Pulmonary Disease (COPD), Heart Failure and Diabetes, and adults with social care or health and social care needs at risk of hospital admission. It will assess the impact on emergency admission rates and bed days, patient/carer experience and quality of life and the impact on Primary Care, to help inform future mainstreaming of this activity.

*Adapted from DH website*

Evidence reviewed by the Telecare LIN suggests that while homecare workers could also be involved actively in assisting service users to access and use telecare, so far this is not often happening, partly because of 'structural barriers' limiting care workers' roles, but also because most commissioning is focused on 'hours of homecare provided', rather than on outcomes for users or carers. Some small experiments have been set up with homecare workers using phone call/webcam support (for example to remind care users to take medication, attend appointments, etc.), and some councils now have arrangements in place to monitor dangerously low temperatures within the homes of vulnerable older and disabled people. This evidence runs counter to the negative perception, sometimes expressed (though rarely evidenced) that personal contact may become reduced through telecare, and that telecare is intrusive or causes isolation. Pilot and introductory studies of telecare implementation show users of social care services prefer the least intrusive response that enables them to manage risks in their lives, as long as valued personal contact is maintained, and that telecare can be an appropriate, dignified and acceptable way of checking for some personal care needs, for example in cases of enuresis or epilepsy.

Across the country telecare has been expanding – but in most localities only very slowly. Where it has been offered, it has been welcomed and found extremely useful by telecare users. Expenditure on both telecare infrastructure and telecare equipment and services is now in evidence in all regions of England (see Tables 8 and 9), but is still very modest when compared with total health and social care spending. Relative to the size of the total population capable of benefiting from it, however, telecare's reach remains limited, almost everywhere, to what can be achieved through pilot projects and small scale local schemes.

The pattern of telecare implementation since 2006 has been nowhere near fast enough to keep pace with the growing numbers of frail, sick and disabled people living alone at home who might benefit from it, and small pilot schemes and projects will not be able to deliver the benefits needed to address the very substantial challenges outlined earlier in this paper. **This is why a new approach to mainstreaming telecare is now being discussed, and needs to be implemented,** as is already happening in a small number of innovative local authorities. The Telecare LIN review states:

*... a combination of case studies, internal and external reviews and evaluation **has already convinced a number of authorities and their partners to develop medium and long-term plans for telecare and***

**telehealth.** Other organisations will be making decisions in early 2009 on longer term plans for mainstreaming and sustainability.<sup>70</sup>

Essex County Council, for example, has allocated £4m to telecare equipment and support in its budget for 2009-2010. Setting out its vision of delivering the best quality of life in Britain, its *Telecare Pledge* (part of the £87m “EssexWorks” strategy, based on extensive consultation with residents and stakeholders) offers new users aged 85 and older a completely free telecare service for one year, covering installation, equipment and a careline connection. The service is being made available to these older residents without reference to other eligibility criteria, and a full evaluation of its impact is planned<sup>71</sup>.

A number of expert reviews of the fast expanding evidence base on telecare have now been conducted, highlighting those benefits of telecare for which there is a good standard of evidence. For example, in an authoritative overview report for the Department of Health in 2006, the Evidence Working Group of the Telecare Policy Collaborative noted:

***There is mounting evidence to suggest that telecare can make a difference to individuals and their carers, and to the health and social care system as a whole. It can help to improve people’s independence, relieve stress on informal carers, and improve clinical and care outcomes***<sup>72</sup>.

**Table 8 Spending on telecare infrastructure**

	2006-07 Plan	2007-08 Plan	2006-07	2007-08 Projected	2007-08 Outturn	2008-09 Plan
	(£'000s)					
ENGLAND	£20,181.00	£21,247.00	£17,900.00	£26,666.00	£23,179.00	£25,132.00
NE	2,558.00	2,639.00	2,235.00	2,995.00	4,202.00	3,596.00
NW	2,996.00	3,391.00	3,297.00	4,404.00	3,570.00	4,122.00
Y&H	2,121.00	2,272.00	1,716.00	2,676.00	1,933.00	2,353.00
EM	1,497.00	1,682.00	1,077.00	2,052.00	1,530.00	1,862.00
WM	2,171.00	2,401.00	1,288.00	2,808.00	1,692.00	2,139.00
E	1,976.00	2,299.00	1,243.00	1,862.00	1,072.00	1,372.00
L	4,414.00	4,494.00	3,944.00	6,141.00	5,722.00	5,569.00
SE	1,095.00	965.00	1,342.00	1,635.00	1,234.00	1,573.00
SW	1,353.00	1,104.00	1,758.00	2,093.00	2,224.00	2,546.00

Source: as Figure 10

<sup>70</sup> Clark, M (2008) *Telecare outcomes and mainstreaming*, Department of Health.

<sup>71</sup> <http://www.essexcc.gov.uk/vip8/ecc/ECCWebsite/dis/guc.jsp?channelOid=71101&guideOid=93301&guideContentOid=71379>

<sup>72</sup> CSIP (2006) ‘*Building an Evidence Base for successful telecare implementation – updated report of the Evidence Working Group of the Telecare Policy Collaborative chaired by James Barlow – November 2006*’, CSIP Factsheet, [www.cat.csip.org.uk/telecare](http://www.cat.csip.org.uk/telecare).

**Table 9 Spending on telecare equipment and services**

(£'000s)

	2006-07 Plan	2007-08 Plan	2006-07	2007-08 Projected	2007-08 Outturn	2008-09 Plan
ENGLAND	£34,378, .00	£49,581.00	£29,949.00	£57,574.00	£42,798.00	£54,009.00
NE	2,656.00	3,240.00	3,014.00	4,305.00	5,560.00	6,102.00
NW	5,468.00	7,337.00	4,009.00	8,254.00	4,411.00	6,481.00
Y&H	3,871.00	5,424.00	3,737.00	6,155.00	5,553.00	6,380.00
EM	2,678.00	4,153.00	2,466.00	4,728.00	2,597.00	4,439.00
WM	3,177.00	4,913.00	2,415.00	7,201.00	3,176.00	5,731.00
E	1,847.00	3,747.00	875.00	4,765.00	2,718.00	3,684.00
L	8,478.00	10,006.00	8,870.00	12,755.00	11,487.00	13,066.00
SE	3,199.00	5,636.00	2,378.00	5,093.00	3,853.00	4,559.00
SW	3,004.00	5,125.00	2,185.00	4,318.00	3,443.00	3,567.00

Source: As Figure 10.

Noting that by January 2006 almost 9,000 articles reporting on the outcomes of telecare trials had been published in scientific journals, and focusing specifically on 100 studies which met high 'quality thresholds', the Working Group addressed the question, 'What's the available evidence for the benefits of telecare?'. Their answer was that:

- For **'vital signs monitoring'**, there was an **'emerging' evidence base for benefits to individuals, and 'some evidence' of care system benefits.** Benefits for those with conditions such as diabetes, hypertension, congestive heart failure and chronic obstructive pulmonary disease had all been shown in well-conducted studies.
- For **'safety and security monitoring'**, the evidence base was less robust because 'no studies met the quality criteria' set. However *'this does not mean that such services do not provide significant benefits, as 'important observational studies' showing positive benefits, and 'numerous anecdotal reports of benefits for individuals' exist (p6).* The report also highlighted the following points:
  - *'Telecare.. helped West Lothian **achieve the lowest proportion of delayed hospital discharges of older people in Scotland and reduced the average stay in private care homes from 36 to 18 months'***
  - *The 'Safe at Home' scheme in Northampton **suggested that telecare helped people (with dementia) to keep living independently in their own homes for longer'***
  - *Data from Birmingham's community alarm service **'showed that a substantial return on investment in the form of reduced hospitalisation costs and reduced residential care could be achieved over a ten year period'**<sup>73</sup>*
  - *Evidence from a telecare scheme for frail older people in North West Surrey **'shows that telecare focused on safety and security could reduce the number of people entering residential care by 11% in the fifth year after implementation or perhaps 25% in year 20'**<sup>74</sup>*

<sup>73</sup> Here citing Brownsell et al's 2001 study published in *Journal of Telemedicine and Telecare*, Vol 7 pp63-72.

<sup>74</sup> Here citing Bayer et al's 2004 study, published in the *Proceedings of the System Dynamics Society Conference*, Oxford, July 2004.

- For ‘**information, advice and support**’ there was already a ‘**good**’ evidence base of benefits for individuals, and ‘**some evidence**’ of benefits for care systems.

The Group also emphasised in their report that:

*‘it is important that a perceived lack of evidence meeting conventional quality standards for health technology trials is not used as an excuse for not exploring the use of telecare. Telecare is an emerging type of care delivery and there is now sufficient evidence to assist in setting up new trials and schemes. (p9)*

In a separate recent review, Williams<sup>75</sup> notes that, “**importantly, no study (of telecare) has yet demonstrated any negative or adverse effects**” (p2). Indeed, ‘most studies and case reports find that telecare has advantages over non-telehealth alternatives’ (p1). Benefits of telecare observed in studies considered in Williams’ review include (pp1-2):

- ‘Reduced use of high cost care or hospitalisation’<sup>76</sup>
- ‘Improved quality of life’<sup>77</sup>
- ‘Greater patient security and self management and reduced mortality’<sup>78</sup>
- ‘Mild to moderate’ measurable clinical outcomes, especially re mental health and (to a lesser extent) heart disease<sup>79</sup>
- ‘Savings were made in acute bed days and professional time’ (p12) in telemonitoring of people with ‘acute unstable conditions’
- ‘The number of home visits to COPD patients using telemonitoring devices ‘dropped by around 80%’, with a separate study<sup>80</sup> showing ‘savings in acute bed days’ (p12)

This study also noted (pp2-3) that

- ‘Telecare should be targeted at medium rather than high frailty categories’
- ‘Patients tend to be readier than providers’
- ‘Introduction of telecare needs to be introduced as a form a service change’
- ‘It is important that telecommunications interventions are designed to acknowledge the emotional needs of patients and their carers’
- ‘Targeted workforce development is a key requirement’

Some weaknesses in the literature were also highlighted in this review, and included:

- ‘A persistent shortage of adequate measurement of cost effectiveness and patient satisfaction’
- Newer assistive and communications technologies currently have a weaker evidence base
- Evidence on vital signs monitoring ‘is dominated by small scale observational studies’, with ‘long-term clinical outcomes and efficiency ... yet to be assessed.’ (p11)

While some ‘dissenting voices’ can be found in the debate about the value of investing in telecare (usually arguing that evidence for some of the claims made for

<sup>75</sup> Williams, I (2008) *Telecare: a rapid review of the evidence 2005-8: a report prepared for the West Midlands Strategic Health Authority* (University of Birmingham and NHS West Midlands).

<sup>76</sup> Citing 4 separate studies.

<sup>77</sup> Citing 3 separate studies.

<sup>78</sup> Citing 3 separate studies.

<sup>79</sup> Citing DelliFraine and Dansky, (2008) ‘Home-based telehealth: a review and meta-analysis’, *Journal of Telemedicine and Telecare*, Vol 14, 62-66.

<sup>80</sup> Here citing Taylor, D M (2005) ‘Telemedicine – the way forward in chronic disease management?’ Tunstall Group, Yorkshire.

telecare remains insufficiently robust), the critics tend to argue for caution about over-emphasising the *scale* of the impact specific types of telecare intervention can make, rather than that telecare is in any way of itself damaging, costly or undesirable. For example, Loader et al<sup>81</sup> critique the idea that what they call '*ICT facilitated integrated care for older people*' offers a realistic prospect for '*providing cost-efficient services*'. However they focused their attention (in a world-wide literature review) on health informatics and the electronic management of clinical information, rather than on the adaptive technologies and social alarm systems with which this paper is concerned.

Similarly, in a review article published in spring 2007, Bayer et al<sup>82</sup> note:

*Despite the interest in the opportunities telecare may offer, and even though trials have demonstrated that the technology works and individuals can benefit through improved quality of life, there are few examples of mainstream services and the evidence base for its benefits is limited.(p63)*

Claiming that '*the benefits of telecare will only become fully effective many years after its implementation*, and that '*a gradual shift towards a telecare-supported delivery is .... realistic and desirable*' (p70), they nevertheless cite worldwide evidence to support the following points:

- *Telecare **reduces the rates of entry to institutional care homes**, where residents will remain on average for several years (p70)*
- *Telecare can be **expected to have an effect on hospital admissions** (p71)*
- *Telecare helps individuals **to avoid the admission to institutional care** in some cases 'postponing' rather than 'avoiding' the need for this type of care*

Using a simulation modelling approach in their research, these authors conclude that:

- *The focus of the development of telecare services should be on reducing the entry to institutional care from medium- rather than high-frailty groups (p75)*
- *The effect of telecare on the institutional population over 5 years is relatively limited... **(but) over 20 years the simulation shows a very substantial drop in the institutional population.***
- *The appropriate time horizon to assess the success of telecare and the financial and systematic consequences of this is long term, perhaps as many as 20 years. (p78)*

A number of recent evaluation and impact studies of local level telecare programmes have reported impressive results in terms of cost savings. Examples include those presented in brief in Boxes 7 to 10.

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<sup>81</sup> Loader, B D, Hardey, M and Keeble, L (2008) 'Health informatics for older people: a review of ICT facilitated care for older people', *International Journal of Social Welfare*, Vol 17, 46-53.

<sup>82</sup> Bayer, S Barlow, J and Curry, R (2007) 'Assessing the impact of a care innovation: telecare', *System Dynamics Review*, Vol 23 No. 1, 61-80.

### Box 7      Telecare in Scotland – a 5:1 benefit to funding ratio<sup>83</sup>

The Scottish Government's National Telecare Development Programme aims to: promote the use of telecare; improve assessment procedures for service users who might benefit from it; train service providers' staff to incorporate telecare in care packages; ensure telecare services are delivered to recognised standards, and enhance innovation in telecare services.

Its strategic statement *Seizing the Opportunity*<sup>84</sup> outlines the role telecare is expected to play in meeting future challenges in the health and social care system, and what it expects to achieve by 2010 and by 2015, indicating that the programme is expected to provide the foundation for telecare systems to become an integral part of community care services in Scotland. Through this significant investment in telecare, the Scottish Government is leading the way internationally on telecare development and performance assessment.

Reporting the findings of its evaluation of the Programme, the *York Health Economics Consortium* identified **significant verifiable savings in 2007-8**, the first main year of operation, totalling **£11.15m**<sup>85</sup> (see Table 10). In 2007-2010 likely savings are valued at around **£43 million** - an anticipated **benefit to programme funding cost ratio of 5:1**.

**Table 10 Scottish Telecare Development Programme: savings achieved**

Outcome	Actual Savings Achieved April 2007 – March 2008		
	Saving	Estimated monetary value	
Hospital bed days saved by facilitating speedier hospital discharge	5,668 days 517 discharges	£1.7m	15.5%
Reduced unplanned hospital admissions – bed days saved	13,870 days 1,220 admissions	£3.34m	30.0%
Care home bed days saved by delaying entry to care homes	62,993 days 518 admissions	£3.42m	30.7%
Nights of sleepover care saved	Info. n/a	£0.55m	5.0%
Home check visits saved	Info. n/a	£1.79 m	16.1%
Locally identified savings, e.g. reduced waking nights	Info. n/a	£0.30m	2.7%
No. of TDP funded telecare users	7,902 users		
<b>Estimated verifiable savings as a result of Scottish TDP</b>		<b>£11.15m</b>	<b>100%</b>

Source: Beale et al (2009), *op. cit.*

<sup>83</sup> Joint Improvement Team (2008) *Seizing the opportunity: telecare strategy 2008-2010*, Edinburgh. The Scottish Government, p30. Over the period 2007-10, local partnerships in Scotland expect to save £43 million, through telecare investments which will save “a minimum of ... 46,500 hospital bed days saved, ... 225,000 care home bed days saved, ... 46,000 nights of sleepover care saved and ... 905,000 home check visits saved” through telecare. These estimates have been produced using a rigorous methodology developed by York Health Economics Consortium, the programme evaluator.

<sup>84</sup> Joint Improvement Team (2008) *op. cit.*

<sup>85</sup> Beale, S., Sanderson, D and Kruger, J (2009) *Evaluation of the Telecare Development Programme, Final Report*, p56. Savings in Quarters 3 & 4 of the year being considerably higher than in Quarters 1 & 2, <http://www.jitscotland.org.uk/action-areas/telecare-in-scotland/telecare-publications/>.

### Box 8 Safe at Home Project, Northamptonshire

The *Safe at Home* project has been providing assistive and telecare technology in the homes of people with dementia in Northamptonshire since 2000<sup>86</sup>. In 2002-4, a 21-month multi-method study, using a longitudinal design and a comparator group (in Essex), concluded that the project had saved **£1,504,773** over the study period, 'equivalent to **£3,690 p.a. for each of the 223 people who received help from the project**'.

The focus of *Safe at Home* is on preventing admission into hospital or residential care, supporting carers, promoting independence and reducing perceived/ actual risks. Telecare is installed following a careful assessment of need. The project explored ways of achieving a transition from project to service by mainstreaming its practice. Their evidence showed that:

- When the rates at which people left the community and moved into residential or nursing care were compared, people in the control group **were four times more likely to leave the community** (and enter residential/nursing care) than *Safe at Home* users
- **Carers and relatives were significantly less stressed** after the project had provided technology (123 relatives/carers surveyed, 70% response, measurement scale used)
- The project was **extremely cost effective**, with people spending less time in hospital, residential or nursing care.
- The **technology was very reliable**

### Box 9 North Yorkshire<sup>87</sup>

Telecare has become an integral part of North Yorkshire's innovative approach to social care. In the first phase (2005-2006) its pilot schemes showed (for 42 clients):

- a net saving of £4,300 per person, based on the comparison of the cost of a traditional package of care and a package including telecare
- 21 people diverted from residential care

Targets for the Preventative Technology Grant were exceeded in every area of the county and at March 2008, 1,349 new users were using telecare. Evidence reported in 2009<sup>88</sup> showed, for a sample of 138 new Telecare users:

- 46% who would have required residential, EMI or nursing care were being supported instead with a package of telecare, homecare and daycare
- 54% who would have required homecare could be supported with telecare and a reduced homecare package
- Preliminary financial analysis suggested a 38-45% reduction in care package costs had been achieved

By August 2008, telecare training, a key element of the implementation process, had been provided to 1,500+ health & social care professionals / partner organisations. North Yorkshire plans to train all staff in relevant roles to use telecare as an effective tool in the identification and assessment of service users' needs.

<sup>86</sup> Woolham, J (2006) 'Safe at Home: the effectiveness of assistive technology in supporting the independence of people with dementia: the Safe at Home project', *Journal of Dementia Care*, London: Hawker Publications.

<sup>87</sup> Tunstall Group Ltd (2008) *North Yorkshire County Council Case Study report* (report of 2005-06 pilot).

<sup>88</sup> Breen, S (2009) 'Person-centred technology- the impact for people with learning disabilities', presentation, 27 January 2009, Cavendish Conference Centre, London.



**Box 10****West Lothian, Scotland**<sup>89</sup>

In West Lothian the Basic Technology Package consists of a home unit, two passive infra-red movement detectors, two flood detectors, one heat extreme sensor and one smoke detector. In 13% of current cases, the basic package is augmented by additional devices, e.g. a property exit sensor, video door entry system, bed sensor, or lifestyle monitoring system.

According to the authors of the independent evaluation of service innovations in this authority, the 'key lessons' from the West Lothian experience are:

- ***Smart technology is effective in a model of care promoting independence, choice and capacity building and in supporting older people and informal carers***
- ***For staff, smart technology can be a catalyst in a cultural change regarding service delivery***
- ***A mainstreaming strategy can offer wider support, reduce the stigma of using services and facilitate additional support if needed***
- ***Costs can be controlled, ensuring effective use of limited budgets alongside improvements in services (p10)***

Results in West Lothian<sup>90</sup> have been impressive:

- Delayed **hospital discharge** results were judged '*dramatically better than most local authorities*', with the **lowest 'length of stay'** in Scotland (9 days, compared to the Scottish average of 57 days). The level of delayed discharges for people over 65 was 67% lower than in the rest of the Lothian area (at 1.30 per 1,000 over 65s in West Lothian), compared with 3.92 in the rest of Lothian and 2.33 across Scotland. This produced an estimated saving of 536 bed nights, avoiding expenditure of £85,837 (p107)
- For falls in West Lothian, an average response time of 22 minutes, compared with a four-hour Scottish average. (Experts consider 'every hour on the floor' means 'one extra day in hospital'<sup>91</sup>)
- The average length of stay in nursing homes in West Lothian dropped from approximately 3 years in 2004, to less than 1 year in 2007
- 10% of users of smart technology were able to stay at home rather than enter institutional care

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<sup>89</sup> Bowes, A and McColgan, G (2006) *Smart technology and community care for older people: innovation in West Lothian, Scotland* Edinburgh, Age Concern Scotland (conducted by members of the Department of Applied Social Science, University of Stirling).

<sup>90</sup> Note that in West Lothian, telecare interventions have been part of a wider range of changes in service delivery and that the integration of technology has been part of this.

<sup>91</sup> Personal communication.

Other local examples yielding results suggesting that investment designed to mainstream telecare and smart technology into the local health and social care infrastructure is likely to be highly beneficial include:

In **Swindon**, analysis of telehealth support for just 11 COPD sufferers produced an estimated saving for the PCT of £300,000 in hospital stays avoided<sup>92</sup>. Swindon PCT considers that being able to detect changes in patients' conditions at an early stage significantly reduces the average number of acute admissions to hospital, improving care outcomes and ensuring best use of healthcare resources. The town's telehealth pilot reduced the number of hospital visits by an average of one visit per patient. As an average stay in hospital for a COPD patient is typically 11 days, it can be estimated that this PCT has already saved approximately £300,000 from just 11 patients.

In **Essex**, an evaluation based on 240 users showed significant cost savings in care support services<sup>93</sup>. 143 of the users in this study had a Careline Connection. Essex County Council estimates its savings at £190,578, and that £1 spent on telecare saves £3.58 in traditional care.

Based on a 10% random sample of all users, analysis of professional social worker assessments (considering what traditional commissioning would have cost had telecare not been available) concluded that for every £1 spent on telecare in Essex **£3.82** was saved in traditional care, and that for those users where telecare was a direct replacement for traditional care, for every £1 spent on telecare **£12.60** was saved in traditional care<sup>94</sup>. (Estimated real costs at time of commissioning.)

Elsewhere, **Croydon's Aztec project**, based on packages supporting 19 users with dementia and 1 carer, showed that an average telecare package cost £1,100, and reported annual savings of approximately £12,000 per user<sup>95</sup>. In **Newham**<sup>96</sup> the NeAT telecare project supporting older people found that cost comparisons of 'Base' (current services) with 'telecare enhanced' services indicated a minimum saving of £1.4 million p.a. in 5 years time, growing to £7.2 million in 10 years' time.

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<sup>92</sup> Rollings, H (2009) *Telehealth keeps patients out of hospital*, web report, PublicNet, 6/2/09.

<sup>93</sup> Raynor, G (2009) *Telecare: implementation* (unpublished powerpoint presentation).

<sup>94</sup> Savings at the time of commissioning telecare can be viewed as 'minimum' savings, as they do not take into account subsequent savings 'down-stream', such as potential A&E, ambulance, hospital and transition costs.

<sup>95</sup> Dunk, B and Doughty, K (2008) *The Aztec Project - providing assistive technology for people with dementia and their carers in Croydon*, Laing & Buisson Te;ecare and Assistive Technology Conference, 18 January.

<sup>96</sup> Cameron, K (2005) *Evaluation of the Newham Advanced Technology (NeAT) project*, Integrated Care Systems.

This section has highlighted key findings from expert reviews of the scientific literature and findings from some of the most important recent evaluation studies. It has indicated not only that the benefits of introducing telecare systems are many and varied, but that in enhancing the quality of life and safety of older, sick and disabled people, unnecessary costs can be removed from the wider health and social care system, releasing resources of both funds and caring labour to be deployed elsewhere.

## Conclusions

This paper has set out the scale, importance and urgency of the potential crisis facing our health and social care system. With the risks to the wellbeing of older, sick and disabled people and their carers in the future now better understood, acknowledged (and perhaps more feared) than ever before, a focus on energetic action to address the problems ahead must be our response.

As explained in Section 1 of the paper, inaction and delays in addressing these issues will affect employers and businesses, the national economy and the general wellbeing of families and communities up and down the country. Initial debate on the Green Paper *Shaping the Future of Care Together* (July 2009) focused on how unfairness in the funding of long-term residential care can most appropriately be addressed. This is a vital element, but it is critically important that discussion, planning and action should not be limited to that aspect. The practicalities of delivering care and support to much larger populations of sick, disabled and older people, almost all of whom will wish to remain in their own homes, with suitable support, must be at the forefront of debate as well.

A focus on the strategies which can keep older and disabled people safe, independent and in control at home needs to be at the centre of these discussions. Harnessing science and technology to achieve these goals, cutting out avoidable costs and (above all) dramatically reducing the incidence of common hazards which threaten wellbeing – falls, accidents, inadequate management of conditions like diabetes, heart disease, hypertension and dementia – must be given the highest priority. This can free up precious human caring labour to focus on support which enhances personal relationships and combats loneliness and isolation in sickness and old age, helping us to retain the strong human values – dignity, respect, care, and concern – which need to remain at the heart of our health and social care system.

Telecare systems – now well tried and tested – will be critical to the achievement of a society in which ageing and long years of life, even with some frailties or disabilities, can be a blessing rather than a curse.

This paper has shown that telecare can:

- **Reduce risks** in the home to older, disabled, sick and vulnerable people – from fire, smoke, gas, extremes of temperature/weather, falls, etc.
- **Respond rapidly and appropriately** when needed – supporting service users and their carers, professionally distinguishing situations which may variously require: rapid, emergency support; timely but not urgent professional consultation or interventions; reassuring contact from a family member, friend or neighbour; specific practical assistance (replace a light bulb/mop up spillages or leaks); and offer information/ advice.
- **Assist in the management of specific conditions** – by monitoring vital signs (e.g. for people with heart conditions); monitoring unusual, uncharacteristic or risky movements/lifestyle patterns (e.g. dementia); detecting problems at night, enabling carers to sleep without worry - knowing they will be alerted if needed (e.g. carers of disabled children, carers of people with breathing difficulties, or of people prone to night-time falls).
- **Delay the entry of people with some conditions to residential or nursing care** – including dementia sufferers whose numbers are set to grow so rapidly in coming years.
- **Enable more people to be discharged in a timely and safe way from hospital care** - achieving significant cost savings, but also enabling them to be at home where most will prefer to be.
- **Cut some unnecessary costs from the health and social care system** – including some types of overnight 'sleeping services', certain types of home visit with their associated wasteful travelling time and costs, and some 'checking' and 'reminding' support which can be provided equally well remotely.

**Investment in telecare** is also particularly attractive because, in addition to the above, it is **low-cost, lacks undesirable side-effects and is not disruptive of daily routines or intrusive in the home.**

- A **typical basic telecare package** (pendant alarm, Lifeline and box, plus flood detectors, temperature monitors and smoke/movement detectors) **costs £400 - £500 to install, about £10 per week to operate, and between £30 - £80 per year to maintain.** Where charges are made to clients (the service is often provided free), these are modest. For example, Blackpool's *Vitaline* service charges clients between £2.13 per week for its 'level 1' and £7 per week for its highest level (5) service<sup>97</sup>.
- **Telecare response centres have comparatively modest costs** (e.g. the very large response centre in Doncaster has over 80,000 connections, 70 operational staff, working day and night shifts to cover 24/7, and 12 support staff, handling between 3,000 and 4,000 calls every day). Large response centres **run very efficiently, and report few complaints** (for example Doncaster recorded only 6 complaints over a month when 120,000 calls were dealt with<sup>98</sup>). The Blackpool *Vitaline* statistics show that **90% of emergency calls are answered within 30 seconds of being received**, with all emergency calls actioned within 1 minute. It can supply its 'Mobile Responder' response to service users with 20 minutes.
- **Telecare can be installed in virtually all homes** (only an electricity supply and a telephone landline are needed for most forms of telecare support, and solutions which do not require a landline are also available), with minimal disruption to daily routines or to interior décor, and unobtrusive equipment.

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<sup>97</sup> Vitaline (2009) *Vitaline Blackpool Annual Report 2008*, published online.

<sup>98</sup> Unpublished evidence made available to CIRCLE, University of Leeds, during research contact.

Evidence about the **impact of telecare on carers is also positive**, highlighting:

- **Improvements in their sleeping patterns**, which reduce exhaustion and help them sustain their caring role.
- **Reduced anxiety and stress**, as there is less need to worry about the safety of the person cared for – in Scotland, 75% of carers reported reduced stress<sup>99</sup>.
- Some carers report **improvements to the relationship with the cared for person**.
- Telecare allows some carers to **sustain paid work alongside a substantial caring role** (which without telecare support would be very difficult to manage)<sup>100</sup>.
- Most studies show **no, or very limited, reductions in the time spent with the person cared for**<sup>101</sup>, although some indicate that the way this time is spent together may have changed (usually for the better).
- Telecare is **effective in enabling frail, sick or disabled people living alone to summon assistance rapidly when needed**, day or night, using simple technology in the form of cheap community alarms worn 24/7 as pendants, watches or bracelets.

The statistics set out earlier in this paper indicate the scale of the challenge. Time is not on our side in putting in place, across the country, an infrastructure of care and support equal to the challenges ahead. Bold action, committing resources now to technology, training, and the implementation of the simple, readily available, technologies already at our disposal - which are proven to reduce risk, sustain independence and support carers - has to make sense.

- It *can* be investment to save
- It *can* eliminate common risks to health and wellbeing
- It *can* enhance the quality of life
- It ***should* be a simple decision**

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<sup>99</sup> Beale, S, Sanderson, D and Kruger, J (2009) *Evaluation of the Telecare Development Programme: Final Report*, Glasgow, The Scottish Government (p47).

<sup>100</sup> Yeandle, S Jarrold, K and Fry, G (2009 forthcoming) – new study in preparation by CIRCLE, University of Leeds, for *Carers Scotland*.

<sup>101</sup> Beale et al (2009) op. cit.



CAN Mezzanine, 32-36 Loman Street, Southwark, London, SE1 0EH  
Telephone: 0207 922 7718 Fax: 020 7431 6668 Email: [office@bowgroup.org](mailto:office@bowgroup.org)

[WWW.BOWGROUP.ORG](http://WWW.BOWGROUP.ORG)