joint improvement team

Seizing the Opportunity: Telecare Strategy 2008-2010

healthier scotland
SCOTTISH GOVERNMENT

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The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

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INTRODUCTION

The population of Scotland is ageing. At the same time, the expectations of people in Scotland continue to rise, and technological innovation continues to increase the possibilities to meet these expectations in new and more effective ways. Relying on our current actions and achievements is therefore not enough. As we look forward, our actions, services and infrastructure must continue to adapt to the changing demographic picture, and to meet the needs and aspirations of our people.

This strategy sets out the Scottish Government's expectations of further developments in telecare. We expect:

- Telecare to contribute significantly to the achievement of personalised health and social care outcomes for individuals
- Telecare to contribute significantly to delivering wider national benefits in areas such as shifting the balance of care and the management of long-term health conditions
- Local partnerships to mainstream telecare within local service planning.

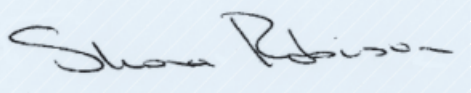
We are supporting these developments with a further investment of £8m provided for telecare funding in 2008-9 to 2009-10.

Over the next two years I expect local partnerships to:

- Extend telecare services to at least 7,500 additional people through this funding
- Increase awareness of telecare amongst service users and carers, and the general public
- Improve the assessment process for service users that could benefit from telecare
- Provide care staff with the skills they need to incorporate telecare within care packages
- Ensure all aspects of telecare service provision are delivered to recognised standards
- Enhance innovation, and telehealth/care convergence where it is appropriate to do so.

The national Telecare Programme Board will continue to support local partnership delivery, to monitor and report progress, and to identify and contribute to international good practice in telecare innovation and implementation.

Used wisely, telecare offers local care partnerships an opportunity for transformational change in the way community care service users and their carers receive support, and in the types of support that can be offered. As a country, we must seize that opportunity.



Shona Robison MSP
Minister for Public Health

WHAT DO WE WANT TO ACHIEVE?[1]

Scotland, 2008

Mr and Mrs Scot are in their early 70s. Their daughter moved to Australia some years ago, and the only other family they have is a sister of Mrs Scot who lives some distance away, but is in regular telephone contact.

Mrs Scot suffers from chronic heart disease. The couple have a community alarm service, and they know there is someone out there who would come if called, but they hardly use it except to test if it is working.

Within the context of an ageing population, Scottish national and local government have committed to ensuring:

- The people of Scotland live longer, healthier lives
- Inequalities in Scottish society are tackled
- The life chances for children, young people and families at risk are improved
- People live in well-designed, sustainable places where they are able to access the amenities and services they need
- High quality public services are responsive to local people's needs, continually improving, and efficient.

Specific national targets relating to these outcomes are to:

- Reduce the proportion of people aged 65 and over admitted as emergency inpatients two or more times in a single year
- Increase the percentage of people aged 65 and over with high levels of care needs who are cared for at home
- Improve people's perceptions of the quality of public services delivered
- Improve the quality of healthcare experience.

Our care and health services will play a central role in delivering these, and have corresponding outcomes and targets to deliver. Specific performance measures for community care partnerships include shifting the balance of care services from institutional to 'home based' settings, by:

- Ensuring community care service users are satisfied with key services
- Improving performance on delayed discharges
- Identifying those at risk of hospital admission
- Supporting carers who feel able to continue their role
- Improving waiting times for assessment and service delivery.

1 Appendix 1 provides details of the demographic and policy contexts that form the backdrop to this strategy.

Specific performance measures for the National Health Service in Scotland include:

- Reducing the proportion of older people admitted as an emergency inpatient two or more times in a single year
- Reducing the number of days older people spend in hospital as emergency inpatients
- Reducing the rates of hospital admissions and bed days of patients whose principal health problem is a long term condition such as asthma, diabetes, chronic heart disease or chronic obstructive pulmonary disease
- Increasing the level of older people with complex care needs receiving care at home.

Achieving all these will involve new ways of working and new ways of thinking. Telecare will be central to both.

Telecare – the Vision

Telecare is a term that covers a range of devices and services that harness developing technology to enable people to live with greater independence and safety in their own homes. The opportunities arising from telecare have been rapidly expanding as the underlying technology has become more sophisticated and its uses have been explored with imagination and creativity.

The Scottish Government has established a Telecare Development Board to drive the telecare agenda forward. Its aim is 'to help thousands of people to live at home for longer with safety and security by promoting the use of telecare and thereby providing the foundation on which telecare systems can become an integral part of community care services in Scotland'. This strategy shows what we want to achieve and how we will do it.

OUR VISION FOR TELECARE IN SCOTLAND IS THAT

By 2010

- Telecare will be widely understood and accepted by service users, carers and health and care professionals alike. Local political leaders will appreciate what telecare can do for their constituents and actively promote its use
- All 32 local care partnerships will be actively engaged in implementing telecare based services to meet service user needs, and telecare will have been fully incorporated into assessment and service delivery processes
- There will be a more effective working arrangement between health and care services at a local level, with the boundaries between these services becoming less rigid as the technology helps to redefine roles and options
- Social housing providers will be active partners in the implementation of effective care solutions based on telecare, and local authority housing strategies will actively promote telecare solutions for vulnerable people in private accommodation.

By 2015

- All new homes, public and private, and all refurbished social housing, will be fitted with the capacity for care and health services to be provided interactively via broadband from day one of occupation
- The typical service user and their carers will be using the needs assessment process to actively request and secure telecare based services, normally as part of a broader package. This may also involve elements of health care monitoring and response. Telecare and Telehealth will be widely recognised by service users and their carers as the route to greater independence and quality of life
- Independent evaluation will confirm that no care service users in Scotland who could benefit from telecare services in a home-based setting remain in an institutional environment
- Remote long term condition monitoring undertaken from home will be the norm
- Scotland is recognised as an innovative world leader in the provision of care and health services based on telecare technology
- All qualifying courses for front line health and care staff will include an element relating to telecare and other assistive/home care technologies as part of their core basic training.

Scotland, 2010

Mrs Scot's heart disease has worsened somewhat, and Mr Scot has been diagnosed as being in the early stages of dementia. Mrs Scot worries about her husband's safety both within the home and when he is out and about. However she discussed these worries with a care assessor, and safety gas monitors and flood detectors have been installed at her request. Mrs Scot also now has vital signs monitoring in place and blood pressure, heart rate and heart rhythm information is transmitted on a daily basis to a community nurse. Additionally, the Scots decided to take up the offer of a door entry security system in the form of a video camera linked to the council's call centre. If the community nurse or home help visit and cannot gain access, call centre staff are able to confirm the caller's identity and open the door in line with the arrangements previously agreed with the Scots.

While she still keeps in contact with her sister by phone, Mr and Mrs Scot do not get as much opportunity to get out and about as they used to, particularly as Mr Scot is increasingly forgetful about where he lives. Mr and Mrs Scot wonder whether anything can be done to help them reduce their increasing feelings of isolation.

Telecare Outcomes

Telecare will contribute to delivering the national concordat and overall community care policy outcomes. Over the next two years, the telecare strategy will do this by delivering the following specific outcomes:

- More awareness of telecare and its benefits
- Increased use of telecare within mainstream service provision.

We will also ensure that as the technological possibilities continue to develop, further beneficial innovations in care provision are identified and introduced.

Scotland, 2015

The Scots are still at home, even though Mrs Scot's health has deteriorated further, as has Mr Scot's dementia. However, the quality of both their lives has been improving. They have a TV set with a broadband connection that they use to contact and talk with people. Mrs Scot talks to her sister every day through the TV, and her sister can see now how they are both doing, giving everyone much more peace of mind. Mr Scot has a new wristwatch tracking device, so he can still get around to the local shops when he wants, while his wife knows she can get effective help quickly should he get a little lost. The TV also lets them both regularly see their daughter and grandchildren in Australia. At the same time, the video broadband link is the basis for their continuing healthcare. The local healthcare centre receives data every day from a wide range of monitors attached to the broadband line, and if there is anything untoward a nurse can speak directly to Mrs or Mr Scot using their TV video link. The healthcare centre can also be contacted directly by Mrs Scot's sister if necessary. Mrs Scot also uses the video link to play online bingo, but her GP isn't entirely convinced that's the best thing for her heart!

RISKS AND RESOURCES

Current Service Provision and Funding[2]

Scottish local authorities spend over £1 billion annually on care in the community, and the NHS spends a further £1 billion on community based health services. Prior to a first telecare development programme (TDP) of £8.35 million, which was made available over the period 2006-8, local care partnerships were already supporting around 137,000 service users with some form of telecare. The 2006-8 funding programme increased the numbers able to maintain themselves at home by a further 4,000, while generating significant efficiency savings as part of shifting the balance of care. In addition, the development of more sophisticated forms of support are enabling more dependent people to be cared for at home.

Issues to Address in Extending Telecare Service Provision

The key organisations in developing telecare in Scotland are the local health, housing and social care partnerships. Discussions with them indicate that while progress is being made, there is still a lot to do in terms of:

- Ensuring service users and carers understand the possibilities for improving their quality of life that telecare provides
- Ensuring care providers also understand these possibilities
- Ensuring that all aspects of telecare service, from initial assessment of need, through equipment installation and maintenance, to handling calls and data provided by service users and responding where necessary, are appropriately resourced and delivered to high standards in ways that can be demonstrated and verified
- Breaking down cultural barriers that impede more effective joint organisational working arrangements amongst care service providers.

These issues constitute the key risks to securing the full potential benefits from telecare. Failure to manage these risks will result in telecare failing to deliver to its full potential. We will therefore address them as core elements of this strategy.

Communication with service users

Technology should be an asset for older and disabled people, enabling them to lead more fulfilling and independent lives with control and dignity, rather than simply keeping them safe. Increasingly, it offers the possibility to develop creative solutions that can help people achieve this. However some care service users and their loved ones, and some professional care staff, harbour fears that technology might achieve the opposite. In particular, some fear that telecare services might be used inappropriately to replace human contact, or that the use of cameras and alerts means a loss of privacy and control. These fears need to be recognised and addressed.

2 Appendix 2 provides details of the current care service provision and telecare funding contexts that form key parts of the backdrop to this strategy.

Staff skills development

If telecare services are to develop in the ways we want, we need to ensure the availability of good quality basic awareness training for a large number of people, including people who undertake assessments, response staff and other support staff. A recent review of training issues confirmed the importance of securing new training opportunities for:

- Staff from housing, health and social care services involved in identifying service users that would benefit from telecare – for example as part of a single shared assessment. Included in this group are social work staff and assistants, occupational therapists, GPs, district nurses and health visitors, housing support staff and home carers. Currently, newly qualified workers are very unlikely to have much knowledge or understanding of telecare, and induction programmes for new staff are the only, and very limited means of introducing it to them. They need to know what is available in terms of telecare equipment; the relationship between common individual needs (e.g. for safety, a feeling of security, privacy, a desire to maintain independent living) and the range of equipment that will help enable those needs to be met; some basic technical information about what can and cannot be installed; and to be able to explain to potential service users and their carers the part that telecare can play in a package of care and support. Above all, they need sufficient imagination and creativity to encourage potential users to see telecare as a significant way of enabling continuing independence.
- Call handlers – the staff that are the first point of contact, the 'other end' of the alarm or monitor, phone call, or alert. This is not a large group – perhaps 500 in all, located in 22 different centres across Scotland, but they are pivotal to the successful implementation of telecare. As well as meeting standards for prompt response, courtesy, and accurate recording, they must 'filter' with great care the information they receive, so as to choose correctly the procedure to activate or the protocol to follow. These are the staff that need to be able to reassure a confused caller as well as work out what may be going on for that caller, sufficient to trigger an appropriate response. It is this that distinguishes them from staff in other call handling facilities. Over time, as telecare and telehealth services become increasingly used as a more proactive form of support to isolated people, when additional information from more sophisticated equipment in the home has to be interpreted, and when the range of people being supported is much wider than at present, this group of staff will become even more important, and their training needs more complex.

It is also essential that those involved in care service provision handle personal information in a way that ensures it is at all times dealt with legally, securely, efficiently and effectively. Ensuring telecare service providers involved in information handling activities consistently act in line with legal, professional and local policy requirements is of particular importance. New training opportunities must therefore also address information governance issues, and the barriers and risks these present if not appropriately addressed.

Service standards

As telecare services develop, it is important that service providers can demonstrate, and service users and their carers can see, that these services are being provided in a way that meets appropriate standards. However, telecare, in that it combines installation and maintenance of equipment, provision of a call/data handling facility, and a subsequent response service, does not fit neatly into any of the current regulatory frameworks.

Cultural change

While many service providers embrace the possibilities for enhancing services that new technology brings, others find the prospect unsettling as in many cases it requires the adoption of new ways of doing things, including data sharing and changed responsibilities. Again, these concerns have to be acknowledged and addressed.

This is a multi faceted issue. Call handling is an area that currently offers important opportunities to make progress. A recent review of call handling arrangements in Scotland found that:

- There are 22 call handling services or call centres for telecare/community alarms in Scotland
- All but one of the current call centres in Scotland have spare capacity and are keen to expand either the number of people they help or the number of peripherals/applications they respond to
- Operating locally, centres often build up particular knowledge of individual service users, thereby adding value in terms of interpreting situations when calls are made
- There is interest in developing a single partnership centre in Forth Valley between Falkirk, Clackmannanshire and Stirling, and another one for East Lothian and Midlothian
- Working relationships with NHS24 could, generally speaking, be improved, though some centres have managed to establish a special protocol covering the exchange of emergency information, and there would be value in establishing call handling protocols at a national or regional level.

Telecare Development Programme Funding

In March 2008, we announced a further £8m of Telecare Development Programme funding. £4m will be made available in 2008-9 and a further £4m is earmarked for 2009-10. This money is to be made available under the same conditions as previously in that it is capital funding and is to be used to secure further mainstreaming of telecare services.

The bulk of the funding will be made available to local health and care partnerships. Progress made to date by each local partnership has been recently evaluated in terms of:

- Quality of submissions
- Uptake and use of funds previously made available
- Provision of information on local outputs, outcomes and efficiencies actually achieved.

On the basis of this evaluation it was concluded that 23 local partnerships are making good progress with the main streaming of telecare, with 6 partnerships doing particularly well, but 9 partnerships have made slower progress than we would have hoped. This information has been used to determine the allocation of 2008-9 TDP funds:

- Partnerships assessed as 'progressing' have been offered an initial sum of £125,000
- Partnerships assessed as 'progressing well' have been offered an initial sum of £200,000.

These partnerships have been asked to indicate how they will use these allocations to facilitate further main streaming of telecare at local partnership level within the policy contexts of shifting the balance of care and promotion of telehealth/telecare convergence.

Partnerships making slower progress will not receive an immediate allocation. Instead, we will seek a meeting with senior representatives of each of these partnerships, and offer assistance in the form of an externally conducted telecare review. This will provide support to explore the potential for telecare locally, the nature of barriers to progress, and possible ways to address these barriers. Where this support leads to the real possibility of faster progress, the relevant local partnerships will then be eligible to seek additional financial support from a reserve fund. In addition, they will be considered for an allocation from TDP funding for 2009-10.

The reserve fund will also be used to finance innovative developments on a match funded basis up to a total for this purpose of £300,000, the final sum depending on potential calls on the reserve from partnerships making slow progress and uptake of allocations made to other partnerships.

Overall therefore the initial allocation of the 2008-9 funds will be as follows:

Category	Number of Partnerships	Total Amount
Slow progress	9	£225,000
Progressing	17	£2,125,000
Progressing well	6	£1,200,000
Reserve fund		£450,000
Total		**£4,000,000**

The 2008-9 allocations will not be expected to attract match funding. However, this will be a requirement when allocations for 2009-10 are made.

DELIVERY AND TIMESCALES

Key Deliverables

Over the course of the next two years, the following will constitute the core elements of the telecare strategy.

Extension of telecare services to more people

The additional funds made available for the next two years should allow at least as many people again to enjoy telecare support as part of their service packages as the 2006-8 funding programme has. However, we would expect the overall impact to be greater this time, as the additional funding is building on existing progress, there will be some degree of match funding, and as noted we intend to work closely with partnerships to break down barriers where progress to date has been slow. We expect at least 7,500 additional people will be able to maintain themselves at home by 2010, as a result of the new TDP funding, than would otherwise be possible.

Innovation in service delivery arrangements

The following two boxes summarise a number of specific demonstrator projects and pilots that are currently being progressed as part of a broader TDP funded innovations programme.

- Three telehealth/telecare pilots have been funded, to explore how broadband, wireless and audiovisual technology can facilitate contact between service users and health providers without the need for home visits or hospital appointments, and as part of broader care provision arrangements. These pilots will help support future convergence of telehealth and telecare service provision where this is appropriate.
- Three housing demonstrators have been funded, with the overall aim of identifying the housing aspects of a managed shift in the balance of care for older people at a locality level, and the role telecare can play in this.

We will also encourage innovation in call handling arrangements where this would be beneficial to service users. We have commissioned an examination of the potential impact of longer term changes in technology, public expectations and levels of need on telecare related call handling capacity in Scotland and will consider the findings of this research in due course. In the meantime, we will work with existing call centres and NHS24 to develop protocols that will improve current joint working arrangements.

Additionally, we will explore the possibility of NHS24 becoming involved in delivering some telecare call handling services on behalf of one or more local care partnerships. While this presents a number of challenges, it has potential for progressing joint health/care service provision in a cost effective way and of being a further mechanism for promoting telecare/telehealth convergence. More generally, we will support and encourage a greater joining up in the provision of call handling services, to enable greater consistency in call handling standards to develop, and cost efficiencies to be achieved.

Service standard enhancement

We have been contributing to a review of standards being undertaken by the Telecare Services Association (TSA) covering:

- Set-up, maintenance and repair of equipment
- Call handling
- Response services.

We will continue to work with TSA to agree a standards framework suitable for telecare provision in Scotland. Based on the outcome of this work, we will consider the appropriateness of asking local partnerships to seek TSA accreditation from 2009-10 onwards as a condition of securing further TDP funding.

Innovations Programme: Telehealth/Telecare Pilots

NHS Lanarkshire Telehealth Service Pilot

NHS Lanarkshire is progressing a two year telehealth service demonstrator to enhance long-term condition care in both North and South Lanarkshire Community Health Partnership areas. The principal objectives of the demonstrator are to improve the care of patients with Chronic Obstructive Pulmonary Disease (COPD) by early identification and treatment of COPD exacerbations. It is anticipated that this will lead to a fall in the number of hospital admissions as a result of COPD and will assist NHS Lanarkshire in achieving agreed reductions in the rates of hospital admissions and bed days of patients with primary diagnosis of COPD as defined in the HEAT targets. It is also anticipated that with the introduction of a pharmacological protocol and patient group directive, there will also be a drop in the frequency of exacerbations requiring home visits by GPs.

The project involves building a Lanarkshire wide COPD register to enable a clinical network team to access detailed medical histories, assess and monitor individuals on the register remotely, and intervene pro-actively based on data provided by service users on a regular basis.

The demonstrator will also involve improved initial screening of risk by using SPARRA data. Over time it is hoped the demonstrator will extend to cover data from a broader range of diagnostic tests (such as blood gas monitoring) conducted in the home by community-based staff, and a wider range of conditions, including diabetes, hypertension, coronary heart disease and asthma.

The Lanarkshire demonstrator involves a budget of £1.2 million over two years, of which the TDP is providing £200,000.

Innovations Programme: Telehealth/Telecare Pilots (*continued*)

NHS Lothian Telecare/health Pilot

This project targets 'high service users' within NHS Lothian to provide early and continuous monitoring of the health and social needs of people with selected long-term health conditions, to reduce the likelihood of acute exacerbations of their conditions, and hence reduce the demand for expensive interventions, such as unplanned hospital admissions. It works by adding a 'telehealth' solution to an existing telecare agreement formed between West Lothian Community Health and Care Partnership (now under wider NHS Lothian) and the commercial suppliers Tunstall and Intel. The first stage involved identifying 50 patients with COPD in 4 health practices in Lothian to test out the technology and explore areas around the barriers/facilitators to implementation and the patient experience. Stage 1 will inform stage 2 – a major controlled clinical trial involving 350 patients. This may involve patients with chronic heart failure and diabetes as well as COPD.

The Lothian demonstrator involves a budget of £700,000 of which the TDP is providing £350,000.

Argyll and Bute Strategic Health and Care Partnership Telehealth Pilot

The Argyll and Bute Strategic Health and Care partnership are piloting a new approach to managing long-term conditions in rural communities. It involves the installation of remote monitoring equipment (known as 'Remote Nurse') to record patient symptoms and vital signs, and deliver reminders to take medication where appropriate.

The pilot, scheduled to go live in Spring 2008, involves the establishment of a remote monitoring station (a 'kiosk') within sheltered housing in Kintyre, and remote home monitoring equipment in Cowal and Bute. The equipment installed will be linked in to local health practices, and community nursing/ integrated care teams.

The pilot will run for an initial period of three years, with an early evaluation after the first six months, and use of the equipment will be closely monitored to gauge efficiency savings that can be attributed to it in terms of reduced crisis admissions to hospital, early discharge from hospital and increased ability for people to live in their own homes for longer than would otherwise be possible. The Scottish Centre for Telehealth will assist with evaluation.

The pilot involves a budget of £112,000, of which the TDP is providing approximately £70,000.

Innovations Programme: Housing Demonstrators

To support the growth of independent living options, £450,000 has been made available from the TDP to support a change in the model of care provided to people living in ordinary housing and within sheltered and very sheltered housing. The £450,000 is being used to provide equal support to 3 housing demonstrators situated in the Inverclyde, Highland and West Lothian care partnership areas respectively.

The specific objectives for the demonstrators are to:

- Illustrate the housing dimension, both in terms of buildings and of housing services, in shifting the balance of care
- Develop, test and illustrate new models of housing with support and new approaches to housing related services that demonstrate the potential of telecare, to support a shift in the balance of care
- Capture and disseminate the experiences of partners within the demonstrators, the related changes required of participating organisations, and the process by which change is achieved
- Develop practical tools to support analysis, planning, commissioning and delivery of change to housing and housing related services in other local partnership areas.

The Care Commission currently registers and inspects some (but not all) telecare response services, and only one call handling service. As well as progressing work on a standards framework with TSA, we will also encourage the Care Commission to adopt a more consistent approach to telecare regulation as part of the national Care Standards, and in particular to register all call handling as a care service. We will offer assistance with any work on adapting existing Care Commission standards that is required.

Single shared assessment enhancements

The Scottish Government has been developing through the Assessment Review Co-ordinating Group new minimum information and data standards for assessment and care planning. We will ensure that a telecare prompt is included within the Single Shared Assessment (SSA) in every part of Scotland, and that telecare is included within SSA national data standards. We will also seek to facilitate the use of telecare devices as part of ongoing assessments – for example, of long term conditions, or of progress after discharge.

New training opportunities

We have established a telecare training group to drive forward the training agenda. It will progress the development and introduction of new continuing professional development (CPD) training modules and actively promote take-up of these new training opportunities by professional staff engaged in assessment of people with potential care needs.

The telecare training group will also progress the development of training courses to meet the needs of telecare call handlers/responders, and more generally those involved in equipment installation and advice giving to service users and their carers on how to use telecare equipment.

Better communication of possibilities and opportunities

Communication will be a key dimension of the telecare strategy. A significant aspect of the telecare strategy will therefore be to:

- Secure widespread media coverage of suitable news items and key achievements in relation to the telecare development programme itself
- Deliver a series of high profile events, meetings and conferences targeted at local political leaders, key influencers, opinion-formers and decision-makers, to achieve buy-in to, and championing of, the growth of telecare services in Scotland
- Support further development of the existing telecare learning network for staff within local health and social care partnerships (including extending the reach of this network to involve more housing organisations)
- Further develop the JIT website. As well as providing general information on telecare and the programme the website will feature regular TDP updates and progress reports on local partnership developments
- Make effective use of multimedia to increase understanding of the possibilities (and limitations) of telecare services. This will include:
  - Development of video material to raise awareness by showing possibilities
  - Assembly of real life examples of how telecare improves quality of life for users into a digital library resource
  - Development of slideshow material offering glimpses into the rich texture of people's lives and the roles telecare can play that can be used to facilitate or focus awareness raising workshops
  - Preparation of DVD/web based interactive training materials.

Finally, we will develop a mobile demonstrator of telecare possibilities, so that members of the public and health and care staff can see at first hand how technology can expand the horizons of those needing and receiving care services.

International Collaboration

We will also look to develop international partnerships to promote good practice in telecare implementation and innovation.

Specifically within this area we will establish a programme of work with other European countries. Since 1984, the EU has run its research and technological development policy on the basis of multiannual framework programmes. The 7th Framework Programme (7FP) was inaugurated in 2007 and will run until 2013. One of the main programmes under 7FP is the Cooperation Programme, with a budget of €32.3 billion. 7FP offers considerable scope for multi country exploration of new forms of care and health service provision for EU citizens on a match funding basis, and as part of this strategy we will explore the possibilities for engaging in at least one European pilot of third generation telecare/telehealth service provision.

Monitoring and review

Telecare activity under the 2006-8 TDP funding has been subject to continuous independent monitoring from the outset, and an overall evaluation has been commissioned.

Monitoring of telecare outcomes will be continued at the local health and social care partnership level over the period of the new TDP funding (that is to March 2010), and progress will be reported quarterly to the Telecare Development Board.

The Telecare Development Board will also receive a regular quarterly report on progress against the other elements of the action plan. These reports will be placed on the JIT website.

In 2010 a further evaluation will be conducted of the success of the strategy as a whole.

Action Plan

The following table summarises the actions that constitute the core of our strategy, where responsibility lies for delivering them, and the timescales involved.

Purpose	Action	Responsibility	Timescale
Extend telecare services to at least 7,500 additional people	Expenditure of TDP funding 2008-10	Local care partnerships	April 2008- March 2010
	Support local partnerships currently making slow progress to break down barriers to progress in establishing telecare service provision	Scottish Government	By December 2008
Enhance innovation and telehealth/care convergence	Establish the NHS Lanarkshire Pilot	NHS Lanarkshire	
	Establish the NHS Lothian Pilot	NHS Lothian	
	Establish the Argyll and Bute Pilot	Argyll and Bute Strategic Health and Care Partnership	Spring 2008
	Develop new models of housing with support for use in 3 housing demonstrators	Scottish Government	By December 2008
	Implement the new models as pilots in Highland Inverclyde West Lothian	Highland local care partnership Inverclyde local care partnership West Lothian local care partnership	
	Develop national/regional protocols covering joint working arrangements between NHS24 and local care partnerships	Scottish Government	By December 2008
	Explore the possibility of telecare call handling by NHS24	Scottish Government	By December 2009
	Consider the findings of research into the implications of current trends in technology, need and aspiration for future call handling arrangements in Scotland and develop suitable responses	Scottish Government	By August 2008
Ensure all aspects of telecare service provision are delivered to recognised standards	Work with TSA to ensure its standards framework meets the needs of Scotland	Scottish Government	By August 2008
	(Subject to development of a suitable standards framework), encourage local care partnership and member organisations to apply for TSA membership and accreditation	Scottish Government/ Local care partnerships	From August 2008
	Secure a more comprehensive approach to telecare regulation by the Care Commission	Scottish Government	By March 2009

Purpose	Action	Responsibility	Timescale
Improve the assessment process for service users that could benefit from telecare	Ensure that a telecare prompt is included within the Single Shared Assessment process and that telecare is included within SSA national datasets	Scottish Government/ Local care partnerships	By March 2009
	Facilitate the use of telecare as an assessment tool	Scottish Government	By March 2009
Provide care staff with the skills they need to incorporate telecare within care packages	Further development of the telecare learning network for staff within local health care partnerships	Scottish Government	Continuous
	Development of CPD training modules for assessment staff, call handling staff and equipment installation and advice staff	Telecare Training Group	By December 2008
	Secure validation and introduction of the new courses by accredited educational and training establishments within vocational training programmes	Telecare Training Group	From Autumn 2009 onwards
Increase awareness of telecare amongst service users and carers, and the general public	Securing of widespread media coverage	Scottish Government/ Local care partnerships	Continuous
	Delivery of high profile promotional events	Scottish Government	Continuous
	Development of multimedia materials (videos, slideshows etc)	Scottish Government	By December 2008
	Development of a mobile demonstrator that can be used to show people what telecare can do	Scottish Government	By March 2009
Identify and contribute to international good practice in telecare innovation and implementation	Participation in at least one European wide pilot of third generation telecare/telehealth service provision under the 7th Framework Programme	Scottish Government	By June 2009

WHAT'S NEXT?

The implementation of this strategy has already started. However, it will need to be kept under review and if necessary amended as events unfold.

We welcome your comments on any aspect of the strategy at any time. If you wish to offer views please contact:

Moira Mackenzie
Joint Improvement Team
Area 3ER
St Andrew's House
Regent Road
Edinburgh EH1 3DG

Telephone: 0131 244 3652
Email: jit@scotland.gsi.gov.uk
Website: http://www.jitscotland.org.uk/about/

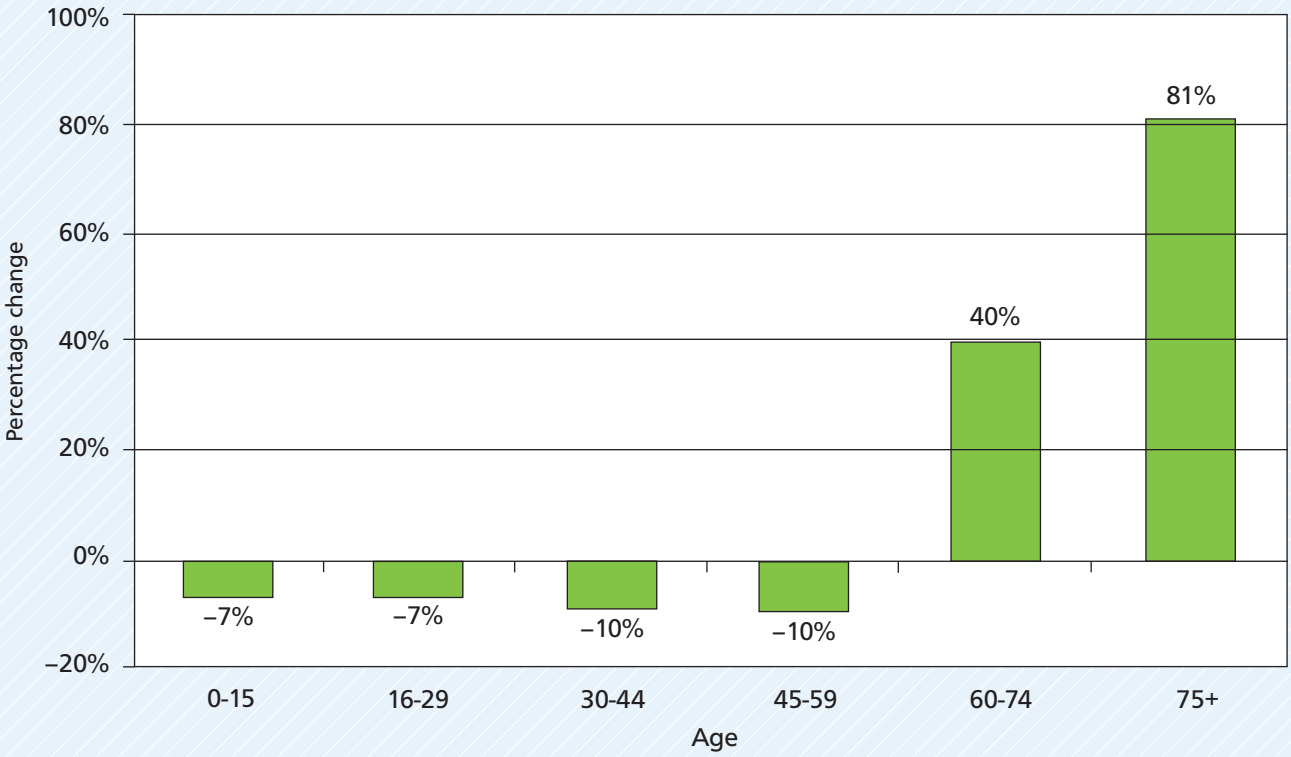
APPENDIX 1: DEMOGRAPHIC AND POLICY CONTEXT

Demographic Trends

While it is obviously not just older people that require health and care services, we do live in a time of 'mass ageing'[3], a phenomenon that is affecting not just Scotland, but the UK[4] and indeed the world as a whole[5].

The latest (2006 based) projections of population for Scotland show the age structure of the population is projected to change markedly between 2006 and 2031[6].

Projected change in Scotland's population by age group, 2006-2031, %



(Source: GROS)

3 Scottish Executive (2007) All Our Futures: Planning for a Scotland with an Ageing Population 1 (Summary and Action Plan). Blackwells.

4 Cabinet Office (2008) Realising Britain's Potential: Future Strategic Challenges for Britain.

5 Department of Economic and Social Affairs (2007) World Economic and Social Survey 2007: Development in an Ageing World. United Nations: New York.

6 General Register Office for Scotland (2007) Projected Population of Scotland (2006-based). TSA: Edinburgh.

Specifically:

- Scotland's population is projected to increase by 5 per cent between 2006 and 2031
- The number of children aged under 16 is projected to decrease by 7 per cent from 0.92 million to 0.86 million
- The number of people of working age is projected to increase slightly from 3.21 million to 3.23 million
- The number of people of pensionable age is projected to rise from by around 31 per cent from 0.98 million to 1.29 million
- Among those of pensionable age, the number of people aged 75 and over is projected to increase by around 81 per cent, from 0.38 million in 2006 to 0.69 million in 2031.

This unprecedented demographic change is driving changes in the scale and nature of much public service provision, and it will continue to do so over the next decade[7]:

- In the period between 2003-4 and 2007-8 Scottish Executive spending on the 60+ age group increased by 5% per annum in real terms, to £5.1 billion a year for the full range of services to that age group
- As people age they are more likely to have a long-term illness or disability. For example, 15% of those aged 16-49 years have a long-term illness or disability and this figure increases with age to 27% of 50-59 year olds, 36% of 60-64 year olds, 41% of 65-69 year olds, 45% of 70-74 year olds and over half of those aged over 75 years (56%). Population ageing therefore means a greater incidence through time of disability and long term illness requiring health and care service support
- As a specific example, the number of people with dementia will double in the next 40 years, and the number of those 85+ with dementia will treble. The number of people with dementia in Scotland is projected to increase to around 82,000 in 2020 and to between 125,000 and 135,000 by 2040.

Older people are key users of both primary and secondary health and social care services in Scotland[8]:

- There were at least 8.1 million contacts with GP Practice Teams (including District Nurses) by patients aged 65 years or over in the year 2004-5 in Scotland, accounting for around one third of all contacts
- GP consultation rates increase with age from the 55-64 year old age groups upwards
- In 2004-5, there were 191,000 emergency hospital admissions of people 65 and over, accounting for 41% of all emergency admissions. Emergency admission rates increase steeply up to the oldest age groups
- Local authorities are the main providers or commissioners of social care services designed to support people at home. In 2002-3 they invested nearly £1 billion in services for older people, out of a total of £1.2 billion for all community care groups.

7 Scottish Executive (2007) All Our Futures: Planning for a Scotland with an Ageing Population: 2 Full Strategy. Blackwells.

8 Scottish Executive (2007) All Our Futures: Planning for a Scotland with an Ageing Population: 3 The Evidence Base. Blackwells

The Kerr report on service change in the NHS in Scotland[9] makes the point that, while the major focus of healthcare was infectious disease prior to 1950, this focus changed during the second half of the twentieth century towards the provision of episodic care for acute conditions, and it is now changing again. In the 21st century, chronic disease is the major challenge for health care. The NHS is largely geared to dealing with acute conditions on an episodic basis.

Steadily rising numbers of emergency inpatient admissions have been the major source of pressure for the NHS over the past twenty years. While the rising trend in emergency admissions amongst the 65 and over group appears to have stabilised in the last few years[10], prior to this increasing numbers of emergency admissions among the very old were a particular problem[11]:

- In 1981 0.5% of the population aged 85 and over were admitted as an emergency three or more times in a single year. By 2001 this had risen to 2.6% of the population aged 85 and over
- Patients aged 80 and over account for almost the entire increase in bed days required by emergency inpatients over the last twenty years
- One increasingly common pattern has been recurrent emergency admission in a relatively small period of time, with the number of multiple emergency admissions of older patients having risen particularly rapidly.

Policy Trends

Kerr concluded that the increase in emergency and multiple emergency admissions among older people has not primarily been a direct reflection of increased morbidity or ill-health in the older population but in the main is a reflection of the way in which the whole system of care has tended to respond to increasing demands:

> "Trends in emergency admission are the best long-term indicators of what has happened in other parts of the system. They help us to understand how the whole system of care has responded to the demographic and epidemiological pressures we have outlined ... part of the explanation of the rise in emergency admissions, and particularly of the rise in multiple emergency admissions among older people, lies not in pressures in one part or other of the system but rather in the very nature of the system itself. In particular, a major part of the explanation could lie in the extent to which the system does not function as an integrated and co-ordinated system of care but rather as a collection of fragmented, uncoordinated and specialised silos ... the rapidly rising trend in multiple emergency admissions among older people is a reflection precisely of a system attempting to cope by providing increasing numbers of isolated episodes of care rather than providing the integrated and supportive care which is so often needed.... The most fundamental strand of explanation for the rise in emergency admissions lies in the mismatch between the needs of the population for proactive, integrated and preventive care for chronic conditions and a healthcare system which is still organised primarily to provide specialized, episodic care for acute conditions."

9 Kerr, D (2005) Building a Health Service fit for the future. Blackwells.

10 Kendrick, S and Vize, J (2007) Trends in rates of emergency inpatient admission among older people in Scotland: A comparative analysis at NHS Board level. Delivering for Health/Long Term Conditions Programme, Working Paper 1. ISD Scotland.

11 National Planning Team (2005) National Framework for Service Change in the NHS in Scotland. Drivers for Change in Health Care in Scotland.

Kerr therefore concluded that the best way of tackling this source of pressure is simply to provide better co-ordinated, more integrated and more preventative care for older people. It points toward a new way of delivering care in Scotland (see box), noting:

> "When we talk about local care, particularly in our work on the care of older people and on the care of people with long-term conditions, one of our key aims is to keep the patient out of hospital by providing the necessary support and treatment in or close to home. For us, this is what the local care of the future is really about. It is not about protecting the bricks and mortar of the local hospital. It is about preventing frail older people for whom hospital is an unwanted (and arguably sometimes unwarranted) disruption from being admitted and looking after them more effectively close to home"

Current view	Evolving model of care
Geared towards acute conditions	Geared towards long-term conditions
Hospital centred	Embedded in communities
Doctor dependent	Team based
Episodic care	Continuous care
Disjointed care	Integrated care
Reactive care	Preventative care
Patient as passive recipient	Patient as partner
Self care infrequent	Self care encouraged and facilitated
Carers undervalued	Carers supported as partners
Low tech	High tech

The Kerr report emphasised two key mechanisms for delivering this shift:

- Community Health Partnerships as the main NHS agent for delivering the Joint Future agenda[12]
- Community Planning Partnerships, whose role is to deliver co-ordination of the local strategies of all key organisations in a local authority area, with full participation of community representatives.

The Scottish Government recognises that the main challenge in the care of an ageing population is improving the care of long-term conditions, and accepts that the care of frailer older people with continuing health problems should focus on better support for them at home (together with support for carers), early recognition and management at home of new or increasing health problems, and a diminishing use of admission to an acute sector bed. It has been government policy for some time to improve the integration of health and care services for the citizens of Scotland. This improvement has been sought in the context of increasing the proportion of both types of service delivered within people's homes and local communities wherever possible. The balance of long-term care provision for older people has now begun to shift away from long-term hospital care towards community based care. Home care and personal services aim to encourage older people and others in need to remain in their own homes for as long as they are able, and to live as independently as possible[13]:

12 *Scottish Executive (2000) Community Care: A Joint Future.* Considerable progress towards integration of health and social care was made under the Joint Future initiative. Good examples include Single Shared Assessments of service user and carer needs, and the introduction of joint services such as rapid response teams for adult people leaving hospital, which now cover most of Scotland.

13 Scottish Executive (2007) *All Our Futures: Planning for a Scotland with an Ageing Population.* 3 The Evidence Base. Blackwells

- Between March 2000 and September 2005 the number of residents in care homes for older people decreased by 2 per cent
- Having reached a low in 2002 at around 53,600 people the number of older people receiving home care services has subsequently increased each year to 57,900 in 2005, with an associated shift toward more intensive home care provision
- Provision of specialist housing for older people has increased in recent years, with the number of very sheltered housing places available increasing from under 1,000 in 1995 to nearly 4,000 in 2005. At the same time, the number of sheltered housing places increased from 32,000 in 1995 to 34,000 in 2005.

The vast majority of Scotland's over 65s (95%) currently live at home, with only 4% (33,700) in care homes and 0.4% (3,200) in long stay hospital care, and research has consistently shown that most people want to stay at home as long as possible.

More recently the Scottish Government has further endorsed and developed the themes set out in the Kerr Report, the Joint Future initiative, and in a fundamental review of social work in Scotland[14], which also recognised and responded to the need for transformational change in the way social work services are provided, through publication of the *Better Health, Better Care* action plan[15]. This action plan sets out an ambitious programme of work for the next five years, and indicates:

- Community Health Partnerships will increasingly be expected to shift the balance of care by providing better community care services – but in order to do this effectively they will need to have a broader range of delegated resources and greater flexibility of decision-making
- NHS Boards must now use a risk prediction tool known as "SPARRA" (Scottish Patients at Risk of Readmission and Admission) or something equivalent in order to identify people at greatest risk of emergency admission or readmission to hospital, and put in place preventative care arrangements for these people to minimise unnecessary and potentially traumatic admissions to acute hospitals
- Development of telehealth services should be a priority, with an initial focus on care for those with long-term conditions, paediatric support requirements, or unscheduled care needs. The Scottish Government believes Scotland should become a recognised global leader in telehealth
- Telecare offers particular opportunities in remote and rural areas[16]
- Effective deployment of telecare and telehealth requires new protocols and agreed service standards. A new Scottish Centre for Telehealth will provide support and advice to NHS boards in developing these, complementing the work of the Joint Improvement Team
- A need for further improvements to local Single Shared Assessment frameworks and more effective sharing of information across health and social care service providers should continue to be a focus for collaborative working
- From 2008 dementia will be regarded as a national priority.

14 Scottish Executive (2006) Changing Lives: Edinburgh, Blackwells.

15 The Scottish Government (2007) Better Health, Better Care Action Plan, Edinburgh, Blackwells.

16 "Travelling to a central point can be avoided through the use of videoconferencing, telephone or email, whilst digital data such as blood tests, ECGs, and images can be transferred from remote sites to other points to enhance diagnosis."

Measuring Progress

To measure progress in improving health care provision, the Scottish Government adopted a performance management system known as HEAT (Health, Efficiency, Access, Targets). The HEAT framework complements the core outcomes previously identified for use by JIT in providing local care partnerships access to telecare development funding in 2006-7 and 2007-8. HEAT also complements the Community Care national outcome framework introduced in 2007 to demonstrate how joint working between local authorities and their NHS partners improves community care services. The Community Care framework includes four national outcomes and 16 performance measures (see tables below).

In November 2007 the Scottish Government and COSLA reached a new concordat on the nature of the future relationship between the two tiers of government. Under the concordat there is in future to be a single outcome agreement (SOA) for every council, and a new performance reporting system based on an agreed set of national outcomes, underpinned by agreed national indicators[17]. The SOA will cover all local government services in each local authority area as well as the responsibilities of Community Planning Partnerships where local authorities have a significant part to play. The local indicators that local authorities may use in their SOAs include a generic community care indicator that is evidenced by the community care performance framework.

Community Care: National Outcomes

- Improved health
- Improved well being
- Improved social inclusion
- Improved independence and responsibility

17 Interpreted by councils to fit with local priorities.

Community Care Measure	Link to national frameworks
Percentage of community care service users feeling safe	Concordat: National Outcomes 9 and 15 Concordat: National Indicators 28 and 31
Percentage of users and carers satisfied with their involvement in the design of care package	Concordat: National Outcome 15
Percentage of users satisfied with opportunities for social interaction	Concordat: National Outcome 15
No of patients waiting more than 6 weeks, or in short stay settings, for discharge to appropriate setting	Concordat: National Outcome 15 (NB stated policy aim within *Better Health, Better Care Action plan* is to reduce delayed discharges to nil by March 2008 and sustain this achievement thereafter)
No of people waiting longer than target for assessment, per 000 population	Concordat: National Outcome 15
No of people waiting longer than target time for service, per 000 population	Concordat: National Outcome 15
Percentage of carers who feel able to continue their role	(NB Concordat commits Central and Local government to jointly deliver 10,000 extra respite weeks per annum at home and in care homes)
Percentage of user assessments completed to national standard	
Percentage of carers' assessments completed to national standard	
Percentage of care plans reviewed within agreed timescale	
No of emergency bed days in acute specialties for people 65+, per 100,000 pop	HEAT: Reduce emergency in patient days by 10% by 2008, against 2004-5
No of people 65+ admitted as an emergency twice or more to acute specialties, per 100,000 pop	
No of people 65+ admitted twice or more as an emergency who have not had an assessment, per 100,000 population	Concordat: National Indicator 20 HEAT: Reduce no. by 20%, compared to 2004-5
Shift in balance of care from institutional to 'home based' care	HEAT: Reductions in the rates of hospital admissions and bed days of patients with a primary diagnosis of COPD, Asthma, Diabetes or CHD, between 2006-7 and 2010-11
Percentage of people 65+ with intensive needs receiving care at home	Concordat: National Indicator 26 HEAT: Increase the level of older people with complex care needs receiving care at home
Percentage of people 65+ receiving personal care at home	

APPENDIX 2:
THE CARE SERVICE PROVISION AND TELECARE FUNDING CONTEXTS

Mainstream community health and care services in Scotland

Services received by an individual depend on their needs and the balance of care differs between different client groups. The following table shows the number of people receiving community care by the four main client groups.

Numbers of people in Scotland receiving community care service by main client group 2006[18]

	Care Homes	Day Care Services	Home Care Services	Direct Payments	Special Needs Housing	Free Personal Care
Older People	33,358	11,912	57,187	484	84,453	72,677
Learning Disability	2,499	7,473	3,066	415	NA	NR
Mental Health	1,071	540	3,192	50	NA	NR
Physical Disabilities	493	1,671	55,766	781	24,147	NR

The table shows that the current importance of special needs housing for older people as well as the significance of home care services, while for those with learning disabilities day care services dominate. For those with mental health problems or physical disabilities home care services play the biggest role.

Total levels of spending on community care are difficult to determine given its cross sector nature. The majority of local authority and NHS Board funding is generic, and these organisations allocate that funding according to their own individually determined priorities. However, the following table details net local authority expenditure on community care by client group in 2005-6 based on returns to the Scottish Government.

Net expenditure on community care by all Scottish local authorities, 2005-6 (£000s)[19]

Older persons	£952,543,000
Adults with physical or sensory disabilities	£154,142,000
Adults with learning disabilities	£298,799,000
Adults with mental health needs	£84,715,000
Adults with addictions/substance misuse	£25,860,000
HIV/AIDS	£1,726,000
Total Community Care	£1,517,785,000

18 Payne, J (2007) Community care in Scotland, SPICe briefing 07/29.

19 ibid.

The table shows that annually over £1.5 billion is spent by Scottish local authorities on care in the community.

Local authorities also receive money from the NHS via resource transfers. Local negotiations take place between Health Board and council officials to determine the amount and the timing of these in order to facilitate the transfer of people from long stay hospitals to the community. In 2005-6 the total amount of resource transfer from NHS Boards was £278m.

Identifiable community based health service expenditure is also considerable, at £959,350,000 in 2006, with services being provided by over 20,000 staff[20].

Telecare development funding and telecare service provision

In 2006 the Scottish Government made telecare development programme (TDP) funding of £8.35 million available to the 32 health and social care partnerships across Scotland. The purpose of this funding was to build upon earlier progress and accelerate the adoption of telecare within mainstream care service provision. Local care partnerships advised that prior to the introduction of TDP funding there were almost 137,000 service users in Scotland with telecare forming some part of their care package.

From a national perspective, the additional impact arising from TDP funding, based on what local care partnerships said they could achieve with the extra money, is summarised in the following table in terms of the collective contribution made to four specific outcomes[21].

National Outcomes	Anticipated TDP contribution 2006-7 to 2007-8
Reduce the number of delayed discharges from hospital	400
Reduce the number of unplanned hospital admissions for community care based clients	1,700
Remove the need for care home admissions for community care based clients	390
Increase the number of persons able to maintain themselves at home through receipt of a telecare service (with support)	3,800

20 ISD Scotland table R100: http://www.isdscotland.org/isd/797.html – by 2007 expenditure had risen to £988,460,000.

21 These are separate from and in addition to a range of other locally sought and expected outcomes.

In addition, local partnerships identified a number of expected efficiency savings from the programme, as summarised below[22].

Core efficiency savings from the Telecare Development Programme 2007-8 to 2009-10

Over the period 2007-10, a minimum of:

- 46,500 hospital bed days saved by facilitating speedier hospital discharge
- 225,000 care home bed days saved by delaying the requirement for people to enter care homes
- 46,000 nights of sleepover care and 905,000 home check visits saved by substitution of remote monitoring arrangements.

Collectively, these savings are valued at around £43 million – an anticipated benefit to programme funding cost ratio of 5:1.

In addition, a recent benchmarking exercise on the development of telecare in Scotland concluded that perhaps the most encouraging aspect of recent progress under TDP funding is that a number of local partnerships, from what was virtually a standing start in 2006, have now begun to develop area wide strategies for future telecare service provision[23].

Progress is also being made with regard to telehealth. The table below summarises developments in this area that are being supported by the Scottish Centre for Telehealth[24]. In addition, the Scottish Centre for Telehealth is working with the NHS Boards in Tayside, Fife, Borders, Orkney and Highlands to develop area wide telehealth strategies, and with the Joint Improvement Team to ensure that over time telehealth and telecare service provision is mutually reinforcing.

Actual and planned telehealth service pilots and extensions across Scotland

General Type of Service	Locations and Details of Services
Unscheduled Care Provision	Orkney, Grampian, Tayside
Long Term Condition	Orkney, Shetland (teleneurology) Moray, Highlands (epilepsy) Aberdeen, Shetland (chronic pain management) South/North East Scotland, Lanarkshire (hyper acute stroke care) Lothian, Lanarkshire, Moray (COPD) Fife, Grampian (teleuveitis) Forth valley (dermatology)
Remote and Rural Area	Shetland, Western Isles (upper airway endoscopy) North Scotland/Western Isles (maternity services)

22 The York Health Economics Consortium at York University (YHEC) is monitoring ongoing progress against these expected outcomes and efficiencies.

23 Joint Improvement Team (2008) Telecare in Scotland: Benchmarking the present, embracing the future.

24 http://www.sct.scot.nhs.uk/index.html

APPENDIX 3: GLOSSARY

Call handling

Community alarm schemes (see below) require someone at the end of a phone line who can respond to an alert or alarm call. This part of the service is referred to as a call centre, monitoring centre, or call handling service. One or more trained operators (call handlers) provide an immediate, skilled, sensitive response to the person calling, or to the alarm. Detailed protocols provide a series of instructions the call handler must follow in any eventuality. Usually, with modern equipment, core information (such as address, name of key holders, essential medical information etc) will appear on screen at the same time as a call comes in.

For telehealth (see below) equipment, call handlers require additional protocols, specialist training, and/or a trained nurse immediately available.

Community alarm scheme

Also known as a community alarm service, this is considered to be a basic introductory form of telecare. It involves the installation of reactive systems or passive devices that transmit alarm calls. Community alarm schemes or services are now well established in all parts of Scotland. They originated in sheltered housing schemes, but are now more widely available to people in their own homes (sometimes referred to as 'dispersed units'). A 'basic package' involving a pull chord, button, and/or pendant enables a user to create an alarm at a call or monitoring centre.

Information Governance

Information Governance is the way by which the NHS and care organisations handle all organisational information – in particular the personal and sensitive information of patients and employees. It allows organisations and individuals to ensure that personal information is dealt with legally, securely, efficiently and effectively, in order to deliver the best possible care.

Response service

The response service is the framework for actually responding to an alarm from a community alarm scheme or telecare device. It is usually triggered by the call handling centre.

Some areas have teams of specially trained personal carers who provide the main response service to most community alarm scheme emergency calls. Other areas will have wardens, or similar, who can provide practical help in an emergency, and can appraise a situation (such as a fall, or failure to answer the door) so ensuring that the appropriate emergency service is called. A service user is also usually asked to name one or more 'key holders' so that, if they are unable to answer their door when in difficulty, someone else can. In several areas of Scotland, access to community alarms service is limited to those who can name at least one key-holder.

Telecare

Telecare is the remote or enhanced delivery of health and social services to people in their own home by means of telecommunications and computerised systems. Telecare usually refers to equipment and detectors that provide continuous, automatic and remote monitoring of care needs emergencies and lifestyle changes, using information and communication technology (ICT) to trigger human responses, or shut down equipment to prevent hazards.

Sometimes telecare can be identified as relating to different 'generations':

- ***First-generation*** telecare refers to equipment and devices found in most community alarm schemes. It refers to user-activated – e.g. push button, pendant or pull cord – alarm calls to a control centre where a call handler can organise a response of some kind - usually via a neighbour, relative or friend acting as a 'key holder'.
- ***Second-generation*** telecare evolved from the introduction into basic community alarm services of sensors such as smoke alarms and flood detectors. Second generation telecare includes sensors that can monitor the home environment, vital body signs, physiological measures, and lifestyle. These sensors can collect and transmit information continuously about door opening, bathwater running, the use of electrical appliances, and movement both within and outwith the home. This provides a much more sophisticated and comprehensive support to managing risk and improved quality of life.
- ***Third-generation*** telecare arose from improving and increasing availability of broadband, wireless and audio-visual technology. This offers potential for virtual or tele-consultations between the service user and doctor, nurse or support worker, thus reducing the need for home visits or hospital appointments. Furthermore, it leads to increasing opportunities for people – particularly those unable to leave their homes alone – to 'visit' libraries, shops and maintain contact with family and friends.

Telehealth

Telehealth refers to the use of monitoring and measuring devices that collect information about health conditions in the patient's home, and then send it on for evaluation. Clinicians can then be alerted to significant changes in a patient's condition, and the patient advised, or reassured, appropriately.

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