THE TELECARE SERVICE STRATEGY
for
WREXHAM

2006-2008
Index

Executive Summary

Section 1: Introduction

Section 2: Telecare Technologies

Section 3: Key Drivers

Section 4: The Political and Policy Context

Section 5: Wrexham Demography and Local Context

Section 6: The Partnership Agenda

Section 7: Telecare Partnership Working

Section 8: Community Alarm Service in Wrexham

Section 9: Existing Strengths and Weaknesses

Section 10: Target Audiences for Telecare Services

Section 11: Service Development Process

Section 12: Developing the Infrastructure

Section 13: Procurement Choices and Issues

Section 14: New Service Propositions

Section 15: Developing a New Charging Policy

Section 16: Training, Assessment and Installation

Section 17: Monitoring and Response Services

Section 18: Evaluation and Review

Section 19: Financial Outcomes

Section 20: The Regional and National Agendas

Section 21: Risks
Executive Summary

Telecare services support the independence of vulnerable people in their own homes by providing remote management of risk and of activities performed and monitored within the home environment. They therefore have an important role to play in encouraging people to choose their location of care, and to elect to “stay put” if this is their wish.

The Welsh Assembly Government supports the need to use technology to make health and social care delivery more efficient. It recognises the need to pump prime the system to help reengineer the delivery of care services. The Welsh Telecare Capital Grant provides a total of £8.92 million for the purchase of telecare sensors and equipment across Wales. Wrexham’s share of this grant is £374,189 which covers the period up to the end of March 2008 and is designed to enable over 400 additional vulnerable people to be supported in their own homes using a telecare service.

A new Wrexham telecare service is proposed based on the infrastructure and resources already available through the Wrexham Care Call service. It will also capitalise on the expertise of Occupational Therapy staff who have provided items of electronic assistive technology to people with dementia for a number of years, enabling them to remain safe in their own homes rather than having to move into institutional care at a premature stage.

The new service will be offered at two levels:

I. A Home Safety package to people whose risks and levels of unmet need may be described as low to moderate and will support any vulnerable person who is at risk of losing their independence.

II. A fully assessed and tailored telecare package for people who may be in, or approaching, a position of crisis and for whom telecare may be part of a care plan designed to avoid unscheduled care in hospital or unnecessary admission to residential or nursing homes. It might also support the independence of people with learning disabilities and other vulnerable groups. The full service will be targeted at people with dementia, those at risk of falling, frail elderly people recently discharged from hospital, and other groups identified by the stakeholder advisory group. People with physical, sensory or learning disabilities may also be helped to achieve their potential in living independently through an extended use of technology.

The Telecare Capital Grant will be used to purchase the equipment needed in the homes of service users and to buy additional technical and software resources needed to support the development of the service. A new charging policy will be developed to ensure that the telecare service is sustainable and consistent with national and regional agendas. It will be the subject of agreement between partners, each providing financial and other support consistent with the level of benefit to their services. A need for local coordination of services and responses is recognised.
Section 1: Introduction

In 1999, the Royal Commission on Long Term Care reported that the cost of providing continuing health and social care for older people in the UK will double from £12 Billion per annum by 2025, and double again by 2050. This is due to:

- Greater life-expectancy
- Changes in the number of people living alone and outside families
- More expensive healthcare interventions, and
- Higher expectations of individuals and their families regarding the quality and choice in care delivery

The future problem may be compounded by the falling birthrate, especially during the 1960s and 1970s which has resulted in fewer people being available to fund the NHS and social care system through taxation, and also a potential shortage of carers. The future situation is illustrated in Figure 1 which shows that during the period 2006 to 2008 both the dependency ratio (defined as the number of people aged 18 to 64 divided by the number aged 65 and over) and the long term healthcare costs are about to change at their fastest rate.

![Figure 1: The Demographic and Cost Time-bomb Facing the UK](image)

Whilst the initial thoughts were focused on finding the additional funding necessary to deal with the impending crisis, it has more recently become evident that an alternative, and more affordable, option may be to change the way in which care is delivered. This means both making the system more efficient and, where necessary, changing the system completely to encourage alternative ways of working. An increased role for technology was evident but, until recently, the required devices and ICT (information and Communications Technology) infrastructure were not available, and there was little evidence to demonstrate the efficacy and cost-effectiveness of this approach. This has now changed and the Audit Commission showed in 2004 that technology is viable in reengineered healthcare service.
Section 2: Telecare Technologies

Rapid improvements in electronics, computing, telecommunications and engineering during the latter half of the 20th century have resulted in the maturing of a number of new technologies. Many of these have been used to support or maintain independence, and have become known as Assistive technologies. Generally, an Assistive technology (AT) may be defined as:

"a product, system or service that helps a person to:
1. Achieve a greater level of independence and/or
2. Improve their Quality of Life and/or
3. Increase their inclusion in society through enabling them to participate in social, work-related or recreational activities”

There are four types/generations of telecare technology:

Generation Zero

These are standalone devices and systems which compensate for sensory, physical or cognitive or a learning disability. They include simple gadgets such as calendar-clocks and video door-bells that help to manage unmet needs identified by carers or in an assessment.

Over 50 different devices were used in the Northamptonshire “Safe at Home” project between 2001 and 2004. 91% of them worked reliably over the course of 6 reviews. As a result of the technology, people suffering from mild or moderate dementia spent less time in hospital, residential and nursing care. This saved over £1.5 million over 21 months on 233 service users, and compared with a control group from Essex (where there was no telecare) they were four times less likely to leave the community during the course of the project.

Generation One

This is telecare using the community alarm infrastructure but with smart (i.e. decision-making) sensors providing rapid and automated alerts in the event of emergency. The success of the system depends on the availability of sensors appropriate which can manage the risks to independence of an individual. These will include environmental and security sensors, e.g., smoke alarms, fall detectors, designed to keep people safe, but also an increasing number of social sensors which may help to prevent increasing dependency and admission to care homes. In the future, there will be sensors to detect medical and physiologic emergencies including hypoglycaemic incidents and nocturnal epileptic seizures. These will be relevant to the provision of rapid response teams to the home in order to avoid emergency admissions to A&E and unscheduled care incidents.
Over 2500 people in West Lothian now have 1st generation telecare systems consisting of an intelligent carephone and sensors. 90% have a base home safety package, but the others, following an assessment, have access to a much wider range of devices. By 2004, the use of technology was believed to be saving over 3000 hospital bed-nights per year. After 5 years, the number of delayed transfers of care had fallen by 88% compared to 60% across the rest of Scotland e.g. there were 3 people waiting for discharge in April 2006 compared with 17 in April 2001. In a similar way, the rate of total homecare provision fell from 312.8 in 2003/4 to 298.8 in 2004/5 (per 1000 people aged over 65). This compares with an increase from 512.2 to 561.6 in the rest of Scotland, yielding significant savings to the social work budget.

Generation Two

Monitoring domestic activities and/or vital signs, e.g., getting up in the morning, and/or blood pressure monitoring, on a daily or continuous basis, provide an opportunity to examine trends and identify problem situations before they mature into full emergencies. This allows early interventions to be made which can result in the avoidance of future problems including the need for hospitalisation. Daily monitoring in the home can replace the final few days in an acute hospital allowing patients to return home earlier and to avoid the possibility of acquiring infections such as MRSA. The technologies are now mature and are becoming increasingly compatible with the 1st Generation of telecare infrastructure, enabling the sensing devices to interface with the telephone network through the intelligent carephone, and for physiological and activity data to be stored on servers at the monitoring centre.

In Carlisle, the Riverside Housing Associated is contracted to the local PCT to provide monitoring equipment in the homes of people with Chronic Obstructive Pulmonary Disease and/or Congestive Heart Failure for 3 or 4 days after they are discharged from hospital. 1100 monitoring days were commissioned in the first year of the service. They were used to provide 265 episodes of monitoring, saving 990 bed-days (equivalent to 2.7 permanent acute beds). The savings to the PCT through Payments by Results was in the order of £500K. The number of monitoring days commissioned this year has been doubled.

Generation Three

This involves the delivery of relevant advice and information to any member of the public in order to promote good health and well-being. Services will certainly make use of broadband communications, the TV, and, with the addition of a set-top box, will involve the use of the internet, video consultations and other interactive services. It is assumed that the
set-top box will provide an interface for the sensors used in second generation, and also the carephones used for first generation telecare.
Section 3: Key Drivers

There is an on-going shift in public resources from secondary to primary care. Healthcare and medical services will, as a consequence, move closer to local communities. At the same time, support services associated with community alarms have extended to embrace more and more people with healthcare and medical support needs in those same communities. There is, therefore, a convergence between social and health care. The future development of telecare services will reflect these changes.

The two major concerns facing the health and social care system have been identified in Section 1 as cost and capacity. Table 1 identifies the major costs already facing Wrexham Social Services in providing community care services for an ageing population (additional costs are funded by the NHS and by individuals). Each element in this matrix is likely to increase in the future because of inflation and the effects of an ageing population. Political expediency may force governments to change eligibility threshold enabling more people to received care services free of charge. Social services departments remain responsible for the assessment of need and the management of care contracts when community care functions are performed by either an in-house team or through an external agency.

Table 1: Care in Wrexham, Costs of Care Provided by Local Authority Social Services

<table>
<thead>
<tr>
<th>Type of care</th>
<th>No of recipients</th>
<th>Average cost per client per year</th>
<th>Total annual cost of provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing care</td>
<td>202</td>
<td>£15,708</td>
<td>£3,173,000</td>
</tr>
<tr>
<td>Residential care</td>
<td>460</td>
<td>£17,384</td>
<td>£7,997,000</td>
</tr>
<tr>
<td>Community based care</td>
<td>2951</td>
<td>£5,697</td>
<td>£16,814,000</td>
</tr>
</tbody>
</table>

The difference in average cost per client per year is more than £10,000 for community based care compared with the lowest cost institutional care. A reduction in institutionalisation is clearly high on the agenda.

Meanwhile, domiciliary care agencies in most local counties struggle to recruit and retain care staff. Pay rates have historically been low and, at times of low unemployment, the capacity of the care sector to increase supply is seriously compromised.

Waiting times in Accident and Emergency Units in hospitals rose steadily through the 1990s. At times, ambulances have had to wait with patients at the front door until a bed becomes available. Long waits on trolley have been necessary in many hospitals. In the same way, delays in providing ambulances have been profound.
NHS Direct Wales was introduced as an attempt to reduce the number of people turning up at A&E units for unscheduled care. It involves both teletriage and an internet approach to answering the concerns of people regarding health matters. Expansion into medical telecare services was envisaged by some senior clinicians. However, the cost per call remains high despite a significant increase in call traffic every year, especially at Christmas and at weekends.

Despite this success, Figure 3 shows that NHS Direct does not attract calls from older people in the same proportion as might be expected based on the number of A&E presentations made by this group, and the number of bed nights consumed for unscheduled care by people aged over 65. It may be evident that a decrease in the number of unplanned hospital admissions is required through improved services rather than through an alternative funding strategy (such as Payments by Results employed in England). Figure 4 does show, however, that a telephone intervention (i.e. telecare) can divert patients from the A&E department.

Figure 3: Proportion of NHS Direct Callers by Age

Figure 4: Outcomes of NHS Direct Calls
Section 4: The Political and Policy Context

A raft of policy documents relating to the long term care agenda have been published by both UK Government and the Welsh Assembly Government in recent years. In the context of telecare, perhaps the most important of these are the following. Although three have a remit for England alone the agendas addressed can be seen as relevant for the whole of the United Kingdom. The empowering ethos associated with the documents emerging from the Department of Health, furthermore, is entirely in keeping with the approach that underpins the Welsh Assembly Government’s Strategy for Older People in Wales.

- Social Justice And Regeneration Committee’s Report on Housing and Older People (2004) ;

10
The strategy and policy documents listed on the previous page, point, to varying degrees, to the ways in which services at the interface of social care and medical care are changing or should change. The Department of Health’s report aimed at furthering the ‘expert patient’ programme, for instance, affirms that the “era of the patient as the passive recipient of care is changing and being replaced by a new emphasis on the relationship between the NHS and the people whom it serves – one in which health professionals and patients are genuine partners ...”. It noted that developments in technology would “make it easier for patients to monitor the progress of a disease.

The Wanless review for Wales, while recognising an important role for telemedicine, recommended that “... the Assembly should give a lead in social care ICT” with compatible systems to facilitate the exchange of information relevant to health and social care needs. The investment required would “... realise improvements in productivity and new service models ... that focus on prevention, promotion, primary and non-institutional care”. Such objectives were supported by the Social Services Inspectorate for Wales when calling for a “... radical shift in the pattern of services ... [for people] to achieve greater independence in the community, prevent inappropriate hospital admission and support timely discharge from hospitals.”

The Strategy for Older People in Wales includes the objectives of enhancing the engagement and participation of older people; tackling ageism, age discrimination and age stereotyping; promoting partnerships and establishing ‘unified’ assessment procedures for health and social care; and the strengthening of primary and community services. All such approaches are endorsed within the National Service Framework for Older People in Wales.

The new support services that must be adopted and further developed in Wales are, therefore, those that may have tended to underpin social rather than medical care. They reflect agendas that give people more choice and have extended the opportunities offered through, for instance, direct payments and individual budgets. As the new services are developed, it is clear that telecare can embrace appropriately configured telemedicine services in people’s homes. This is especially the case as the prospect of service choices, whether mediated or not by telecommunications technologies, is increasingly realised.

In Wales, the recognised need to move away from, ‘top down paternalism’ (Department of Heath, 2006) is reflected in the Assembly Government’s commitment to ‘empowering citizens and communities so that service improvement is triggered from the ground up’. This is a part of the ‘Making the Connections’ initiative (Welsh Assembly Government, 2004). New partnerships are envisaged that involve voluntary and private sectors and will be ‘putting the citizen centre-stage’. Further re-enforcement of many of
the messages as they apply to public services (regarding e.g. partnerships and funding frameworks) are clear within the report by Sir Jeremy Beecham (Welsh Assembly Government, 2006).

Telecare must therefore be considered within the above context, it can become the catalyst for change.
Section 5: Wrexham Demography and Local Context

Wrexham is situated in North-East Wales on the border with England (as shown in Figure 5) sharing boundaries with Cheshire to the east and Shropshire to the south. It has three distinct geographic regions:

- An upland area to the west consisting mainly of moorland and hill farms
- A central urban area around the town of Wrexham, and
- A flat area to the east used mainly for agriculture

Figure 5: Location of County Borough of Wrexham in North Wales

The overall population of Wrexham County Borough was 128,476 in the 2001 census which was a 3.5% increase since 1991. The increase is mainly attributable to increases within the post retirement age groups. Figure 6 shows the age distribution and estimated increase of the population aged over 65 to 2012. A further 15% increase in the number of people aged 65 – 79 is expected by 2012. More significantly, the number of people aged over 85 (and most likely to need community services) may increase from 2500 to over 3000, a 20% change.

Figure 6 – Projected increase in population aged 65 and over

<table>
<thead>
<tr>
<th>Age</th>
<th>2001</th>
<th>2012 estimate</th>
<th>Population increase</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>65-79</td>
<td>15,166</td>
<td>17,502</td>
<td>2,336</td>
<td>15%</td>
</tr>
<tr>
<td>80-84</td>
<td>2,939</td>
<td>3,150</td>
<td>211</td>
<td>7%</td>
</tr>
<tr>
<td>85-89</td>
<td>1,669</td>
<td>1,919</td>
<td>250</td>
<td>15%</td>
</tr>
<tr>
<td>90+</td>
<td>831</td>
<td>1,092</td>
<td>261</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: Office of National Statistics – Census 2001
Cultural Diversity

According to the 2001 Census, around 1.1% of the local population describe themselves as being Black, Asian or of mixed heritage. However, over the past decade, there has been a steady growth in the overall population of Wrexham County Borough and the local population is more ethnically diverse than ever before. In particular:

- The County Borough has seen an increase in the number of economic migrants over recent years. They help to fill skills gaps within the local labour force and underpin the economic growth of the area as well as maintaining service delivery within the health sector;
- The County Borough is part of the Government’s dispersal programme and is home to a number of Asylum Seekers and Refugees;
- NEWI welcomes a large number of oversees students each year.

It is likely that these influences will change the demographic profile of older people in the next twenty years but it is difficult to project to what extent the population will change.
Section 6: The Partnership Agenda

The development and subsequent implementation of Wrexham’s Telecare Strategy will be taken forward by the Health, Social Care and Well-being Partnership Board, whose membership includes representation at a senior level from Wrexham County Borough Council, Wrexham Local Health Board, the North East Wales NHS Trust, the National Public Health Service, Community Health Council and the Association for Voluntary Organisations in Wrexham (AVOW).

The successful implementation and delivery of telecare requires a “whole systems” approach and it is therefore vital that all partners are engaged at an early stage.

Wrexham County Borough Council is a Unitary Authority and therefore the involvement of a number of departments, including, housing and social services, is necessary to deliver the telecare agenda.

Likewise early engagement with the voluntary sector in terms of their role in representing service users views is required.

The North East Wales NHS Trust covers the whole of Wrexham (and also most of Flintshire and areas of Denbighshire, Gwynedd and Powys). It offers a comprehensive range of secondary care services including acute, community and mental health.

Compared with other areas of Wales which have an industrial heritage, Wrexham’s population is comparatively healthy. However, the 2001 Census results for Wrexham suggest:

- 11% of people described their health as “not good”
- Nearly 28,000 described themselves as having a limiting long term condition
- 6% were permanently sick or disabled
- Over 11% provided informal care with over 3000 of them spending over 50 hours a week caring for a relative or close friend

The broad vision of the Partnership Board is:-

"To create a healthier community by promoting and supporting healthier lifestyles, and to develop first class services that support those people who have health or care needs”. “Caring for our Health” the Health, Social, Care and Well-being Strategy for Wrexham 2005-2008.
Current priorities for partners in which telecare/telehealth can have a fundamental impact include:

- Chronic Disease Management
- Enabling people to remain in their own homes
- Delayed Transfers of Care
- Intermediate Care
- Unscheduled Care

It is established that people with long term conditions and chronic disease require continuous support, but also unplanned and emergency interventions during the course of the year in order to deal with exacerbations. Telecare, especially monitoring of vital signs, may play a significant role in reducing the number of unscheduled care episodes, by providing access to an integrated health and social care team on a 24 hour basis.

Coronary Heart Disease (CHD) is responsible for 23% of total deaths in Wrexham. Rapid access to emergency services through telecare may help reduce the number of deaths, especially when supported by prevention and health promotion initiatives. Chronic Obstructive Pulmonary Disease (COPD) includes asthma, bronchitis and emphysema. It cannot be cured but involves many unscheduled care episodes during the final phases, many of which could be managed through use of medical telecare.

Mental health problems are common, affecting one in four families in some way. Dementia is age related and is present in 20% of people aged over 80 years. There are few alternatives to hospital care and, too quickly in the case of many older people, admission to nursing homes. Telecare does offer an alternative by supporting both the patient and their carers in their home environment, providing an early warning of problems such as wandering or dangerous behaviour.

The provision of appropriate Intermediate Care services enables early discharge from hospital and the prevention of hospital admission. Telecare plays an important role in both re enablement and maintaining independence, as well as managing the risks of early discharge, for example, through the use of lifestyle monitoring. This will assist with reducing the number of Delayed Transfers of Care and support people to remain in their own homes.

Medication is provided free of charge to all older people. Polypharmacy is now a major issue with most people taking 5 different tablets every day. Poor compliance is likely to affect over half the people, leading to sub-optimum treatment and the risk of overdose. The use of telecare to remind people when to take their medication and to provide feedback on compliance may have a positive effect on health and well-being.
The implementation of Telecare will support the following SSD Performance Indicators & Service & Financial Framework (SAFF) Targets.

SSD PI’s

SCA/002(NS2)
The rate of older people (aged 65 or over): Helped to live at home per 1,000 population aged 65 or over
This performance indicator also represents one of Wrexham County Borough Council’s key priorities for both 2006-2007 and 2007-2008.

SCA/003
The percentage of clients who are supported in the community during the year, who are:
a) Aged 18-64
   Aged 65+

SCA/010
The rate per 1,000 adult clients assessed during the year who are provided with assistive technology as part of a package of care

SCA/001(NS1)
The rate of delayed transfers of care for social care reasons per 1,000 population aged 75 or over

SCA/011
The percentage of delayed transfers of care due to:
a) Healthcare reasons
b) Social care reasons
c) Other reasons

SCA/0708/NEW4
The percentage of clients with learning disabilities aged 18-64 directly supported in order to maximise their independence & social engagement.

SAFF Targets

16
To reduce the numbers of delayed transfers of care in mental health facilities per 10,000 population

17
To reduce the number of days delayed for delayed transfers of care in mental health facilities per 10,000 population
To deliver through the development of Integrated Chronic Disease Management Systems:
10% reduction in emergency admissions against the 2004/05 baseline
10% reduction in the number of bed days resulting in emergency admissions against the 2004/05 baseline.

To reduce the numbers of delayed transfers of care (excluding mental health) per 10,000 population

To reduce the number of days delayed for delayed transfers of care (excluding mental health) per 10,000 population
Section 7 Telecare Partnership Working

A multi-agency telecare stakeholder group was established to develop a vision and to ensure that telecare services would be developed with the full support and cooperation of partner organisations from the statutory, voluntary and independent sectors. As previously stated, telecare requires a “whole systems” approach, it is therefore crucial that all partners are engaged in formulating the Strategy.

The Vision of the telecare stakeholder group is that:

“In Wrexham, anyone could be supported by telecare/telehealth, to maintain both their independence and health, in a setting of their choice”

Priorities identified by the telecare stakeholder group include:

- Enabling people to stay at home – reducing premature admission to residential or nursing homes
- Reducing the need for unscheduled care – using alarm, activity and vital signs data collected within the home to predict and prevent emergency situations which would lead to unplanned care episodes
- Mainstreaming – developing a complete service that can be accessed by all relevant groups without the need for pilots
- Maximising independence – providing vulnerable people with the opportunity of doing more for themselves through the provision of telecare and the management of risks
- Keeping people safe – providing a service which offers rapid detection and response to accidents in the home
- Protecting vulnerable people – using technology to confirm the location of children and frail adults during the day and the night
- Increase choice – to offer an alternative way of overcoming sensory, physical or cognitive challenges
- Support for carers – to provide an electronic safety blanket of support on a 24 hour basis to relieve the stress of caring
- Partnership delivery – to identify elements of a service that may be provided by partner organisation
- Integrated provision – to develop a service that is accessible to the public through a number of different routes
- Contributing to Best Value Services – to ensure cost-effectiveness by producing efficient methods of service delivery which will result in cost savings to the council over a period of time.
- To support young adults through the process of transition to adulthood.

The vision can be supported/achieved through a telecare service that extends from monitoring the home environment in order to detect fires and
similar accidents, though to pro-active medical monitoring to manage chronic disease. Access therefore should be to everyone at the lower levels, but confined to people who have undergone a full needs assessment for the higher levels.
Section 8: Community Alarm Service in Wrexham

A key element of telecare is the monitoring centre, currently in Wrexham this function is undertaken by Wrexham Carecall. Carecall was established in 1991 and provides a monitoring-only service mainly to residents of Wrexham. Wrexham Carecall is part of the Housing & Public Protection directorate of Wrexham County Borough Council and is located in a flat within a sheltered housing unit near the town centre. It also provides security and (informal) lone worker monitoring as well as some out-of-hours call handling for various council run services, mainly related to housing.

It employs 1 full-time manager, 5 full-time operational staff as well as 2 part-time operational staff plus relief staff, and 1 full-time management admin assistant. For the majority of the time there is one member of staff on duty, apart from 3pm-9pm, Monday to Friday and 9am-3pm at weekends and Bank Holidays, when two staff are on duty. Installations, removals and maintenance are performed by an external contractor.

Figure 7: The Age Profile of Carecall Service Users

A service is provided now to over 3000 properties, about a quarter of them in sheltered housing schemes operated by the council or by Registered Social Landlords (RSLs). Approximately half the users receive financial help from Supporting People for their alarm service. The remaining private clients pay £3.10 per week for their service and for the rental of equipment payable quarterly in advance plus £30 installation fee. The charges are less for WCBC tenants and are added to the weekly rent. Figure 7 shows that the service users tend to be aged over 75, with over 500 clients aged over 90 years.

Wrexham Carecall, like most similar organisations in Wales, was well-positioned to champion telecare over the past few years but lacked the resources and the strategic vision necessary to fully embrace the
opportunity. Most community alarm services in the UK have been similarly restrained. It will require significant investment in technology, training and other facilities to enable it to become the hub for telecare service delivery.
Section 9: Existing Strengths and Weaknesses

The Technology with Support in the Community (TSC) scheme has been operating successfully in Wrexham for a number of years. It involves the installation of mainly standalone smart technology devices in a person’s own homes enabling them to continue to live there safely rather than accept an immediate move into residential or nursing care. The scheme has developed under the direction of an Occupational Therapist from the North East Wales NHS Trust with a specialty in dementia care. She has become an expert in the assessment of people and in the matching of technology to the need and to the management of risk. The skills and processes developed during this work can be adapted for rolling out to other groups within the community.

The experience of the Carecall service and staff, offer an opportunity to develop telecare provision from a mature base. The age profile of existing service users is particularly well matched to the people most likely to need the service. The fact that three-quarters of the users are dispersed in the community, and pay a weekly charge, removes many of the obstacles to telecare development, and demonstrates an excellent approach to marketing the service to the relevant sectors.

However, a review of the existing community alarm service and premises is required to establish it’s fitness for purpose in respect of telecare and identify any investment required.

The monitoring station, which was installed in 2001, has the capacity to interpret telecare alarm codes supported by enhancements to the proposed new British Standard, BS7369. However, the lifetime of this equipment is finite. Future-proofing any new facilities may be extremely difficult at a time when major changes in telecommunications are imminent. The integration of remote health and domestic activities, and the use of monitoring centre to provide advice and information must also be considered (see Section 2). The annual running costs for a modern, well-manned and managed monitoring centre are likely to be in the order of £500K when training and capital upgrade and maintenance are included. This needs a customer base in the order of 10,000 in order to generate this level of income based on standard monitoring charges of £1 per person per week (as noted by ASAP in 2003). This problem applies not only to Wrexham Carecall but also to all monitoring centres in Wales as well as to those over the border in England. Indeed, a Supporting People review in County Durham has proposed the use of only one monitoring centre in the future to replace 5 current centres.

Wrexham Carecall has supplied service users with carephones and peripherals from the security company Scantronics over a number of years. Sensors and alarm devices now operate at 868MHz, a frequency approved across Europe for security rather than telecare applications. The range of
peripherals available for use in this system is extremely limited. The NHS Purchasing and Supply Agency framework for telecare neither includes Scantronics nor any of the smaller providers of telecare equipment (E.g. Antenna, Caretech, Tynetec, General Electric, Bosch, Telealarm, Intervox and Secom) in their own right – though many are available at a higher than list price through distributors. It may be evident that Wrexham Carecall will need to change its primary supplier of community alarm equipment and consider a range of options for service development.

A change in the supply of equipment will inevitably require an investment in training both for the Carecall staff and for agencies involved in purchase, storing, advertising and installing the equipment. There will be a need for demonstration facilities because no “smart home” yet exists within Wrexham (though a Homesafe demonstration property has already been established by the Pennaf housing group at Elm Court in Rosset). These facilities could play a significant role in raising awareness amongst all levels of care staff and informal carers. The provision of telecare services for people with low or moderate needs may become an important component in a prevention agenda.
Section 10: Target Audiences for Telecare Services

The previous sections have identified issues of ill-health and unmet need relating specifically to Wrexham. The introduction of telecare in Wrexham will be on an incremental basis with 2 strands:

i) Initially focusing on a number of key areas, with the eventual aim of supporting all people based on their needs once telecare is embedded into the health & social care systems.

ii) The Home Safety service, aimed at people with low level needs, to avoid loss of independence & unnecessary admission to hospital or residential care.

Broadly telecare may be used to support the following vulnerable people:

- **Patients recently discharged from hospital** - Integrate with existing services to avoid the need for re-hospitalisation.
- **Older people living alone** - Risk management in their own homes, increased confidence relating to accidents and security
- **People with a dementia** - Reminders and sensors to detect dangerous situations
- **People with learning disability** - Opportunity to maximise independence through electronic aids and emergency detection
- **People with physical disabilities** - Remote control devices with risk management to provide easier access to emergency services in the event of accident
- **People with increased frailty** - Safety net of support and long term monitoring of the progression of their condition
- **Chronic disease or long term condition sufferers** - Supported self-care and expert patient programmes with easy access to 24 hour support services to avoid unscheduled use of hospital services
- **People with mental health problems** - Rapid support at times of crisis and help to achieve compliance with medication therapies
- **People with sensory impairments** - Sensors to help compensate for reduced senses, management of risk through improved user interfaces
- **Tenants in sheltered housing schemes** - Extends existing community alarms to include a range of automatic environmental sensors
- **Extracare housing tenants** - Supports independence by managing risks without the need for 24 hour care services
- **Children with a range of challenges** - Peace of mind for parents
- **Hostel dwellers with history of substance abuse** - Lifestyle monitoring to support rehabilitation programmes, and protection from hostile parts of society
- **People with complex support needs** - Assessment of lifestyle and problems through activity monitoring
• **Informal carers of any of the above groups** – Continuous emergency monitoring to provide respite
• **Women at risk of domestic violence** – Silent and rapid access to emergency services
• **People at risk of abuse from bogus callers** – Increase confidence by providing continuous access to support and emergency services
Section 11: Service Development Process

The Welsh Assembly Government published guidelines for the development of a telecare service in October 2005. These provided a more prescriptive approach than in similar documents published in England. They could be summarised by the following process:

- Assemble Telecare Stakeholder Team
- Determine local priorities
- Formalise Assessment Processes and links with the Unified Assessment Process (UAP) and Fair Access to Care Services (FACS).
- Plan the implementation
- Evaluate the programme.
- Consider resources, needs and options
- Establish and confirm an ethical position for the delivery of Telecare
- Develop charging policy
- Determine equipment needs and procurement strategy
- Develop inventory of “stand alone” equipment (Electronic Assistive Aids)
- Ensure the appropriate acquisition storage and management of equipment.
- Identifying the Response Service
- Developing Interface protocols
- Develop Care Pathway examples with Telecare
- Establish a basis to commission the telecare service
- Training
- Raise the profile of Telecare
- Review scope of equipment
- Monitor progress and ensure evaluation

The majority of these steps have already been considered in Wrexham and will form the basis of the implementation plan. Others are discussed in more detail because of their strategic implications.
Section 12: Developing the Infrastructure

The infrastructure for telecare services includes the technical equipment needed to enable communications to be made rapidly and reliably between sensors and a home gateway, between the gateway and a monitoring centre, and between the monitoring centre and the emergency responders. It also includes the methods employed to allow access to appropriate services, assessments, and provision of equipment.

The existing monitoring centre must either be up-graded to be fully telecare enabled, or it must be omitted from telecare service development, using external providers to fill the gap. Unfortunately, there is only a limited possibility of using a another local provider as an external contractor for monitoring as none of the current monitoring providers in North Wales has significantly more experience in telecare than Wrexham Carecall. Other options will need to be considered including the short term use of large national monitoring centres in England (e.g. Astraline or Eldercare). These may present a problem in terms of the bilingual agenda in Wrexham so the national and regional debates on telecare services need to be informed of the Wrexham needs.

As previously mentioned, a review of the existing community alarm service and premises is required to establish it’s fitness for purpose in respect of telecare and identify any investment required. This will inform an options appraisal as to the most appropriate solution.

Though monitoring of alarms can be performed at any remote geographic location, the coordination of community services and the responses to emergency situations can be performed effectively only on a local basis. Thus, there may be a need for a separate telecare centre operating only during weekdays on a 9 to 5 basis, to coordinate response protocols and the administration of service delivery.

In response to locally identified pressures and national agenda plans have been developed to fundamentally redesign the way in which unscheduled care is provided and access within North East Wales. The plan is known as the North East Wales Emergency Response Area (NEW ERA). Any potential development of a telecare monitoring centre will need to be developed in conjunction with this plan.
Section 13: Procurement Choice and Issues

The new NHS PaSA telecare framework covers 1st and 2nd generation telecare systems (including remote vital signs monitoring equipment). It enables the development of consortia in order to take advantage of price bands in which major savings can be made without the need to undertake expensive and time-consuming tendering procedures using OJEU procedures. The scale of grant available in Wales makes the PaSA framework extremely relevant.

In some English counties, only 1st generation telecare is being offered in the first instance. Thus, every single telecare service recipient receives a carephone plus an appropriate arrangement of sensors. The choice of carephone then governs the entire procurement process as economies of scale are sought. Factors influencing this choice include the preference of existing community alarm service providers, the price of the carephone, and the range, quality and performance of the smart sensors and other peripherals that can be used with the carephone.

A single provider is often selected to reduce training requirements, and to simplify stock control and installation procedures. In other cases, multiple providers are employed in order to avoid future restrictions, accepting that the needs of some service users will only be satisfied by the carephone and sensors available through one manufacturer. This approach may be necessary to support people with dementia, nocturnal epilepsy and sleep apnoea, and for people with complex needs.

The number of companies providing 1st generation telecare equipment has become limited as the differences between community alarm systems and telecare have become more pronounced. Only the UK’s biggest telecare providers, Tunstall and Initial, have been accepted onto the PaSA telecare framework though Tynetec equipment can be purchased through the framework using RSL Steeper as the provider (at a premium in the order of 20%). The Welsh Assembly Government favours the use of the PaSA framework for procurement, and this is the only logical approach for the second phase when a consortium approach may be possible for North Wales counties. During the first phase, the sums involved may not justify a full procurement process – and a spot purchasing approach may be best.

The Wrexham experience with Generation Zero stand-alone products will demand a mixed approach to telecare provision. The PaSA framework may not be relevant as over 50 products may be involved, none of which appears on the framework. It may be necessary to provide these devices more universally, offering them through a retail operation such as a demonstration house or a Disabled Living Centre.
Section 14: New Service Propositions

Two levels of telecare might then be relevant, appealing to fundamentally different groups. The first option is focused on home safety. It will be available to all existing community alarm users and to any other individual or families who are seeking peace of mind. No assessment will be needed as every customer will receive a standard package of modern carephone and sensors. The exact make-up of the sensor package will be decided following discussions with the Fire Service and other stakeholder groups, and will be related to the cost of buying the kit.

The second option will be Total Telecare, a service of equipment tailored to the unmet needs and risks to independence determined through a full assessment using the Unified Assessment Process (UAP). Necessarily, this service will be subject to strict eligibility criteria (FACS) and will be subject to a financial assessment. In principle, it will involve service users being provided with a care phone plus a combination of sensors and settings designed to managed their individual risks in the most appropriate manner. They will also be provided with a number of stand-alone devices. It is envisaged that this service will appeal to a number of people currently receiving homecare services and to those entering the service for the first time following referral from a memory or falls clinic or from a health or social care professional. In addition, Total Telecare may help enable adults with learning disabilities to maximise their potential for independence by managing many of the risks associated with performing domestic tasks such as cooking and washing. By considering the night-time support needs of this group, it may be possible to reduce the level of intrusion into their lives during the night. This might involve replacing a wakeful carer with someone sleeping in the property, or the replacement of a sleep-in carer with a telecarer who can respond to an emergency need within a matter of minutes.

Some potential service users who live with their carers may not need a carephone. They will, however, benefit from items of stand-alone technology which will increase their level of independence. This may be particularly relevant to people with learning disabilities who can be supported in many domestic tasks and overnight by appropriate devices. People with a physical disability will benefit from the remote control of various electrical appliances.

People who are found to have significant risks to independence, and who have a limiting chronic disease such as COPD or CHF, may also be issued with remote vital signs monitoring equipment. These will allow them to use their first generation telecare system to provide a rapid alarm in the event of an emergency whilst also allowing long term trend data to be collected to allow early intervention in the event of an exacerbation.
Section 15: Developing a New Charging Policy

Currently, community alarm users pay £3.10 per week inclusive of monitoring and rental fees. For the benefit of further analysis, let us assume that this consists of £1.10 per week monitoring charge and £2 per week for administration, maintenance, battery replacement and "rental" component. A one-off £30 charge is made for installation.

There is currently a review of the charge for the Carecall service, this review will need to take account of the higher level of equipment and services that will be offered. It may be necessary to waive the installation fee in order to increase the attraction of the new services. This may also encourage a role for other partner organisations in the installation process. The Fire Service might see the provision of Home Safety packages within their sphere of responsibility giving them an opportunity to also look for other fire risks.

The charging structure for Total Telecare must take into account the fact that some service users will not have carephones, and will therefore not be connected to the monitoring centre. However, there may be significant maintenance and administration associated with a number of independent devices. Thus, the charge must have at least two components.
Section 16: Training, Assessment and Installation

Training is crucial to the development of a high quality telecare service. A training manual will need to be developed using external support. All personnel associated with health, social care and housing services will need to receive a basic level of telecare awareness training. This is needed to ensure that they will all be capable of recognising telecare devices and of identifying opportunities for using a telecare service to support independence and safety.

A higher level of training may be required for all staff involved in the process of assessment and who need to appreciate how telecare service can form part of the care plan to support vulnerable people. Finally, a small group of expert assessors will need to be created. They will have a complete knowledge of all the technologies which they will be able to cascade down to their colleagues.

Due to the deficiency of the Unified Assessment Process in identifying risks in the home environment, an additional specialist assessment is required based on a home safety survey. It will focus on the hazards found in the home, and the likely problems associated with the service user trying to interact with appliances and services in the home. The UAP and the Home Hazards survey will each yield a number of triggers which will need to be addressed in the care plan. The Home Hazards survey and the method of matching the needs and risks to items of technology will need to be combined as a professional tool. All assessors will need professional training in the use of this tool.

Initially, it may be necessary to use external contractors to install the telecare packages. However, installation may be performed by an in-house team as soon as the service becomes sufficiently popular to require 2 or more installations per day. All installers need to be trained to a high level of competence in order to avoid the possibility of a fault developing which puts the service user at an undefined risk.

Installers need to have appropriate and on-going training in order to ensure that all devices are commissioned in accordance with the manufacturer’s instruction. It is particularly important that the carephone is installed in such a way that it will command the telephone line under all circumstances so that emergency transmissions can be made. A substantial number of new sensor devices, many programmable, will appear over the next two years. Installers must be familiar with all new developments so that telecare packages can be kept up-to-date.

A code of practice for installers has been produced by the TSA and may be useful in maintaining standards.
Section 17: Monitoring and Response Services

The monitoring centre will collect and record relevant personal data and the calls history of all clients with their consent. It will include in the client file, standard information including

- age, address and telephone number
- next of kin and contact details
- emergency response telephone numbers
- GP name and telephone number
- Access code for key safe (if present)
- Key-holder contact details (if no key safe)
- Special instructions for access to properties
- Presence of pets or other hazards, and
- Other services received including homecare and meals

Some other medical information might be included if relevant to emergency response. This might include visits from community nurses, special medication needs and long term conditions such as diabetes, epilepsy and Parkinson’s disease.

Each client file must include a list of all sensors (and the emergencies that they will detect). Each emergency condition will require a response protocol which is dependent on the time of day and on the day of the week (if relevant). In each case, there should also be an escalation procedure. Generally, the initial response involves speaking to the service user to determine the scale of the problem and to provide advice. A visit to the property is only necessary if the issue cannot be resolved over the telephone.

The response to genuine emergencies will generally involve action from the emergency services or the GP service. The key holder may be summoned to open the door and/or to provide comfort to the service user. Some alarm conditions will not require the emergency services as they will involve a social or environmental issue where the most appropriate response would not be a medically trained person. In most cases, the informal contact will be able to respond, but for some people who have no local family or friends, it may be necessary to call out the Emergency Duty Team. Telecare may increase the demands on this team, which may need to be strengthened.

The alternative is to establish a low level emergency response team using floating support arrangements. The demand for such a service is unknown and so is the cost. Initially, it may be more appropriate to signpost service users to a response service provided by an external agency such as a RSL, a nursing home or a domiciliary care provider.
Section 18: Evaluation and Review

Telecare services consist of many elements from referral through to response and, ultimately, withdrawal of equipment. The success of a telecare service depends on the correct identification of the unmet needs and risks to independence i.e. the assessment process. It then depends on the care manager and the assessors setting up a service that is tailored to the needs of that individual. Each sensor must be suitably installed and programmed to detect a particular emergency condition and to respond in an appropriately defined manner.

The telecare service needs to be evaluated from several perspectives. Technically, it must be shown that the equipment is installed and working correctly. From a well-being perspective, it must be shown to be having a beneficial impact on the service user’s subjective well being and quality of life, irrespective of the challenges facing that individual. It must also be popular with professional staff and with informal carers who should feel that the equipment is providing them with good support. Finally, it must be cost-effective as an alternative to more traditional care methods.

The local strategy will involve the auditing of a sample of service users in order to determine their views of the service, and to understand the cost of provision together with some alternative costs using traditional care. This will be supported by a comprehensive survey of service users and their families to ascertain whether telecare can have a positive impact on service users and on their families.

After each emergency alarm, there will follow a case review in order to determine the cause of the alarm, the appropriateness of the response, the outcome, and the steps taken to avoid a repetition. The suitability of the installed equipment will be discussed and the package of telecare changed if it helps achieve the desired outcomes.
The following is an illustration of the potential savings and increased revenue, across the Partner organisations, that may result from the provision of the Telecare Grant.

The new charging structures discussed in Section 15 should result in two revenue streams. The one associated with the Home Safety telecare initiative may yield in excess of £200 per user, per annum, assuming a weekly charge of £4. This includes a minimum of £50 per annum of new money over and above existing revenues from community alarm units. 250 of these installations are planned for the project period providing at least £12.5K of new revenues.

The Total Telecare service may yield 250 service users paying £4 per week of new money into the system. However, only 50% of service users are likely to pay for the service (i.e. 50% fail the financial test). Consequently, the yield for the service is likely to be £25K per annum resulting in the generation of £37.5K per annum of new revenue.

It is apparent that the provision of telecare services elsewhere have resulted in significant changes in care provision, which have produced major cost savings across the board:

- **Delay in progression of frailty** - people can be maintained in their existing level of care for longer. The cost benefits arise mainly as a result of delaying people’s admission to residential care. For 250 Total Telecare users, 5 service users (2%) each might expect to remain in the community for an additional 6 months. Using Table 1, the savings for each of the 5 service users would be £7K. Total savings therefore = £35K per annum

- **Reduced demand for homecare services** - low level telecare can delay the need for homecare services. If 10 service users (4%) are maintained with a lower level of homecare service for 20 weeks, then assuming a change of 5 hours of care per week @ £10 per hour, the total savings will be £10K per annum

- **Fewer bednights for chronic disease sufferers**: if 5 patients are treated at home rather than in hospital each for 4 nights then the savings will be £10K based on Payments by Results tariff.

- **Reduction in Delayed Transfers of Care agenda**: if 5 patients each avoids a delayed transfer of 5 days at £120 per night then the saving is in excess of £6K per annum

**THE TOTAL SAVINGS THROUGH ALL 4 ROUTES = £61K**

The above figure is likely to increase every year as the issues are discussed, and as more service users come on-line.
Section 20: Regional and National Agendas

An efficient and cost-effective monitoring centre should have a minimum of 10,000 service users in order to benefit from economies of scale. In Wales, the Telecare Capital Grant is expected to fund only about 10,000 new telecare service users. Consequently, a reduced number of centres may be relevant unless existing centres for community alarms become dual purpose.

The North Wales Regional Partnership Board have been successful in their bid to the “Making the Connections” fund to consider the advantages to a regional approach to Telecare, the aims of the project are:-

I. to develop common standards for telecare services (e.g. protocols, needs assessment) to members of the communities of North Wales who are supported to live independently in the community;

II. to achieve cost efficiencies through the collective procurement and maintenance of telecare installations and communications systems;

III. to achieve cost efficiencies through shared training and advisory services; and to use telecare as a route into an exploration of a shared contact centre(s) for supported client monitoring systems, CCTV monitoring and management, out of hours contact with local authorities, and management of enquiries using the proposed Single Non Emergency Number (SNEN).

A feasibility study will conclude early in 2007 and will make proposals for a shared agenda. These need to be considered seriously before making plans beyond 2007.
Section 21: Risks

The risks to successful service provision are:

1) Technical
This involves ensuring that all equipment provided is of the highest quality and is unlikely to malfunction. The ideal would involve equipment which has been designed with Built In Self Test capability, and which has undergone a vigorous product acceptance examination. Key indicators are the number of units out in the field, the number of local authorities already using the devices, the mean time between breakdowns figure, and the availability of independent pilot study reports using this device.

2) Human
This relates to the potential for human error in the process of technology selection, its installation or to any of the response functions. Improved and continuous training may be the only method of reducing the risk. Reviews and evaluations will also be relevant.

3) Organisational
A lack of coordination and planning could lead to problems in delivering a service, especially where service users have complex needs and different agencies are involved. A political champion may be needed and also support from senior officers within the council and its partners. A coordination officer may be recruited to ensure that practical problems are solved.

4) Financial
A failure to recruit sufficient service users or to charge an economic rate for the service will lead to financial problems and an unsustainable service. A robust business plan is needed which factors in financial contributions from the agencies which will benefit most from telecare.