



WEST SUSSEX PREVENTATIVE TECHNOLOGY GRANT

**Preventative Technology Strategy – Part 2
Long Term Strategy Document v2.0
June 2008**

*Enabling people to live independently, in control
and with dignity for longer.*

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1. Executive Summary

Telecare is the continuous, automatic and remote monitoring of real time emergencies and lifestyle changes over time in order to manage the risks associated with independent living.

West Sussex County Council, in collaboration with the NHS Trusts, District and Borough Councils and Community Alarm Providers, has conducted a number of pilots since January 2007 to support individuals in the community to remain independent. These pilots involve hospital discharge services, admissions avoidance, intermediate care, dementia outreach support and also management of long-term conditions.

The independent evaluation conducted proves Telecare improves the quality of life for service users and carers and also supports people to live independently for longer.

This Strategy proposes that Adults' Services and the PCT combine resources to deliver mutual objectives of independence and wellbeing through a Section 75 Agreement of the National Health Service Act 2006. This type of agreement was previously under Section 31 of the Health & Social Care Act, 2001, which allows Local Authorities and NHS bodies to jointly enter into prescribed functions if the arrangements are likely to lead to improvements in the way in which those functions are exercised.

A combined annual pooled budget of £500,000 would help provided 900 package of Telecare per week, which is an increase in the county provision of 9%.

The proposed financial arrangements will provide short term funding for telecare packages to allow service users, their carers and family members to experience how Telecare can enhance their quality of life and what part it has to play in any longer term care needs. The short term funding of hospital discharge packages has led to 80% of service users paying for Telecare service themselves, through self funding, personalised budgets or attendance allowances.

2. Introduction

2.1 Background

This paper is the second part of the Preventative Technology Strategy. In September 2006 the Cabinet Member approved the 'Interim-Strategy'. The strategy proposed a vision to embrace the DoH White Paper and facilitate the change in design and delivery of preventative technology strategies in health, social care and housing services to enhance and maintain the well being and independence of individuals.

Within the expectations of the 'Interim-Strategy', a clear set of desired outcomes/objectives were identified.

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

The long-term vision for preventative technologies is to achieve all the aforementioned desired outcomes/objectives.

The 'Interim-Strategy' set out the key points of the Preventative Technology Grant (PTG) and identified the problems, issues and questions that needed to be addressed and answered so a 'Long-Term Strategy' post the life of the PTG could be developed and sustained.

This paper reviews the activity for the grant period with decisions that need to be made regarding identified options for taking the 'Long-Term Strategy' forward.

2.2 Updates

An update to the Local Authority Circular (2006)5 Preventative Technology Grant 2006-07 to 2007-08 was published in July 2007.

DETERMINATION OF A GRANT UNDER SECTION 31 OF THE LOCAL GOVERNMENT ACT 2003 OF THE PREVENTATIVE TECHNOLOGY GRANT 2006/7 and 2007/8			
Local Authority	2006/07	2007/08	Total
West Sussex	£ 439,787	£ 733,094	£ 1,172,881

The update states that the grant period does not finish on the 31st March 2008 and monies can be rolled forward into the next financial year. There are no restrictions on the proportion of the Preventative Technology Grant that can be carried forward.

Any grant carried forward will be the council's responsibility to manage the funds locally. The amount carried forward must be spent within 2008/09.

The project executive, Anna Coss, agreed that the project should continue for a further year given these flexibilities and the previous tight time constraints the project was under.

3. Strategy

This 'Long-Term Strategy' has been an open document that has been developed throughout the life of the project with a view to mainstreaming the work. The evaluation of the pilot work carried out between June and September of 2007 has been key to evidence the recommendations for the long-term strategy. The full evaluation can be found in "An Evaluation of the Preventative Technology Grant Schemes for West Sussex County Council" conducted by Ozone Solutions Ltd.

3.1 TeleHealth Business Case and TeleCare Strategy

Through the development of the pilots, it was agreed by the Preventative Technology Steering Group to develop a separate Business Case for TeleHealth that could be passed to the PCT to use and progress in line with their own strategy. The long term strategy for TeleCare would concentrate on technology linked to community alarms.

3.2 Pilots

Four key pilot areas were developed and independently evaluated as part of this project. Two further development areas were looked into to determine the mechanism and to support the possible mainstreaming of the service.

The four pilot areas were:

- **Dementia Outreach Service** – Based in the New Tyne Resource Centre in Worthing.
- **Long-Term Conditions Packages** – TeleHealth monitoring linking to Community Matrons and the Heart Failure Specialist Nurse in the Horsham and Chanctonbury area.
- **Hospital Discharge Packages** – 3-month care packages to cover the Western part of the county.
- **Intermediate Care and Admission Avoidance Service** – Based in the Worthing Area.

The two development areas were:

1. **Assessment Process Development** – Mid Sussex project.
2. **Countywide Awareness Raising and Training** – Recruitment of a Training and Development Officer.

Further detail of these pilots can be found in Appendix A.

4. Evaluation

Summary detail of the evaluation can be found in Appendix B.

Table 1 Evidence against the key outcomes

Key indicators	Evidence base from this sample
Continue to reduce the need for residential/nursing care	From this cohort, nine people or 6% went into residential care and nursing care. This is low when compared to the 16% in the non PTG pilot people admitted during the same period in West Sussex. However, this comparison needs further investigation.
Increase choice & independence for Service Users	Apart from one person spoken to, TeleCare did increase peace of mind; it did give a sense of security and helped people to manage their own lives. It did offer choice, staff felt they were able to offer more choice with TeleCare and TeleHealth
Reduce the burden placed on Carers & provide them with personal freedom	Carers spoken to said it did help them to have more time to themselves, but also to be able to relax more because they felt they did not carry all the risk and responsibility themselves. Some specific equipment in the home helped carers to have an easier life. Many carers themselves were elderly and not well and the equipment did support them in their caring role.
Contribute to the care & support for people with long-term health conditions	From the interviews with patients with doc@HOME and HomMed, they thought it did support them to be able to live in their own home. It meant Community Matrons workloads could increase from 4 new clients per month to 6 new clients per month, the number of visits Community Matrons made to patients decreased by 65%, the number of telephone calls by 30% and the number of call outs to GP's via community matrons decreased. Community Matrons avoided 8 s admissions over the 5 months of the pilot.
Reduce acute hospital admissions	There was no comparison group, however in this cohort there were 47 people readmitted a total of 820 days. This is a readmission rate of 40%. The average length of stay was 11.3 days. A third of admissions stayed less than 3 days, which is a short stay for many older people. Community Matrons avoided 8 admissions through preempting a crisis, a possible savings of £120,000 None of the people with dementia had unplanned admissions.
Support Hospital Discharge & Intermediate Care	From the staff teams in the hospital discharge pilot the equipment was easy to set up and enabled them to discharge in the morning if they knew the equipment was installed the same day. If the providers can guarantee to install equipment on a named day the discharges could be earlier. TeleCare did not always mean a faster discharge, but could often mean a safer discharge with less likelihood of readmission in the short term.

This evaluation, similar to most small scale, local and short term evaluations has shown that there is a positive outcome for users and carers and that their quality of life and their options have both increased. It also confirms what other evaluations have shown i.e., is that it is very difficult to get trend data in a time limited project. It is also difficult to link cause and outcome when there are many factors influencing an outcome for an individual other than TeleCare or TeleHealth.

5. Data

5.1 Pilot Costings

The costs per week per person in the pilot are based on the rental equipment they were using. The total number of weeks the equipment was in place was calculated per pilot and the costs per person per week calculated to give unit costs per week. There were slight differences in the costs per person – the Dementia Support pilot was the most expensive £9.30 per person per week, however they had a wider variety of equipment. This table does not take into account one off purchase charges.

Table 2 Weekly charges for equipment in the pilot schemes

	Total weeks used in pilot	Average spend per person	Average weekly cost per person
Hospital Discharge*	1049	£52.94	£5.30
Dementia	278	£176.72	£9.30
Admission Avoidance	162	£72.90	£5.60

** HD takes into account the people who completed 3 month, those who returned the equipment before the end of the 3 months and those still in the pilot.*

Although this is not an ideal way to determine the costs of supported care at home as many would have additional services in place such as homecare and many would not be in need of long term care. However, 78% had been discharged from hospital and the average age was 83 (87 years dementia, 82, hospital discharge, 82 TeleHealth and 84 in AAT).

When looking at the costs of the equipment it needs to be remembered that all the people in the pilots were elderly and vulnerable and living in their own homes. The costs of residential placements in West Sussex are an average of £610 per person per week. The average costs of providing the equipment per person per week for the hospital discharge team was £5.30, the admission avoidance team was £5.60 and dementia support was £9.30 per week.

The one off charges

The one off charges were for equipment that could not be rented, with the exception of the key safe, which could be rented through Chichester Careline but not through Worthing Homes. The most frequently purchased one off equipment was the keysafe. The most expensive piece of equipment ordered for a person in this pilot was the wrist care, which had an

installation cost of £390.00. The equipment for dementia patients is the most expensive.

Table 3 The charges for one off pieces of equipment

	Total £	Hospital Discharge £	Admission Avoidance £	Dementia £
Key safe	3,012.00	1,972.00	520.00	520.00
Flood sensor	89.25			89.25
Door chain	26.00	26.00		
Door sensor	2,100.00			2,100.00
Wrist care	1,170.00			1,170.00
Total	6,397.25	1,998.00	520.00	3,879.25
Pieces of equipment used	63	35	8	20
Average one off costs	101.54	57.09	65.00	193.96

The total cost of equipment was £6,397.25. The costs of the one off TeleCare equipment were highest in the dementia pilot.

5.2 Demographics

The older population and their use of services

Using mid year estimates for 2007, there was a total of 770,800 people in West Sussex, of which 237,700 are people aged 65 and over (31%). They are most likely to be in Arun, Worthing and Chichester, however the largest percentage of growth expected will be in Horsham and Arun.

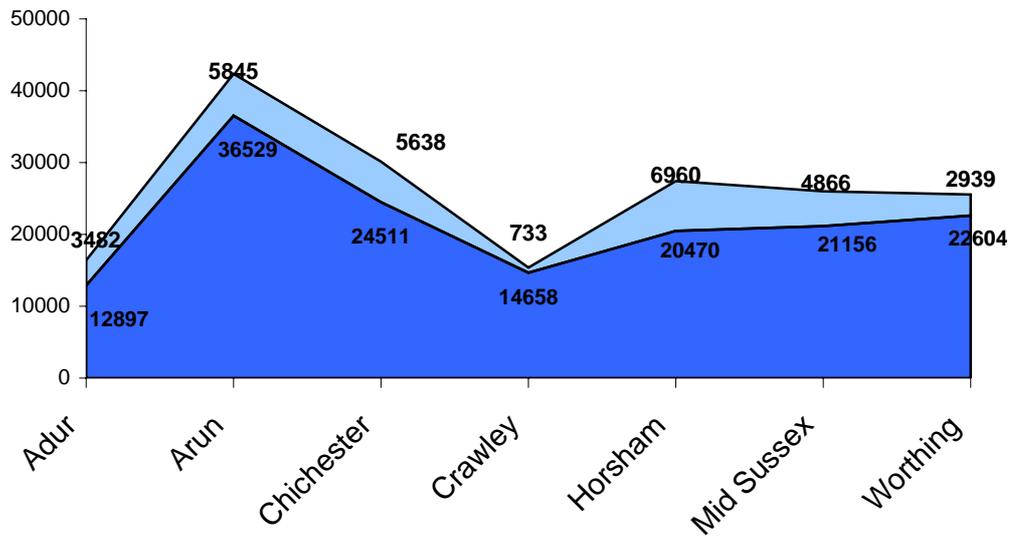
The expected TeleCare service needs to be forecasted to predict numbers of users and potential costs. The West Sussex evaluation identified the county demographics for people over 65 and its potential growth by 2016.

Table 4

	Adur	Arun	Chichester	Crawley	Horsham	Mid Sussex	Worthing
2001	12,897	36,529	24,511	14,658	20,470	21,156	22,604
2016	16,379	42,374	30,149	15,391	27,430	26,022	25,543
Increase	3,482	5,845	5,638	733	6,960	4,866	2,939
%	27	16	23	5	34	23	13

Chart 1

Older Population by area with increase 2001-2016



5.3 Projected Costings

Projected costs of TeleCare expansion

The average weekly cost per person in the different pilots, as identified in 5.1, was established from the independent evaluation. An estimate of future costs needs to be determined from combining Tables 3 and 4 and also considering potential overheads for the community alarm providers to recuperate full costs. An overhead cost for staffing and accommodation should be taken into account.

Assuming a linear growth between 2001 and 2016 then Chichester is currently 16.3% of the total county population for over 65s. Replicating the Chichester Hospital Discharge service of 100 packages per week as a countywide service would breakdown as follows:

$$\frac{100 \text{ packages}}{16.3\%} \times 100\% = 613 \text{ Packages Countywide}$$

This is equal to 613 annual package of TeleCare. Estimating costs at **£10 per week** per person (a combination of Tables 2 and 3) then an annual budget of **£319,010** would be required for the Countywide Hospital Discharge Service.

This figure should be increased by approximately one half to include significant levels of Admissions Avoidance and Intermediate Care support. This would increase the weekly packages countywide by an additional 307 as the weekly cost of hospital discharge and admissions avoidance packages are very similar.

In total, the proposed annual budget of £500,000 would support an additional 920 annual packages of TeleCare. As the current provision of community alarms in West Sussex is approximately 10,000 then this pooled budget would increase the county provision by approximately 9%, which should be a manageable increase.

According to the Hospital Discharge Pilot, approximately 80% of customers are self-funding items such as alarms, key safes and mobile response service after the three-month trial. This could potentially increase customers by an additional 2,000 (20%) per annum on a countywide basis.

Therefore, the TeleCare initiative could potentially increase the county provision of community alarms by 29%.

6. Proposals

The independent evaluation forms the basis of the proposals for the long-term provision of Telecare.

6.1 Service Provision

From the qualitative and quantitative information gathered from the independent evaluation, the service models to be considered as part of the first phase of Telecare and Telehealth implementation has to be those that were piloted through the use of the Preventative Technology Grant. Other potential services, be they partnership services or lone purchasing, will be identified in section 8.

The following three areas were agreed at the Stakeholders meeting in September 2007 to be the key areas for the first phase of countywide implementation of Telecare:

- Admissions Avoidance Packages
- Hospital Discharge Packages
- Intermediate Care

The dementia outreach service provided benefits to the service users and their carers but was a model based around a resource centre as opposed to a flexible service that could be mainstreamed easily. This service could continue through lone purchasing arrangements through individual care plans as opposed to a pooled budget.

The Telehealth pilot prevented admissions to acute hospitals and supported people to manage their long-term conditions and reduce pressure on them, their carers and health service staff. This service supports people with long-term health conditions and is the lone purchasing responsibility of the PCT.

All basic packages could include a radio-linked smoke detector as part of their costs to join up other preventative services.

6.2 Pooled Budget

In total, the proposed annual budget of £500,000 would support an additional 920 annual packages of Telecare. As the current provision of community alarms in West Sussex is approximately 10,000 then this pooled budget would increase the county provision by approximately 9%, which should be a manageable increase.

According to the Hospital Discharge Pilot, approximately 80% of customers are self-funding items such as alarms, key safes and mobile response service after the three-month trial. This could potentially increase customers by an additional 2,000 (20%) per annum on a countywide basis.

Funding would be sought from contributing partners. The proportional funding is proposed to be an even split between the PCT and Adults & Children Directorate.

This proposed figure does not include any staffing costs for referrals, training or managing the service. There is a further 9% increase in population from 2008 to 2016, which would require budgeting for in addition to inflationary uplifts for future years of funding.

6.3 Charging

There will be no charging for Telecare service as part of the pooled budget arrangements. The pooled budget service is for short limited periods of service provision allowing the service user and their carers to be discharge in a timely fashion from hospital or to be maintained at home preventing an admission. The short term package will allow the person to try out the equipment and see the impact on their daily life. If the Telecare service is required beyond the initial period as part of an ongoing need, then the equipment and services can be purchased either through a personal budget or private funding arrangements.

6.4 Commissioning Proposal

The Telecare Steering Group is supportive of pursuing the option of a single tendering with West Sussex Community Alarm Providers (WSCAP). The other commissioning options considered were:

- Local Authority or NHS Trusts to set up installation service.
- Purchase from the Purchase And Supply Agency (PASA) framework.
- Open Tender.

Further details regarding these options can be found in Appendix C.

Single tender with the WSCAP Consortium.

Current partnership arrangements with community alarm providers installing and maintaining the equipment on behalf of the commissioning service have worked well. The community alarm providers have been very flexible in their approach to the pilots and worked well with the care and

health professionals to ensure the appropriateness of the equipment installed for the service users.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Good partnership arrangements. • Supports local providers. • Market stability with private and public commissioning. • Consortium will help improve consistency of services to the private market on a countywide basis. • Transition between private and funded packages will be smoother. • Easier to navigate the public to appropriate support. • Proven providers in West Sussex. • Private market supplements infrastructure for public market. • Contingency support with consortium of providers as opposed to lone provider. • Potential growth in different service areas e.g. Installation, Monitoring, Call Centre, Sitting Service, Mobile Lifting Service, Telehealth and Continence Service. 	<ul style="list-style-type: none"> • WSCAP needs to be a recognised consortium. • Need to agree a single referral process, charging matrix and agreed level of service countywide. • Justification for single tender needs to be agreed.

6.5 Implementation Plan

Cabinet Member Approval is being sought in September 2008 regarding the strategic direction of Telecare. This decision will allow progress to be made towards budget and procurement arrangements during the 2008/09 financial year. Funds are available from the Preventative Technology Grant to continue with the pilots and fund the implementation and set up costs of mainstreaming the service in 2008/09 so arrangements are in place for the pooled budget to function from 2009/10 financial year.

- Key Cabinet Member Decision in September 2008
- Secure Budget Commitment August/September
- Agree Section 75 pooled budget arrangements October/March
- Agree Procurement Arrangements and Service Level Agreements October/March
- Pooled budget operational April 2009

7. Consultation

7.1 Key stages to date

- Interim Strategy determined direction of project.

- Cabinet Member approval given for Interim Strategy in September 2006.
- Pilots started from January 2007
- Independent Evaluation of Pilots occurred from June to September 2007
- Steering Group worked up Strategy Proposal
- Wider consultation occurred May to June 2008
- Select Committee paper presented June 2008
- Cabinet Member Decision September 2008

7.2 People/Groups Consulted

Through the life of the project a number of representatives from different organisations have been involved with the Telecare Steering Group. These include members from the Local Authority, NHS Trusts, District and Borough Councils, Council for Voluntary Services and Community Alarm Providers.

Presentations and consultation with specific groups and attendance at meetings outside of the Steering Group have also occurred. These include Locality Managers, West Sussex Chief Housing Officers Group, Supporting People Working Group, Carers Liaison Meetings and WSCAP.

A list of those being consulted regarding this strategy can be found in Appendix D.

8. Conclusion

8.1 Summary

The Vision of this project was to embrace the DoH White Paper and facilitate the change in design and delivery of preventative technology strategies in health, social care and housing services to enhance and maintain the well being and independence of individuals.

The purpose of the long-term strategy is to ensure there is a consistent Telecare service across the whole county, which is easily accessible by members of the public.

The process of accessing prevention services needs to fit consistently with other support developments without hindering other services and overcomplicating support. The proposal for the Telecare development will ensure services are easily accessible and it will also increase the awareness of Telecare benefits to social care and health professionals in supporting the public in accessing suitable services.

The option of a single tender with the existing providers of community alarms will help develop and enhance the private market of Telecare. The true future of prevention is to ensure there is a proper infrastructure in place for people to access services before they become too dependent and reliant upon social care or health care support.

Telecare is only part of the solution and therefore should be used in conjunction with other services to ensure this vision is realised.

8.2 Next Steps

Further considerations to be addressed

- *Currently there are human resources available for awareness raising, training and management of the Preventative Technology Grant until 27th March 2009.*
- *Initial training can occur during the current financial year but decisions have to be made how this can be sustainable for the future.*
- *The pooled budget will need to be managed by a lead organisation that is part of the Section 31 agreement.*
- *Service development of Telecare has only just started. There is great potential for this area to grow and support people to live independently whilst also alleviating some of the pressure on carers. It is a joint responsibility to develop this service and there is the potential for development resources to be written into the pooled budget.*

Future options for developing TeleCare services

- **Extra Care Schemes** – *Telecare technology can be used to help support people in extra care schemes for longer. There is currently 24-hour care support available and the technology can help assist people to remain independent and help prevent the need to move into residential care.*
- **Learning Difficulties Services** – *Pilots could be set up to explore the benefits of Telecare for people with learning difficulties.*
- **Physical Disabilities** – *As with learning difficulties services, environmental controls could assist people to be more independent and trigger alerts when needed.*
- **Dementia Services** – *To find appropriate models for mainstreaming telecare for people with dementia.*
- **Young Carers** – *Community Alarms could be used to support young carers through the use of their 24-hour support line.*
- **Roving Night Service** – *Adur and Worthing Locality area is piloting an out of hours service to assist with social care tasks e.g. personal care, assisting with continence and activities of daily living during the hours of 22:00-7:00. Combining a range of telecare and homecare support.*
- **Radio Linked Smoke Detectors** – *Whilst packages of care are being agreed with service users, there is the potential for all packages to include a radio linked smoke detector to reduce the risk of fire and ensure an alert is triggered early enough when an incident occurs.*
- **Mobile Response Service** – *The ambulance service could triage calls to the mobile response service when it becomes a countywide service through the introduction of the pooled budget. The first aid trained manual handlers with their lifting equipment could respond to calls that do not require a paramedic to attend. This could potentially save considerable costs by reducing the demand on the ambulance service with the increasing demographics.*

Appendix A – Pilot Specifications

Four pilot areas:

Dementia Outreach Service – Based in a Resource Centre

The **Dementia Outreach Scheme** is provided through the New Tyne Resource Centre in Worthing and supports older people with dementia at home. Referrals can be through a range of sources including Community Mental Health Teams, the outreach team* or locality offices. People with dementia assessed as suitable for assisted technology are referred to Worthing Homes for the equipment and monitoring.

A mobile response service is available to respond to 24/7 alerts. The mobile response uses the Dementia Outreach Support Workers from New Tyne. To help people and their carers to get used to the equipment before they go home, five rooms in New Tyne been converted to train people to use TeleCare equipment. All TeleCare equipment and monitoring provided in this scheme is provided free.

*NB – the outreach team work closely with the rapid response team who will move in with 24 hours support for up to three days and will then be followed by the outreach team.

Long-Term Conditions Packages

TeleHealth is the remote monitoring of patients' vital signs through easy to use equipment that the Health Professionals customize to each patient. Common uses are for heart rate, weight, peak flow, blood pressure, oxygen saturation, and temperature and blood glucose. It is also programmed to ask key questions relevant to the individual user.

Based in Horsham, the **TeleHealth scheme** is a pilot for NHS patients with long-term health care needs. Referrals for the equipment come through the Community Matrons or Heart Failure Specialist Nurse. Clients must be 'frequent flyers' and have two or more A&E visits in past year or two or more admissions in past year.

Information is accessed daily by the Health Professionals to determine if any intervention or corrective measures are required. When necessary, the patient is contacted and given advice over the telephone, or in an emergency situation the GP or an ambulance could be called.

The equipment being used are HomMed and Doc@HOME and both cost around £2000 as a unit. The base units are provided through Horsham District Council. The Council is not involved in any monitoring but does provide equipment checks and maintenance.

Hospital Discharge Packages

The **Hospital Discharge** pilot is based in the Chichester area and provides a TeleCare referral on discharge from hospital. The discharge teams involved are in five hospitals:

- St Richards Hospital Chichester
- Bognor War Memorial Hospital
- Arundel Hospital
- Midhurst Community Hospital
- Marjorie Cobby House.

Any staff on the discharge team can assess for TeleCare. To be eligible to be referred for TeleCare, the client must have a caseworker in the community. Referrals are made to Chichester Careline, which is run through Chichester District Council. Chichester Careline installs equipment, monitor equipment and provide a mobile lifting response team of four staff between 8am-10pm and an 'on call service' between 10pm and 8am. The TeleCare equipment is free of charge for three months, after this period the equipment will need to be returned or the person starts to pay a charge.

Intermediate Care Service

The **Admission Avoidance Team** is part of the Intermediate Care Service based in the Worthing area. The aim of this scheme is to provide intensive support to avoid an admission. This may include providing TeleCare equipment to prevent a person becoming unwell or unsafe at home. Referrals to the TeleCare service are through the team members and are to Worthing Homes.

This service does not have a limited free period.

Appendix B – Evaluation Summary

Evaluation

Background

Projects and evaluations have occurred on national and international levels. Despite the lack of 'hard' evidence, there are clear messages from small-scale studies, including consistently positive responses from users themselves where they say there has been significant impact on their and their carers' quality of life. Occasionally there is evidence that there has been a decrease in admissions to long term care, inappropriate hospital admissions and use of GP's, however this information is difficult to come by when an individuals service use is across many different providers. It is also difficult to determine cause and effect and whether a particular outcome is linked to TeleCare support at home or to a range of factors.

A further problem with TeleCare evaluations to date is that they have been mainly short term, and it would be more appropriate to follow people up over the long term or to have a control group through which comparisons could be made. However this method is fraught with problems, such as efficacy and a lack of integrated health and social care performance management information.

Pilots

The pilots were evaluated to look whether they had an impact on the following key outcomes:

- reduced need for residential/nursing care
- increased choice & independence for Service Users and patients
- reduced burden placed on carers and families
- increased care & support for people with long-term health conditions
- reduced acute hospital admissions
- reduced delays in hospital discharge and the number of admissions.

The evaluation took place between June and September 2007. It included qualitative and quantitative information from staff, users, carers, providers and throughput and performance information. It used information on service use from the Client Information System (CIS WSCC) and PIMS for hospital admissions.

Referrals

Referrals started in January 2007. There were a total of 196 referrals into the pilots and 150 who took up the service. Not all schemes started to refer at the same time with the hospital discharge teams being the first refer. Reasons for delays in starting to refer included the infrastructure being in place to support the referrals. The first referral was the 3rd January and the last one included in the evaluation was on the 7th September 2007.

Table 5 Referrals and take up across the pilots schemes January-September 2007.

	Hospital Discharge	TeleHealth	AAT	Dementia	Total
Total referrals	150	13	14	19	196
Total take up	107	13	12	18	150
% take up	71%	100%	86%	95%	77%
Date first referral made	3/1/07	23/4/07	26/4/07	19/1/07	

Reasons for not taking up the referrals included: 1 went into residential care, 3 into nursing care, 9 refused TeleCare, 7 stayed in hospital, one died and three already had the equipment.

The 107 people in the hospital discharge pilot were on a non-chargeable three-month time limited period. At the end of this evaluation period, 42 were still within their trial 3 months, 17 had returned the equipment prematurely and 48 had completed the 3-month trial. Reasons for the 17 who returned the equipment before the end of the trial period included: 6 had died, 8 went into long term care, 1 back into hospital, 1 had not used it so did not wish to keep it and another had recovered sufficiently not to require it any longer.

31 (64%) of the 48 who completed 3 months decided to keep the equipment and to be charged for it. At the end of the free period, 17 returned the equipment, the reasons given were: one had died, one had recovered, three were back in hospital, one went into residential care and the other 11 gave no reasons.

Equipment Used

TeleCare equipment for the pilots was provided through Worthing Homes and Chichester Careline. The range of equipment and services available were similar, although there were some items specific for people with dementia provided for this pilot through Worthing Homes. However, the out of hour's response teams differed. Chichester Careline had an on call service from 8pm to 8am and Worthing Homes transferred their evening response unit to their Guildford Office. TeleHealth equipment was installed and provided by Horsham District Council.

The range of equipment available for the pilot was extensive and included:

- Fall Sensors
- Floor Detectors
- Smoke Detectors
- Movement Detectors
- Natural Gas Detectors
- Carbon Monoxide Detectors
- Temperature Extreme Sensors
- Wandering Client Monitors
- Bed Occupancy Monitors
- Chair Occupancy Monitors
- Pill Dispensers
- KeySafes
- Door Chains
- Remote light control
- Wrist monitors
- Wellness calls
- Pendant with response unit

- Mobile response services
- Doc@HOME (TeleHealth)
- HomMed Genesis (TeleHealth)

Most people had a mixture of equipment, with the pendant and monitoring being the most commonly provided.

Admissions to Long Term Care

Reducing or avoiding admissions to long-term care is a key outcome in this evaluation. Of the 150 clients in the pilot there were 10 (6.6%) admitted to long-term care, nine from the hospital discharge service and one from the admission avoidance pilot.

This is low when compared to 16%, which was the percentage of non-TeleCare assessments who were admitted to long-term care between April 1st and August 1st 2007 (CIS data 2007). Comparisons are difficult as the larger sample may be less well and there may have been transfers from short-term care to long-term care on the CIS system, they also may be appropriate admissions, which is not possible to construe from these statistics.

Hospital Admissions

There was admission data for 120 people in the pilot of which 47 (39%) went into hospital within 6 months of the equipment being installed.

Table 6 Acute Hospital Admissions

	All	Hospital Discharge	TeleHealth
N clients readmitted	47	46	1
Total admissions	72	71	1
Total nights used	820	812	8
N under 3 days stay	15 (31%)		
N between 4 and 7 days stay	6 (12%)		
N between 8 and 14 days	5 (10%)		
N between 9 and 21 days	5 (10%)		
N over 21 days	16 (34%)		-

**Two people in the Dementia pilot had a period of planned respite in Salvington Lodge Community Hospital.*

Thirty nine percent were readmitted and the length of days used were 820 however the length of stay for almost a third was less than three days.

Eight of the 13 patients using TeleHealth (Doc@HOME or HomMed) had actively avoided an admission because the community matrons were able to preempt a crisis. This lead to an estimated savings of £1,500 per patient, or

£120,000 in total saving over 5 months of the pilot. (See Appendix E for list of NHS unit costs for various conditions). Three had had planned admissions.

Emergency Calls to Chichester Careline and Worthing Homes

While people are at home with TeleCare equipment, they are in contact with a call centre 24 hours a day. The call centres are also constantly in contact with the clients through routine equipment tests and checks. Mostly calls in from clients are not emergencies but are people making a mistake or learning to use the equipment or occasionally a person has a query that is sorted out by the operator. When there is an emergency the operator will either call an ambulance, the rapid response unit or a neighbour.

It needs to be noted here, that the PTG pilots are a very small amount of the clients that are with both the providers and represent less than 5% of their client database.

Table 7 Call Outs during the Pilots

	Hospital Discharge	TeleHealth	Admission Avoidance	Dementia
Calls out	106		71	886
Calls in	405			
Feeling unwell	9			
Anxiety	5			
Breathing problems	1		1	
Needing call outs	8		4	12
Accidental calls	144			
Intruder Alarms				40
Ambulance called	20		4	3
Fire brigade	1			
GP called out	2			
Mobile response sent	5			

There were far fewer response required calls outs than predicted. The main reasons for calling ambulances were for falls.

Call outs for Community Matrons

The Community Matrons kept information about telephone calls, visits and calls to GP's about clients, pre and post installation. Although it was not completed for all clients, there was a decrease in telephone calls by 30%, in visits by 65% and calls to GP's by 85%.

Qualitative data

Questionnaires to staff

A small number of staff returned a questionnaire which focused on assessment, referral and what works. There were few improvements needed to the referral and assessment process, other than additions to the forms. The assessment was not always simple and could mean the time taken to assess and discharge from hospital could be longer than without TeleCare, although this could be beneficial in the longer term. The more assessments people did the more confident they became. They had few problems with Worthing Homes or with Chichester Careline, other than where technicians were not available they needed to have their work covered as this did result in delays in equipment being installed.

They needed more information to take with them when assessing clients and generally felt their level of knowledge although good could be improved. They felt TeleCare developments were quite fast moving and they would like to be able to keep up with new equipment and processes. They also wanted more straightforward information on charging and possible funding options such as Supporting People Funds. Having different provider across the County made it difficult to know who to refer to in different areas especially if they were outside the PTG area.

Most felt TeleCare had many advantages to individuals as well as discharge teams as it did support hospital discharges to be safer and in some cases quicker. There were examples of how it had offered choice, including the choice to die at home, and the choice to be at home rather than in long term care. It gave families as well as individuals peace of mind and helped the assessor to feel more confident about the discharge.

They thought TeleCare should be rolled out countywide for all clients leaving hospital or living on their own in the community especially for people at risk of an admission and for people with dementia. TeleHealth monitoring should be more easily available as this would impact on admissions. They wanted a training programme and for more staff to be involved in the assessment and referrals.

The main points from the staff were:

- The more often people refer for TeleCare, the more confident they become
- There could be better communication with the providers
- If providers can install equipment on the day of discharge this increases confidence of discharging people
- It does offer people the chance to stay in their own home
- It does not always mean discharges are quicker, but it can mean they are safer
- Adding TeleCare to an assessment may make the assessment longer
- The information for staff needs to be reviewed
- TeleCare could have a higher profile with the public
- Regular staff updating, training and information sessions would increase confidence in referring

- Regular visits to the Smart House would keep staff up to date with what equipment is available
- Feedback from clients on their use of the equipment would be a useful way to know whether the assessment was accurate
- It should be rolled out across the county as it does help discharge
- Financial issues need to be made simpler
- More involvement of homecare staff in referring for TeleCare
- Nurses in Admissions Avoidance Team would like to refer for TeleHealth

More information on the results of the staff questionnaires is in "An Evaluation of the Preventative Technology Grant Schemes for West Sussex County Council", conducted by Ozone Solutions Ltd.

Interviews with clients and their families

Seventeen people were interviewed about their equipment, six with TeleHealth and 11 with TeleCare. The emphasis of the interviews was to look at whether the equipment has affected quality of life and supported their remaining in their own home.

The main outcomes were that the TeleHealth equipment and monitoring was very positive for all except one person who did not like it and would have been happy to go back to monitoring her blood levels the way she used to. All people interviewed in the hospital discharge scheme were very positive and thought it was helping them to stay living in their own home. The comments from the people in the dementia service were that it is not useful if someone is very forgetful or confused, however it can be a lifesaver for a carer if they are able to get good nights sleep. Some of the comments were:

Extracts from the interviews can be found in Appendix F.

Appendix C – Commissioning Options

The other commissioning options considered were:

- Local Authority or NHS Trusts to set up installation service.
- Purchase from the Purchase And Supply Agency (PASA) framework.
- Open Tender.

Local Authority or NHS Trusts to set up installation service.

The option to run the installation and management of the technology by either the Local Authority or the Trusts was disregarded by the Telecare Steering Group as not appropriate or in keeping with current strategies.

Purchase from the Purchase And Supply Agency (PASA) framework.

The Department of Health have already conducted a tender exercise for equipment and support services to reduce the time and costs to Local Authorities.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Tender process already completed. • Recognised and validated organisations. • Rates schedule to plan against. • Brings in competition for the community alarm providers, which benefits the private market for choice and cost. 	<ul style="list-style-type: none"> • No established providers in West Sussex are on the framework. • In other authorities the current Community Alarm Providers are subcontracted to do the work anyway, which only adds a financial cost to the service. • Transitional issues between funded and private paying customers. • Confusion to private market as to who provides community alarms and the difference between the services.

Open Tender.

If a single tenders is not an option and we do not want to be restricted to using the PASA Framework then an Open Tender could be a possibility.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Full competitive process. • Full picture of potential providers. • WSCAP could tender as a Consortium or as individual providers. 	<ul style="list-style-type: none"> • Time. • Cost. • Detailed specification required of a new service that requires a certain level of flexibility. • Would it be equal opportunities to external providers when WSCAP are already providing the service to a good standard and at a reasonable rate?

Appendix D – Consultation List

Groups to be consulted:

Local Authority

Adults and Children Services

Supporting People

Supporting People Working Group – Service Users

West Sussex Fire & Rescue Service

West Sussex Primary Care Trust

Primary Care & Community Services

Contracting & Performance

Practice Based Commissioning

North East

South East

West

Community Hospitals

- Arundel and District Community Hospital
- Bognor Regis War Memorial Hospital
- Crawley hospital
- Horsham Hospital
- The Kleinwort Centre
- Midhurst Community Hospital The Bailey Unit
- Salvington Lodge
- Zachary Merton Hospital

Worthing & Southlands Hospital NHS Trust

- Worthing & Southlands Hospital

Brighton & Sussex University Hospital NHS Trust

- Princess Royal Hospital

The Royal West Sussex Trust

- St Richards Hospital

South East Coast Ambulance Service NHS Trust

Sussex Partnership NHS Trust

District/Borough Councils

West Sussex Chief Housing Officers Group - WSCHOG

West Sussex Community Alarm Providers - WSCAP

Councils for Voluntary Services

Partnerships for Older People Projects

Community Partnership Teams

Carers Network

User Involvement Network Project in the ILA

Appendix E – NHS Unit Costs

Table 8 Examples of NHS Unit Costs
(Payment by Results, Tariff Information, August 2007)

HRG name	Elective spell tariff (£)	Elective long stay trimpoint (days)	Non-elective spell tariff (£)	Non-elective long stay trimpoint (days)
Transient Ischaemic Attack	831	15	1,698	13
Alzheimers Disease	1,527	125	1,952	153
Complex Elderly with a Nervous System Primary Diagnosis	6,149	165	5,369	84
Complex Elderly with a Mouth, Head, Neck or Ear Primary Diagnosis	3,163	39	3,069	39
Lung Abscess-Emphysema	2,579	38	4,031	38
Other Respiratory Diagnoses	1,493	7	1,670	16
Complex Elderly with a Respiratory System Primary Diagnosis	2,608	50	3,255	39
Deep Vein Thrombosis	382	1	2,065	17
Hypertension	1,074	11	1,890	16
Cardiac Arrest	2,233	10	2,167	10
Arrhythmia or Conduction Disorders	602	1	996	7
Chest Pain	1,161	5	1,115	6
Complex Elderly with a Cardiac Primary Diagnosis	2,215	27	3,370	39
Stomach or Duodenum Disorders	1,207	5	1,876	19
General Abdominal Disorders	1,256	7	1,745	13
Inflammatory Bowel Disease	818	7	2,063	19
Complex Elderly with Digestive System Primary Diagnosis	2,700	37	3,679	44
Complex Elderly with a Hepato-Biliary or Pancreatic System Primary Diagnosis	4,151	51	4,028	51

Open Lower Limb Fractures or Dislocations	3,846	19	3,731	19
Open Upper Limb Fractures or Dislocations	2,510	9	2,435	9
Sprains, Strains, or Minor Open Wounds	927	2	569	2
Other Wounds or Injuries	1,503	6	1,458	6
HRG name	Elective spell tariff (£)	Elective long stay trimpoint (days)	Non-elective spell tariff (£)	Non-elective long stay trimpoint (days)
Other Neck of Femur Fracture w cc	5,616	90	6,087	78
Other Neck of Femur Fracture w/o cc	3,076	85	4,518	51
Complex Elderly with a Musculoskeletal System Primary Diagnosis	7,219	114	6,406	76
Complex Elderly with a Skin, Breast or Burn Primary Diagnosis	6,147	59	4,060	59
Fluid or Electrolyte Disorders	770	2	2,405	27
Disorders of Nutrition	1,222	5	2,670	32
Diabetes with Hypoglycaemic Emergency	2,238	21	2,171	21
Kidney or Urinary Tract Infections	1,918	37	2,762	33
Complex Elderly with a Urinary Tract or Male Reproductive System Primary Diagnosis	2,797	52	3,879	47
Complex Elderly with a Female Reproductive System Primary Diagnosis	3,944	72	3,827	72
Lower Respiratory Tract Disorders without Acute Bronchiolitis	1,354	5	1,090	6
Other Viral Illness	1,023	7	1,035	7
Other Non-Viral Infections	867	1	1,665	11
Respite Care	908	16	1,540	30
Complex Elderly with a Haematology, Infectious Disease, Poisoning, or Non-specific Primary	1,509	35	3,530	54

Diagnosis				
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2007-08 Accident and Emergency Mandatory Tariff	
A&E tariff name	A&E tariff (£)
High Cost Attendance	101
Standard Attendance	73
Minor A&E / Minor Injury Unit Attendance	55

Payment by results: Tariff information 2008,
http://www.dh.gov.uk/en/Policyandguidance/Organisationpolicy/Financeandplanning/NHSFinancialReforms/DH_077279

Appendix F – Interview Extracts

TeleHealth

(doc@HOME equipment)

It is nice to know how I am. I do oxygen readings twice a day and now I know why I am feeling not well when I am having a bad day.

I would recommend this equipment to anyone who has lung disease and wants to stay at home. It's not a cure, but it helps me to know about my health so I feel safer at home, I never want to go into a care home so this makes me very happy. The community matrons are always there if I need them and that makes me feel safer also.

I know that I am ok and I am being monitored and I don't have to go to too many appointments. That's less stress on us both.

I never see my GP anymore, just use the Community Matron although that is only if she needs to see me. They used to come more regularly but not any more.

It gives me some security, it means I don't have to go out too much, easy to monitor and I know when I am all right so it is peace of mind really. I know they are there when I do my readings because they call if it is wrong!

All this equipment has kept me living in my own home.

(TeleHealth HomMed)

I look after some of my health at home; I still may have appointments but probably not so many.

TeleCare

Bed sensor and pendant (daughter)

(An assessment for LT care)...The visit took place while mum was recovering from surgery, had a UTI and was quite confused, and she was told she would need long term care. I said I would look after her, and with the pendant and the bed sensor she would be OK. The social worker did the 2-week review visit and was surprised how well she was doing at home. This has helped her to be here and not in a care home. She was too close to being in a care home.

Pendant

It would have been better if I had had the pendant before the stroke. It's great for my husband as he can go out for short times and not worry so much.

Pendant

I had been in a nursing home temporarily and this helped me to come back to my own flat.

Pendant

She was very worried before and now we all have peace of mind. It should be available free for all older people who live on their own!

Pendant

I wish if I had had the pendant earlier, I may not have had to go into hospital.

Bed sensor (Dementia carer)

I now get a great night's sleep. It can be very hard work looking after a partner with dementia, as it is full time when they are around and if you have not such good health yourself it can be very draining.

The bed sensor saves on work and stress. It is a great help for carers – would recommend to everyone with a caring role.

I don't want her in a home, she needs to be around me because she knows me and I know her.

The bed sensor saves my mind and money because less carers have to come to clean her up as I can do it because I get to her before it is too bad.

Dementia family member

It is only a matter of time before he needs 24 hours care. The pendant and door sensor does not help him to stay at home anymore and it is causing too much stress for the family.

For a full outline of the interviews see "An Evaluation of the Preventative Technology Grant Schemes for West Sussex County Council" conducted by Ozone Solutions Ltd.