



Improving Medication Concordance of Service Users

As people get older, they are more likely to suffer from one or more long term condition that cannot be cured but which can be managed using combinations of therapy including medication. Figure 1 shows that the average number of medications prescribed to people living independently in the community increases quite sharply with age beyond 55 reaching 9.2 for people aged 90. It is perhaps no surprise that perhaps half of older people fail to take all their medications every day as prescribed by their doctor. This is clearly a waste of NHS resources but also can have a negative effect on the management of their conditions. In some cases, it means that they are unable to perform routine domestic and self-care tasks, and must rely on long-term care arrangements.

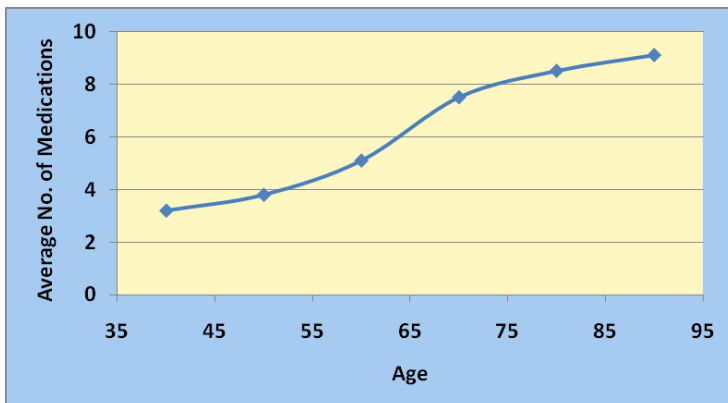


Figure 1: The Average Number of Medications Prescribed in the UK as a Function of Age

The reasons why people don't take all their medications at the right time every day are many and varied. They include a fear of side effects and a desire to maintain control over their well-being. However, the most common reason is that they simply forget which medication should be taken at what time. This is especially the case when they have multiple medications (polypharmacy) and when some pills need to be taken at different times to other pills, and especially if some medication need only be taken when particular symptoms present.

A number of aids to medication compliance have been introduced over the years ranging from simple boxes with labelled compartments through to more sophisticated electronic devices which make medications available only when programmed to do so, and which can provide an alarm linked to a monitoring centre when appropriate. These approaches have been successful in many cases but require cassettes to be loaded every week by a pharmacist or by a family member, and are actually too complex to meet the needs of many people.

While on holiday in the USA last year, I came across a simple electronic reminder device that was being sold over the counter in drug stores. I bought one and found that it was both low cost (\$7.99) and so easy to use that one of my relatives who has struggled with a TV remote control was able to use it. I asked the manufacturer if it was available in the UK or in Europe and he told me that it didn't seem to appeal to AT suppliers over here because the potential profit per unit was going to be so low that it wouldn't be worth their while offering it for sale. This might be true as far as individual sales are concerned, but it clearly wouldn't be the case for a telecare service provider who might already be offering products such as Magiplugs and automatic night lights.

Based on this, I have decided to conduct a little research project using these devices and, because I have no external funding, I am looking for help from CUHTec members to run the trial with me. I have bought 500 of these devices (shown in Figure 2) and need up to 20 organisations to each buy a minimum of 25 devices for use with their service users. The cost

will be £75 for a batch of 25 units including postage and packaging. I will provide some survey questionnaires for organisations to use with their service users before and after using the devices so that we can work out if they have been effective and with what type of service user. Although the device can sit neatly on the cap of a bottle of pills, it could also be attached to a box of tablets or to a blister pack. Indeed, I could imagine some people needing 2 or 3 different devices.

A similar project was undertaken in the USA 18 months ago by the Blue Cross and Blue Shield of Kansas City (Blue KC) organisations. They found high levels of satisfaction amongst people who were offered the device and continued to use it for longer than 2 weeks; self-reported compliance rates were also greatly improved.



Figure 2: The Front view of the Dose Alert Pill Reminder Device

If any CUHTec member organisation would like to enrol in this project, please contact Kevin Doughty by email at: dr.k.doughty@btinternet.com as soon as possible.

CUHTec Member Survey 2011

The figures below come from the 23 CUHTec member organisations who responded to a questionnaire we sent out in May. 14 of these described themselves as both commissioners and providers, 6 as service delivery organisations and 4 as commissioners. There were a number of aims ranging from the ways that members tolerated or responded to lost devices, through to their willingness to embrace mobile care technologies and other items of equipment that could be termed “standalone telecare”. The main results and some comments are given below.

1. Emergency responder services

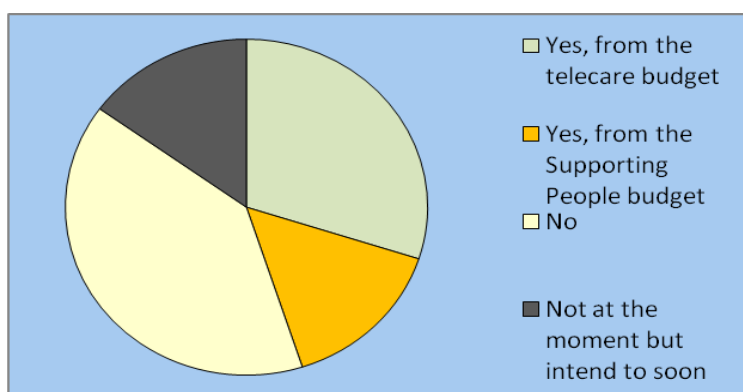


Figure 1: Answers to “Do you fund an emergency response service?”

currently support a responder service or will do so in the future, with nearly 20% of them relying on Supporting People funding in some way.

It is accepted that many of the most vulnerable people in society live alone and have no relatives or friends close by who are able to provide practical support in the event of an emergency incident. Many organisations have created mobile emergency response services to ensure that they are able to deal effectively with a number of incidents including falls, and especially when the individual is on the ground and unable to get up without help. Figure 1 shows that the majority of telecare commissioners

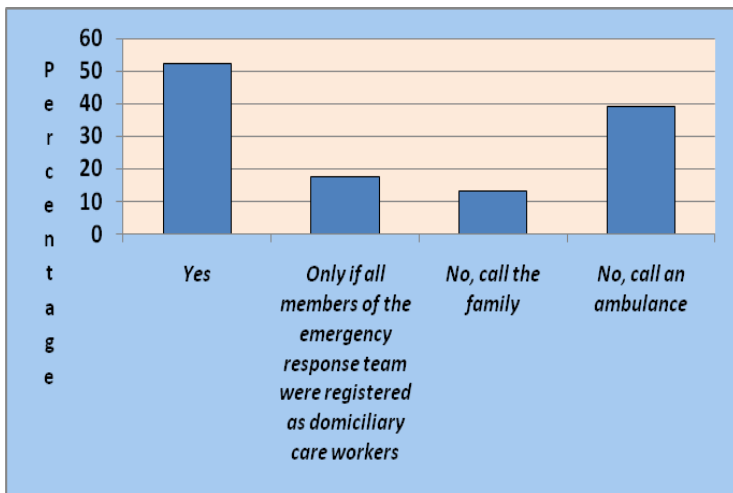


Figure 2: Answers to the question: “Would you expect an emergency response team that is equipped with a Mangar Elk inflation cushion to pick up someone who had fallen on the floor?”

On the other hand, Supporting People funding plays a big role in most responder services operated by telecare service providers with nearly a half depending on some of this form of financial support for their services. The significance of Supporting People funding may be relevant to the responses shown in Figure 2 where both commissioners and service providers were asked if they would expect an emergency response team to pick up someone who had fallen if the team was equipped and trained to use an inflation cushion device such as a Mangar Elk. Although more than half said that they would, there were

clearly concerns about the appropriateness of a response team to perform manual handling and, consequently, if such actions could be considered to be support rather than care. Calling an ambulance without confirming that there was a serious problem is likely to increase the number of emergency presentations at A&E, and the number of admissions, which will cost primary care in England through the Payments by Results tariff. Yet, employing a dedicated telecare response team may be financially difficult at this time because of the uncertainties surrounding funding through Supporting People and the need for additional registration to enable staff to provide any form of personal care such as helping people get up off the floor following a fall.

2. Expanding the Telecare Inventory

Previous CUHTec surveys and audits of telecare services have revealed disturbing information on the poor quality of telecare equipment prescribing, especially in areas where there is no specialist team of assessors. They have also shown that the majority of social care assessors have completed one or less telecare prescription during the previous 12 months. Despite this, over 65% of organisations stated in this year’s survey that they believe that all social care assessors, with appropriate training and resources, should prescribe telecare equipment and services. Over 80% felt that expert support should be available for complex cases. Figure 3 shows that the vast majority of organisations recognise the limitations of using a very narrow range of telecare sensors and a dispersed alarm unit in their telecare services. Their responses indicate a rapid extension of provision to include more standalone devices, and improved access through a retail function. It follows that assessors

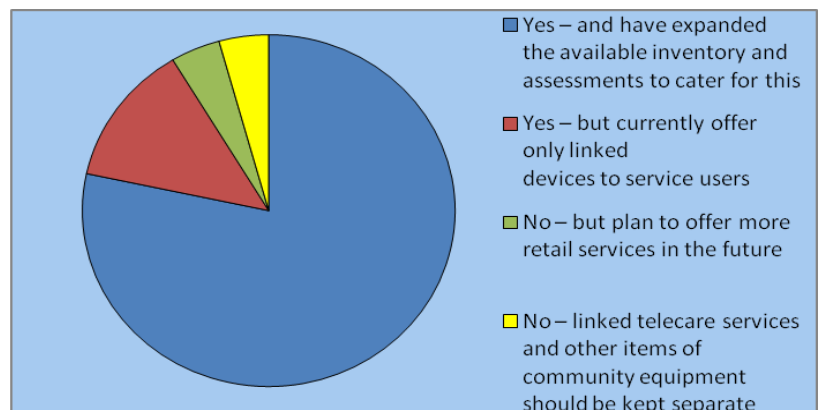


Figure 3: Answers to the question: “Telecare services are being expanded to include a wider range of assisted living opportunities including many standalone devices. Does your organisation support this expansion?”

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will need more resources in order to ensure that they prescribe the most appropriate device selections from a growing inventory.

In the same way, nearly three quarters of organisations felt that the availability of mobile telecare services through mobile phones or smart phones will have a significant effect on existing service as new “apps” will improve the safety of their users when they are out of the house. More than one in five believes that these new technologies (including set-top boxes linked to the TV) will eventually make existing telecare devices redundant.

It may be apparent that such changes will need to be managed and that increased resources will be needed to ensure that installers and others in the process chain are appropriately trained to deal with much more choice covering not only telecare equipment but a range of assisted living services.

3. Dealing with Equipment Losses

Telecare devices are becoming smaller and less conspicuous every year, avoiding much of the stigma associated with social alarm systems and assistive technologies generally. Unfortunately, as many service users have impaired vision, an increasing amount of equipment is being lost, and needs to be replaced. The smallest (and most common) piece of equipment is an alarm pendant which has a replacement cost of about £50 and which needs to be programmed to work with the alarm receiving unit in the service user’s home. Replacement is therefore an expensive option which the majority of organisations appear to be doing free of charge with over a quarter prepared to provide a free replacement more than once to the same individual. Less than 10% of organisations appear to be prepared to charge

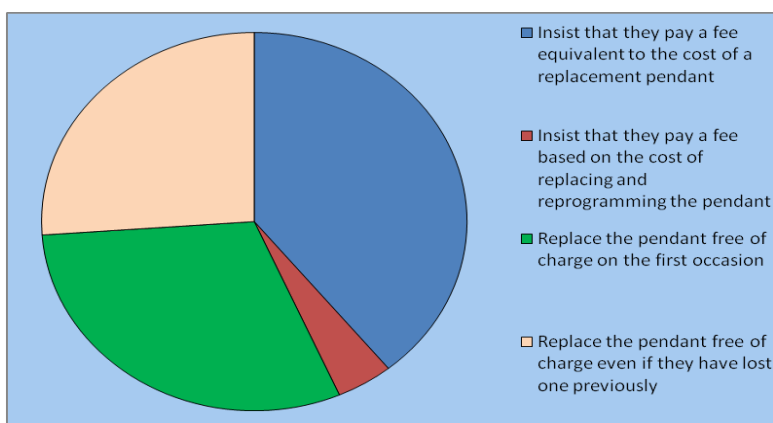


Figure 4: Answers to the question: “If a service user reports that their pendant is lost, which of the following courses of action are you most likely to take?”

the service user in full for the pendant and the cost of a visit to program the alarm unit to accept the replacement device. The results are shown in Figure 4.

Equipment sometimes cannot be found when an elderly service user passes away or moves into a care home. Under such circumstances, organisations are more likely to offer to help look for it than to issue an invoice to the family for the replacement cost. Insurance is not considered to be a practical method of reclaiming the money.

4. Minimum Telecare Standards for Homes

There are decent homes standards that apply to facilities such as bathrooms and kitchens, and Registered Social Landlords need to meet these standards in properties that they have available for rent. If similar standards existed for telecare then potential tenants would know that they could expect to find a decent level of telecare infrastructure and equipment. However, the results shown in Figure 5 suggest that the majority of organisations don’t believe that there should be a minimum level of equipment provided in all homes. This may be linked to moves from hard-wired to wireless infrastructure and, ultimately perhaps, to systems based on mobile technologies as discussed above.

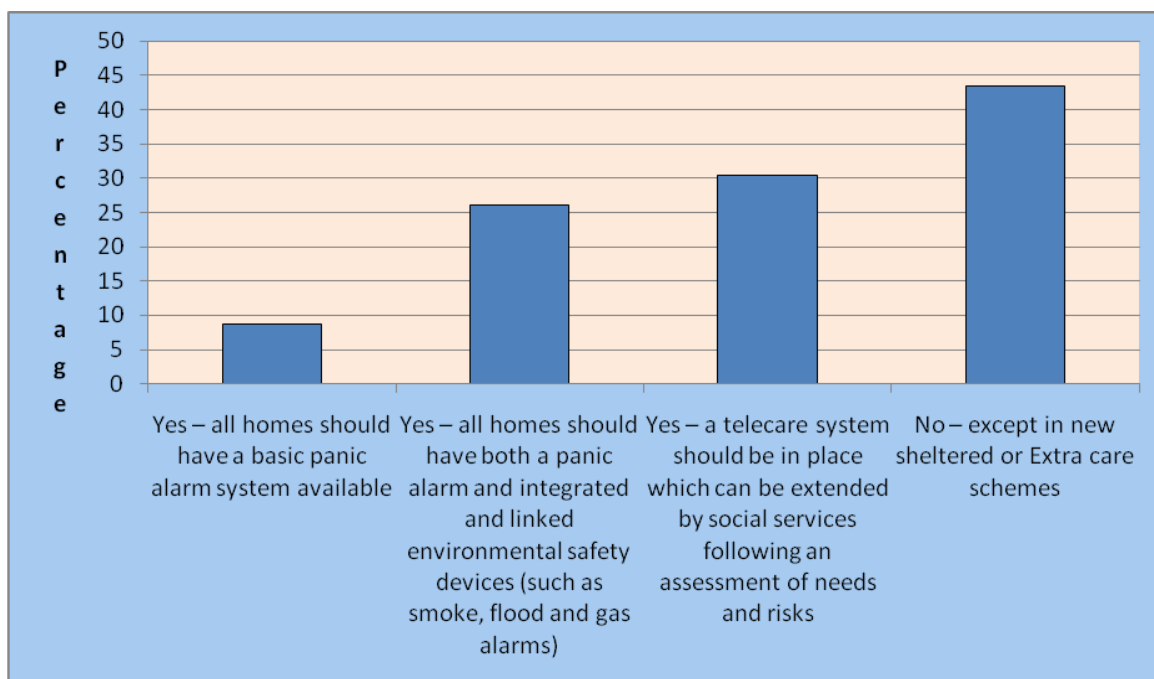


Figure 5: Answers to the question: “Do you think that there should be reasonable standards with regard to telecare availability in properties?”

5. Acknowledgements

Many thanks to the organisations who completed our questionnaire, also to Jenny Parry for administering it. The questionnaire was designed by Kevin Doughty who supplied this article. If you have any further comments or questions, please contact him directly at dr.k.doughty@btinternet.com

CUHTec Courses:

Using telecare to reduce the cost and increase the effectiveness of re-ablement and intermediate care - 18th October, 2011

Assistive Technology and telecare for learning disability services - 19th October, 2011

Using telecare to reduce the cost and increase the effectiveness of re-ablement and intermediate care - 18th October, 2011

The course will enable you to demonstrate the true cost and potential savings to be made through using Assistive Technology, Telecare and Telehealth for: (i) re-ablement after a medical crisis; (ii) prevention of re-admission to hospital, especially people with long term conditions. Each of these opportunities will be considered in turn and delegates will be guided through the process of costing and justifying a service, as it might be set up in their organisation.

This course is for commissioners, service development managers also operational staff and others with responsibility for telecare service planning and delivery. This includes primary care organisations, social landlords and groups who provide support services for vulnerable people.

After attending this course you will be able to:

- explain how re-ablement is to be used according to DH guidance
- cite evidence for the effectiveness of re-ablement programs

- make a case for the use of telecare to reduce the cost of re-ablement programs
- make a case for telecare in re-ablement as a way for service providers to increase telecare uptake
- cost and justify a telecare service within a re-ablement program, as it might be set up in your organisation
- give examples of how technology can be used to avoid re-admission to hospital
- cost and justify a telehealth and intermediate care service as it might be set up in your organisation

Assistive Technology and telecare for learning disability services - 19th October, 2011

The course will show you how Assistive Technology and Telecare can be used cost effectively to support people with learning disabilities: living with their family, independently or in Supported Housing and smart homes. In each case it will allow you to demonstrate the true cost and potential savings to be made. Delegates will be guided through the process of costing and justifying a service, as it might be set up in their organisation.

This course is for local authority and supported housing managers providing services for people with learning disabilities.

After attending this course you will be able to:

- Give examples of how technology, particularly smart phone apps, can help this group
- Overcome the obstacles to the introduction of technology in this context
- List the different risks faced by people with learning disabilities living with their family, in Supported Housing and independently
- Cost and justify services for each of these ways of living, as they might be set up in your organisation

Both courses will be led by Kevin Doughty and Andrew Monk of the Centre for Usable Home Technology at the University of York, and will be limited to 12 places. They will consist of short talks, exercises and discussions. Attendees will receive a CPD certificate.

Further details and a booking form can be found at: <http://www.cuhtec.org.uk/>

To reserve a place please contact:

Jenny Parry, CUHTec Administrator Tel: 01904 323178 Email: cuhtec@psych.york.ac.uk

Fees for these courses are:

One course:

CUHTec Full Members - One delegate £180, Two or more delegates £150 per delegate

CUHTec Associate Members and Non-Members - £295 per delegate

Both courses:

CUHTec Full Members - One delegate £320, Two or more delegates £260 per delegate

CUHTec Associate Members and Non-Members - £550 per delegate

CUHTec Regional Telecare Forums

London/South East England Resource Centre, N7 6PA - 28 September, 1.30pm to 4.30pm

South Wales/South West England Cardiff, 8 November, 11.00am to 3.00pm

CUHTec regional telecare forums are half-day events aimed at service providers at all levels. They provide an opportunity for CUHTec members (full and associate) to get together to exchange ideas and experiences with fellow professionals in the region with the emphasis on sharing best practice in telecare. Each forum targets specific subjects for discussion based on recent feedback from members in the area and are facilitated by Kevin. Please contact Jenny Parry (tel; 01904 433178 email; cuhtec@psych.york.ac.uk) if you wish to attend.