

Telecare Factsheet

Exploring the Use of Pill Dispensers in Telecare Services

October 2009

INTRODUCTION

This fact sheet is based upon information provided by the City of Edinburgh and Renfrewshire Council around the use of pill dispensers as part of their wider telecare services. It has been produced by the Joint Improvement Team on behalf of the national Telecare Learning Network to inform and assist other organisations who may be considering the use of such devices.

The pill dispenser in use is one of a range of telecare devices provided by these local partnerships to assist independent living across a range of service users with different needs.

What is a Pill Dispenser?

The pill dispenser is an easy to use tablet dispenser which can assist in the management of medication and allows the correct dose to be available at the correct time of day or night. This reduces the risk of the service user failing to take their medication or taking too much inadvertently.

How the Pill Dispenser Works

The dispenser is programmed with dosage and times, and an alarm sounds to prompt the user to take their medication. It will only allow the tablets for that specific dose to be available to take from the dispenser. If the medication has not been taken, then the dispenser reminds the user that a dose is due. An alert will be sounded if the medication is not accessed within the following hour. If linked into a call handling and monitoring service this alert will allow appropriate follow up action to be taken.

The following examples show how the pill dispenser is being used in the identified two partnership areas.

Use of Pill Dispensers in City of Edinburgh Telecare Partnership

Background

The City of Edinburgh Partnership has been developing their Telecare Service since 2006 and has over 800 service users (Aug 2009). The pill dispenser is one of a range of telecare devices deployed to assist individuals live independently.

Objectives

The Telecare Service objectives are to:

- Provide support to carers.
- Support independent living.
- Facilitate hospital discharge.
- Enhance current packages of care.



- Reduce/delay long term care admissions.
- Enable the partnership to meet strategic targets, eg as contained within the Older People Capacity Plan.

In relation to the use of the pill dispenser within the Telecare Service, the anticipated outcomes are:

- Service users have an increased ability to self medicate.
- Carers feel more supported at home and are more confident.
- Reduced need for medication prompt visits from either paid or unpaid carers.

Edinburgh installed 24 devices in 2006 which were all refilled by unpaid carers. Between 2007 and 2009 a further 51 devices have been installed with the re-filling undertaken by either the carers, or in a small number of cases, by the community pharmacist.

Findings to Date

A number of physical and operational issues have been identified with the pill dispenser. These include:

- It is not air tight, and would be unsuitable for pills which require to be kept in an air tight container.
- It can be unsuitable for travelling.
- It is unsuitable to be stored in a fridge.
- The carousel has a finite capacity.
- It is not tamper proof and batteries and pills can be easily accessed.
- Limited pharmacy buy-in has been experienced, and there is a need to have the relevant local pharmacy fully on board
- It will not replace visits by carers.
- The lid on the carousel is not reflective and it cannot be placed in sunlight or read.



Edinburgh's Telecare Service is currently in the process of identifying a small number of pharmacists to work in partnership with them on further developing the use of the pill dispenser. A joint working protocol has been drafted which identifies one pharmacist who will re-fill, collect and deliver the device, and where necessary undertake re-programming should the medication regime change.

Edinburgh have also developed a pre-assessment checklist to guide the use of the pill dispenser which can be found at Annex A.

Use of Pill Dispensers in Renfrewshire Telecare Partnership

Background

Renfrewshire have been using various telecare packages since 2002. A joint working group was set up in 2007 which involved the Community Health Partnership,

Social Work, Primary Care Development Pharmacist and NHS Greater Glasgow and Clyde to look at the use of pill dispensers. A pilot involving 10 service users for a period of six months was agreed. Service users with varying medical conditions were identified in order to allow specific conditions to be assessed as appropriate for the pill dispenser use.

Prior to using the pill dispenser a joint assessment was undertaken with the service user, family, case manager, pharmacist and a Telecare Service Co-ordinator. The information gathered included:

- Service user name
- Address
- Telephone number
- Date of birth
- GP Details
- Next of Kin details
- Second contact details
- Medical Information
- Dosage and times of medication
- Response route



The joint assessment was carried out in the service user's home to allow the pharmacist access to all their medication enabling a comprehensive pharmaceutical review. Once all the relevant information was known, the service user's details were recorded on a call response monitoring system (PNC5) along with the correct procedures for activation of the pill dispenser.

Objectives

The objectives for Renfrewshire's pill dispenser pilot were to:

- Assist service users to manage their own medication.
- Reduce hospital admissions due to overdosing.
- Provide support to carers.
- Promote independent living.

Each service user was allocated two units to allow for change-over of medication. One unit would remain in the pharmacy for filling and dispensing on the allocated day. The Community Alarm/Telecare Service would provide a pick up and drop off service for each service user.

Findings to Date

There was encouraging feedback on the use of the pill dispenser including:

- The unit is easy to set (time/alarm/dosage).
- Users all heard the noise to prompt them to take medication.
- One family credited the unit with helping their relative get the correct dosage at the correct time.

- One service user, who previously had numerous hospital admissions due to overdoses, has been maintained at home for six months without any admissions to hospital.
- Two service users within the same household, who constantly confused their medication (both with mild dementia along with other underlying health conditions) were allocated their own individual pill dispensers. This insured the correct medication was dispensed to each user at the right time.

Some limitations around the use of the pill dispenser included:

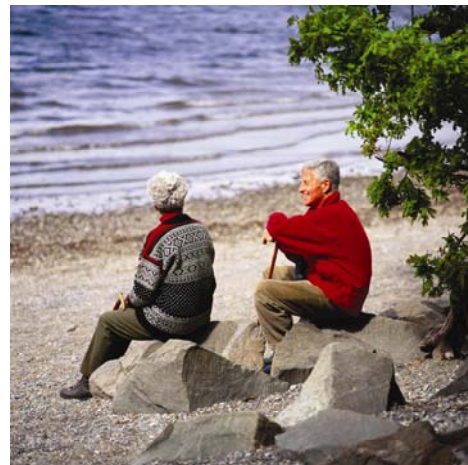
- Pharmacist found the unit difficult to fill due to its shape.
- Pharmacist found it physically difficult to remove wrongly allocated tablets.
- It was difficult to check the unit unless dispensed by the pharmacist (tablets on top of each other).
- Medication changes were difficult to deal with as responders were required to return the unit for change.
- Service users can remove batteries and if no homecare/carers attend daily, this could lead to medication not being taken for a number of days.
- The batteries require to be replaced frequently.
- There was not a maximum level pill indicator within the carousel.

It was acknowledged that improved communications between the telecare provider, pharmacies and responder teams was the biggest strength of the pilot. It demonstrated the benefits for all stakeholders through joint working. Patients require to be assessed appropriately from both a pharmaceutical care and telecare/homecare perspective. It also highlighted that services users with early onset of dementia were able to understand the prompts from the device and managed this process, whilst those with more severe symptoms appeared unable to cope.

Recommendations

Renfrewshire have a number of recommendations for the pilot scheme, these include:

- Joint assessment by pharmacy/telecare service for those with early onset dementia to identify those who are more likely to benefit from the pill dispenser.
- The number and size of drugs involved in each dose must be assessed before agreeing installation.
- Manufacturing arrangements should allow for a maximum level indicator to be included within the carousel, along with a locking device.



Renfrewshire have supported the pilot scheme but have also used pill dispensers as a stand alone service within the community where carers or family have been responsible for filling these units. They advise that this has contributed to the

reduction of service users being admitted to hospital due to over-dosage of medication.

The pilot within Renfrewshire is to remain in place for current service users, as will the stand alone service.

To Find Out More

Contact;

Donna Fleming
Projects Manager – Telecare
The City of Edinburgh Council
Telecare Team, Community Alarm Service
Chesser House
500 Gorgie Road
Edinburgh EH1 2YJ
0131 529 7089
donna.fleming@edinburgh.gov.uk

Lesley Deane
Telecare Service Co-ordinator
Renfrewshire Care 24
Lesley.deane@renfrewshire.gov.uk

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EDINBURGH – APPENDIX A

City of Edinburgh Council: Telecare: Pill Dispenser Guidance Notes

Pre-Assessment Checklist

Ensure you have the following information:

- Clients name
- Address
- Date of Birth
- GPs name, address, telephone number
- Relevant medical information
- Medication regime – doses and times
- Other information, carer's support, day centre use (for portable device if needed), holiday plans
- Response protocols – CAS/Carer or stand alone

Assessment Checklist

- Need to ensure client has capacity to understand and gives consent to install the device (or consent is given by power of attorney).
- The client can operate the device, has dexterity to manoeuvre and tip pills into hand/other suitable item and then sequences this action with actually taking their pills or carer operates device on their behalf and ensures the client takes the pills.
- Re-fill arrangements are in place. The carer/pharmacist is trained on use of device, labelling issues and how to set up, load and lock the device.
- If pharmacist is re-filling the device, they have been trained on how to set up and change batteries etc and are clear about how to switch device on/off. Boots has a standard operating procedure for the PivoTell Pill Dispenser. You can find access this information via the link <http://www.PivoTell.co.uk/boots-pharmacy-filling.htm>.
- Check the pills fit into compartments and ensure they do not require to be kept in an air tight, refrigerated environment.
- Does the device need to be linked to a Telecare Call Handling Service or mobile phone? If so is appropriate response protocols in place?
- Ensure Telecare Call Handling Service is aware of date of installation, for change of battery/maintenance purposes.
- Ensure the label is completed appropriate and is secured in the underneath compartment of the device.

Installation Checklist

- Follow setting up instructions, (enclosed with the device).
- Ensure the client picks relevant sound (the one most likely to get their attention).
- If deaf/hard of hearing, ensure light is activated.

- Linkages to Telecare Call Handling Service/mobile or local pager – is responder clear on this and what to do once device activated?
- Ensure client/carer is clear about the key, paper reminder cards and how to lock and load the device.
- Spare carousel – leave with client/carer.
- Lid for spare carousel is not light reflective, ensure stored appropriately.
- Leave manual with carer/client as appropriate.

Process from Assessment for Pharmacy Re-filling

- Device regarded as suitable.
- Assessor contact local pharmacist – if willing to re-fill and had training, inform pharmacist of client name, date of birth etc. See pre-assessment checklist and fax to pharmacist or Omni Care Pharmacy.
- If local pharmacist willing to re-fill device but has had no prior training – Assessor to contact City of Edinburgh Council Telecare Department, who will contact the pharmacist and arrange the necessary training.
- If local pharmacist is unwilling/unable to re-fill device – Assessor to contact Omni Care, detailing client's information. See Pre-Assessment checklist.

Process from Assessment for Carer's Re-filling

- Identify if device is suitable for client.
- Assessor has trained the carer in loading and locking device (Assessor will already have set up the device, the carer is not re-programming the device).
- If the device is linked to carer's mobile phone they are aware of the out of range issues and are prepared to respond to the device's alert.
- The carer is aware that the Telecare Department can be contact to report any changes of circumstances and what telephone number to call for repairs.

All devices are maintained and batteries changed by City of Edinburgh Council Telecare Department.