



## **Assistive Technology**

Jim Ellam, Margaret White & Tanya McGinlay



Assistive technology (AT) has the potential to narrow the gap between an individual's capacity and their environment, and therefore to make it easier for people to remain in their existing accommodation.



The extent to which AT can narrow the gap depends on people's willingness to use it, which in turn can depend on a number of factors:

- the needs that people perceive and the outcomes they wish to achieve
- the perceived usefulness and value for money of the AT
- whether the individual feels that use of the device either supports or undermines their sense of personal identity





Through case examples and discussion we will consider whether it's the outcomes rather than the technology itself that should be our focus - do we all need a box of tricks containing the right items of AT to help us live our lives?

We will discuss ways in which building awareness of the AT spectrum and understanding how to access AT will assist in identifying different ways to achieve our outcomes inside and outside the home.

This needs to be accessed at right time for each of us and may include self assessment, peer recommendation and/or professional assessment.

We will discuss the need for the technology to be well designed, easy to use and give us confidence that it will work reliably and offer value for money.





Sometimes the symptoms of MS make it difficult—or even impossible—for people to carry out their daily activities. Faced with these kinds of challenges, people have a big choice to make—whether to give up one or another of the activities that make life full and interesting, or figure out ways to do things differently.

This is about finding ways to keep doing the things that are important to you—by working with your health care team to manage your symptoms, using tools and technology to make life easier, and manipulating your environment to maximize your mobility, safety, and independence.





I wish that I knew what I know now When I was younger.

I wish that I knew what I know now When I was stronger.











"If 5 years ago I had known what I know now then life would have been so much better for us all.

We would now have worried as much or struggled for so long and we could have lived our lives differently.

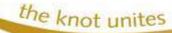
By the time I knew what could have helped it was too late for us.

I want other people to get the right help and advice at the right time."



# Enabling IndependenceDelivering choice and control

- it should be used to enable and support people to live more independently
- it should be considered following a <u>person centred</u>, holistic assessment of the needs and wishes of the individual concerned
- it should be considered alongside <u>ethical issues</u> such as informed consent and the principles of doing one's best for the person, avoiding harm and respecting rights and preferences
- it should be considered alongside the use of other services, not as a replacement for human contact and care
- it may not be the answer for everyone.





## Lets make this personal!!



One size doesn't fit all.



Supporting independence delivering choice



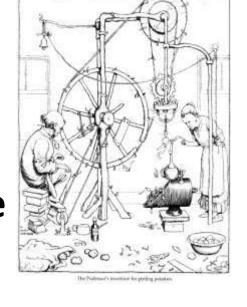




### It doesn't need to be expensive,

It doesn't need to be complicated

But it has to be trusted and effective











### Its about the outcomes not the technology











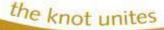


2 **Floods** in a Cannock sheltered housing scheme within a year cost £1000 to repair and had a big impact on everyday life, affecting the confidence and wellbeing of those involved. The tenants meeting discussed what could be done to avoid it happening again.

Magi-plug identified—reducing risk of floods and scalds

#### **Outcomes**

- Tenants more confident and reassured, no floods, ££savings.
- The story generated a lot of positive publicity and has proved an effective way of introducing Assistive technology





## John struggled to open tin and jars

He struggled to prepare meals until he discovered automatic openers





## Mary missed her cups of tea

- Her arthritis made it hard to lift her kettle
- She struggled to prepare hot drinks
- She cancelled her weekly tea party
- She missed her friends visiting.....
- Until her new kettle arrived







### Jane felt isolated

Jane struggled to remember numbers.

 She only rang her family and friends when her support workers helped her dial the number.

She had to plan making a call....

Until she changed her phone...









## Bill kept missing phone calls

Until he wore his phone around the house and in the garden







## Staffordshire Simple mobile phones





## Safer walking





## Using GPS technology















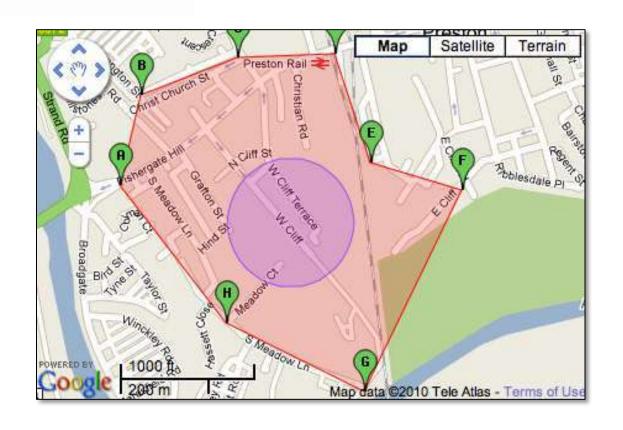
### **FIND**







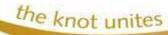
# Staffordshire SETTING A BOUNDARY













### **Medication reminders**



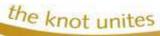


### John – "Getting my life back..."













**Telehealth** is where electronic sensors or equipment that monitors vital health signs remotely, are placed in service user's home, or they are given equipment that can be used while they are on the move. These readings are automatically transmitted to an appropriately trained person who can monitor the health vital signs and make decisions about potential interventions in real time, without the patient needing to attend a clinic.

**Blood Pressure Monitor** measure's a user's blood pressure and heart rate without the need for a nurse or a visit to a GP. Blood pressure monitoring may also be helpful in the detection and treatment of hypertension. **Pulse Oximeter** provides immediate and reliable readings of oxygen saturation levels. It is an accurate tool offering information to determine the interventions needed for patients with asthma and Chronic Obstructive Pulmonary Disease (COPD).

**Glucose Meter** allows a clinician to identify trends and track historical readings to ensure the patient's blood glucose is within their ideal range.

**Body Weight Scales** are for taking daily weight measurements which are automatically updated and monitored by a clinician. Any fluctuations in weight can indicate an increased level of risk.





## Community alarms and telecare













## Improving design.....

Lifeline Vi is the 6<sup>th</sup> generation of Tunstall product

1	2	3	4	5	6
Lifeline 1, 2, 2+	Portal/Premier	Lifeline 1000, 2000, 3000	Lifeline 4000, 400	Lifeline Connect, Caresse	Lifeline Vi









http://www.youtube.com/watch?v=9825oS7q1B4







### Mr and Mrs B

"Mr B sleeps like a log!! His wife visits the bathroom 2 or 3 times during the night, because she is unsteady on her feet she was constantly falling and injuring her self, her husband would not know any of this until she could wake him by shouting or even not until the next morning when he has found her on the floor at night and has fallen on several, occasions, lying on the floor until he wakes up".



















### Benefits for carers

Telecare can allow a carer to go to work, to shop or just to take some time off, secure in the knowledge that any problem at home will be detected and help made available.

Telecare equipment does not have to focus on alerting a monitoring service that is somewhere else. It can alert the carer in the home. An example might be equipment to let a carer know if the person they look after gets up and wanders during the night or falls out of bed. This can help a carer get a good nights sleep instead of spending the night anxious.





### Mick's story -

Telecare has strengthened a Maidstone couple's relationship, and improved their quality of life.

Mick and Jean have been married for 43 years. When Mick was diagnosed with Multiple Sclerosis in 1989 both their lives took a dramatic turn.

The burden of Mick's disability has over time, had a significant impact on their lives. Mick has had to deal with adapting day-to-day with the effects of MS which for him includes enduring a level of disability, having to use a wheelchair, fatigue, and an increasingly poor short-term memory.

Meanwhile Jean has taken on the role of her husband's full-time carer, a role that most spouses take on as a matter of course and very often their efforts as formal carers are not recognized.



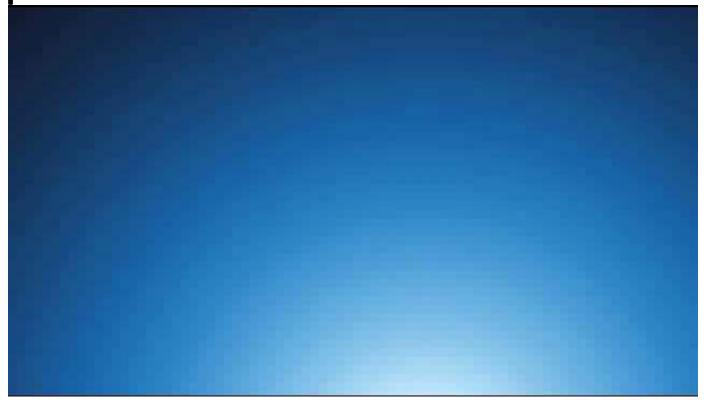


Mick's Care Manager initially recommended him for the Telecare service because of the risks to him associated with falling. It wasn't until later that Jean noticed an unexpected benefit to her as a carer. Jean started to use the Telecare system as a respite service. Ensuring that Mick was wearing his Telecare pendant, she said "if I'm having a bad day, stress, the lot, I'm out of the door, I can get in the car, and down the shops I go!

Rediscovering her independence and knowing that Mick is looked after by Telecare has freed Jean up to enjoy some time for herself where she can look after her own needs and enjoy the company of friends and family without constantly looking over her shoulder to check on her husband."



Support inside and outside the home



http://www.youtube.com/watch?v=G2vWFTW9deY





## Monitor through your mobile



### SeN·Cit+ monitors



#### Regular Movement

Alert sent if no morning, lunchtime or evening movement detected



#### Door Open Wandering

Instant alert to prevent wandering via main doors



#### Room Temperature

Alert if room temperature gets too cold or too hot



#### Mains Power Cuts

Text message to inform of main



#### Night Wander

Text and 'ring' alert in case of night time wandering



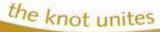
#### Home Security

SMS security when home left unnatended



#### All OK

Receive a Daily or Weekly SMS to let you know all is well





## Monitor through your landline







# Remote control plugs and power savers







Large button remote controls



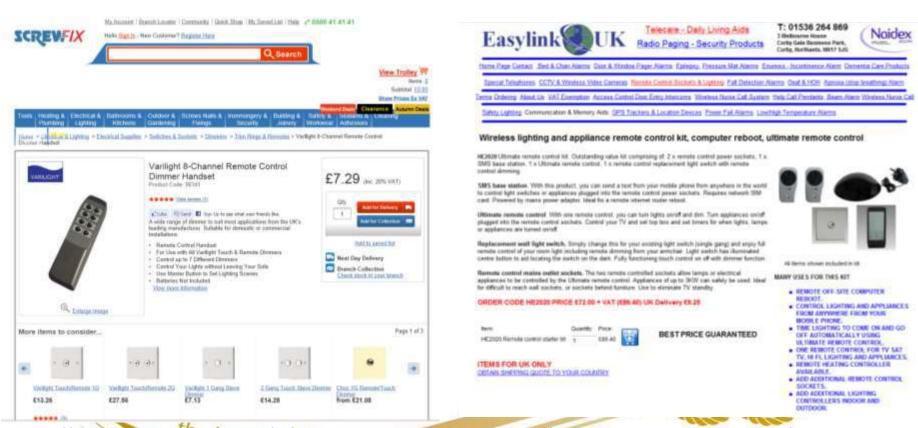








## Simple home automation



http://www.screwfix.com/p/varilight-8-channel-remote-control-dimmer-handset/90341

http://www.easylinkuk.co.uk/page117.html



### Access controls and locks etc.













## Sources of information

- http://www.mstrust.org.uk/information/livingwithms/equipment.jsp
- http://www.mssociety.org.uk/ms-resources/adaptations-and-yourhome-ms-essentials-27
- www.livingmadeeasy.org.uk
- http://www.gadgetgateway.org.uk/
- http://www.dlf.org.uk/content/asksara
- http://enabledbydesign.org/ebdcommunity/
- http://www.independentliving.co.uk/index.shtml
- http://www.ricability.org.uk/index.aspx
- http://assist-uk.org/
- http://www.medpage-ltd.com/







http://www.gadgetgateway.org.uk/









### independent advice knowledge empowering essential supporting choice impartial enabling innovative trustworthy providing opportunities

Google" Duston Search Search X

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Home		
About us	About the home  These DLF factsheets provide general advice on topics such as features to look for when choosing a wide range of items of daily living equipment. However, if you want detailed information on specific types of equipment that can help you, you should visit our website Living made easy.  You will need Adobe's Acrobat Reader to view these PDFs. Download it free of charge from the Adobe website or, for people with visual disabilities, visit Access Adobe.	
Our services		
AskSARA		
Business services		
Demonstration Centre		
DLF Data		
Factsheets		
Forums		
Helpline	Factsheets  Choosing equipment to maintain safety and independence at home (introducing telecare) Choosing equipment for the heavier person Making a difference (choosing equipment for everyday living)	what you think  66 My husband has cerebral pelsy and arthrifus. One day he found that he could no longer get out of the bath easily. We needed help quickly so, having heard of DLF, I called them and within a day or two received comprehensive details of suppliers of bath aids. We contacted one and bought a bath seat - problem solved!
Living made easy		
Moving & Handling People		
Room hire		
Services for parents		
Supplier directory		
Training		
Support us		
News and events	<ul> <li>Choosing household equipment</li> </ul>	
Training	Choosing toilet equipment and accessories	
Contact us	Choosing a bed and bed accessories	
Donate	<ul> <li>Choosing a bath and bath accessories</li> </ul>	

### About the home

### Factsheets

- Choosing equipment to maintain safety and independence at home (introducing telecare)
- . Choosing equipment for the heavier person
- Making a difference (choosing equipment for everyday living)
- · Choosing household equipment
- · Choosing toilet equipment and accessories
- . Choosing a bed and bed accessories
- . Choosing a bath and bath accessories
- Choosing a chair and chair accessories
- \* Choosing a shower and accessories
- · Choosing and fitting grab rails
- I Choosing eating and drinking equipment
- ) Choosing equipment to get up and down stairs
- · Choosing pressure relief equipment
- . Some suppliers of a range of daily living equipment

### Helpline 0845 130 9177

Weekdays 10-4pm



### Support us

Support us today to help someone lead a better life.

Donate now \*

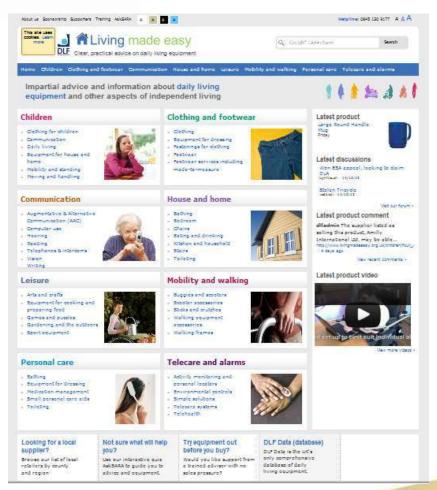


### Stay in touch



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## Staffordshire Grahams case study

Graham is 45 years old and has Multiple Sclerosis. He lives with his wife in a two bedroom flat.

Graham uses a wheelchair to get around both inside and outside his flat. He has recently become more dependent on his wife and personal assistants at mealtimes due to an increase in uncontrolled movements in his arms, particularly on his left side.



He would like to be more independent at mealtimes so he can feed himself without assistance.





Graham finds that he cannot keep food on his plate and it often spills on the table and onto the floor. He also finds he spills food and drink on his clothes at most mealtimes. To overcome this his wife and personal assistants have been feeding him to reduce the amount of cleaning up after meals. Graham feels like he has lost his independence and feels embarrassed at mealtimes, and therefore avoids eating out or in the company of family and friends.

Graham was visited at home by an occupational therapist from his local authority. The occupational therapist recommended the following equipment:

## A plateguard, A slip resistant mat ,A bib with a trough, A spill-resistant cup with a lid.





## Enabled by design



http://enabledbydesign.org/







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ilty - What do you want to tell us about?

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What are the things that make your life just that little bit easier? Tell us about the products, services, gedgets and gizmos that you really couldn't be without!



Having poor dealerty due to MS. often means that I have difficulty



Wheelchair Groppets are a lecturised silicone covering that fit over the gush rims of a manual



Safesip - reusable drinks Safesin is a reusable drinks coue

made from food prade allicone, it

What are the products, services and design in general, that you find frustrating and fiddly or impossible to use? Tell us the how, why and if you think things could be changed to make them work better for you.



Spoke guards I was so forn when choosing between love and hate, and while



External ralls I have these rails as they are neither national or beautiful. In the sun



Myoo Swivel Bather I currently don't have a level access ballyoom and lest year an OT supplied me with a Myco Skive

Have you seen something while out and about that you'd like to share with the Enabled by Design community? If so, then here's the piece to do it...



basin concept

I was interested to see this recognifor a litting sink beam, designed by



Georgie - smart phone app for visually impaired. Georgie is a smartphone app aimed at people living with visual



**Built lets medical students** experience symptoms of old

More Spotted

Have you got an idea for a new product or service to help make people's lives that little bit easier? Maybe the thing that you're looking for just doesn't seem to exist. Or perhaps you've got a useful tip that you'd like to share? Then we'd love to hear from you!



Semusy Adaptations? things that would make segury use for a disabled individual who is using



Two ideas: Powered shower oheir & Remote control for electric wheelchair From J. Flynn vis email: Des



Sense See Remember hi Guyal My name is Oliver Sturit I'm an Industrial design student at Northumbrie University The bean



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accessibility accessible assistive technology bathroom codesign mpetition COOKING Cool Wall crutches design Designathon design for all Design Zone dexterity amount disability Enabled by Designathon events food preparation FutureGov Good Grips grip grooming hands hate idea DEO Independent living Kitchen OVE mobility Mobility Roadshow Naidex nomination OXO prototyping question Ravensbourne reading shopping spotted sugru technology tray T 88

### wheelchair

willo : BIG-UP THANKS Genebledby for nutting well to wall great people in a room with @lachwillsaveus @IDEO @augru for Adeagnatho Keen on making

visual impairment walking walking stick.

michennett: Odiczel Odominiczamobel Really nercolegay, be great to include it in future work.

JonMartlewCPD: @enabledby Are there any enabled by dealer workshore for achonic? Ex-Technology at Cardiff High

feyesesepe: RT @ensblecby: The inaugural 3D printed prototype @ensblecby #designation cup! @ Ravenabourne College http://co/XTIVO1GPs

Alextetrer: RT @Juniors0: Just home from Adesignathon, Cannot gradit (Canabledov enquolifor such a wonderful two days. Much laughter, Steen all in our needed only



### Magnetic necklace / bracelet clasp converters

BY DENISE - AUGUST 15, 2012

POSTED IN: COMMUNITY, FEATURED, LOVE



Having poor dexterity due to MS, often means that I have difficulty doing fiddly things such as undoing and fastening necklace and bracelet clasps. Previously this meant that I had to avoid these all together or only wear them when I knew someone would be about to help me. That was until I found these magnetic clasp converters, which have made a huge difference to me.



Magnetic clasp converter demo-

The magnetic clasp comes in two pieces each with a magnet attached to either a loop or clasp ending. The loop ending of the converter attaches to the clasp of the necklace / bracelet and the clasp ending of the converter attaches to the loop end of the necklace / bracelet. I needed help with doing this, but once fitted I can now put on my necklaces easily and without other people's help.

The magnets on each end of the necklace / bracelet are attracted to each other to hold it in place. These are strong enough to do this, although just as importantly they're not too strong to pull apart when removing the necklace / bracelet.

I've found that when wearing more than one necklace with magnetic clasp converters attached, the magnets all stick together in a big clump at the back of your neck, which isn't ideal. Therefore, when wearing three necklaces that I always wear together,

I've just used one magnetic clasp converter to attach to all of them, which works well.

When storing necklaces / bracelets with magnetic clasp converters attached, I've also found that it's easier to store these separately, otherwise you can end up with a big jumbled muddle of necklaces all stuck together by the magnets. Just thought I'd share this, as I learnt the hard way! : )

Link: http://stores.ebay.co.uk/Magiclasp-Magnetic-Jewellery-Clasps









## **BILBROOK**

Assistive Technology

HOME









### High street purchases





































### Tamworth and Lichfield



Multiple Sclerosis Society

### Margaret White and Tanya McGinlay





### Q. Does AT have a role in supporting people with M.S?

- Most certainly since becoming aware of what aids and assistance can offer to people with MS
- Promoted through AGM
- Championed by Margaret, Tanya and the committee
- We are keen to to see first hand what would help people with MS and their daily living.





## Q.. How can we help people understand what AT can do and what will work for them.

- By going out to the various groups etc. and showing them,
- Let people see and hold the items so they at least they could get feel for the item.
- Supplying the info as to where they could be obtained. Because there is a
  certain trepidation around purchasing these sorts of sorts of items (being
  ripped off in the past) it was good for them to see and acquire the
  knowledge of what was out there.
- The other thing was how cheaply one could acquire some of these items.
   Another plus as people feel that items made for any disability tend to be on the expensive side. Particularly people with M.S. would purchase more of these aids, in turn making them feel 'Useful!! therefore adding to their confidence and making themselves feel better about the difficulties they experience.



# Q. How can we influence shops and manufacturers to stock/develop AT solutions that work well and offer value for money.

- We need those people to talk to the people they are hoping will purchase their goods.
- This could be made possible, at the embryonic stage inviting disabled people in to try, remark on their goods.
- If they did this they would be creating a bigger market for themselves because they would be not only endorsed, but tried and tested by the very people they were made for.





## Q. How will my entitlement to Personal Independence Payment be assessed and decided?

- The assessment for the new benefit will look at your needs to help decide your benefit entitlement.
- It will involve health professionals considering your personal circumstances to understand how your condition or disabilities affect you.
- The health professional will consider the evidence provided by you and any professionals that may support you on a regular basis.
- Most people will also be asked to a face-to-face consultation with this health professional as part of the claim process.
- The health professional will provide advice to a benefit decision maker at the Department for Work and Pensions





# Q. Do the changes with P.I.P. mean people need to more aware of evidencing how they live their lives and their use of A.T.

- Very much so, the change to P.I.P. is exactly what it means Personal Independence Payment, a big move from the medical issues that most disabled people are aware of, will now concentrate on how you manage your life with a disability.
- Therefore they need to inform at the face to face interview exactly what they
  use to enable them to do things i.e. how they can cook a simple meal and what
  aids they would use, to be able to perform this task.
- It is going to be so important that the use of these aids will not only help you to get the payment but assist your daily needs.
- Because of this we have a weekly drop in centre whereby Tanya & I explain to people with MS about the new allowance, plus the importance of keeping a diary re the aids they use.



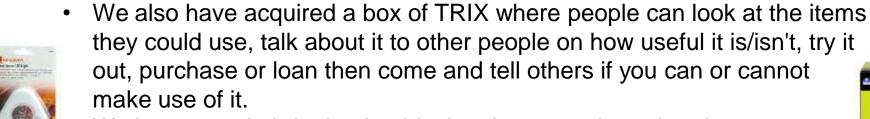


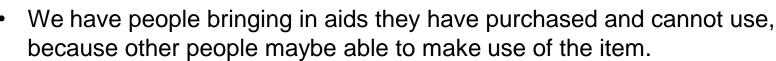


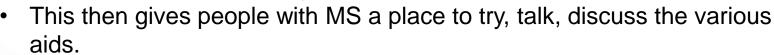


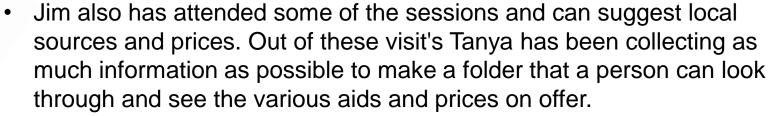












 We want to create an environment in which they can discuss with others and not feel quite so intimidated.







The world of assistive technology includes a wide range of options from simple gadgets for home and office, to fancy electronic gizmos and complex computer systems, to mobility aids and accessible vehicles.

Each one of these tools helps to ensure that if you can't get something done one way, you can do it another.

The key to the world of assistive technology is deciding that it is okay to do things differently than you did them before.





"If 5 years ago I had known what I know now then life would have been so much better for us all.

We would now have worried as much or struggled for so long and we could have lived our lives differently.

By the time I knew what could have helped it was too late for us.

I want other people to get the right help and advice at the right time."



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