

Global Positioning Systems

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Northern Health
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Aim

- To give a short overview of the Northern Trust Occupational Therapy's Project on the use of Global Positioning Systems for people with a diagnosis of dementia.



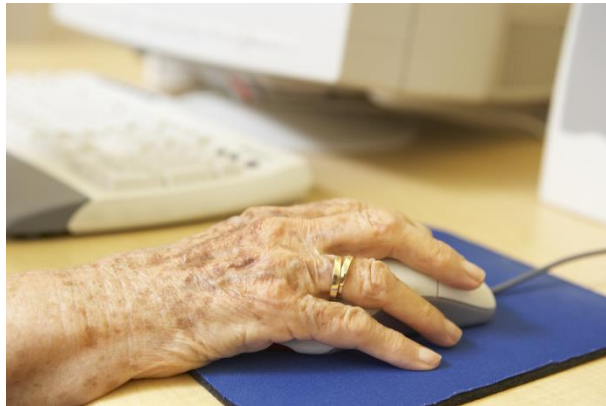
Objective

- What is GPS?
- Benefits
- How it works
- Essential criteria
- Considerations
- Training
- Consent
- Case study
- Outcome of audit



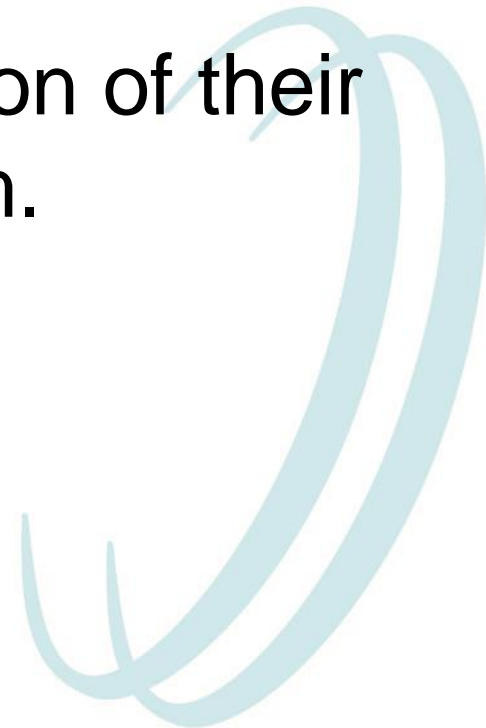
What is GPS?

- A Global positioning system locates a person by satellite and then transmits details of their location via a mobile phone network to a computer or phone.



How does GPS Work?

- Client wears a device which will alert a carers telephone or computer if a client goes outside a pre-set boundary.
- Carers can also check the location of their relative by logging on the system.



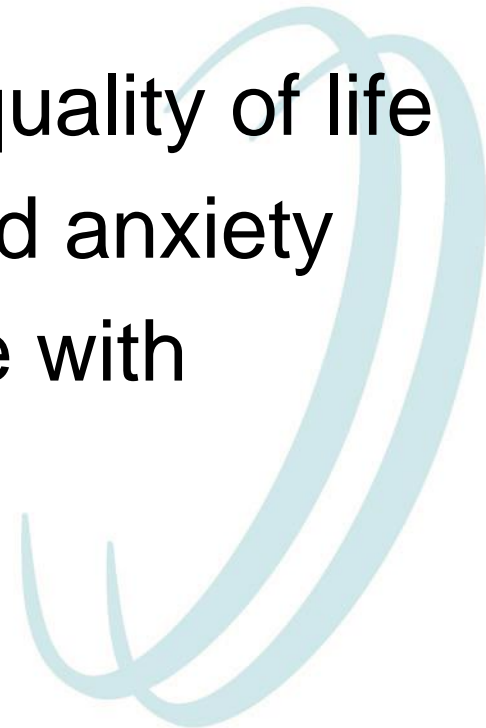
Why GPS?

- People with dementia sometimes get lost
- Risk of mortality, injury, dehydration
- Experience loss of confidence, loss of life role/hobby.
- Increased caregiver burden
- Premature admission to care home



Why GPS?

- To help maintain people at home for longer.
- To maintain existing hobbies, promoting purposeful activity.
- To promote independence and quality of life
- To decrease caregiver stress and anxiety
- Right to privacy, enabling people with dementia to go out alone



Why GPS?

- Peoples right to choose to go out on their own where they choose, when they choose.
- All in the knowledge that if they get lost it will be easier for others to find them.



Northern Trust OTs Essential Criteria

- Capacity to consent.
- Road traffic assessment completed.
- Client must either remember to wear GPS or have a carer who can apply same.
- Carer who can respond to tracking device
- Access to a computer or phone and able to use same



Northern Trust OTs Exclusion Criteria

- A client who has been assessed as unsafe to go outdoors alone.
- A client living in a nursing home.
- Must not cause stress to the person or increase confusion.



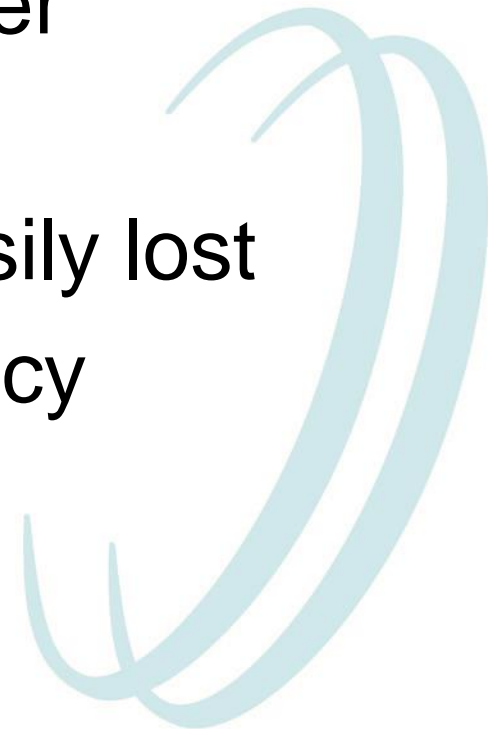
Considerations

- Clients capacity
- Clients route/routine
- Personal history and cultural issues
- Differences in perception of risk between carers, person with dementia and professionals



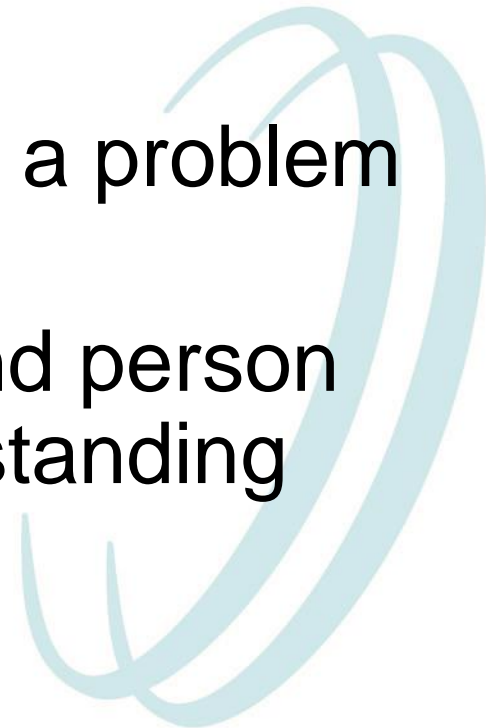
Considerations

- Application of GPS
- Respond immediately to alert
- Level of computer literacy of carer
- Charging of device
- Device is small and could be easily lost
- Satellite signal can affect accuracy



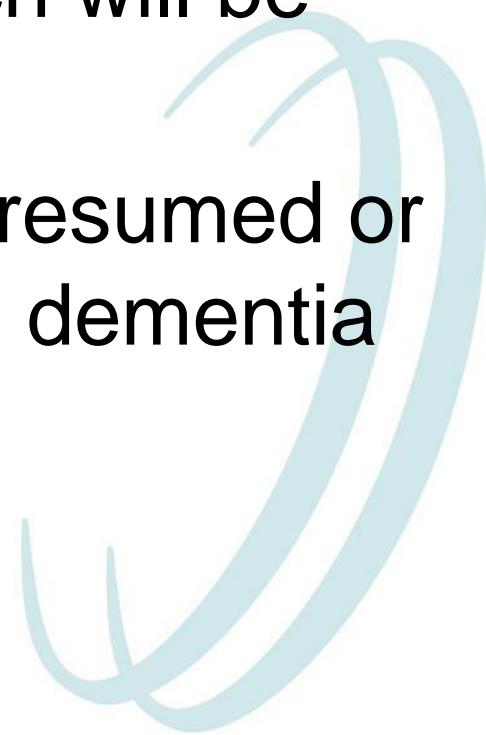
Training & Guidance

- Carers and client need clear information on GPS
- Time to ensure the person with dementia understands how to use it
- Advice on who to contact should a problem arise with the GPS
- Developed a leaflet for carers and person with dementia to improve understanding



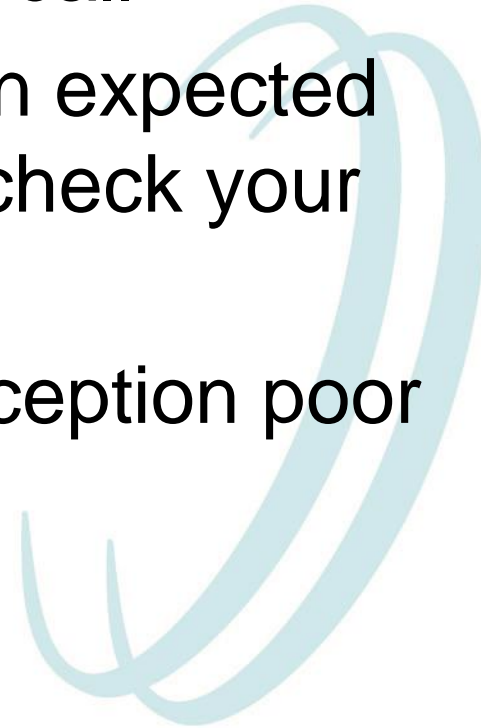
Consent

- Preferred consent of person with dementia
- If client cannot give informed consent then a shared decision making approach will be adapted
- Consider the past and current, presumed or known wishes of the person with dementia



How Does It Work?

- Safe zones or geofences set up based on lifestyle information from client and family
- If service user goes outside boundaries alert is raised via email alert, text or phone call
- If service user does not return within expected time period registered contact can check your whereabouts online
- Beacon available where satellite reception poor



Best Practice

- Advise carers not to track persons whereabouts on computer only log in if a reason for concern raised
- Protection of persons right to privacy and autonomy



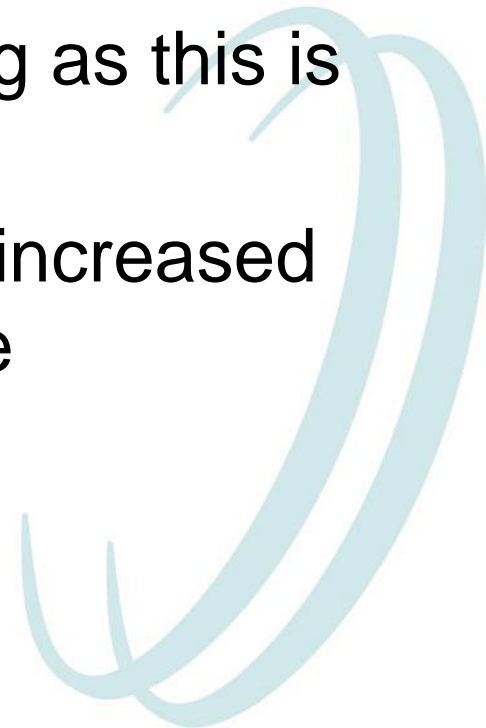
Why buddi?

- 24 hour call management system therefore reliability high
- Tried and tested system in Britain
- Annual fee with reminders to renew reduced admin for OTs
- Added extras such as fall alert beneficial



Case Study

- Mr X lives with his wife, always enjoyed going for daily walks – approximately 3-4 miles
- 3 year history of Alzheimer's disease; wife increasingly concerned about his well-being
- Client is very keen to continue walking as this is main hobby
- Increased anxiety from wife, causing increased caregiver burden and conflict at home



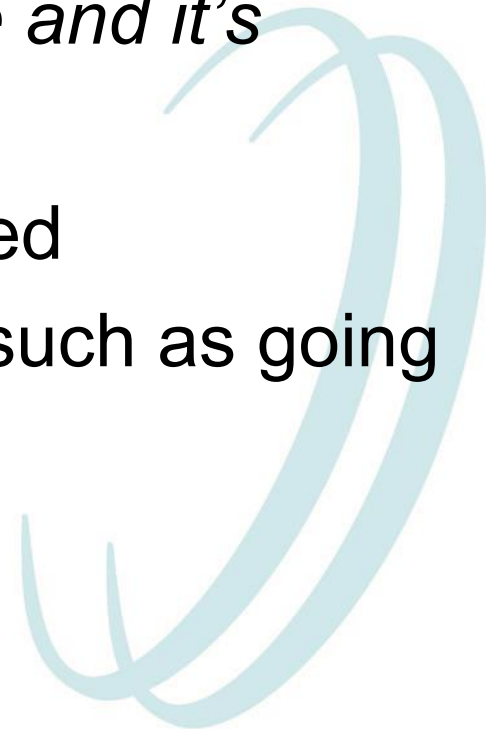
Case Study cont.

- OT assessment
 - deemed to be safe on road
 - safe on road
 - maintaining hobby very important role
 - autonomous behaviour
 - maintains mood and independence
 - client consented to GPS



Case Study cont.

- carer able to access computer and available to remind client to wear GPS and to charge it
- GPS used for over 1 year
- carer reports *“this is the best device and it’s made such a difference to our lives”*
- peace of mind – carers are reassured
- allowed client to do ‘normal’ things such as going for walk alone



Case study 2

- 73 year old lady lives with husband
- Goes for daily walks, same general route
- Reports from husband of walks getting longer and he is worried and anxious.
- Keen to continue walking alone
- Full OT assessment completed

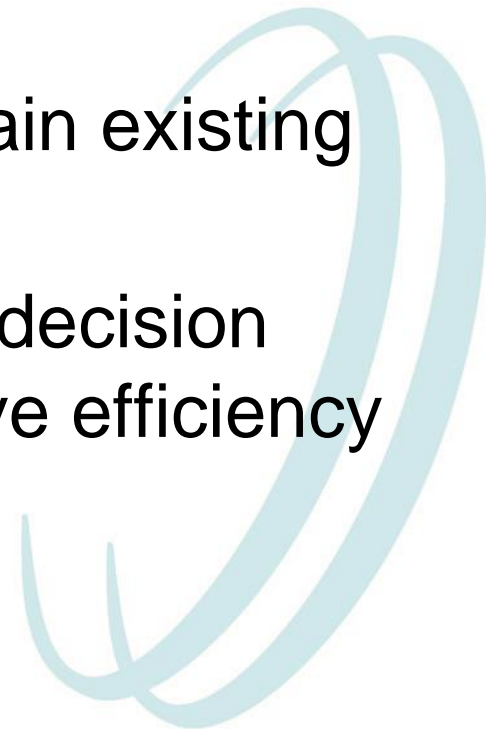


- Consent gained
- Road traffic completed
- Walking important role to both husband and wife. Time out through a hobby was also important.
- Husband computer literate.
- Used successfully for one year
- Really benefited from this device
- Was very worthwhile made things easier for me



Outcome of Pilot

- Service evaluation completed with client and carers
- All clients and carers reported they found the GPS very beneficial
- Easily used
- Decreased caregiver anxiety
- Enabled persons with dementia maintain existing hobby for minimum of one year.
- Assessment and OT support assisted decision about suitability and usage and improve efficiency of device



Recommendation

- Further research would be required to quantify the savings from using GPS in terms of residential costs, hospital admissions, informal care breakdown.
- GPS does maintain/promote independence with existing hobbies.
- Does reduce caregiver anxiety
- OT dept will continue to prescribe GPS within an ethical framework.



Conclusion

- Tracking technology is suitable for use in dementia care provided that it is applied in a way that respects person hood and maintains functional capacity (College of Occupational Therapists).



Last but not least...

Karen Walls took first prize in the Dementia Design Project of the Year Category.



“Karen Walls, Clinical Lead OT from the Northern Trust were among the local companies, health care trusts and individuals who have been recognised for their outstanding work with people who have dementia in Northern Ireland, at the Northern Ireland Dementia Achievements Awards in Belfast’s Europa Hotel on 4th February.”



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