“developing a person-centred social and health care support network”

STRETCH: Socio-Technical Resilience for Enhancing Targeted Community Healthcare

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Technology Enhanced ‘Circles of Support’

• As we get older we are often faced with challenging health conditions – often in combination
  • (Memory, mobility, visual impairment, heart, mental illness, diabetes etc.)

• We prefer to remain independent and live in our own home/communities

• Requires a functioning ‘Circle of Support’
• Often ‘Circle of Support’ not available/ poorly functioning

• Can mean (amongst other things) that people can’t be discharged from hospital (‘bed blocking’; black alerts’)

Circles of Support

- General Practitioners
- Hospital Consultants
- Health Carers
- Social Carers
- Community Nurses
- Social Workers
- Volunteers
- Neighbours
- Children
- Spouse

Older Adult

Family

Community

Technology
Technology Principles

• To enhance rather than replace human contact in care
• To prioritise the requirements of the ‘Person at the Centre’ of the circle
  (Person centred social and health care support network)

1) Lots of existing tech is about surveillance for the benefit of others
2) Whose values should drive the system?
   • e.g Need for Independence VS Need for safety/security
3) How does the system share information with others?
   • Dynamic Privacy
Co-Design with Person at the Centre

Fieldwork in partnership with AGE/UK Exeter

Age/UK Exeter worker embedded in research team

Mapping of individual circles of support

Exploring technology concerns

Developing a manual for how to explore circles of support
Some anonymised examples from our existing participants

• We will now give two real (but anonymised) examples from people who are participants on our project.
Jay

Health professionals:
- Nurse
- Psychologist
- GP

Practical support:
- Financial planner

Community:
- Volunteering
- Community evenings

Friends:
- Julie
- Sam
- Debra

Family:
- Daughter + husband, 3 children, husbands parents

Depression after death of husband
No physical care needs
Insomnia – lacks energy
Reliant on daughter
Has good close friends

Want technology to monitor her activity levels/emotional state and warn her.
Wants help to engage more outwardly
Peter

Health professionals:
- GP

Practical support:
- "Enabler" who takes him out the house

Family: sister, brother, and their children

Friends: Community based

Community:
- Support groups for memory impairment
- Interest groups

Would like technology to help him explore the world more
But also make sure he is safe in his own home
Wants a ‘smart system; that can watch over him and alert family if he needs help

Memory impairment
Physical mobility issues
Parents help – but they are elderly
Can currently do most things for himself
Worried about the future
The current STRETCH system:

- Small box in each room recording movement, temperature, humidity, light levels.
- An energy monitor installed inside the electric meter box.
- Box connected to the internet transmitting data.
- Mood devices: A mood clock or a mood board can be used input their mood, as frequently as they desire. Mood information can be used for self-reflection or communication with Supporters.
- A smartphone app uses the collected data to report on living room and bedroom temperature, whether the resident has bathed, how often they have cooked, their at home activity level, and how often they have had company.
Spying on Granny or Supporting Ageing in Place?

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Socio-Technical Solutions
• Built of simple cheap electronics, battery powered
• Internet Enabled
• measures:
  • Temperature & Humidity
  • Movement
  • Light Levels
  • Barometric Pressure
• A separate device measures:
  • Household Electricity
What can you do with this?

• Passive, privacy sensitive monitoring in the home
• Can infer events from sensors:
  • cooking, bathing, alone/with company/out of house
• Detect patterns and when patterns are broken
• Notify members in circle of support
• Detect when circle unresponsive
Active logging

• Passive logging can’t see everything;
• Recording & Reflecting on mood can have positive impact
• Can be correlated with passive sensors
• Design principles & Privacy are important
Keeping Circle Informed

- Monitor and detect social isolation or mood changes (mental wellbeing)
- Notify if OA is becoming more isolated, eating less, sleeping more, not attending to hygiene or other anomaly
- Provide reassurance to relatives that OA is healthy
- Regularly check that the CoS is intact and working