



Prifysgol Cymru
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University of Wales
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Changemakers: Creativity and Value Creation

Professions (BMHP5014)

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DEMENTIA SMART WATCH

Stay safety, Independence.
Peace of mind.



Smarter technology.
Compassionate care.
Better lives.

THE ISSUE

- Over 944,00 people in the UK are living with dementia
- 60% people can lost at least once
- Falls are leading cause of injury and hospitalisation
- Families and carers experienced high stress and worry

IMPLEMENTATION

WHERE?

Care homes, supported living, community settings and private homes across in the UK

By Whom?

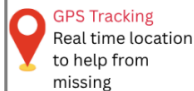
NHS, Local Private Providers, Charities

How?

Watch to the user. Carers and professionals use a secure app/portal to monitor and communicate.

OUR INNOVATION

Dementia SmartWatch



GPS Tracking
Real time location to help from missing



SOS Button
Press it to connect with carers or emergency services



Fall Detection
automatically detects fall and alert to carers



Medication Reminder
Get reminder when you need to take medication



Two-Way Communication
Voice call and sms



Heart Rate Monitoring
Takes your heart rate and give alarm if unusual

TARGET AUDIENCE & IMPACT

- People living with dementia
- Family member and informal carers
- Care homes and support living services
- NHS team

IMPACT

- Improved safety and reduces risk of serious harm
- Independence
- Faster emergency support
- Reduces stress for families

DEVELOPMENT & REGULATIONS

- The innovation complies with:
- UK GDPR
- Data Protection Act 2018
- Health and Social Care Act 2022
- Medical Device Regulations 2002 (as amended)
- NHS Digital Data Security and Protection Toolkit
- ISO 13485 Medical Devices Quality Management
- Equality Act 2010

Safety, privacy and dignity remain at the center of the innovation.

TECHNOLOGY INTEGRATION



GPS

Accurate location tracking



4G/5G

Reliable connectivity



AI & Sensors

Detects unusual patterns and health risks



Secure Cloud

Data stores safety and encrypted

TIMELINE DEVELOPMENT & ROLLOUT PLAN



Step 1
Research and design
(Month 1-3)

- Needs assessment
- User consultation
- Prototype planning



Step 2
Prototype development
(Months 4-6)

- Software development
- Hardware integration
- Internal testing



Step 3
Pilot testing
(Months 7-9)

- NHS Trusts
- Care homes
- Community settings



Step 4
Evaluation and improvement
(Months 10-12)

- User feedback
- Performance analysis
- Product refinement



Step 5
National Rollout
Year 2

- Deployment across the NHS and social care organisations throughout the UK

DISSEMINATION & PROMOTION

- The innovation will be promoted through:
- NHS websites
- NHS newsletters
- Social media campaigns (Facebook, Instagram, TikTok)
- Partnerships with Alzheimer's Society and dementia charities
- Healthcare conferences
- Staff training sessions
- GP surgeries
- Information leaflets
- Community awareness events

CONCLUSION

Dementia SmartWatch is really helpful for people with dementia, It will help to remain safer, more independence and to be connected with health&social carers and families.

Benefits

- Safer
- Less stress for families and professionals
- Better quality care
- Greater independence

Together, we can build a dementia-friendly UK through compassionate technology.

EXPECTED OUTCOMES

- Less missing people incidents
- Quicker notice ions about falls and emergencies
- Earlier detection to health problems
- Less stress
- Increased independence
- Better patients outcomes
- Improved quality of life

REFERENCE

- Alzheimer's Society (2024). Dementia UK: Update.
- Alzheimer's Society (2023). Facts for Professionals.
- NHS England (2019). The NHS Long Term Plan.
- Department of Health and Social Care (2022). Health and Social Care Act 2022.
- Information Commissioner's Office (ICO) (2024). UK GDPR Guidance.
- NHS Digital (2023). Data Security and Protection Toolkit.
- World Health Organization (2021). Global Action Plan on the Public Health Response to Dementia 2017-2025.

Pitch:

Dementia is a major health and social care challenge in the UK. It affects memory, communication and the ability to complete everyday activities. People with dementia can lose, forget medication or experience falls. So SmarWatch can be helpful to prevent it.

The audience is people with dementia and at the same time their families, care professionals where they will get noticed about conditions of person who has dementia.

Implementation would happen gradually.

Months 1–3: Research and consultation with people with dementia, carers and professionals.

Months 4–6: Development and testing of the prototype.

Months 7–9: Pilot testing in selected care homes and community services.

Months 10–12: Evaluation, feedback and improvements.

Year 2: Wider implementation if the pilot demonstrates that the technology is safe and effective.

The Dementia SmartWatch could provide a practical solution to several challenges experienced by people living with dementia. GPS tracking, fall detection, medication reminders, health monitoring, an SOS button and communication features could improve safety while supporting independence.

References

Alzheimer's Society (2024) *Dementia UK: Update*. London: Alzheimer's Society.

Great Britain (2005) *Mental Capacity Act 2005*. London: The Stationery Office.

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Great Britain (2018) *Data Protection Act 2018*. London: The Stationery Office.

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NHS England (2019) *The NHS Long Term Plan*. London: NHS England.