

SMART HOME – A SOLUTION COMPATIBLE WITH THE EU HOME-BASED CARE PRIORITY?



Mateja Banović, Maja Banadinović^a,
Dorja Vočanec^a, Aleksandar Džakula^a

^aUniversity of Zagreb, School of Medicine

Background

- Chronic patient care, which greatly refers to the elderly, represents an increasing burden for health care. Smart home care solutions, which are based on IoT networking technologies, wireless integration of parameters received from sensors and automated data transfer, emerge.
- The aim was to analyse compatibility of the smart home care solutions' concept with EU 2021-27 home-based care priority, on the example of Croatia.

Material & Methods

- Search through PubMed was conducted, using terms „smart home“, „smart environment“, „smart living“, „aging in place“, „healthy aging“, „IoT home monitoring“.
- 15 articles since 2010 were included in SWOT analysis of the elderly smart home care model.

Results

STRENGTHS

- primary health care network
- nursing home care programs
- many community initiatives and projects for home care
- Central health care IT platform (CEZIH)
- Internet availability for many areas

THREATS

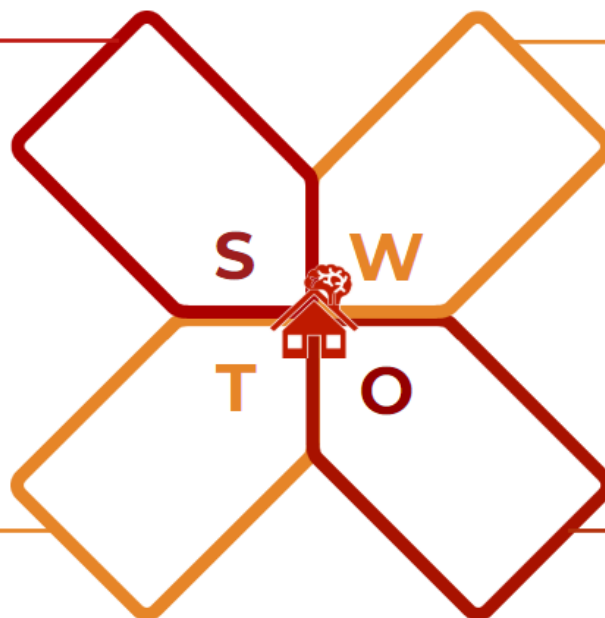
- Internet security threats
- Quality of Service (QoS)
- broadband Internet availability in remote/rural areas
- loss of autonomy and privacy (GDPR)
- ethical concerns

WEAKNESSES

- technology acceptance
- expensive
- relatively immature technology
- lack of standardization
- integration with existing health care software (EMR) and public services
- digital literacy

OPPORTUNITIES

- aging-in-place
- with wider acceptance hardware prices will drop
- better technology acceptance with digital literacy development
- better patient supervision and monitoring / follow-up
- overall cost of care reduction



Conclusion

- In accordance with EU 2021-27 long-term care priorities smart home technologies are a potential solution to support home-based care while reducing chronic care burden on the health care systems.
- Remote monitoring and communication with carers via existing infrastructure could allow elderly patients to remain in their homes whilst still being cared for.
- Challenges include digital literacy, financial accesibility, immature technology, privacy loss and internet availability in remote/rural areas.
- Current COVID-19 pandemic showed us how fragile are nursing home based systems. Herein, the alternative solutions like ageing in place are even more emerging.
- There is a clear need for a proof of evidence study to demonstrate the software integration possibilities.