Understanding Information Management and Technology Use Among Older Veterans in Arizona: A Focus Group Study

Navya Jagirdhar [a] <njagirdh@asu.edu>

E. K. Chiou[a], N.Roberts[b], M.Zhao[c], D.Coon[d], N.Newton[b], J.Valera[a], K.Monroe[b], V.R.Kumar[c], C.Helm[b], E.Contreras[b], S.Dhulipala[c]

[a] Human Systems Engineering, [b] School of Social and Behavioral Sciences, [c] Computer Science, [d] Edson School of Nursing and Health Innovation

Arizona State University

OBJECTIVE

Identify specific challenges older veterans face in metropolitan Phoenix, Arizona, and explore the feasibility of a data-driven, IoT-based solution for high-quality, low-cost, socially relevant self-managed care.

METHOD

- Contextual Design (Beyer & Holtzblatt, 1998) methods were adapted to collect semi-structured interview data, generate workflows, and ideate on potential solutions
- Recruiting through local channels, 7 focus groups, and 1 workshop were conducted with 20 older veterans, 7 care partners, and 7 service or care providers
- Veteran participants from Arizona underwent initial phone screening to meet inclusion criteria: age 50+, served in the U.S. armed forces, and having at least one chronic health condition. A $50 gift card was provided for their participation in a 2.5-hour session
- Audio recorded interviews were transcribed, and a virtual design session was conducted with 8 diverse project team members
- Transcript data were analyzed via affinity diagramming on a virtual Miro board to identify recurring themes. These insights were then used to develop work models to represent older veterans' needs, behaviors, and barriers in using technology and managing daily health needs.

RESULTS

- Affinity diagrams uncovered 13 themes, including barriers to adoption due to complexities, overwhelm, skepticism and trust issues, and privacy concerns.
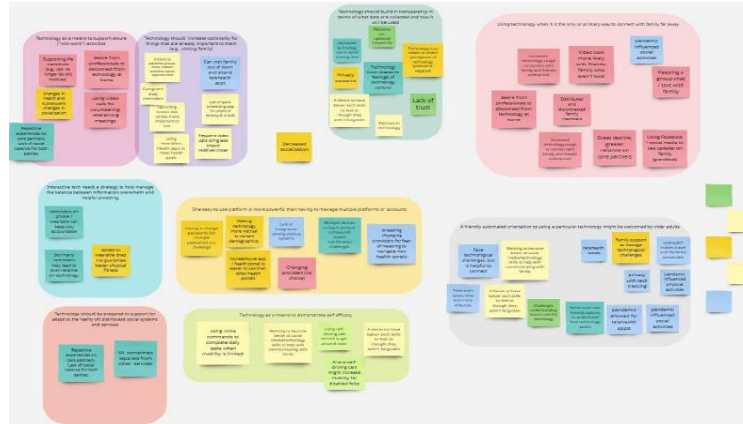

Figure 1. Affinity diagram showing themes from older adult veterans in Arizona

- Three work models were created from transcript insights and affinity diagrams. The **cultural model** highlighted factors influencing technology use due to cultural barriers and suggested potential interventions. The **artifact model** mapped social media apps and technologies that older veterans use, identifying potential challenges in various use cases. The **sequence model** analyzed key tasks, identified steps, and pinpointed inefficiencies to understand execution challenges.

IMPACT

- This research highlights the physical, emotional, social, and mental health challenges faced by veterans and their care partners, proposing digital literacy programs and user-friendly technological solutions.
- Based on our data and project team discussions, a customized digital calendar with simplified scheduling, health information tools, and cultural sensitivity offers a promising solution to technological complexity, privacy concerns, and care partner support.
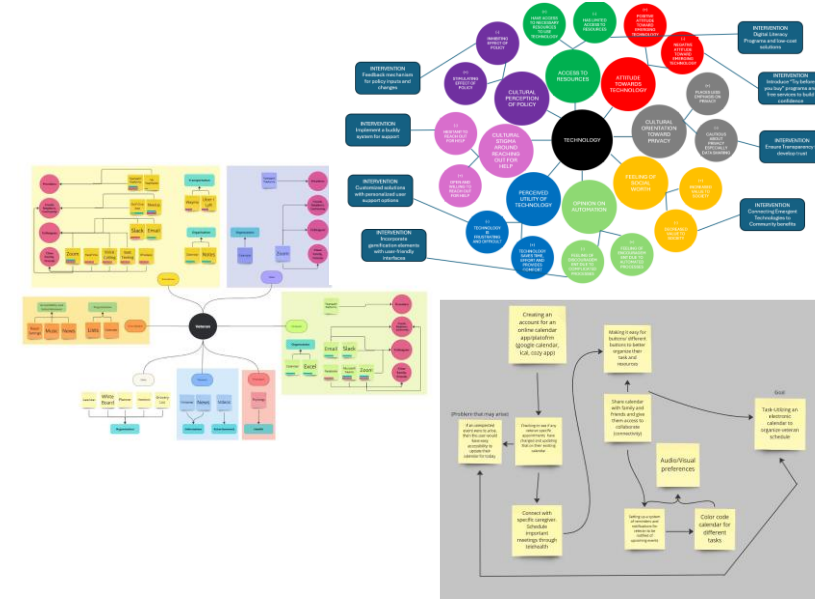

Figure 2. Left then clockwise: artifact model, cultural model, sequence model

REFERENCES

- Beyer H., Holtzblatt K. (1998). *Contextual design: Defining customer-centered systems*. San Francisco, CA: Morgan Kaufmann.
- Cha, G., Brinson, S., Lee, J., & Rebola, C. B. (2023, March 16). *Implementing contextual design for the aging*. Industrial Designers Society of America. https://www.idsa.org/education-paper/implementing-contextual-design-for-the-aging/

ACKNOWLEDGEMENT