

# Getting the Edge on Data-Driven Self-Managed Care: A Focus on Older Veterans in Arizona

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## Project Challenge

- Older adults strive to be independent and healthy, but are at greater risk of chronic health conditions and social isolation
- Solutions are needed to create ways for older adults to thrive, connect, contribute to, and shape their communities

## Project Vision

- Explore Internet of Things (IoT), smart wearables and smart home devices, and machine learning for real-time interventions for self-management of care
- Focus on the older military veteran populations in Arizona
- Build a multidisciplinary team to form a research agenda for developing and deploying an IoT based solution for providing high quality, low cost, and socially-relevant self-managed care
- Benefit Arizona's large populations of older adults and veterans, with potential to impact underserved aging populations across the U.S.

## Planning Grant Activities

- Real-time and privacy-preserving learning systems which employ IoTs and edge computing to support learning on live, personal health data and provide real-time, personalized feedback without compromising user privacy
- Heterogeneous data integration and learning techniques to detect social-emotional, and health changes and support prevention and early intervention

- Human-systems engineering and health informatics which integrate IoT-based health information and delivery systems to meet the diverse needs of older adults and allow them to more effectively take charge of their health
- Social science domains including dynamic influences of social, cultural, and relationship factors on cognitive and affective processes in older veterans

## Progress and Outcomes

- Partnered with Veteran stakeholders
- Conducted 4 focus groups: 17 participants (29% female, 18% veterans of color) aged 51 to 92 years, with 2 to 30 years of U.S. Military service (all branches), and diverse health conditions (e.g., hypertension, sleep apnea, diabetes, depression, chronic pain).
- Generated and refined themes based on initial focus groups, including paradoxes participants' discussion revealed (e.g., more tech background, younger, and healthier often were less likely to adopt).

