# Meet Nicole Whitney

**AGE 55 • PRONOUNS: SHE/HER/HERS**
**PROFILE: PROFESSIONAL BAKER, KNOWN FOR HER SIGNATURE PECAN CINNAMON PIE**

Nicole is a retired Marine Corps Veteran who was working her second shift at the bakery when she suddenly experienced chest tightness. Nicole was rushed to the nearest emergency room, where it was confirmed, she had a heart attack. As follow up care, Nicole's providers recommended she begin a cardiac rehabilitation (CR) program. While she tried her best to attend the recommended 36 visits, Nicole couldn't afford to miss more shifts at work nor drive an hour to her appointments. After completing three visits, Nicole stopped attending her CR. Two years later, Nicole returned to the emergency room with signs of a second heart attack.

**Nicole shouldn't have to choose between income and lifesaving care.** **Veterans are more likely to have heart disease at a younger age than non-Veterans.**[17]

*This story is a realistic representation of a common experience for heart-attack patients, and informed by research for CR.*

[17] Hinojosa, Ramon. "Veterans' likelihood of reporting cardiovascular disease." The Journal of the American Board of Family Medicine 32.1 (2019): 50-57

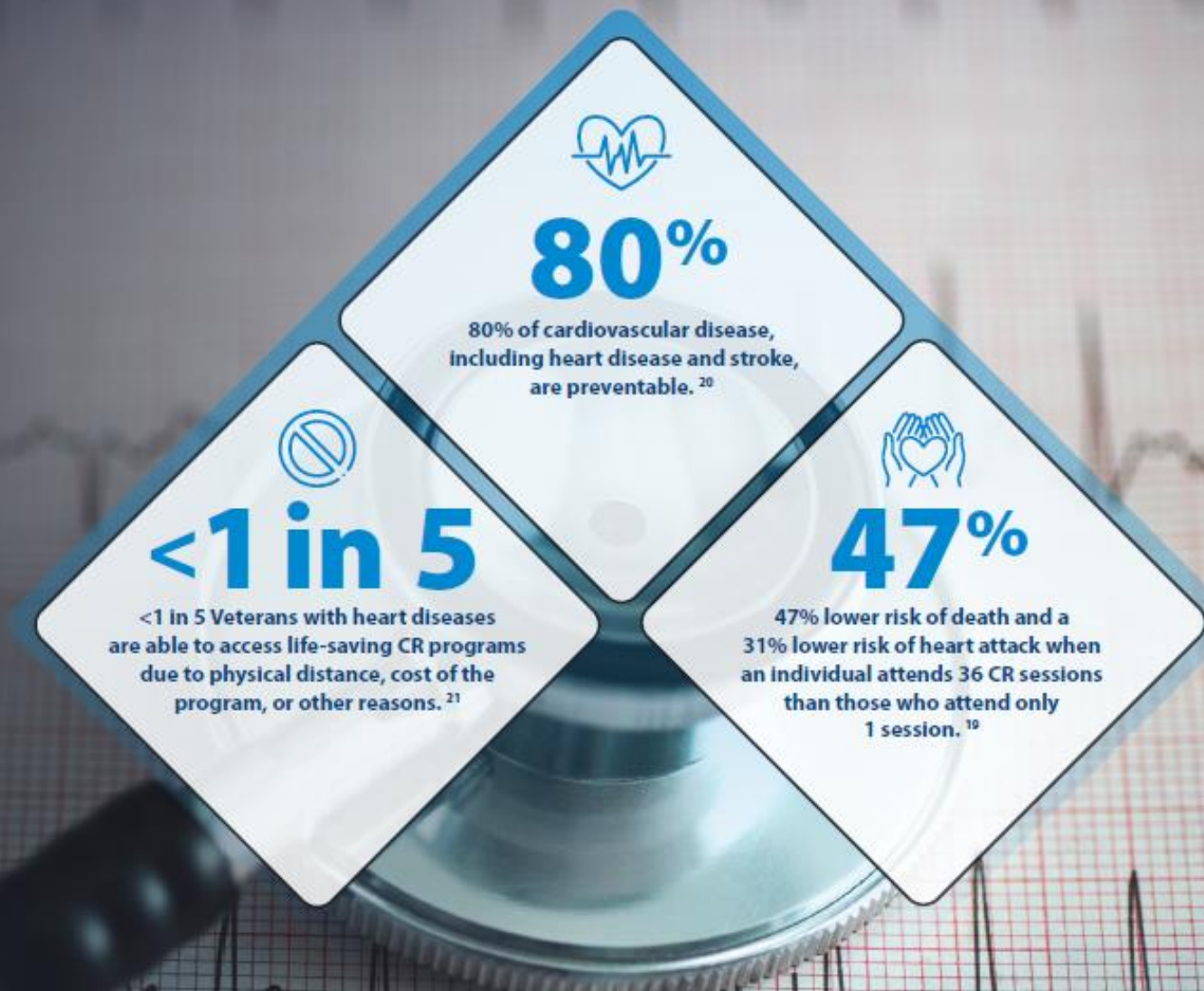INTRODUCING THE FRAMEWORK    PRIDE    REMOTE TEMPERATURE MONITORING    3D-PRINTING    **SMARTHEART**    INSPIRING ACTION    FRAMEWORK FOUNDATIONS

# At the Heart of the Problem

Heart diseases are the leading cause of preventable death globally, and are the leading cause of hospitalization in the VA health care system.[18] Completing as many CR program sessions as possible has been shown to reduce the risk of another heart attack or death.

## 80%

80% of cardiovascular disease, including heart disease and stroke, are preventable. [20]

## <1 in 5

<1 in 5 Veterans with heart diseases are able to access life-saving CR programs due to physical distance, cost of the program, or other reasons. [21]

## 47%

47% lower risk of death and a 31% lower risk of heart attack when an individual attends 36 CR sessions than those who attend only 1 session. [19]

[18] U.S. Department of Veterans Affairs. Office of Research & Development, https://www.research.va.gov/topics/cardio.cfm. Page last reviewed: April 22, 2020. Accessed August 18, 2021

[19] Centers for Disease Control and Prevention/Million Hearts. Division for Heart Disease and Stroke Prevention. https://millionhearts.hhs.gov/data-reports/factsheets/cardiac.html. Page last reviewed: April 22, 2020. Accessed August 18, 2021

[20] Centers for Disease Control and Prevention. Preventing 1 Million Heart attacks and strokes https://www.cdc.gov/vitalsigns/million-hearts/index.html. Accessed August 18, 2021

[21] Harzand A, Witbrodt B, Davis-Watts ML, Alrohaibani A, Goese D, Wenger NK, Shah AJ, Zafari AM. Feasibility of a Smartphone-enabled Cardiac Rehabilitation Program in Male Veterans With Previous Clinical Evidence of Coronary Heart Disease. Am J Cardiol. 2018 Nov 1;122(9):1471-1476. doi: 10.1016/j.amjcard.2018.07.028. Epub 2018 Aug 4. PMID: 30217377; PMCID: PMC6196098
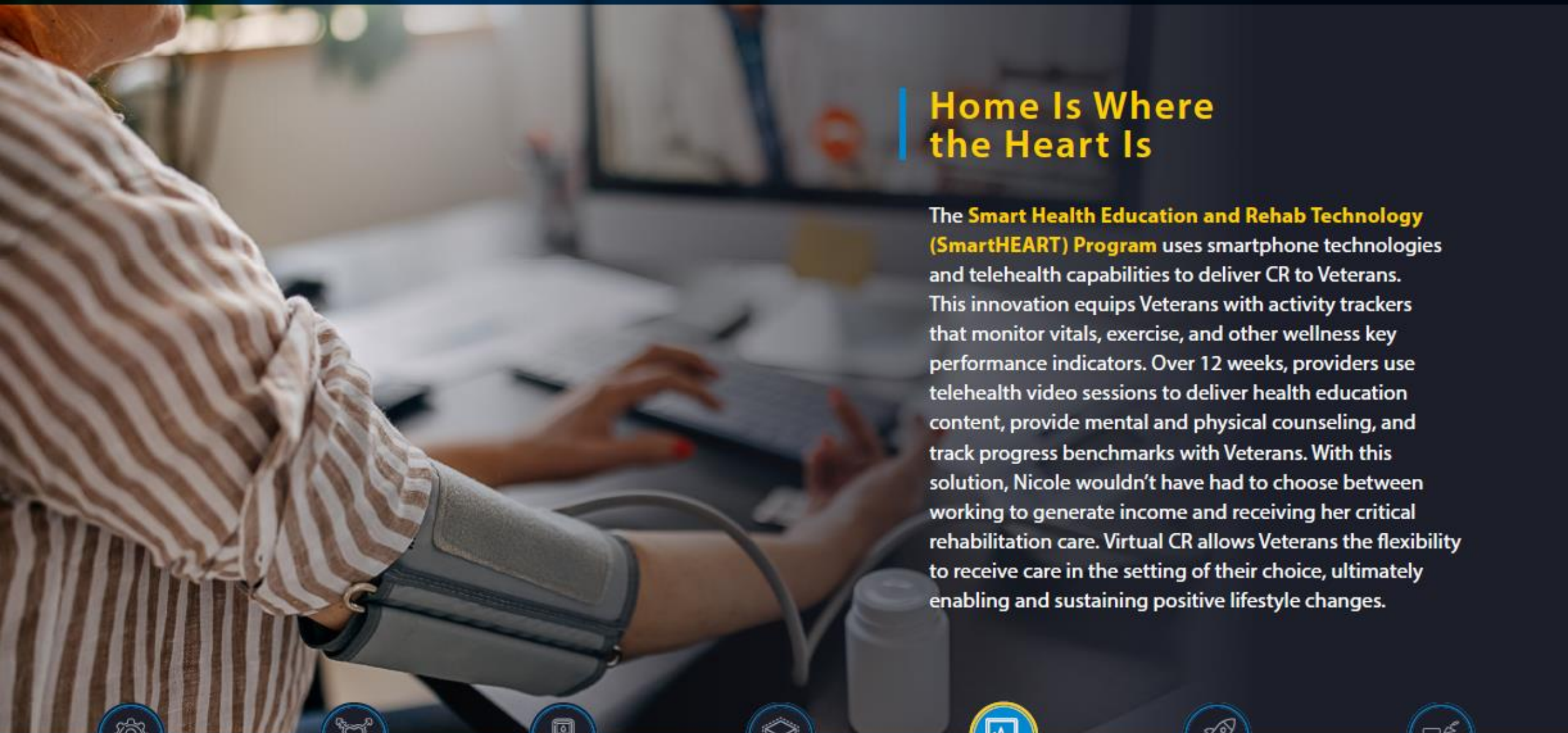
# Home Is Where the Heart Is

The **Smart Health Education and Rehab Technology (SmartHEART) Program** uses smartphone technologies and telehealth capabilities to deliver CR to Veterans. This innovation equips Veterans with activity trackers that monitor vitals, exercise, and other wellness key performance indicators. Over 12 weeks, providers use telehealth video sessions to deliver health education content, provide mental and physical counseling, and track progress benchmarks with Veterans. With this solution, Nicole wouldn't have had to choose between working to generate income and receiving her critical rehabilitation care. Virtual CR allows Veterans the flexibility to receive care in the setting of their choice, ultimately enabling and sustaining positive lifestyle changes.

## SmartHEART Demonstrates Principles for Value-Driven Innovation
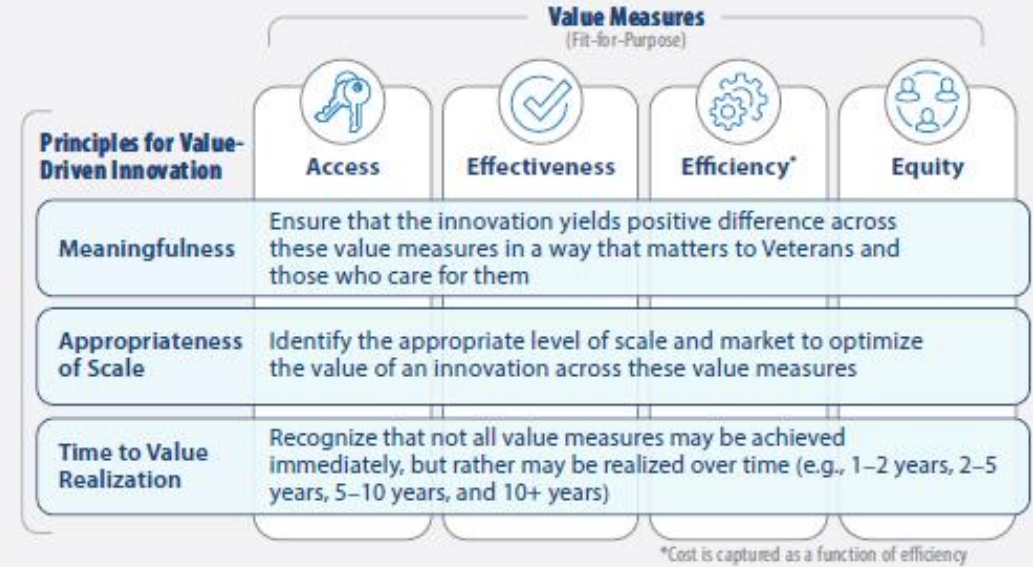
### Meaningfulness

SmartHEART targets the primary killer of Veterans—cardiovascular disease.[21] This solution provides cardiac care designed around the Veteran through new care models and digital innovations. SmartHEART provides an alternative to both in-person CR, which may be too costly (e.g., time costs, costs of commuting), and telephone appointments, which often limit Veteran engagement and sustained lifestyle change post-rehabilitation.

### Appropriateness to Scale

SmartHEART is currently available at the Atlanta VAMC with the goal of scaling to additional sites in fiscal year 2022. SmartHEART's scale strategy targets VAMCs with established CR programs and capacity (e.g., technology onboarding, clinician bandwidth) to effectively deploy a new service line.

### Time to Value Realization

Today, SmartHEART yields value by increasing access to specialty care and reducing the digital divide, especially for rural Veterans. The program provides more effective care through tailored, remote care that improves recovery from cardiac arrest and can prevent heart disease from worsening. Over time, SmartHEART will yield value across the care ecosystem by enhancing patient trust, limiting future illness or readmission, and reducing emergency room visits.

**Value Measures** (Fit-for-Purpose)

| Principles for Value-Driven Innovation | Access | Effectiveness | Efficiency* | Equity |
|---|---|---|---|---|
| Meaningfulness | Ensure that the innovation yields positive difference across these value measures in a way that matters to Veterans and those who care for them | | | |
| Appropriateness of Scale | Identify the appropriate level of scale and market to optimize the value of an innovation across these value measures | | | |
| Time to Value Realization | Recognize that not all value measures may be achieved immediately, but rather may be realized over time (e.g., 1–2 years, 2–5 years, 5–10 years, and 10+ years) | | | |

*Cost is captured as a function of efficiency

## Measuring the Value of SmartHEART

### Access

Improves access to specialty care, particularly for Veterans in rural areas who live long distances from their VAMCs and Veterans who have difficulty taking time away from work and other personal responsibilities to prioritize lifestyle change

### Effectiveness

Improves effectiveness of care by increasing patient knowledge and encouraging sustainable recovery, likely reducing the likelihood of future illness or death from heart disease; increased patient activation and satisfaction can improve the long-term adoption of a healthier lifestyle for cardiac health

### Efficiency

Improves efficiency through better quality of care, cost avoidance, and reduced facility congestion, resulting in increased numbers of patient encounters without sacrificing patient engagement. Reductions in hospital readmissions and mortality are also likely to be a catalyst for patient trust and confidence, inspiring Veterans to seek care at the VA rather than in the community.

### Equity

Improves equity by helping reduce disparities in cardiac care delivery, especially towards rural, non-Hispanic, Black Veterans who traditionally exhibit a higher likelihood of cardiovascular events than their White Veteran counterparts[22]

[22] Brown EA, Ward RC, Weeda E, Taber DJ, Axon RN, Gebregziabher M. Racial-Geographic Disparity in Lipid Management in Veterans with Type 2 Diabetes: A 10-Year Retrospective Cohort Study. Health Equity. 2019;3(1):472–479. Published 2019 Sep 23. doi:10.1089/heq.2019.0071