Remote Cardiac Monitoring
VALUE-BASED CARE

The COVID19 pandemic exposed weaknesses in traditional contact-based health care delivery methods, intensifying demand for new solutions to address the unique challenges of the post-COVID era. The calamity has forever altered telehealth as *"nice-to-have-features"* to *"must-have-capabilities"* that powers the healthcare continuum. Applying frictionless information technologies like remote heart monitoring, *at-risk* populations such as residents in Assisted Living (AL) can minimize exposure while safely accessing value-based care even through unprecedented times. The goal is to *provide the right cardiac care at the right time for better health at a lower cost.*

O ver 55,000 elderly residents and health workers at long term care facilities across the U.S. have died from COVID19[1] since March 2020. A lethal trifecta of community living, compromised immunities, and a deadly virus ravaged these facilities and continues to shine a spotlight on the need to enhance caregiving services with new *non-contact* approaches that mitigate virus transmission. Equally apparent is the urgency to stream 24/7 cloud connected healthcare information to reach the most vulnerable populations in a way that is sustainable.

Remote Health Monitoring Reduces COVID19 Transmission

Over 40% of COVID deaths are in long term care facilities. One routine interaction can impact the entire community of workers and residents. Non-contact remote health monitoring is an effective countermeasure to resisting COVID19 infections. Since no device is attached to the body, aging fragile skin is protected from infection. Virus transmission is mitigated by reducing the need for frequent physical contact between attendants and affected residents with 24/7 remote cardiac-respiratory monitoring. Attendants can safely and efficiently perform numerous wellness checks on multiple residents using an App on their phones or PCs without breaching quarantine protocols.

The Need for Continuous Cardiac Care is Glaring. COVID19 adds a new layer of concern, underscoring intense need to address existing but preventable health problems. Cardiovascular disease (CVD) remains the leading cause of death for men and women. Three out of four seniors age 65 years or older suffer from illnesses and conditions related to CVD[2]; e.g. cardiac heart failure (CHF), stroke, high blood pressure, hypertension, etc. "Monitoring "changes in vital signs [such as heart and respiratory rates] prior to clinical deterioration are well documented and early detection of preventable outcomes is key to timely intervention."[3]

When Wearables Don't Work, Remove the Friction

Users of wearable healthtech have limits; every "rub" of the skin quickly erodes enthusiasm held by the user. The "dirty little secret" of the wearable healthtech industry is well-known: 50% of people abandon their devices within 6 months[4] of purchase - even faster among the elderly. Less than 5% of seniors[5] wear health trackers, overwhelmingly rejecting wearables despite

The Majority of Seniors Don't Use Wearable HealthTech

admitting it could augment health management and improve overall health. Fiercely independent Baby Boomers don't want to be reminded that they're aging, according to AARP; wearable monitors directly challenge this sense of independence.[6] The older people get the less likely they are to tether themselves to a *'pet device',* especially those with dementia. The unforeseen phenomenon means up to 48 million seniors are disenfranchised – either seniors acquiesce, or they cannot be protected by wearable monitors.

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[1] *NYT*
[2] *American Heart Association*
[3] *National Center for Biotechnology Information*
[4] *TechRepublic*
[5] *Users by Age 2019 Report, eMarketer*
[6] *AARP, Challenging Innovators: Matching offerings to the needs of older adults*

Working Smarter, Not Harder:
How Remote Cardiac Monitoring Adds High-Value Services, Sustains Quality Care at a Fraction of the Cost
Consider that health workers spend at least 100 minutes per day on routine vital signs acquisition.[7] This translates to approximately $10,000 per year *per worker*.[8] Thus, a facility of 10 health workers typically spends $100,000 per year on manual procedures that can now be alleviated with new remote cardiac-respiratory monitoring services. Streamlining time-consuming tasks saves Providers $100,000 in repetitive labor (more for 10+ staff) that could be reallocated to high value critical care services.

Smart healthtech like Cardi/o® Distress + Alerts promotes value-based care that delivers the right care at the right time. Attendants can respond 10 times faster than in-person resident health checks when alerted of potential cardiac or respiratory distress. The faster response time has a direct impact on recovery outcomes that could impact a resident's quality of life.

Adding continuous cardiac monitoring services in assistive care is economically sustainable and safeguards the autonomy, independence, and privacy valued by residents/families.
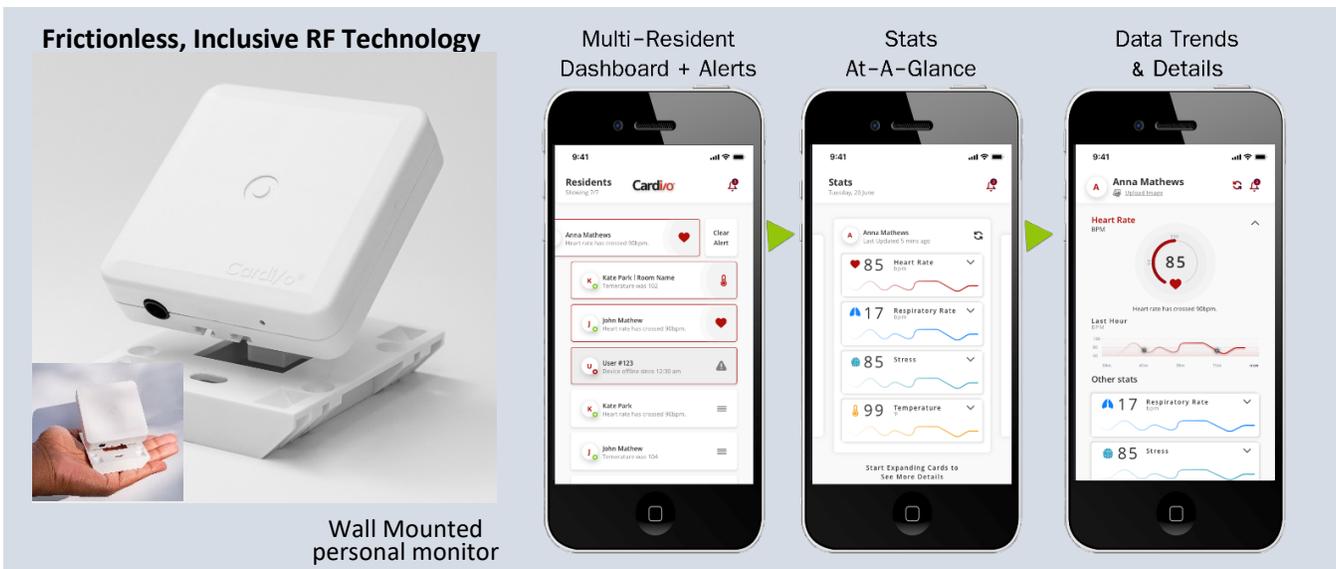
Table 1 examines the cost-efficiency of adding one (1) staffed attendant per shift versus Cardi/o® for efficient around-the-clock wellness checks, a savings of nearly $130,000 per year.

TABLE 1:	MONITORING MANUAL vs CONTINUOUS		
	24/7 Attendant	Cardi/o®	STREAMLINED LABOR SAVED
Cost per Year:	$ 131,400	$ 1,500	$ (129,900) per year **SAVED**
Cost per Day:	$ 360.00	$ 4.11	$ (356) per day **SAVED**
Cost per Hour:	$ 15.00	$ 0.17	$ (14.83) per day **SAVED**

Eliminate Friction: *Making Health Care Inclusive and Accessible for Elderly + Caregivers*

A *frictionless* user experience like the one offered by Cardi/o® is designed to reduce the effort required to perform repetitive routines. The experience "frees" the resident from wearable health trackers and requires no extra effort by the caregiver, thus extending care to the widest range of people and technical abilities. New 24G RF radar technology used in Cardi/o® remotely scans a person's heart rate, respiratory rate, stress level and motion 24-hours a day 7 days a week. The system continuously measures micro-vibrations of the body's cardiac-respiratory system and transmits data via the cloud (frictionless). The 30° field of view (FoV) of a single monitor can cover an entire room up to 10 feet long, with option to cover larger areas via add-on monitors. Thousands of rooms can be serviced via the HIPAA-compliant cloud platform which can serve 95% of seniors who are not served by today's wearable healthtech. Solutions like Cardi/o® are inclusive, accessible technology driving value-based care.

FIGURE 1

Frictionless, Inclusive RF Technology
Wall Mounted personal monitor
Multi–Resident Dashboard + Alerts
Stats At–A–Glance
Data Trends & Details

[8] Based on $15/hour calculation