Heart Failure Automated Remote Monitoring System
HF-ARMS

Leveraging Technology for Effective, Fast, Safe, Low-Cost Heart Failure Monitoring

Heart Failure (HF) is the most expensive preventable condition, regardless of patient ethnicity, race, socio-economic status, sex, and insurance status. Good outpatient care and telemonitoring can significantly reduce avoidable HF-related hospitalizations and all-cause mortality. Traditional monitoring, while effective, is costly. **Heart Failure telemonitoring can be easier, cheaper, and available to a wider patient population.**

The **Heart Failure Automated Remote Monitoring Systems (HF-ARMS)** is a cost-effective, proven technique for improved clinical performance, with positive fiscal and satisfaction outcomes that have demonstrated efficacy for patients regardless of race, ethnicity, social class, education and technology experience.

The HF-ARMS is Effective
- ♥ 93% of data collected by HF-ARMS is clinically equivalent to human calls

The HF-ARMS is Safe
- ♥ The HF-ARMS and humans have the same under-triage rates (3.8% vs. 3.7%)

The HF-ARMS is Low-Cost
- ♥ 95% lower cost than traditional nurse calls
- ♥ Less than 3% of HF-ARMS patients required a follow-up call from a health care professional

Patients like The HF-ARMS
- ♥ 80% of users preferred the HF-ARMS calls to less frequent human monitoring
- ♥ 72% of users were satisfied or strongly satisfied

> *[The HF-ARMS] keeps me trying to be more serious about losing weight and my low salt diet. It's a good system because it makes me think about not killing my heart.*
> - Male HF-ARMS user, age 47.

How the HF-ARMS Works

The HF-ARMS is a data collection tool that uses automated speech recognition, text messages, email, and web-based communications, to capture patient responses. It negotiates simultaneous outbound and inbound communications to patients on a scheduled and triggered basis. Communication content includes structured scripts and deterministic decision tree logic with clinical decision points that guide patient interviews and the collection of appropriate patient data. Clinical content used in the creation of the HF-ARMS are consistent with the most recent American College of Cardiology and American Heart Association (ACC/AHA) Guidelines for the Diagnosis and Management of Heart Failure.

The HF-ARMS...
- ✓ Is available in English and Spanish
- ✓ Communicates through phone, text, and email with web and mobile interaction
- ✓ Is configured to the patient's condition, preferences, and medical home
- ✓ Delivers communication results and alerts in near real-time to health care professionals

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HF-ARMS Content and Features

Language	English and Spanish
Modality	Phone, Text, Web, Mobile
Proxy Use	Patient can designate a family member or friend to communicate on their behalf
Patient Authentication	Patient can select a PIN, secret word, last 4 of SSN, DOB, or MRUN
Push and Pull	Patient can call, text, or log in when ready or receive scheduled communication through any modality
Communication Length	Stable patients can fast track through the communication
Rescheduling	Patients can reschedule automatically
Alerting	Providers are emailed near real time alerts for fast intervention when clinically indicated

The HF-ARMS reduces the need for HF-related emergency department visits and hospitalizations by providing intense, consistent, patient-centered monitoring for high-risk patients. HF-ARMS monitoring (a) is personalized to the patient's condition and personal preferences, (b) provides patients and providers with a closer continuity relationship, and (c) facilitates early interventions that can reduce inappropriate use of rescue care resources.

Learn More about HF-ARMS - Other Available Documents Include
- ✓ The HF-ARMS Safety Study
- ✓ The HF-ARMS Cost Analysis
- ✓ The About ARMS Research Poster
- ✓ The Patient HF-ARMS Log Book
- ✓ The HF-ARMS Enrollment Procedure

Want the HF-ARMS For Your Patients?
Contact Us
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Other ARMS projects and publications are available. Please contact us if interested in partnering.