



# HEART HEALTH INTELLIGENCE

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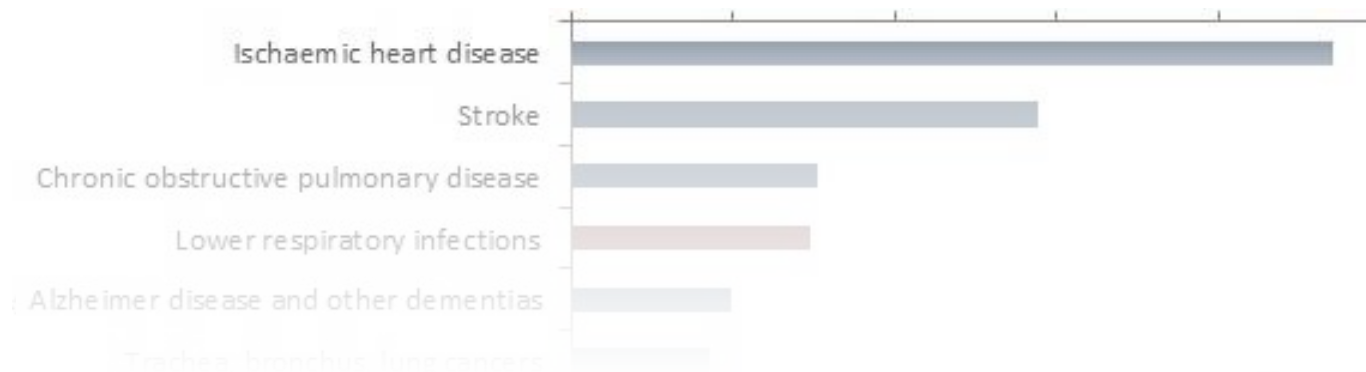
Reducing the cost of **heart failure**  
through effortless **in-home monitoring**

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# CARDIOVASCULAR DISEASE

Heart disease is the **leading** cause of **death** worldwide



Heart failure<sup>1</sup> costs **\$34 B**  
with **80%** due to hospitalization

More than 45% of patients are readmitted within 90 days

## THE PROBLEM

Fewer than **10%** of heart failure patients monitor themselves for **deterioration**

The standard of care results in **preventable** hospitalizations

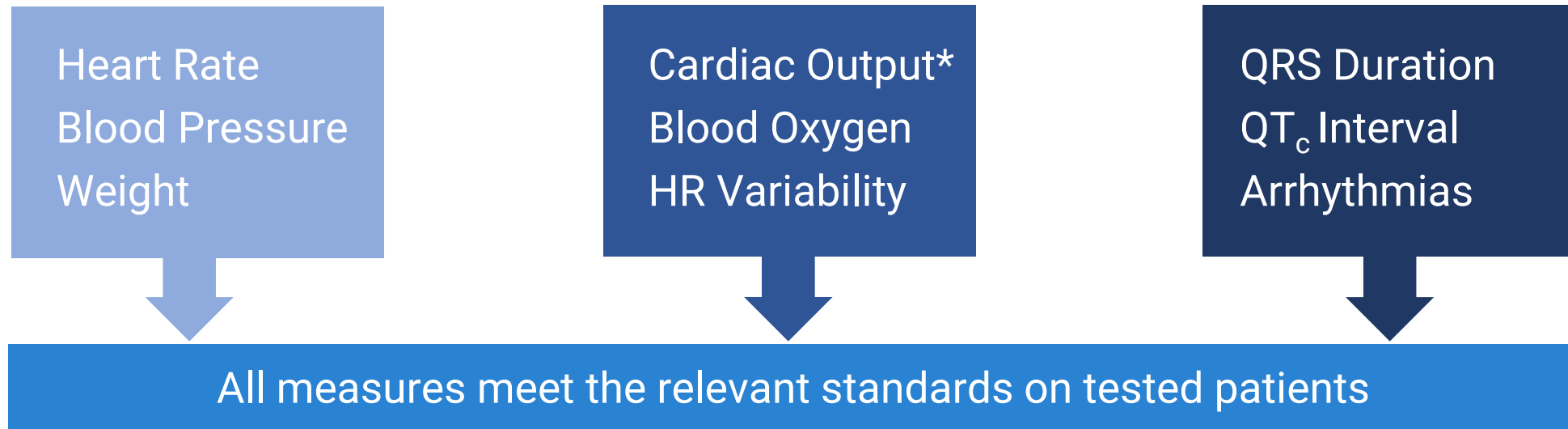


**ECG** the electrical activity of the heart

**PPG** local blood volume and oxygenation

**BCG** the mechanical activity of the heart

## Comprehensive **CLINICAL GRADE MONITORING**



Validated on **300+ human subjects** including those with heart failure

**Published** in 2 peer-reviewed journal articles<sup>1</sup>

\* No commercial in-home solution exists for monitoring cardiac output

# PASSIVE DAILY MONITORING

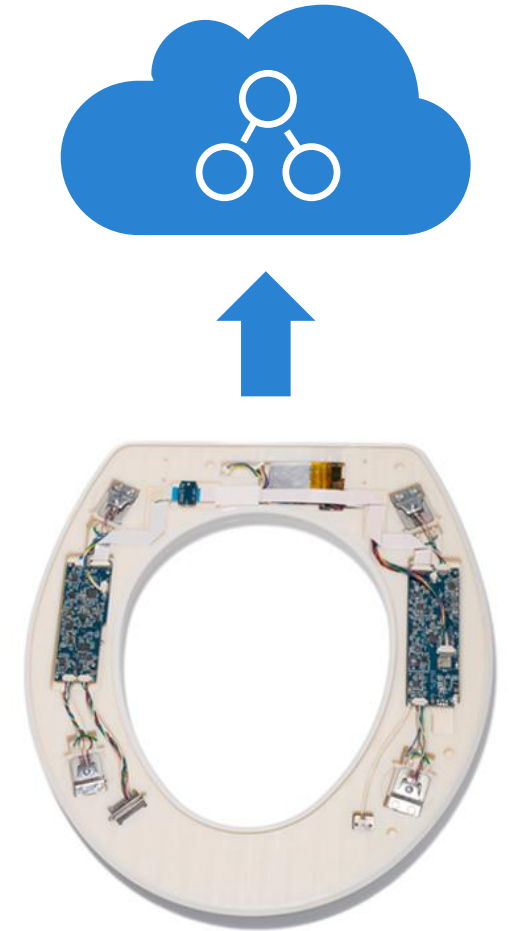
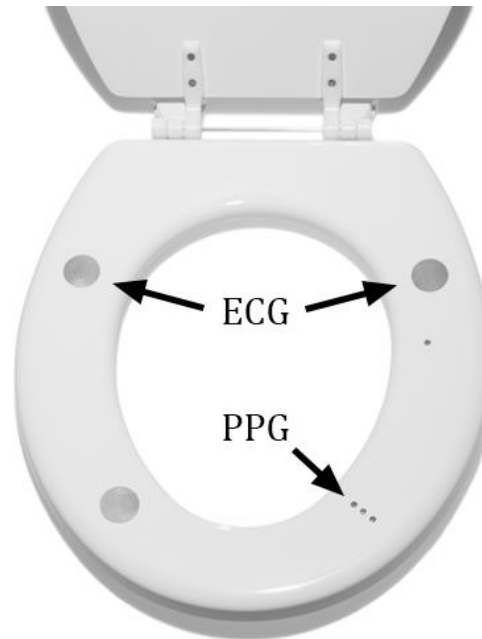
## In-Home Monitoring

### Install and Forget

Completely self-contained  
Fits on a standard toilet

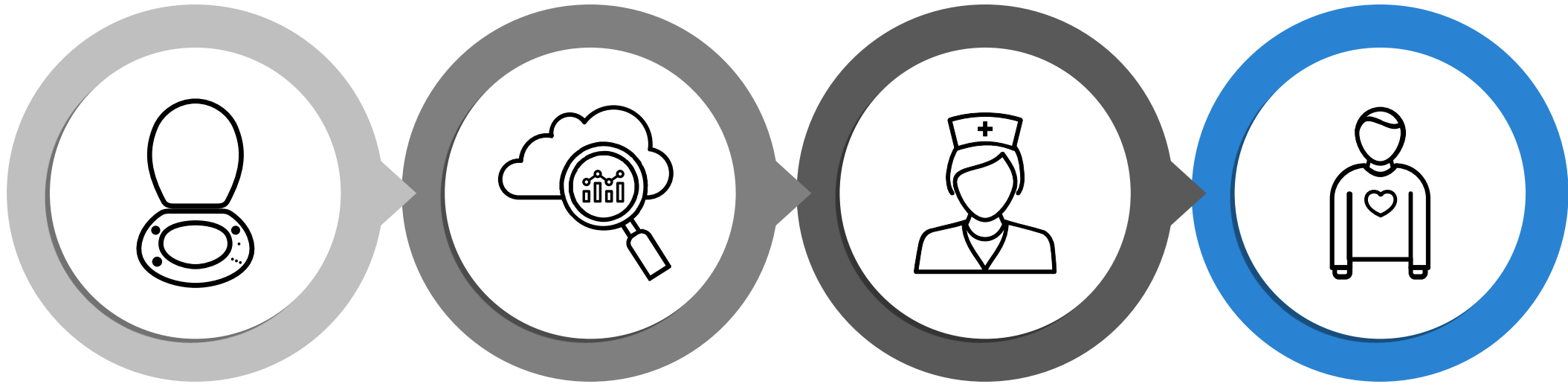
### Ensured Patient Adherence

No change in habit required  
Guaranteed skin contact



# Reducing Hospitalizations

## A COMPLETE SOLUTION



Install and Forget

Automated Detection  
of Deterioration

HHI Provider-Run  
Operations Center

Hospital Care Team  
Facilitated Intervention



## Measurements

# OTHER SOLUTIONS

	HHI System	Smart BP Cuff	Smart Scale	Wearables <sup>1</sup>	CardioMEMS <sup>2</sup> (Abbott)	OptiVol (Medtronic)
HR	✓	✓	✓	✓	✓	✓
Blood Pressure	✓	✓		✓		
Body Weight	✓		✓			
ECG	✓			✓		✓
Blood Oxygenation	✓			✓		
Impedance (Fluid Retention)						✓
Pulmonary Artery Pressure					✓	
Cardiac Output / Stroke Volume	✓					

<sup>1</sup> Requires multiple devices to capture all measurements

<sup>2</sup> Acquired for \$455M in 2014 by St. Jude

A National Crisis

# CARDIOVASCULAR DISEASE

“ By 2035, nearly **half of the U.S.** population will have some form of cardiovascular disease

Prior 2030 predictions were reached **15 years earlier** than anticipated

# CARDIOVASCULAR DISEASE

“Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments

– World Health Organization (WHO)

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To stand up to heart failure,  
we need to **sit down.**



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