

Reducing Cardiovascular Spend

How to help your members potentially avoid costly invasive procedures through digital therapeutics



Digital Care Could Potentially Save Employers \$1,865 Per Participant in the First Year¹

Healthcare costs in the United States are rising to unsustainable levels. Currently, 19.7% of the U.S. GDP is spent on healthcare,² nearly double that of the average country in the Organisation for Economic Cooperation and Development (OECD).³ Of those costs, **heart health-related conditions are the most expensive to treat.**⁴

More than 181 million Americans⁵—virtually half of the population—depend on employer-sponsored insurance. Employers are in a powerful position to improve quality of care while helping to potentially reduce healthcare costs by offering digital care as an employee benefit. Read on to learn why digital health is gaining traction and its potential to help save employers nearly 20% in total medical claims in the first year, according to a Validation Institute employer claims analysis, commissioned by Hello Heart.⁵

High cost of treatment for people with hypertension

\$9,842

average total medical spending per year for individuals with hypertension¹

Potential cost savings



\$1,865 saved

per participant in year 1¹

Waste in the U.S. Healthcare System is Vast and Growing



There are a plethora of reasons why healthcare costs are so high, but a major factor is that waste in healthcare is vast — and increasingly recognized as causing both patient harm and excess costs.⁶ Overtreatment, which can include unnecessary surgeries, procedures, diagnostic testing, imaging, prescriptions, and low-value care, is estimated to account for a staggering 10% of waste.⁷

Waste in the U.S. healthcare system

\$935B

per year,
or 25% of total medical spending⁸

Waste driven by overtreatment

\$75.7B to \$101.2B

per year⁸

Unnecessary Invasive Procedures are Costly



Unnecessary invasive procedures are the most costly and risky forms of overtreatment, and cardiac care is ripe with fraud, waste, and abuse.⁹ A *USA Today* investigation into healthcare waste and fraud concluded that unnecessary invasive procedures, including stents, angioplasty, and pacemaker implants might account for up to 20% of cardiac procedures.¹⁰ Unnecessary cardiac procedures are one of the key areas that authorities are investigating related to healthcare fraud and abuse.



Up to 20%

of cardiac procedures
might be unnecessary¹⁰

Invasive Procedures are Not Always Necessary

So why are some procedures unnecessary?

Multiple clinical trials and studies have shown that **invasive procedures don't always mean better clinical outcomes for patients:**

- The Objective Randomized Blinded Investigation with Optimal Medical Therapy of Angioplasty in Stable Angina (ORBITA) trial found that participants who received a stent fared no better than those who did not.¹¹
- The Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation (COURAGE) trial found that placing a stent and unclogging arteries failed to reduce the risk of death, heart attacks, or other cardiovascular events.¹²
- The International Study of Comparative Health Effectiveness With Medical and Invasive Approaches (ISCHEMIA) trial found that stents and bypass surgery were no more effective than drugs for treating stable heart disease.¹³

In patients with stable heart disease,

1 in 7 stents are unnecessary¹⁴

There are Too Many Procedures and Not Enough Preventative Measures

Cardiovascular disease is the leading cause of mortality in the United States for both men and women and the most expensive chronic condition, costing about \$363 billion each year. **Hypertension is one of the most important risk factors for development of cardiovascular disease**, and early detection and management of it can be key to catching risk in time and potentially saving lives.¹⁵

79% of patients with hypertension do not have adequate control of their blood pressure, putting them at risk of suffering from progressive cardiovascular disease and undergoing invasive procedures that could have been avoided.¹⁶

But the cornerstone of healthcare in the U.S., the fee-for-service system, misaligns incentives by placing greater emphasis on expensive procedures and therapies rather than focusing efforts on prevention.

Why hypertension needs to be a focus



#1 in cost

\$363B

annual cost of cardiovascular disease¹⁵



#1 in unmanaged risk

79%

of patients with hypertension
are not managing it¹⁶

Invasive Procedures Can Be Costly and Risky

While many procedures are appropriate and life-saving, in many cases they are potentially avoidable and may not result in better clinical outcomes or survival. Reducing avoidable and unnecessary procedures would translate to billions of dollars in healthcare spending each year.

Invasive procedures come at a huge cost to both patients and to employers. Beyond the financial costs of medical claims, co-pays, and missed work, the human toll is not something to be ignored.

Research shows high levels of anxiety and stress associated with the disease, invasive procedures, and complications after cardiac surgery.¹⁷ Fear of complications from invasive procedures, which can cause anxiety and stress, are common and not unjustified. There is a 0.3-3.4% chance that a blood clot will form after a stent placement, which increases the risk of heart attack or stroke.¹⁸

Average cost of procedures that are potentially avoidable



Stent

\$32,200¹⁹

Coronary artery bypass
graft (CABG)

\$151,271²⁰

Preventative Care Can Help People Reduce the Risks of Hypertension

For managing high blood pressure, which is often a precursor to more serious heart issues, the American Heart Association and American College of Cardiology recommend medication and lifestyle management.²¹ **Healthy habits and preventative care may help patients reduce the risks of high blood pressure and its associated costs.** But it's difficult when patients don't comply with lifestyle modifications and take their medications.¹⁶

Traditional disease management and blood pressure tracking programs have tried — and largely failed — to fix this. Fortunately, there's an innovative, technology-led approach that's making a big difference: digital care.



Invasive procedures and surgeries without the corresponding changes in lifestyle and evidence-based medical therapies ultimately lead to the need for reintervention and more procedures downstream.



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Digital Therapeutics Can Help People Build Healthy Habits



Digital care bridges the gap between self-care and traditional care through personalized digital coaching and medication reminders that are securely delivered to patients.

Patients get practical and jargon-free education to understand their condition, which may help promote healthy lifestyle change. Hello Heart, a digital solution for heart health management, takes the mystery out of blood pressure numbers and terminology so that patients understand what they actually mean – and feel empowered instead of intimidated.

Benefits of digital care

- ✓ Low cost
- ✓ Fast and convenient
- ✓ Digital coaching for behavioral change
- ✓ Engages patients that avoid primary care



Peer-reviewed Clinical Outcomes and Observed Cost Savings

Clinical research and employer claims analysis shows the potential outcomes and cost savings of digital therapeutics. A peer-reviewed study published in *JAMA Network Open* found that 84% of Hello Heart users with a baseline blood pressure over 140/90 reduced their blood pressure and sustained it up to 3 years. Their average reduction in systolic blood pressure was 21 mmHg – a 2x greater improvement than any other digital heart health solution.²²

The clinical outcomes may translate into significant savings for employers. In an analysis of 2017-2020 employer claims data commissioned by Hello Heart, Validation Institute found a cost savings of \$1,865 per Hello Heart participant in the first year, or 19% of total medical claims spending. The savings were largely driven by fewer surgeries, invasive procedures, and imaging.¹

The analysis also observed an increase in costs for primary care visits among Hello Heart users, which may be attributable to the program encouraging users to engage in preventive care.

Clinical outcomes

Published in *JAMA Network Open*

For members with a baseline blood pressure over 140/90:



84% reduced

blood pressure and sustained it up to 3 years²²



2x greater

improvement in systolic blood pressure vs. other digital solutions²²

Potential cost savings



\$1,865 saved

per participant in year 1¹

Employers are Tackling Healthcare Costs with a Digital Heart Program

Benefits leaders could potentially save millions of dollars by offering a digital solution for heart health to their employees. A multinational employer based in the U.S. reviewed their employees' healthcare claims and observed sustained increases in spending related to hypertension. Their benefits team sought to reverse these trends and cut down their healthcare costs for their most expensive chronic condition. They turned to Hello Heart's digital solution for heart health management.

In 12 months, 83% of participants starting in stage 2 hypertension reduced their blood pressure

and lowered their heart risk.^{23,24,25,26} On average, they dropped their systolic blood pressure by 21 mmHg.^{23,24} These decreases are significant because research shows that even a 10-point drop in systolic blood pressure cuts the risk of major cardiovascular disease events by 20%, heart failure by 28%, and stroke by 27%.²⁷

The estimated cost avoidance for this program was a medical claims cost reduction of \$1,865 per participant in year 1.¹ Based on year 1 enrollment, they potentially saved over \$15.6M by offering Hello Heart to their highest-risk population.

Estimated Cost Avoidance for Year 1 Program Enrollees.²⁸

$$\begin{array}{ccccc} \mathbf{8,367} & & & & \\ \text{Hello Heart users enrolled} & \mathbf{X} & \mathbf{\$1,865} & \mathbf{=} & \mathbf{\$15.6M} \\ \text{in year 1 of the program}^{24} & & \text{Estimated reduction in total medical} & & \\ & & \text{claims costs per participant in year 1} & & \end{array}$$

Hello Heart's Digital Heart Program is Validated to Reduce Medical Claims

Hello Heart is the only digital therapeutics company to focus exclusively on heart disease, the leading cause of death for U.S. adults. Through a connected device and mobile app that uses AI, behavioral science, and personalized digital coaching to drive lifestyle changes, Hello Heart empowers people to embrace healthier behavior, which can reduce the risks of high blood pressure and heart disease. It also helps users catch blood pressure readings that are extremely high and encourages them to talk to their doctor to identify potential risk in time.

Validated in peer-reviewed studies and trusted by leading Fortune 500 companies, Hello Heart is easy to use and works alongside an employer's benefits ecosystem.

Founded in 2013, Hello Heart is a member of the American Heart Association's Innovators' Network, and is part of the CVS Health Point Solutions Management Program.

Visit www.helloheart.com for more information.

Hello Heart ROI

Up to 100%
performance guarantee

2:1
average ROI²⁹



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