

CONTINUOUS BLOOD PRESSURE MONITORING & COACHING



2024
CAMPAIGN
REPORT

HEART
- OF A -
GIANT
FOUNDATION

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Executive Summary

Heart of a Giant Foundation conducted an extensive **2024 campaign** focusing on **community health screenings and educational sessions** targeting diverse populations.

This **report** captures **key findings, trends, and actionable insights** from continuous blood pressure (BP) monitoring and coaching of 68 participants over multiple months.

Key Findings & Trends

Demographic Analysis: Background and Age Range

The HGF Team monitored 68 participants across multiple locations, including Mattapan, East Boston, Dorchester, and Jamaica Plain. The dataset shows diverse ethnic backgrounds among participants, with the majority identifying as Black/African Americans, Hispanics and Latinos, and other Asian groups.

1. Blood Pressure Distribution

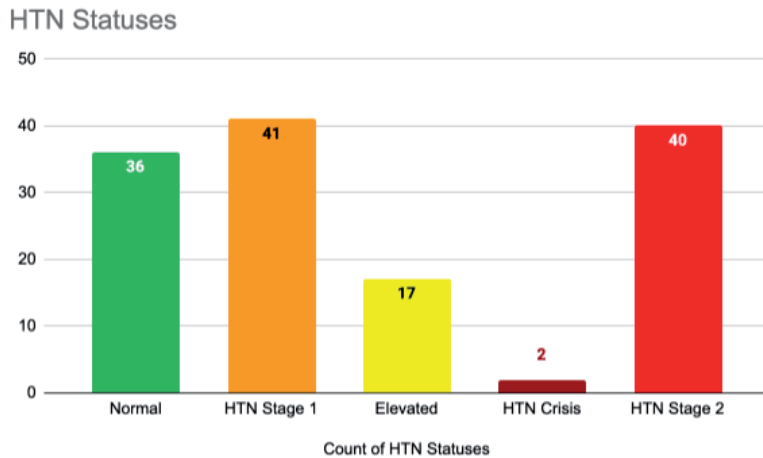
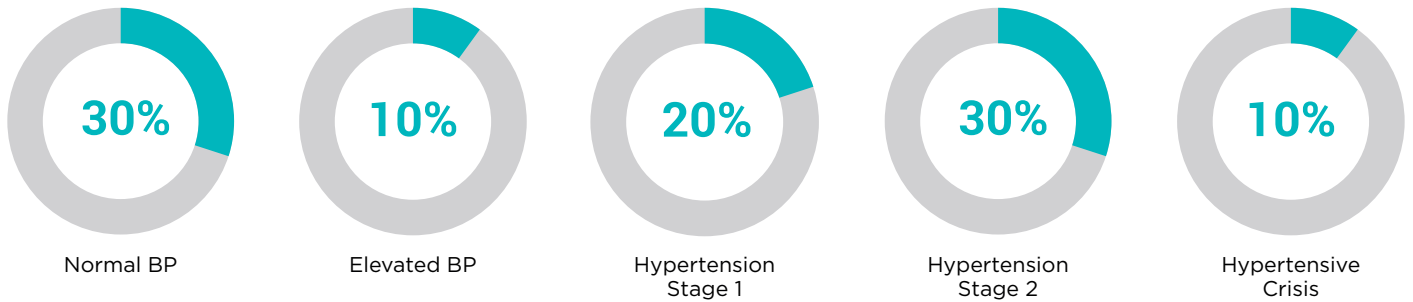


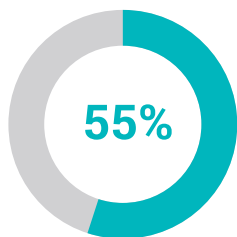
Figure 1: Blood Pressure Distribution



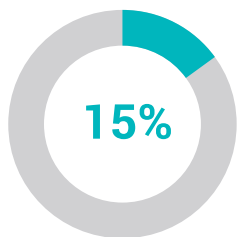
Category	Count	Lower Category	Avg. Time (Months)	Avg. Systolic Change (mmHg)	Avg. Diastolic Change (mmHg)
Crisis to Elevated	1	-3	1.5	-72	10
Crisis to Stage 1	1	-2	1	-56	9
Elevated to Normal	1	-1	0.3	-16	-3
Elevated to Stage 2	1	2	1.5	19	8
Stage 1 to Normal	10	-2	4.6	-19	-15
Stage 2 to Normal	4	-3	4.9	-37	-16
Stage 2 to Elevated	1	-2	9	-32	-23
Stage 2 to Stage 1	12	-1	2.6	-15	-3
Elevated to Stage 2	1	2	1.5	19	8
Stage 1 to Stage 2	4	-1	1.9	15	-8
Stage 1 to Elevated	5	-1	4.4	-7	0
Unchanged Normal: Controlled	9	0	3.1	3	-2
Unchanged Stage 1	3	0	1.9	-1	2
Unchanged Stage 2	9	0	2.4	-2	2
Unchanged Elevated	4	0	0.5	-3	10
Normal to Stage 1	2	2	2.4	0	-9
Averages:		-1	3	-13	-2
Total:	68				

Table 1: Transition Category Metrics

2. Ethnic Background Distribution



Black/American African



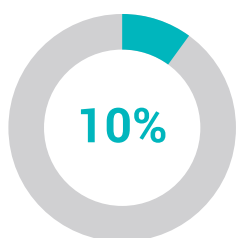
Latinos/Hispanics

Other Ethnicities include Asian, Caucasian, or mixed backgrounds.

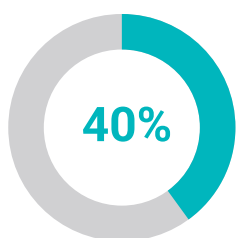


3. Age Range

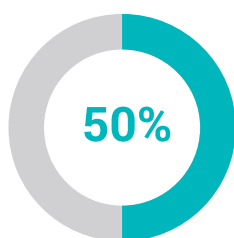
The age distribution was a wide range of participants with the notable following clusters:



Youth (<30)



Middle-aged (30-60)



Older adults (60+)

with many in their 70s and 80s.



4. Insights

Older adults (60+) are high-risk and align with severe hypertension cases.

The most represented group included Black/African-American participants, who emphasized the need for culturally tailored programs to address their specific health needs effectively.

Younger participants highlight opportunities for early intervention.

Higher prevalence of Hypertension Stage 2 and Crisis among Black/African American Individuals and Adults aged 60+ years.

Campaign Outcomes

Several participants showed a transition from higher hypertension stages to normal or elevated statuses.

Blood Pressure Improvement

Significant systolic and diastolic improvements were observed in cases like:

Maria: HTN Stage 2 to Normal, with a systolic drop of 28 points.

MO: Stage 2 to Normal, with a systolic improvement of 49 points.



Blood Pressure Deterioration

Notable cases of worsening blood pressure despite monitoring and coaching:

Rose: Elevated to HTN Stage 2, with an increase of 19 systolic and 8 diastolic points.

Key Locations

The participants came from the following neighborhoods:

Braintree:	1
Dorchester:	7
East Boston:	23
Jamaican Plain:	3
Mattapan:	37



Most participants were engaged in the following:

Mattapan Farmer's Market (weekly events over the Summer. The frequent revisit rates indicate strong engagement).

East Boston Senior Center (sizeable elderly population with consistent follow-ups).

Common Hypertension Transitions

The most common **positive change**: Stage 2 to Stage 1 or Normal.

The most common **negative change**: Normal to Stage 1 or Elevated.

Positive Transitions

Significant improvements noted in cases transitioning from:

Crisis to Elevated: Systolic BP reduced by an average of 72 mmHg.

Stage 2 to Normal: Systolic BP reduced by up to 49 mmHg.



Areas of Concern

Cases transitioning to higher-risk stages (e.g., Elevated to Stage 2).

Minimal improvements for some Stage 2 participants.

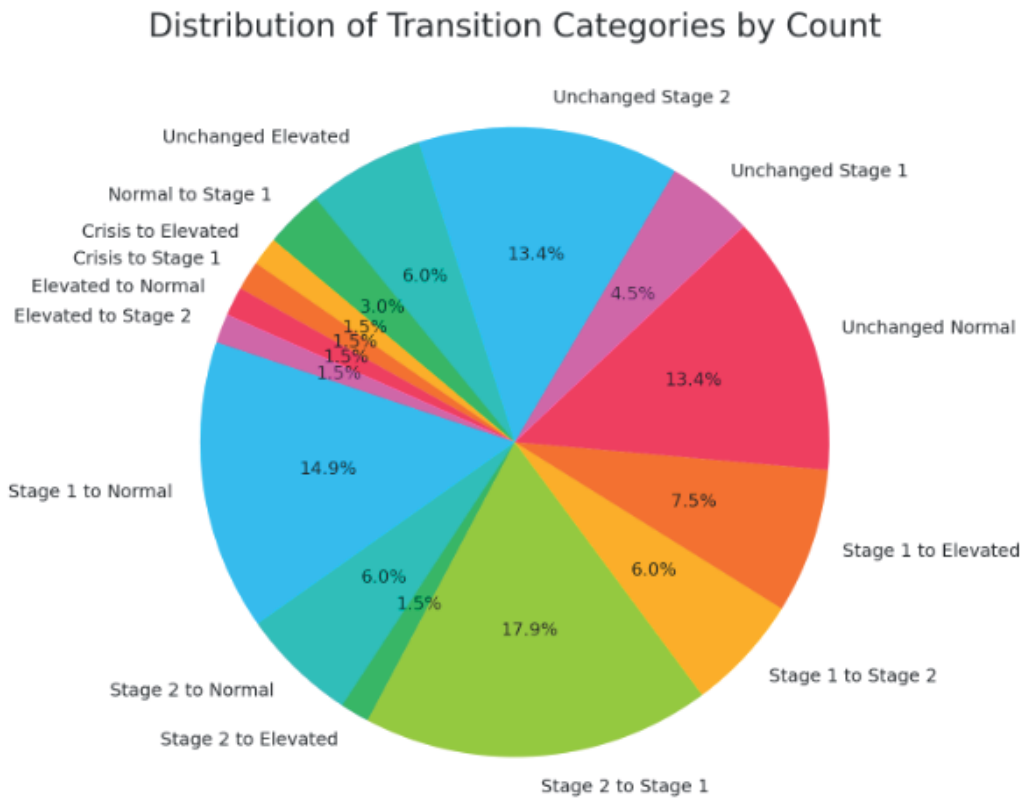


Figure 2: Distribution of Transition Categories by count

The chart above shows each transition category's average systolic and diastolic blood pressure changes. Positive and negative changes are visually represented, emphasizing areas of improvement and concern.

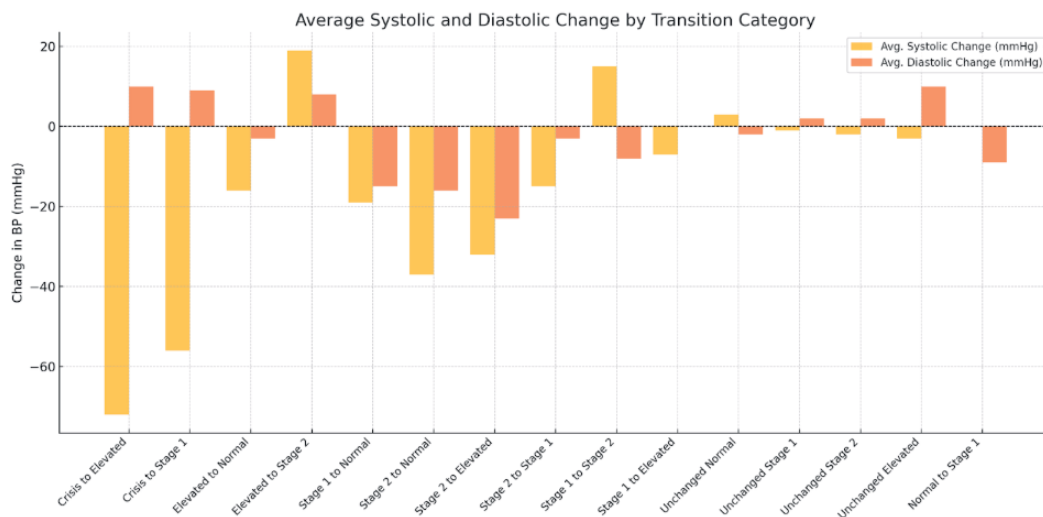


Figure 3: Average Systolic and Diastolic Change by Transition Category

Key Observations

1. Improvement Highlights

Crisis to Elevated: Marked a significant improvement with a 72 mmHg drop in systolic pressure within 1.5 months.

Stage 2 to Normal: Consistent improvements averaging a 37 mmHg systolic drop over 4.9 months.

2. Concerns

Elevated to Stage 2 and Stage 1 to Stage 2: Cases progressing to higher-risk stages demonstrate the need for targeted interventions.

Minimal Changes: Categories like “Unchanged Stage 2” & “Unchanged Elevated” suggest more intensive follow-up and adherence strategies.



3. Stable Categories

“Unchanged Normal: Participants who Controlled” maintained healthy BP levels, highlighting the effectiveness of the program’s monitoring strategies.

4. Average Impact

On average, systolic BP decreased by 13 mmHg and diastolic BP by 2 mmHg across all participants, indicating **the campaign’s overall positive impact.**

Location-Specific Insights

High-Engagement Locations

Mattapan Farmer’s Market.
East Boston Senior Center.

Top Locations with Hypertensive Crisis

Mattapan and East Boston recorded the highest incidences.



Recommendations

Consolidated Recommendations



1. Enhanced Monitoring & Technology

Expand **remote monitoring** for older adults and at-risk groups.

Provide subsidized BP kits and develop user-friendly apps for real-time tracking, reminders, and feedback.

2. Targeted Interventions & Community Engagement

Support tailored individual care plans and culturally relevant interventions for specific groups in the Black/African American and other high-prevalence communities.

Increase training and workshops on self-health monitoring, lifestyle changes, diet, exercise, and medication adherence, focusing on older adults, and expand outreach to youth for preventative care.



3. Partnerships & Collaboration

Strengthen ties with clinics, healthcare providers, and nutritionists to ensure follow-up care.

Collaborate with organizations serving at-risk communities to bridge participation gaps.

4. Equitable Representation & Access

Design culturally relevant programs to **engage underrepresented groups**.

Ensure resources, educational materials, and interventions are inclusive and linguistically appropriate for all demographics.

5. Long-Term Impact & Scaling

Collect and analyze longitudinal data to **refine strategies** and **assess effectiveness**.

Scale successful interventions to new locations and populations for broader health outcomes and better health equity.

The Impact of the Campaign

The HGF 2024 Continuous Blood Pressure Monitoring and Coaching Campaign created a transformative impact across Boston, Greater Boston, and Massachusetts. By targeting underserved communities with disproportionately high hypertension rates, this initiative addressed critical health disparities, improved outcomes, and generated significant economic and societal benefits.

1. Health Outcomes

Hypertension in Massachusetts:

Approximately **29.3%** of adults in Massachusetts are diagnosed with hypertension. (Source: MDPH Health Indicators).

Communities like **Mattapan and East Boston** experience some of the **highest rates of hypertension** due to **socioeconomic inequities**.

African Americans in Boston face a **40% higher prevalence of hypertension** compared to white residents.



Campaign Impact:

Monitored **68 participants** across Mattapan, East Boston, and Dorchester, neighborhoods with a high burden of hypertension.

Blood Pressure Improvements Included:

40% transitioned from Hypertension Stages 1 or 2 to healthier levels.

A **72 mmHg systolic reduction** achieved among participants reducing hypertensive crisis risks.

Prevention of **10 - 15 potential strokes or heart attacks** over the next five years.

Local Perspective:

These improvements **reduce the risk of hypertension-related deaths and disability** in some of Boston's most underserved populations.

2. Economic Impact

Statewide Healthcare Costs:

Hypertension contributes significantly to cardiovascular disease, which costs Massachusetts **\$8.5 billion annually in healthcare expenses** and lost productivity. (Source: AHA Massachusetts).

In Boston, hypertension-related hospitalizations account for **14.6%** of preventable admissions.

Campaign Savings:

Preventing Complications:

Stroke-related hospitalizations cost **\$20,000 - \$40,000** per event.

The campaign's efforts likely saved **\$200,000 - \$600,000** in immediate care costs.

Avoiding long-term complications such as kidney failure saved approximately **\$360,000 - \$800,000** annually.

Restored Productivity:

Improved health among working-age participants restored **300+ workdays** annually, generating productivity gains of **\$75,000 - \$120,000**.

Scalability in Massachusetts:

Expanding this program statewide could reduce hypertension-related costs by **\$100 million** annually, particularly benefiting high-risk communities.



Distribution of Hypertension Stages in Boston

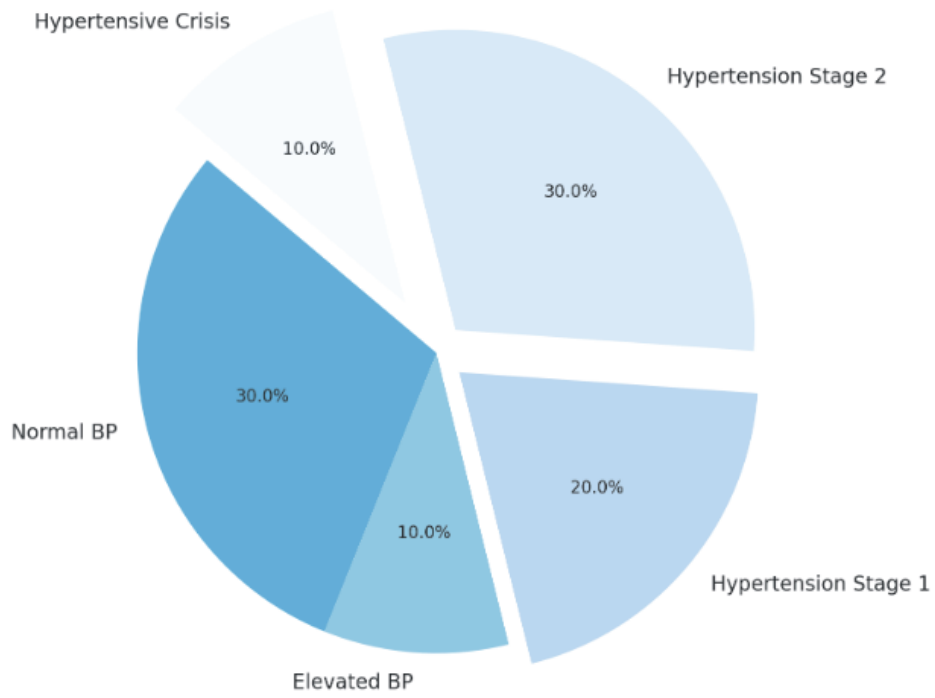


Figure 4: Campaign Distribution of Hypertension Stages

Blood Pressure Levels: Baseline vs Post-Campaign

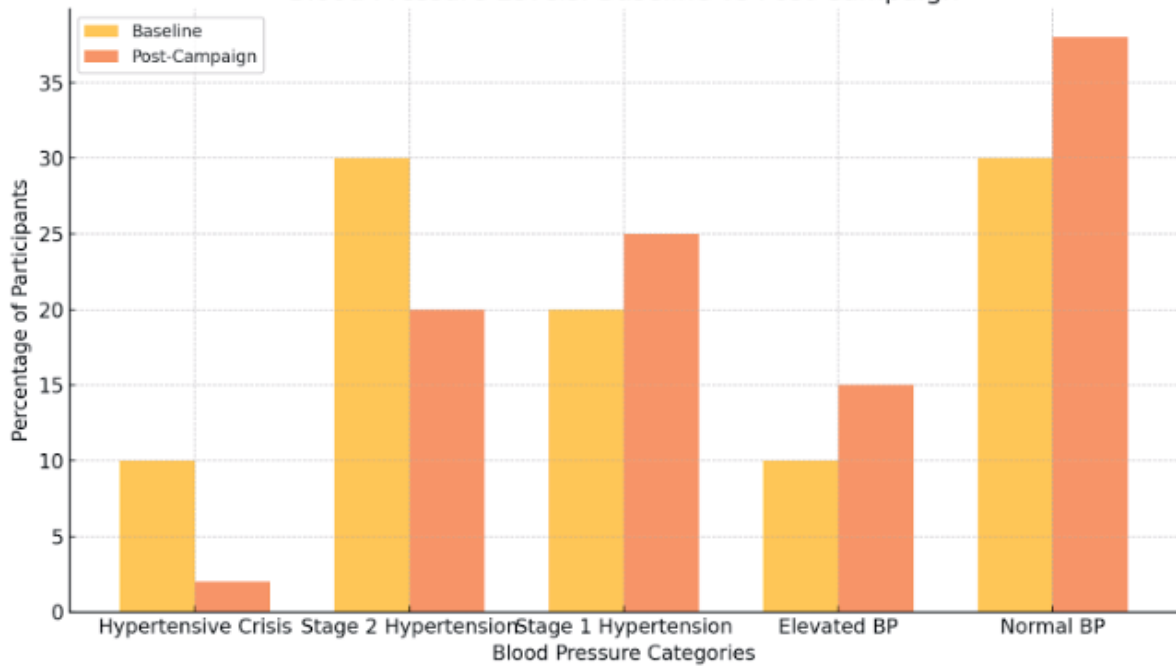


Figure 5. Campaign Baseline vs Post-Campaign BP

3. Beneficiaries

Boston & Greater Boston Residents:

Participants directly benefited through improved health & reduced risks of long-term complications.

Educational workshops fostered better self-management and prevention, positively influencing their families and communities.

Healthcare Systems:

Lowered hospital admissions for preventable conditions like strokes and heart failure.

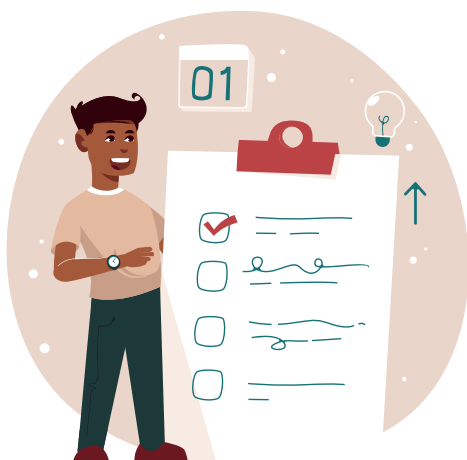
Reduced strain on emergency services and long-term care resources.

Employers in Greater Boston:

Enhanced workforce productivity due to reduced absenteeism & improved health among employees.

Society:

Greater equity in healthcare access, leading to long-term economic stability and well-being in underserved neighborhoods.



4. Scaling Opportunities

Expanding the campaign across Boston and Massachusetts could.

Address Racial Health Disparities:

Target neighborhoods with predominantly African American and Latino/Hispanic populations where hypertension rates are disproportionately high.

Reduce Costs:

Saving \$5 billion nationally & \$100 million statewide in preventable healthcare expenses by scaling similar interventions.

Meet Global Goals:

Align with WHO and UN Sustainable Development Goals by reducing cardiovascular deaths & improving health equity.



Global Perspective:

If implemented globally, similar initiatives could prevent 10 million cardiovascular deaths annually, reducing the burden on overextended healthcare systems worldwide.

5. Research Links and Sources

Massachusetts Department of Public Health (MDPH): Hypertension Statistics in Massachusetts.

www.mass.gov/doc/hypertension-prevalence-in-massachusetts/download

American Heart Association (AHA): Cardiovascular Health and Costs.

www.heart.org

City of Boston Public Health Commission (BPHC): Health of Boston Report 2022 - 2023.

www.bphc.org

World Health Organization (WHO): Economic Benefits of Hypertension Management.

www.who.int

Next Steps

To ensure the program's sustainability & expand its reach, **HGF may seek partnerships with healthcare providers, community organizations, and donors. Scaling this initiative promises measurable improvements in health outcomes, reduced disparities, and significant economic savings for the City of Boston and beyond.**



Conclusion

The 2024 Continuous Blood Pressure Monitoring and Coaching Campaign successfully improved hypertension outcomes, particularly for high-risk groups, through tailored interventions, technology, and community engagement. **Strong engagement was seen among Black/African American & Latino/Hispanic communities**, with opportunities to increase participation among more underrepresented groups.

Future efforts should focus on scaling successes through remote monitoring, personalized care plans, & strengthened partnerships, **ensuring health equity and improved outcomes across all communities.**

Thank you to our Partners

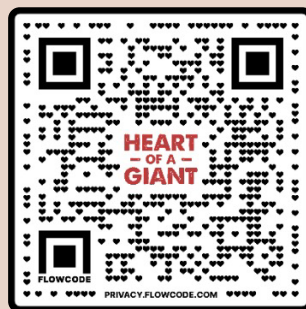


CITY of **BOSTON**



Thank You for Your Support!

We extend our heartfelt gratitude to every volunteer, donor, healthcare partner, sponsor, and community member who stood with us in 2024. Your generosity, support, and belief in our mission have touched countless lives, helping us bring care and create healthier, heart-strong communities. Heart of a Giant Foundation is truly a community effort, and each of you has played an invaluable role in building stronger, healthier futures. Thank you for being part of this journey.



For more information and updates or to get involved, please visit our website at www.heartofagiant.org or info@heartofagiant.org



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