care everyday

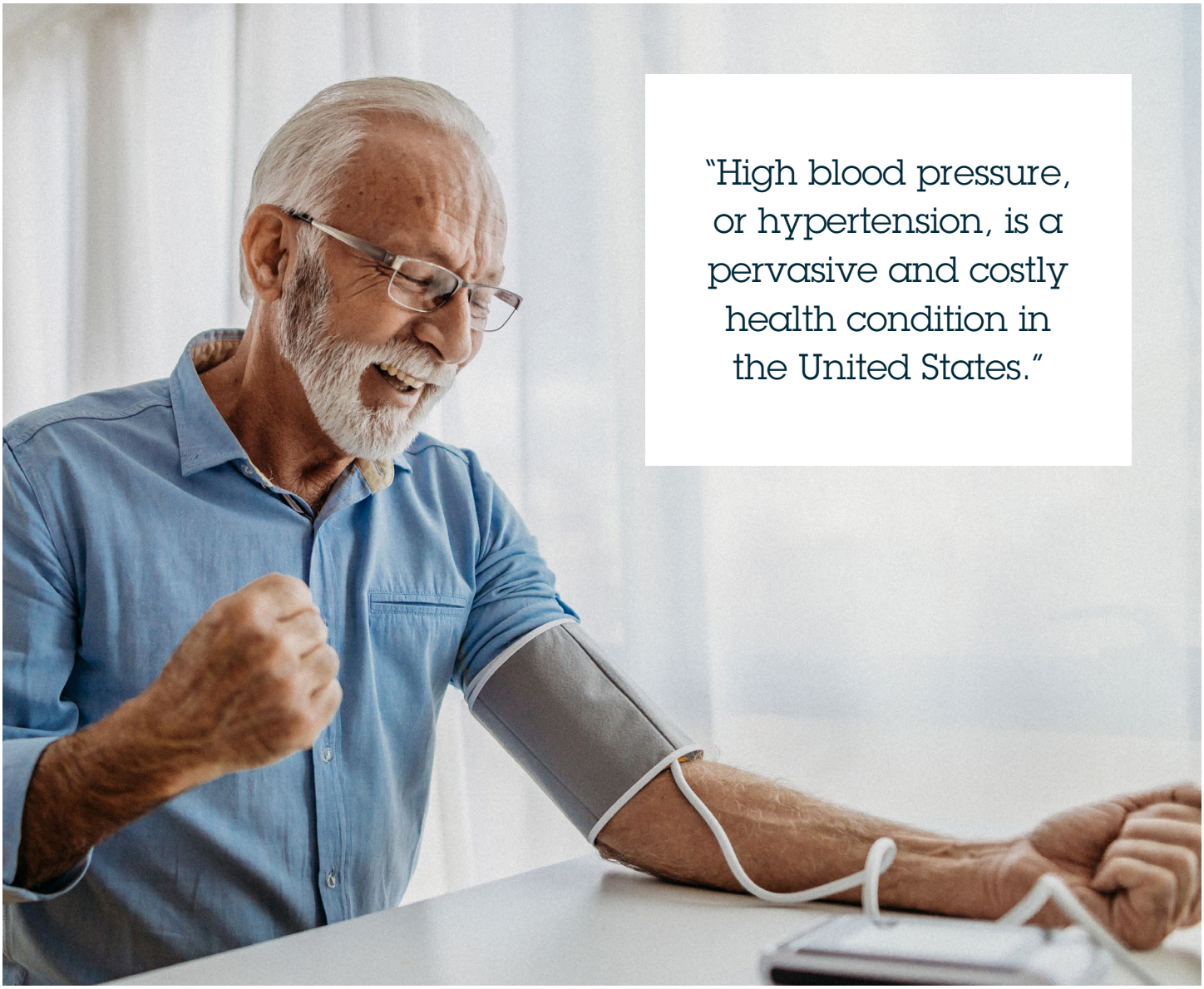
The Impact of High Blood Pressure and the Benefits of an in-Home Program on Improving HEDIS Control

Summer 2024

Introduction

High blood pressure, or hypertension, is a pervasive and costly health condition in the United States. It affects nearly half of all adults and is a leading cause of heart disease, stroke, and other serious health complications. Uncontrolled hypertension significantly impacts individual health and quality of life and imposes a substantial financial burden on the healthcare system and health plans.

This paper sheds light on the challenges with high blood pressure and its associated costs, and the positive impact Care Everyday's* home-based Hypertension Monitoring Program has on improving blood pressure control for participants. Additionally, it explores the significant benefits that health plans can achieve by prioritizing and implementing effective strategies to help participants' blood pressures remain at or below stage-1 hypertension.



*Operating as Valued Relationships, Inc. (VRI).

The Burden of High Blood Pressure

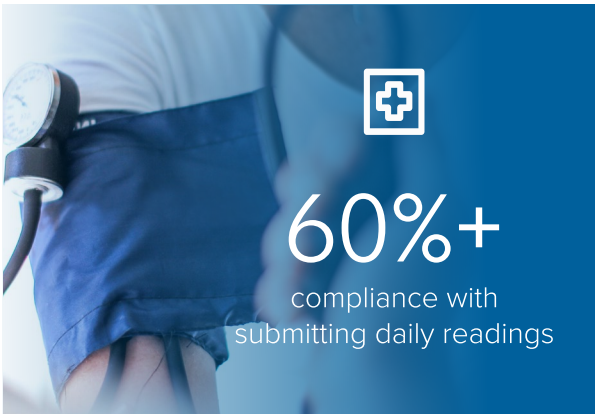
- **Prevalence:** An alarming **47%** of adults in the United States live with hypertension with many unaware of their condition (American Heart Association).
- **Health Consequences:** Uncontrolled high blood pressure is a major risk factor for heart disease and stroke (CDC) and increases the risk of heart failure, kidney disease, vision loss, and cognitive decline (American Heart Association).
- **Financial Burden:** The direct medical costs of high blood pressure in the U.S. are estimated to be between **$131 billion** and **$198 billion** annually, including healthcare services, medications, and productivity loss due to premature death (CDC). Individuals with hypertension face nearly **$2,000** higher annual healthcare expenditures compared to their non-hypertensive peers (American Heart Association Journals).

47%	$164.5B	$2,000
of adults in the United States live with hypertension	average costs of high blood pressure	higher annual cost for those with hypertension

Care Everyday's Hypertension Monitoring Program

For more than 12 years, Care Everyday has operated multiple at-home blood pressure monitoring programs for its health plan customers. Program participants are provided a connected blood pressure cuff with readings transmitted seamlessly to Care Everyday's 24/7 monitoring center. Readings are auto reviewed by the system, with readings outside expected parameters (AHA clinical guidelines with adjustments made for member specific situations), reviewed by the U.S. based monitoring team who conducts telephonic outreach to participants to validate the reading and ask a series of questions about their signs and symptoms. Issues are escalated as appropriate to EMS, a member's physician, or other participants of the member's care team.

The overarching objective of the Program is to provide timely, objective, and validated information to the member's treatment team, who then work with their member to adjust treatment as appropriate. In addition, the program supports members in modifying their behaviors to improve their health outcomes by taking medications as prescribed and understanding the importance of monitoring and improving their condition. Critical to the program's success is a regimented adherence reminder program that drives **60%+** compliance with submitting daily readings.



Study Design

This study investigated the effectiveness of Care Everyday's Hypertension Monitoring Program on individuals living with uncontrolled hypertension at the time of program enrollment. The study period spanned 10-years (January 1, 2014, to December 31, 2023). The extended timeframe allowed assessment of the Program's long-term impact on blood pressure control and identified durability of the observed effects.

To define the study population and ensure generalizability of the findings to a relevant target audience with uncontrolled hypertension, the following criteria were used:

- Documented blood pressure readings taken with a Care Everyday system connected BP cuff
- Confirmed diagnosis of at least one of the following conditions:
  - Hypertension, Congestive Heart Failure, Coronary Artery Disease
- Initial BP readings outside of HEDIS control
- Minimum active Program participation of at least six months. At least one blood pressure reading recorded in the sixth month of participation

Study Population:

The final study population consisted of **3,559** members with a demographic breakdown as follows:

66% Female, **34%** Male

75% of members were **50** years old or older at enrollment

16% of participants were from rural areas

Average age at enrollment: **60** years old (range: 17-108 years)

Participants resided in **36** states and territories across the country

Methodology:

The analysis focused on changes in systolic and diastolic blood pressure during the first six months of Care Everyday Program participation. Blood pressure readings were averaged for each month a member was enrolled, with month 1 being the month of program activation and subsequent months following chronologically.

Blood pressure averages were calculated for the participant population (n=3,559) whose initial readings exceeded stage 2 hypertension, that according to the American Heart Association is a blood pressure greater than 140/90. This aligns with the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS) metric for controlled blood pressure, CBP.

The average blood pressure at Program entry (month 1) was compared to the average blood pressure at month 6.

Results

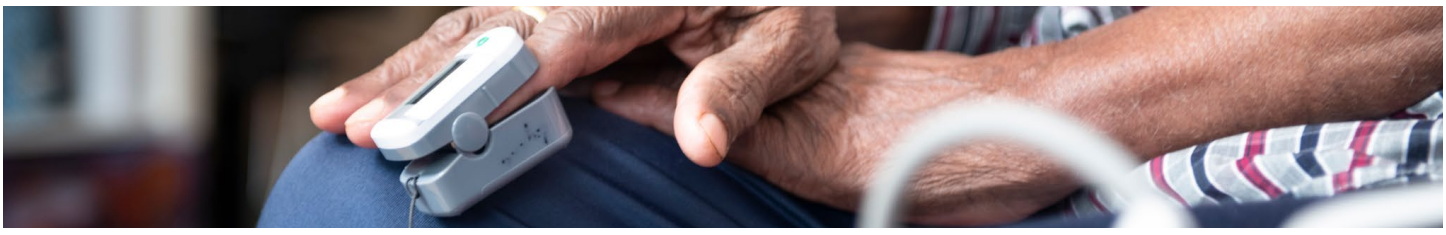
15 ↘ mmHg
average systolic blood pressure decrease

10 ↘ mmHg
average diastolic blood pressure decrease

12 ↘ mmHg
average arterial pressure decrease

52%
initially uncontrolled participants
achieved HEDIS control within 6 months

Participants' average systolic blood pressure decreased from 153 mmHg to 138 mmHg, representing a reduction of 15 mmHg. Diastolic blood pressure decreased 10 mmHg, dropping from 93 mmHg to 83 mmHg. The mean arterial pressure (MAP) within this group decreased 12 mmHg. Overall, participants showed an average trend of –2.5 / 1.6 mmHg blood pressure per month, and -2 mmHg MAP per month. At the end of the 6-month period, 52% of initially uncontrolled participants were within HEDIS control.



Lowering Blood Pressure Reduces Cardiac Risk

Research consistently demonstrates that even a modest reduction in blood pressure of 5 mmHg can have a significant impact on cardiovascular risk:

- **Reduced Cardiovascular Events**: A meta-analysis of blood pressure-lowering trials showed that a 10 mmHg systolic or 5 mmHg diastolic reduction in blood pressure leads to a **22%** reduction in coronary heart disease events and a **41%** reduction in stroke (BMJ).
- **Overall Mortality Reduction:** Studies have shown that a 5 mmHg reduction in systolic blood pressure is associated with a **7%** reduction in overall mortality (The Lancet).

Conclusion

The impact of high blood pressure on individual health and healthcare costs is undeniable. Programs like the Care Everyday's Hypertension Monitoring Program offer health plans a unique opportunity to improve outcomes for their members while reaping significant quality, financial, and reputational benefits including:

- **Better Health Outcomes for Members** - through lowered cardiac risk.
- **Improved HEDIS Scores & Star Ratings** - especially impactful given current triple weighting of CBP metric.
- **Increased Reimbursement** - plans with higher Star Ratings receive increased reimbursement rates from CMS. Healthier members also impact risk adjustment which can result in higher revenue for the plan.
- **Reduced Medical Costs Through a Reduction in Cardiac Events** - with an average cost per cardiovascular event at $20,000 or more, the potential cost savings is significant.
- **Improved Member Retention and Acquisition** - Health plans with high Star Ratings and good HEDIS scores are more attractive to members, leading to increased member retention and acquisition.

Investing in Care Everyday's home-based Hypertension Monitoring Program with a proven and sustained impact of lowering blood pressure for participants outside of HEDIS control results in measurable improvement in cardiac risk. When coupled with existing health plan hypertension and education programs this program provides a compelling value proposition.