2025 Application Summary
Bernard J. Tyson Award for Pursuit of Healthcare Equity

Cone Health
Bridging Disparities in Hypertension Control for Black/African American Patients

Bernard J. Tyson Award
PURSUIT OF
HEALTHCARE EQUITY

Executive Summary

In FY 2023, our data revealed a 9% gap in blood pressure control. Precisely, only 66% of Black patients with a Cone Health primary care provider had controlled hypertension (blood pressure below 140/90 mmHg – Stage 2 Hypertension), compared to 75.6% in other populations. Consequently, Cone Health initiated a systemwide effort to reduce hypertension disparities among Black and African American patients who experience higher rates of uncontrolled blood pressure. Hypertension is a significant risk factor for cardiovascular disease (CVD), which remains the leading cause of death worldwide. In the U. S., healthcare costs for hypertension were estimated at $79 billion in 2016, with nearly half of American adults experiencing elevated blood pressure, many of whom remain uncontrolled. Key factors contributing to racial disparities in cardiovascular health include socioeconomic influences, patient-provider relationships, and shortcomings within the healthcare system. To address these issues, Cone Health launched a multidisciplinary initiative to improve hypertension care for non-Hispanic Black patients by implementing a team-based approach involving physicians, pharmacists, and social workers. This model focuses on patient needs, identifies barriers, optimizes treatment, and enhances patient engagement through education and support. This approach successfully closed the racial gap in uncontrolled blood pressure and improved patient-centered outcomes, such as satisfaction and treatment adherence. Additionally, recognizing the role of social determinants of health (SDoH), the initiative addressed unmet health-related social needs, contributing to improved blood pressure management. The initiative has also led to the CATCH 5 in 5 projects (Collaborative Actions Toward Community Health), which aim to reduce life expectancy disparities by 5 years over 5 years through community-wide screening for hypertension and other cardiovascular disease (CVD) risk factors. This involves forming partnerships with community-based organizations (CBOs) to address unmet health-related social needs or social drivers of health. Cone Health remains deeply committed to community health and ensuring equitable access to care for all individuals as we work to prevent and manage chronic diseases in populations most affected by disparities.

Describe the healthcare disparity that was the target for the improvement initiative and the importance of this target population to your organization.

In North Carolina in 2018, high blood pressure was the primary cause of 1,014 deaths and a contributing factor to 24,326 deaths from heart disease and stroke. This means high blood pressure is responsible for at least 27% of all deaths in North Carolina each year. High blood pressure also led to 40,481 hospital admissions in North Carolina in 2018. Cone Health is a not-for-profit healthcare network serving people in Alamance, Forsyth, Guilford, Randolph, Rockingham, and surrounding counties. Guilford County is the most populous, with a total population of 537,174 and a racial mix of 34.38% black/African American, 49.39% White/Caucasian, 8.41% Hispanic/Latino, and 5.27% Asian. Unfortunately, hypertension control has not been optimally achieved in the non-Hispanic Black population at Cone Health. This is reflected in our internal data, which shows a 9% gap in

blood pressure control among the non-Hispanic Black population compared to others. This situation prompted a systemwide focus on reducing disparities in hypertension control among Black and African American patients.

To achieve equitable outcomes, it is essential that we understand the factors that advance health equity. It is well documented that social determinants of health influence a patient's ability to realize their full health and wellness and are associated with a high burden of hypertension-related complications. Historical discriminatory policies and structural racism have contributed to disparities in socioeconomic status, healthcare access, education, food security, housing stability, and environmental factors, which in turn affect health outcomes. We focused a significant part of our team-based treatment plan on optimizing medical therapy and identifying and addressing unmet health-related social needs, aiming to expand access, improve health literacy, and remove systemic barriers to care. By launching a data-informed initiative —a team-based care model for hypertension management — Cone Health seized the opportunity to address both clinical outcomes and the social contexts that influence them. This initiative demonstrates how closing equity gaps can lead to measurable improvements in health and strengthen trust within historically underserved communities.

Explain what factors you identified as the causes of the disparity and possible targets for your intervention to reduce the disparity. Specifically, describe the analysis of the causes of the disparity within the healthcare organization or in the community that you identified through literature review or, optimally, through an analysis of your healthcare organization data or data about the community you serve.

Multiple root causes were identified as contributors to disparities in hypertension control among Black and African American patients. The primary barriers to medication adherence included lack of refills (26%), cost (24%), forgetfulness (20%), and limited transportation (19%). These factors are worsened by social and structural inequities such as low income, chronic stress, limited health literacy, and living in medically underserved areas. Cone Health's analysis revealed system-level issues, including fragmented pharmacy services, a lack of auto-refill options, and inconsistent follow-up. Patients also reported confusion about their diagnosis or treatment plan, highlighting gaps in clinician-patient communication and health literacy and education.

Based on these insights, the multidisciplinary team developed targeted interventions:

1. Pharmacy optimization: Refill synchronization, proactive reminders, and extended hours in underserved areas. 2. Culturally responsive education: Health coaching tailored to patients' language, beliefs, and literacy levels. 3. Transportation solutions: Ride-share programs and transit vouchers to improve appointment attendance. 4. Cost assistance: Access to discount programs, formulary alignment, and nonprofit pharmacy partnerships. 5. Memory and adherence support: Reminder apps, blister packs, and caregiver involvement. 6. Evidence-based algorithm for medication optimization. This multifaceted approach was driven by community health needs assessments and patient surveys, ensuring that solutions were evidence-based and informed by patients.

Tackling these root causes required coordinated action across all clinical care teams.

Describe team and stakeholder engagement throughout the initiative.

A multidisciplinary team comprising pharmacists, physicians, advanced practice practitioners, nurses, social workers, and community health workers collaborated to guide the initiative from assessment through implementation. Patients were surveyed to understand the barriers to adherence, and navigators provided personalized support. Community partners, including nonprofit pharmacies, public transit agencies, and local health departments, helped co-design solutions. A patient advisory council reviewed materials for cultural

relevance. Clinical leadership supported alignment with organizational priorities and approved enhancements to the EHR. Engagement was sustained through monthly team huddles, quarterly stakeholder updates, and biannual community forums, enabling timely refinements based on real-time feedback.

Describe the interventions and how they were implemented. Specifically, describe the improvement methodology and tools used, strategy adjustments, evidence-based best practices employed, change management strategy.

A multidisciplinary team-based population health initiative was launched to reduce hypertension disparities. The care integration involved primary care teams that referred patients with uncontrolled hypertension to clinical pharmacists for medication review, chronic disease education, and adherence support. Pharmacists also proactively identified patients via the EHR and conducted outreach using a structured telephonic model, which did not require video—eliminating digital access barriers. The mediation optimization was guided by a Hypertension subject matter expert from cardiology, who led the team in creating an evidence-based algorithm that was integrated into the electronic health records. Other EHR enhancements included hypertension care pathways and alerts to capture repeat BP readings after elevated measurements.

This collaborative intervention also incorporated quality improvement principles, including patient stratification, closed-loop communication, and data tracking of blood pressure trends and medication fill rates. Pharmacists followed the ACC/AHA guidelines to titrate therapy, monitor for adverse effects, and provide counseling on lifestyle changes.

All team members were encouraged to assess social determinants of health and refer patients to support services. Those facing affordability challenges were linked to savings programs or assisted with formulary optimization. Adherence tools—such as reminder apps, pill organizers, and text alerts—helped maintain consistency. Access to home blood pressure monitors was facilitated through clinical and pharmacy channels. During this intervention, the system invested in a behavior nudging tool that identified patients and interacted with them through messaging, providing reminders for follow-ups and education on high blood pressure. Care plans were personalized and included frequent follow-ups (every 2–4 weeks), with intervals extended once control was achieved. Importantly, pharmacist visits were not billed, reducing patient cost barriers. Synchronization of medication labs and appointments helped address transportation gaps.

Change management strategies included team alignment, standardized workflows, cross-training, and regular leadership engagement. These practices enabled the rapid spread of the model across additional care sites, strengthening its scalability and sustainability. The initiative demonstrated a replicable, sustainable, multidisciplinary, team-based approach for optimized care.

Describe measurable improvement(s) achieved for the targeted disparity. Support this section with data here and in the supplemental upload document; illustrate improvements in processes of care, health outcomes, and/or experience of care (i.e., results tables, statistical tests, run charts, and other quantitative methods). Compare the data post-intervention(s) to the data used to establish the baseline and illustrate improvement.

From Nov 1, 2023, to Apr 30, 2024, five pharmacists conducted 352 virtual hypertension visits with 138 patients (83.3% Black/African American). Most patients had diabetes (58%), screened Medium/High Risk for SDOH (82.6%), and lived in High/Medium-High SVI areas (83%). At baseline, only 7.2% had controlled blood pressure (<140/90 mmHg), which improved to 64.5% at follow-up (OR 27.3, 95% CI 9.0–135.2, $p < 0.001$). Among Black patients (n = 115), the control rate rose from 5.2% to 63.5%. Mean blood pressure dropped by –15.6/–6.1 mmHg.

In high SDOH risk patients, BP control improved from 8.8% to 69.2%, and BP declined by –16.8/–7.2 mmHg. In high SVI areas, control rose from 5.4% to 66.1% (–17.4/–7.2 mmHg). Adherence barriers were identified in 64.5% of patients: lack of refills (26.1%), cost (24.6%), forgetfulness (20.3%), and access (18.8%). Despite only 15.9% requiring new antihypertensives, 75.3% showed improvement through enhanced adherence to their current regimens. Pharmacists closely collaborated with providers; 95% did not use independent prescribing authority. Seventy-two percent had home BP devices, most upper-arm monitors. Slight increases were observed in the use of thiazide diuretics, angiotensin receptor blockers (ARBs), and potassium-sparing agents. Adverse effects remained low (27.5%). Referral sources were provider-driven (58%) or system-generated reports (42%). Eighteen percent of patients were lost to follow-up after the first contact.

This model delivered measurable improvements in hypertension control, particularly among medically underserved racial and ethnic populations, and supports an effective and scalable framework for pharmacist-led chronic disease care in equity-focused environments.

Describe whether the improvements achieved were sustained and any processes implemented to monitor and ensure that the improvement will be sustained in the future. Include the most recent available data.

The initiative resulted in sustained improvements in hypertension management and increased access to medication. Within 12 months, the number of patients reporting refill access issues decreased from 26% to 10%, and the proportion of cost-related nonadherence dropped from 24% to 8%. Forgetfulness also declined with the expanded use of reminder tools and personalized follow-up.

To ensure sustainability, Cone Health embedded several monitoring systems:

1. Dashboards: Real-time tracking of prescription refill rates, missed appointments, and reported barriers.
2. EHR Alerts: Trigger follow-ups for high-risk patients with adherence concerns.
3. Quarterly Reviews: Conducted by care coordination teams to identify trends and adjust outreach strategies.
4. Ongoing Training: Staff receive regular updates on communication best practices, SDOH screening, and adherence support in all ambulatory settings.
5. Patient Voice: Continuous feedback is gathered through surveys, focus groups, and storyboards to refine processes.
6. Lirio – behavior nudging software

As of Q4 2024, system-wide refill adherence had increased by over 15%, and 82% of surveyed patients reported no current barriers to accessing their medication. Clinics using the intervention model experienced fewer medication-related emergency department (ED) visits and improved appointment adherence. These results are grounded in routine clinical workflows, data-informed decision-making, and Cone Health's broader $150 million commitment to health equity strategy. Embedding sustainability into infrastructure and staffing ensures the improvements continue beyond the initial implementation phase.

Describe how the interventions/solutions were (or could be) replicated (implemented/disseminated) by other parts of your organization or other facilities.

From the beginning, a team-based approach and scalability were core design elements. Following a successful pilot, the model was expanded to ambulatory care clinics serving demographically diverse populations. Key tools were uploaded to a shared resource portal, including referral workflows, patient outreach scripts, adherence screening templates, and cost assistance guides. Medication adherence screening was integrated into the EHR intake workflow across locations. New sites underwent onboarding through virtual learning sessions and a train-the-trainer model to support staff adoption. Monthly cross-site learning collaboratives facilitated shared learning

and iterative improvements. Our system leaders prioritized expanding to rural and high-disparity clinics. External partners, including local health departments and FQHCs, expressed interest in adapting the model, demonstrating its broader applicability and potential for community-wide dissemination.

Describe innovative aspects of the work including principles that are applicable to other disparities and/or any lessons learned that may be beneficial to other organizations. Describe the lessons your team learned, and the tools, strategies, and methodologies that other organizations could adapt and adopt to achieve similar results.

This initiative demonstrated the power of multidisciplinary team-based care in improving blood pressure control for high-risk populations. It is essential to note that for our target demographics, a critical care point was offering telephonic visits without requiring video, thereby making care more accessible for patients who lack internet access or suitable devices. The clinical team focuses on assessing and addressing unmet health-related social needs in real time and builds trust through repeated touchpoints. Appropriate patient-centered and shared decision-making communication, culturally responsive counseling, and tools like refill reminders and pill packs helped overcome adherence barriers. Risk stratification enabled targeted outreach. Lessons learned include the importance of flexible engagement in patient-centered care, the effectiveness of multidisciplinary team-based care collaboration, and the impact of integrating SDOH-informed care into chronic disease management. The approach is adaptable to other disparities and supports Cone Health's broader CATCH 5-in-5 initiatives, a System-wide strategic focus to advance health equity by making a $150M commitment to improving outcomes in medically underserved communities.

Table 1: Cone Health's Service Area Demographics:

Table 1: Demographic Characteristics - Alamance, Guilford, Rockingham and NC, 2021				
	Alamance	Guilford	Rockingham	NC
Total Population	169,509	537,174	91,010	10,488,084
% Under 18	22%	22.14%	20.12%	21.90%
% Over 65	17.10%	15.50%	20.87%	16.70%
% Black/African American	20.10%	34.38%	18.60%	21.36%
% Asian	1.75%	5.27%	0.60%	3.19%
% Hispanic or Latino	13.06%	8.41%	6.33%	9.78%
% White/Caucasian	62.93%	49.39%	72.15%	62.61%
Median Household Income	51, 580	55,820	44,686	57,388
Children eligible for Free/Reduced Lunch	56.30%	62.31%	60.31%	56.17%
Children In Poverty	22%	23%	26%	19%
Unemployment	3.8%	4.1%	4.4%	3.9%
High School Graduation	81.55%	88.76%	86%	86.27%
Some College	62%	71%	54%	67%
Homeownership	65.17%	58.77%	69.56%	65.21%
Severe Housing Problems	13%	13.78%	11.49%	12.78%
Residential Segregation Index *	40.50	48.25	29.73	50.07
% renters cost-burdened	48%	49%	45%	47%
Children in Single Parent Households	29%	34%	30%	28%
% Rural Residents	28.6%	12.7%	61.9%	33.9%
Long Commute; Driving Alone	33%	24%	39%	34%
* The residential segregation index ranges from 0 (complete integration) to 100 (complete segregation)				
Source: County Health Rankings and Roadmaps - www.countyhealthrankings.org				

Source: Census Data (CC-EST2019-ALLDATA-[ST-FIPS])

Table 2: Showing the Study Population Baseline Characteristics and Demographics

Characteristic	N=138
Mean age, y	59
Male sex, n (%)	73 (52.9)
Race, n (%)	
Black or African American	115 (83.3)
White	23 (16.7)
Insurance, n (%)	
Medicare	61 (44.2)
Medicaid	49 (35.5)
Commercial	45 (32.6)
Uninsured	10 (7.2)
Comorbidities, n (%)	
Diabetes	80 (58.0)
Atherosclerotic Cardiovascular Disease	39 (28.3)
Chronic Kidney Disease Stages 3-5	19 (13.8)
Heart Failure	19 (13.8)
Presence of a Medium or High-Risk SDOH Screening, n (%)	114 (82.6)
Transportation	10 (7.2)
Financial Resource Strain	44 (31.9)
Housing or Utilities	12 (8.7)
Food Insecurity	20 (14.5)
Alcohol	3 (2.2)
Tobacco	77 (55.8)
Social Connections	25 (18.1)
Stress or Depression	14 (10.1)
Physical Activity	51 (40.0)
Social Vulnerability Index, n (%)	
Low	15 (10.9)
Low-Medium	11 (8.0)
Medium-High	32 (23.2)
High	80 (60.0)

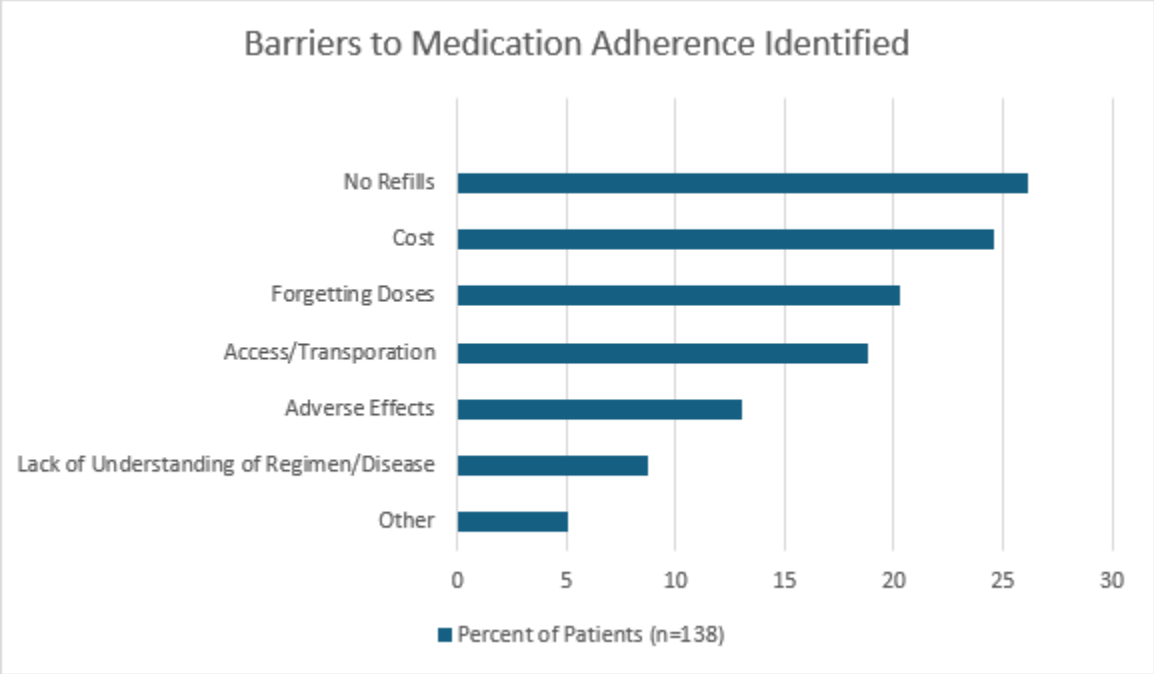
Table 3: Showing the Study Findings – Hypertension Control

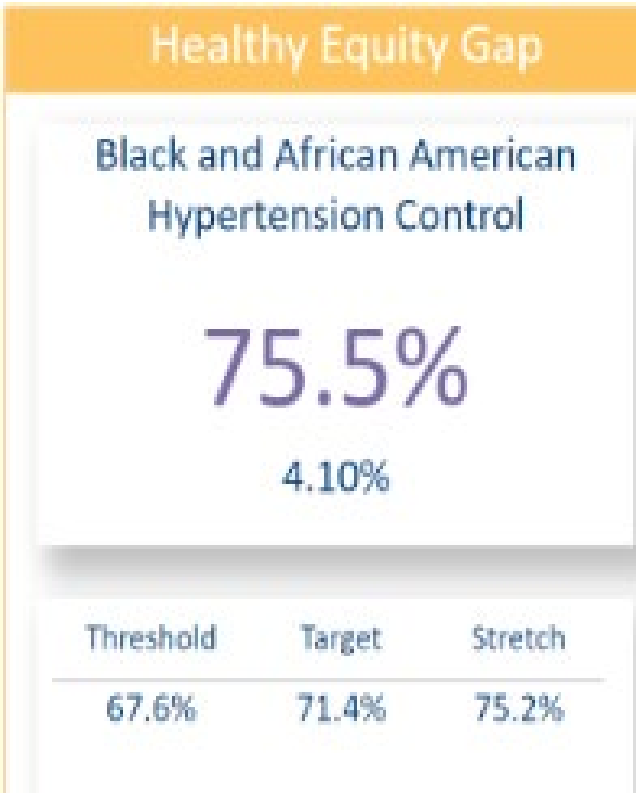
Outcome	Baseline	Follow Up	Change
Primary Outcome			
Blood Pressure <140/90 mm Hg, n (%) N=138	10 (7.2)	89 (64.5)	79 (57.3) OR 27.3, 95% CI 9.0 – 135.2, p <0.001
Secondary Outcomes			
Mean Systolic, mm Hg	154.3	135.7	-15.6
Mean Diastolic, mm Hg	85.3	79.2	-6.1
Blood Pressure <140/90 mm Hg, n (%) Black or African American, N=115	6 (5.2)	73 (63.5)	67 (58.3)

Table 3: Exploratory Outcomes

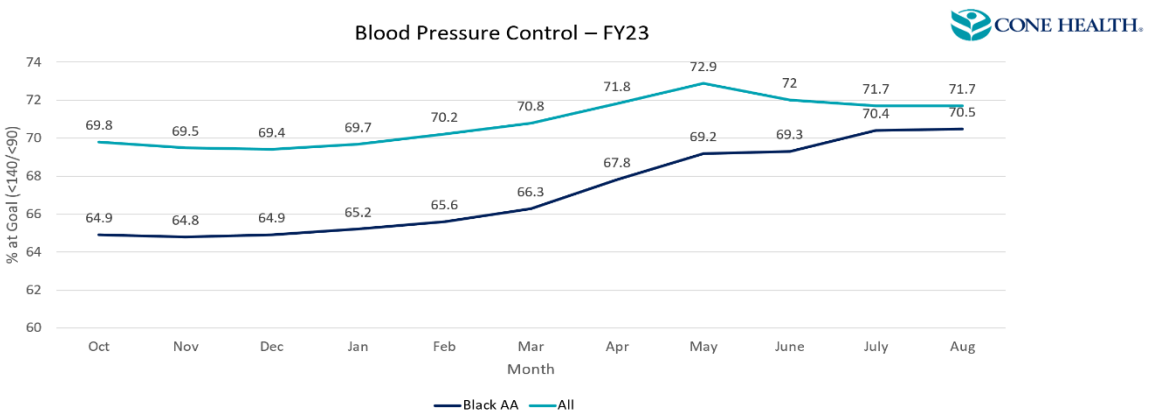
	Positive for Medium or High-Risk SDOH Screening (n=114)			**Negative for Medium or High-Risk SDOH Screening (n=24)**		
	Baseline	Follow Up	Change	Baseline	Follow Up	Change
Mean Diastolic BP, mm Hg	150.6	133.8	-16.8	154.4	144.3	-10.1
Mean Diastolic BP, mm Hg	85	77.8	-7.2	86.5	86	-0.5
	High or Medium-High SVI (n=112)			**Low or Low-Medium SVI (n=26)**		
Mean Diastolic BP, mm Hg	151.8	134.3	-17.4	148.3	141.5	-7.8
Mean Diastolic BP, mm Hg	85.9	78.8	-7.2	82.5	81.3	-1.1

Figure 1. Barriers to Medication Adherence



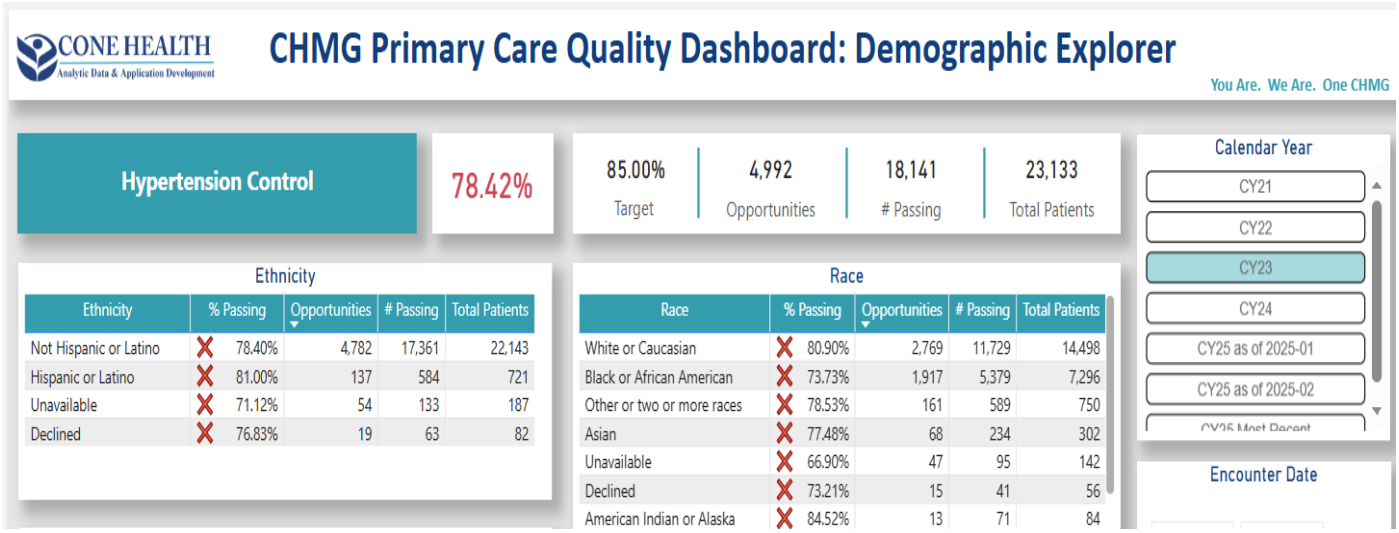


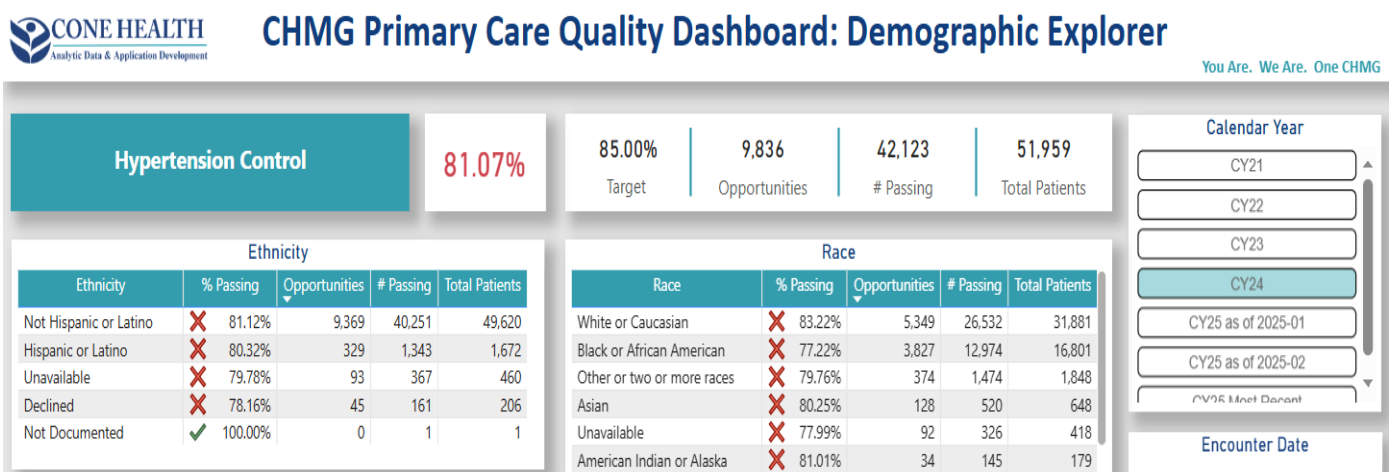
Cone Health TNM on Hypertension Control: 2023/24



Pop.	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Black & AA	64.9%	64.8%	64.9%	65.2%	65.6%	66.3%	67.8%	69.2%	69.3%	70.4%	70.5%
All Groups	69.8%	69.5%	69.4%	69.7%	70.2%	70.8%	71.8%	72.9%	72.0%	71.7%	71.7%
Equity Gap	4.9%	4.7%	4.5%	4.5%	4.5%	4.5%	4.1%	3.7%	2.7%	1.3%	1.2%

Dashboard showing the demographics and hypertension control for FY 23 and 24





Links to different community initiatives, announcements, publications, and the City Council's recognition of Cone Health's efforts in Health Equity.

Greensboro City Council Meeting 03/18/2025
Effort to Add 5 Years of Life Kicks off in Greensboro | Cone Health
Cone Health set to invest $150 million in East Greensboro, other medically underserved areas over five yearsCone Health set to invest $150 million in East Greensboro, other medically underserved areas over five years - Triad Business Journal
Cone Health to invest $150 million in underserved health - Business North Carolina
Lirio and Cone Health Launch AI-Driven Interventions for Chronic Conditions to Advance Public Health Outcomes