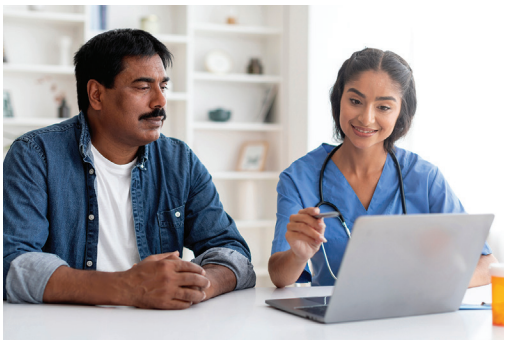


Care + Community + Equity: Executive Summary

Putting quality improvement into practice for diabetes and heart disease management and prevention

RHODE ISLAND DEPARTMENT OF HEALTH

Introduction:
What is Care + Community + Equity (CCE)?

Care + Community + Equity (CCE) is a quality improvement initiative of the Rhode Island Department of Health's (RIDOH) Diabetes, Heart Disease, and Stroke Program (RIDHDS). The initiative is rooted in the use of the Chronic Care Model, with an emphasis on the integration of clinical-community linkages to improve care and health outcomes for patients with, or at risk for, diabetes and heart disease.[1] For the past five years, the quality improvement work implemented by 16 practices has served 66,089 Rhode Islanders statewide.

Securing a partnership with the Care Transformation Collaborative of Rhode Island (CTC-RI) in 2017 has been critical to the success of CCE, helping not only to leverage and align efforts to transform chronic disease management efforts across the state, but to also provide data management and practice facilitation support to contracted CCE practices. RIDHDS particularly leveraged its partnership with CTC-RI in response to the COVID-19 pandemic for project management support. In 2021, a job description for a Quality Improvement Consultant (QIC) was written and posted by CTC-RI, and the focus of the position was to implement and oversee CCE and other quality improvement initiatives implemented by RIDHDS. Together, RIDHDS and CTC-RI are experienced at designing quality improvement initiative in response to federal funding, are successful in garnering interest and participation from practices who reach priority populations, and are adept at evaluating success through quality measurement and quality improvement strategies.[2,3]

Alongside a contract with CTC-RI, RIDHDS also leveraged a long-standing partnership with Advocates for Human Potential (AHP) for clinical quality measurement support. AHP has had a strong working relationship with RIDOH's chronic disease programs since 2015, providing subject matter expertise to transform the way primary care practices deliver services, using electronic health records (EHRs) and other eHealth technologies. To assist practices in meeting the performance deliverables of CCE, AHP has assessed EHR capacity and needs, overseen data and workflow integration, and established systems to utilize data for performance measurement and improvement efforts. Additionally, a partnership with the Rhode Island Health Center Association (RIHCA) was established to add an additional layer of technical assistance to CCE. Since 1972, RIHCA has maintained long-standing relationships with Rhode Island's Federally Qualified Health Centers (FQHCs) providing technical assistance and support for countless projects. For this reason, RIHCA was uniquely positioned to serve as the co-chair for CCE's quarterly best practice sharing meetings. Best practice sharing meetings offered an opportunity for participating CCE practices to share successes, discuss lessons learned, and review resources and tools that align with and support their quality improvement efforts. In collaboration with RIDHDS, RIHCA helped to craft best practice sharing meeting agendas, facilitate discussions, solicit practice feedback and needs, and compile and disseminate tools and resources via email or program webpage.

History and Background

RIDOH has been a national leader in healthcare system transformation since 1998 with the creation of the Rhode Island Chronic Care Collaborative (RICCC), Rhode Island's first patient-centered medical home (PCMH) initiative. The initiative began through a partnership with RIDOH's Diabetes Prevention and Control Program and one FQHC. Soon, it evolved into a larger, in-state collaborative with 10 community health centers and one hospital-based practice. With funding from the Robert Wood Johnson Foundation's (RWJF) Improving Chronic Illness Care grant, the RICCC sought to improve diabetes care using the Model of Improvement and the Chronic Care Model (CCM), the first comprehensive model of care to advocate for evidence-based healthcare system changes to meet the needs of increasing numbers of people who have chronic disease.

The CCM was developed to provide patients with self-management skills, and tracking systems and represents a well-rounded approach to restructuring medical care through partnerships between health systems and communities.[4,5] The RICCC continued to evolve under the influence of federal funding awards (i.e., CDC cooperative agreements for chronic care and disease management) and statewide health system transformation efforts, such as the convening of the CTC-RI in 2008, State Innovation Model (SIM) funding awarded to Rhode Island in 2014, and Reinventing Medicaid in 2016. These efforts have shaped what is now Care + Community + Equity, an initiative rooted in the CCM to improve care and health outcomes for patients with, or at risk for, diabetes and heart disease.

1998
The RICCC, RI's first PCMH initiative, is formed in partnership with RIDOH's Diabetes Prevention & Control Program and one FQHC

2002
RICCC expands to an in-state collaborative with RWJF funding support

2008
CTC-RI is convened by the RI Office of the Health Insurance Commissioner (OHIC) and the RI Executive Office of Health and Human Services (EOHHS) Medicaid Program to create the state's only multi-payer PCMH initiative

2013
RIDOH is awarded CDC DP13-1305 funds, creating RICCC "Enhanced" to improve "upstream" factors related to chronic disease management and prevention (e.g., undiagnosed hypertension and prediabetes screening)

2014
RIDOH is awarded CDC DP14-1422 funds, creating the first version of Care+Community+Equity, which brought on FQHCs and primary care practices within RI Health Equity Zones

2015
SIM funding awarded to RI by the Centers for Medicare and Medicaid Services (CMS)

2015
RI passed the Reinventing Medicaid Act of 2015

2016
RI Executive Office of Health and Human Services (EOHHS) begins to implement its Accountable Entity (AE) Program through its contracted Medicaid Managed Care Organizations (MCOs)

2018
Care+Community+Equity is redesigned in response to new CDC funding awards (CDC DP18-1815 and CDC DP18-1817) for diabetes and cardiovascular disease

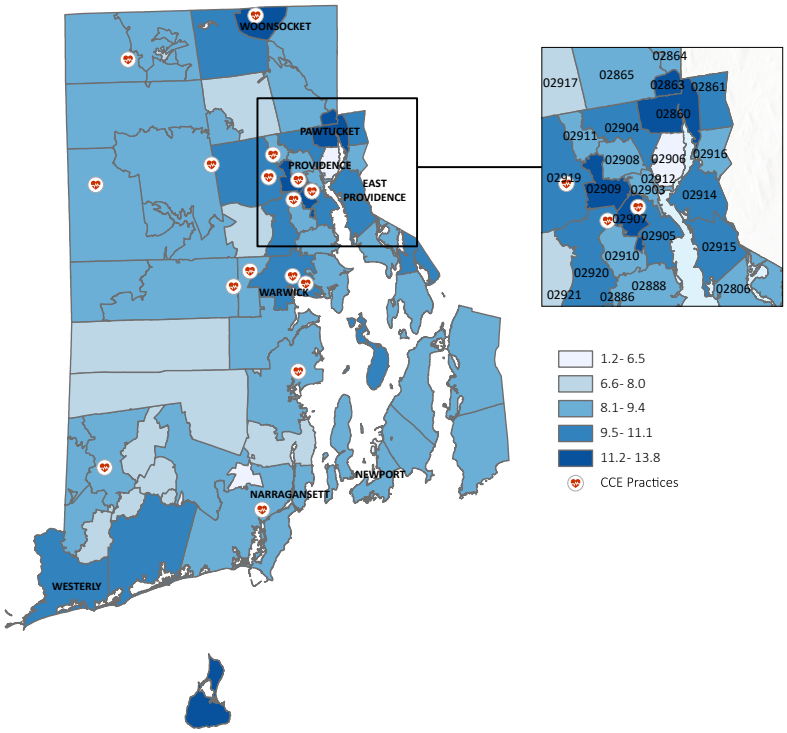
2019
Implementation of Care+Community+Equity begins with participation from six FQHCs and two free clinics, continuing decades of work to improve care and outcomes through use of the chronic care model

Problem Statement and Prevalence Maps

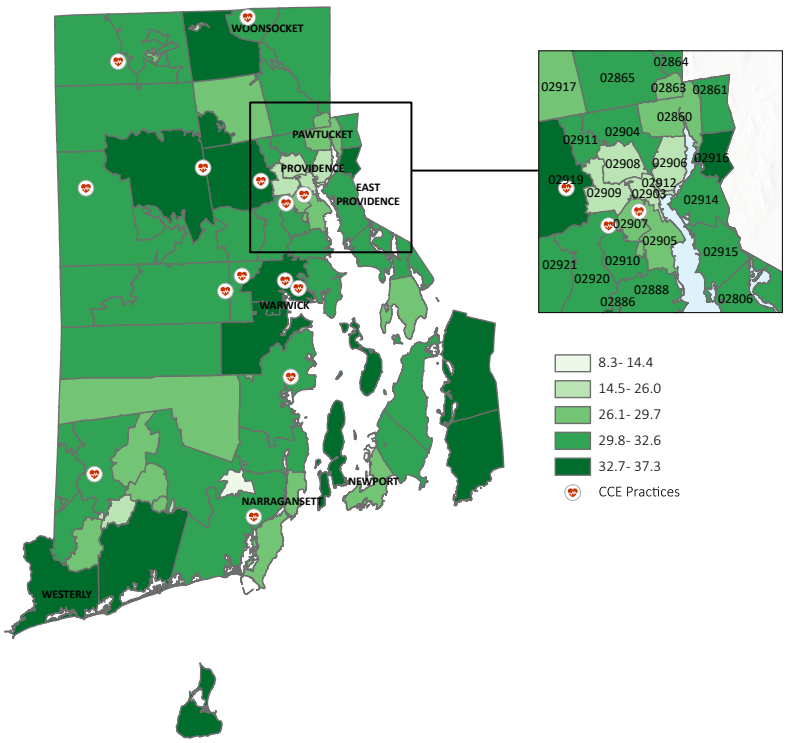
In Rhode Island, more than half of the adult population (59.6%) has reported having at least one chronic disease, including diabetes and heart disease, and more than one in four adults (28.8%) reported having at least two.[6] Diabetes has steadily increased in the past few decades and is affecting a growing proportion of Rhode Island's adult population. The prevalence of diabetes has risen to 10.4% in 2021, compared to 6.0% in 2000, and it is the eighth leading cause of death in Rhode Island.[6,7,8] Nationally, the prevalence of diagnosed diabetes is 10.9%.[9] Hypertension and high cholesterol are primary risk factors for heart disease, the leading cause of death, and are also highly prevalent in Rhode Island.[8] Hypertension and high cholesterol rates have fluctuated slightly through the years; however, they continue to hover around 30.4%-33.9% without signs of declining.[6] Since 2000, the prevalence of hypertension and high cholesterol have increased from 22.9% to 32.9% and 28.6% to 33.9% in Rhode Island, respectively.[6,7] Nationally, the prevalence of hypertension is 32.4% and high cholesterol is 35.7%.[9] As a result of the increase in chronic disease, the total claims paid for diabetes, hypertension, and high cholesterol care have soared to a reported $517 million, $540 million, and $645 million in 2020, respectively.[10] The prevention and management of diabetes, hypertension, and high cholesterol are crucial to improve the health and well-being of Rhode Islanders and reduce the risk of other complications, such as chronic kidney disease, heart disease, Alzheimer's disease and other dementias.

The below maps show the prevalence of diabetes, hypertension, and cholesterol in Rhode Island. CDC PLACES 2022 data was used to depict crude prevalence of chronic conditions among Rhode Island adults by ZIP code tabulation areas (ZCTA).[11] The CCE practices data reflect practice location, though practice sites likely serve patients who reside outside of the practice's ZCTA.

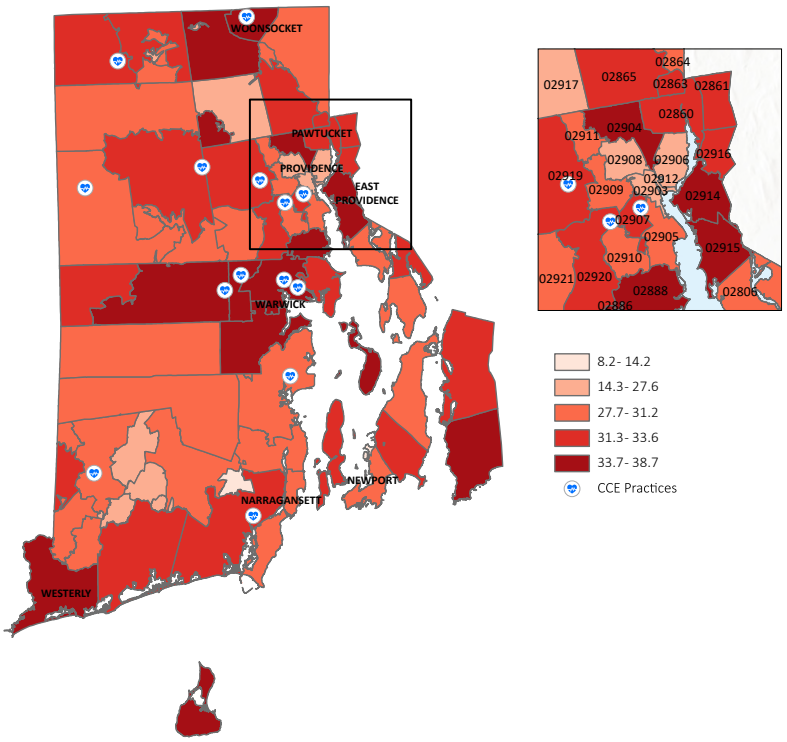
Prevalence of Diagnosed Diabetes



Prevalence of Diagnosed High Cholesterol



Prevalence of Diagnosed Hypertension



Care + Community + Equity (2019 – 2023)

Quality Improvement Focus Areas

The quality improvement efforts of CCE are focused on three topic areas:

1. Diabetes control and prevention
2. Cardiovascular disease management and prevention
3. Self–measurement of blood pressure

Participating practices committed to one or more topic areas and completed the core and incentive deliverables required of each topic area, including quarterly clinical quality measure reporting, best practice sharing meetings, and implementation of a quality improvement plan. Each year, practice facilitators, who are quality improvement specialists, work with practices to identify areas of improvement and develop a quality improvement plan that includes specific, measurable, achievable, relevant, and time-bound (SMART) goals.

The framework of CCE gave practices the freedom to design their own quality improvement plan specific to their CCE focus area(s), practice needs, and priority populations. As such, CCE practices addressed and implemented quality improvement in a variety of ways. For instance, two CCE practice sites had limited resources to accurately and consistently extract data from their EHRs. CCE consultants provided much needed technical assistance, helping each practice utilize their EHR data to identify gaps in care and to develop workflows that monitor patient health needs and outcomes. In contrast, another practice site identified and promoted the use of a 90-day prescription supply to increase patient medication adherence after they discovered many of their patients face transportation issues: a barrier to obtaining their medications. Other quality improvement projects incorporated the following:

- Expanded use of telehealth technology (e.g., smart apps, text messaging) to manage hypertension (HTN) and high cholesterol;
- Reviewed clinical quality measures during pre-visit planning;
- Used a diagnosis code for prediabetes screening and identification, and referring identified patients to evidence-based-lifestyle change programs (i.e., Ready for Health Brochure (ri.gov)) and services (i.e., diabetes self-management education and support (DSMES));
- Expanded use of non-provider team members to improve diabetes, blood pressure, and cholesterol management;
- Screened and identified patients without health insurance and provided education on the 340B program to address prescription medication affordability; and
- Promoted eye exams for people with diabetes.

Overview of Participating Practices

Practices participating in CCE offer care to approximately 70,000 patients across Rhode Island, while serving communities with the greatest need. As shown in the table below, most CCE practices committed to all three focus areas of the quality improvement initiative.

Practice Website	Diabetes/ prediabetes	CVD	SMBP
Comprehensive Community Action Program & Health Services | CCAP	X	X	X
Clínica Esperanza / Hope Clinic	X	X	X
Providence Community Health Centers*	X	X	X
Rhode Island Free Clinic	X	X	
Tri-County Health Center	X	X	X
Thundermist Health Center	X	X	X
WellOne Primary Medical & Dental Care		X	
Wood River Health Services	X	X	

*First year participant only; Did not participate in Years 2-4.

Description of required core deliverables

Monthly practice facilitation: Attend quarterly meetings with assigned practice facilitator. Practice facilitators are specially trained individuals who work with primary care practices to make meaningful changes designed to improve patients' outcomes. For CCE, the practice facilitators worked with practices to identify areas of improvement and develop a quality improvement plan that includes specific, measurable, achievable, relevant, and time-bound (SMART) goals. Progress was continuously evaluated through Plan-Do-Study-Act cycles.

Measure reporting and stratification: Submit clinical quality measure data quarterly to the CCE Portal and pilot the stratification of standardized clinical quality measures by race, ethnicity, or other demographics identified by the practice (e.g., gender, poverty level, age range). In the absence of standardized clinical quality measures for prediabetes, undiagnosed hypertension, and SMBP engagement, measure definitions were created for CCE. See Table 1.

Team-based care: Utilize a multi-disciplinary, team-based care approach to address diabetes and cardiovascular disease management and prevention.

Quality improvement (QI) projects: Identify an issue or gap in care specific to diabetes and/or cardiovascular disease. Implement continuous and ongoing efforts to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the priority population.

Best practice sharing: Attend quarterly best practice sharing meetings to share lessons learned, successes, and resources with fellow CCE practices.

Referrals to evidence-based lifestyle change programs: Refer patients to the Community Health Network (CHN), Rhode Island's centralized referral system for evidence-based lifestyle change programs. Programs support people with chronic conditions and health concerns including, but not limited to, arthritis, Alzheimer's disease and dementia, prediabetes, diabetes, heart disease, asthma, tobacco use, and chronic pain. CHN Patient Navigators, who are bilingual and certified community health workers (CCHWs), receive provider referrals and guide patients in locating a program that is most appropriate for managing their chronic conditions. The programs are free or low cost, held in convenient locations throughout Rhode Island, and offered in multiple modalities (e.g., English, Spanish, virtual, in-person).

Community care linkages: Outreach to Rhode Island Health Equity Zones (HEZ) to establish community-clinical linkage(s) for the prevention and management of diabetes and/or cardiovascular disease. Examples include incorporation of HEZ partners into the clinic's CCE quality improvement plan or comparing community needs assessments to better address social determinants of health needs of priority populations.

Table 1: *CCE Clinical Quality Measure Definitions*

Diabetes in Poor Control (CMS 122v10: HbA1c greater than 9 or missing	Percentage of patients, age 18-75, with diabetes who had hemoglobin A1c > 9.0% or missing during the measurement period
Prediabetes screening rates*	Percentage of patients age 21 or older who have risk factors for diabetes, who were seen for at least two office visits or one preventive visit in the 12-month measurement period and were screened or have documented previous results for abnormal blood glucose at least once in the last three years (Diagnosis code R73.03)
Hypertension in Control (CMS 165v10): (less than 140/90mmHg	Patients age 18-85 who had a diagnosis of essential hypertension starting before and continuing into, or starting during the first six months of the measurement period, and whose most recent blood pressure was adequately controlled (<140/90mmHg) during the measurement period
Statin therapy for the Prevention and Treatment of Cardiovascular Disease (CMS 347v5)	Percentage of the following patients considered at high risk of cardiovascular events who were prescribed, or were on, statin therapy during the measurement period: *All patients who were previously diagnosed with, or currently have, an active diagnosis of clinical atherosclerotic cardiovascular disease (ASCVD) including an ASCVD procedure *Patients 20 or older who have ever had low-density lipoprotein cholesterol (LDL-C) level >= 190 mg/dL or were previously diagnosed with, or currently have, an active diagnosis of familial hypercholesterolemia *Patients age 40-75 with a diagnosis of diabetes
Elevated Blood Pressure without Hypertension diagnosis*	Number of patients who do not have a diagnosis of hypertension with two or more blood pressure readings > 140 mmHg SBP and/or >90 mmHg DBP
Engagement in the Self Management of Blood Pressure program*	Percent of patients with a diagnosis of hypertension who were advised by their provider to Self-Measure Blood Pressure (SMBP) and who have submitted their blood pressure readings to their provider at least once during the measurement period

*Measure and its definition was created by RIDHDS and their partners in the absence of a standardized clinical quality measure

Incentive Deliverables

Incentive deliverables are another component of CCE. Unlike the required, "core" deliverables, CCE practices were instructed to choose three incentives from a menu of deliverables and were incentivized accordingly if incentive was completed or achieved by the end of the program year. Below is the list of incentives offered across all three CCE focus areas:

- Hypertension in Control (CMS 165v10) is at or above 65%;
- HbA1C in Control (CMS 122v10) is at or below 30%;
- Statin Therapy for the Prevention and Treatment of CVD (CMS 347v5) is at or above 70%;
- Stratify standardized clinical quality measures by race, ethnicity, or other demographics (e.g., gender, poverty level, age range) identified by the practice and implement an additional quality improvement plan (with SMART goals) to address a disparity or gap in care.
- Register and complete the American Heart Association's (AHA) quality improvement initiatives for hypertension control (Target: BP), cholesterol management (Check. Change. Control. Cholesterol), and/or diabetes management (Target: Type 2 Diabetes).
- Register to become an American Diabetes Association (ADA)/American Association of Diabetes Educators (AADE)-recognized site and provide DSMES services to patients..
- Register to become a Diabetes Prevention Recognized Program (DPRP) and start at least one Ready for Health cohort within six months of submitting the application.
- Refer at least 75 patients with chronic disease to evidence-based lifestyle change programs available through the CHN.
- Present on successes and lessons learned of a CCE quality improvement project during a quarterly best practice sharing meeting.
- Demonstrate improved blood pressure control by at least 10% among SMBP program participants.
- Apply and earn Hypertension Control Champion recognition by Million Hearts®, achieving 80% control rates among hypertensive patients.
- Register practice CCHW(s) to attend and receive the Specialty training and/or endorsement in Cardiovascular Health & Diabetes.
- Demonstrate use of RIDOH's RIghtMoves Provider Toolkit to promote physical activity and enhance provider-to-patient physical activity counseling; and
- Demonstrate creation and use of a clinical policy that supports tobacco screening and cessation among patients who are at risk for cardiovascular disease.

Benefits for Participating Practices

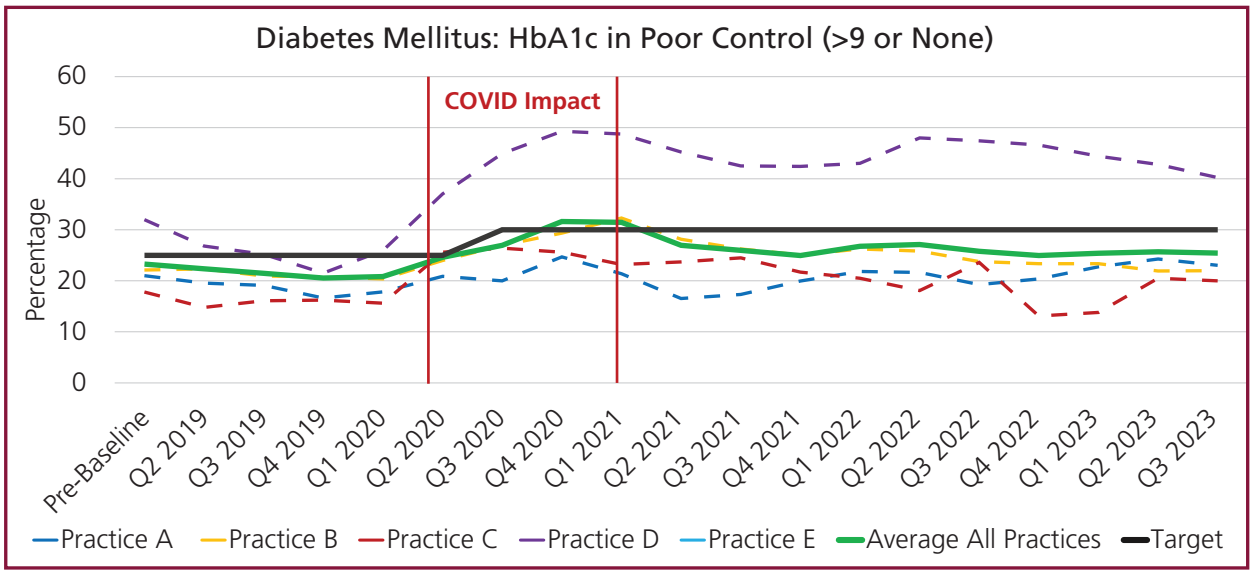
There were a multitude of benefits for participation in CCE. In addition to a variety of technical support and consultant services, funding for staff time to complete the "core" and "incentive" deliverables was also provided. Overall, participating practices benefited from the network CCE created for diabetes and cardiovascular disease prevention and management work. Quality improvement efforts were sustained through workflow changes and a foundation for clinical-community linkages was established.

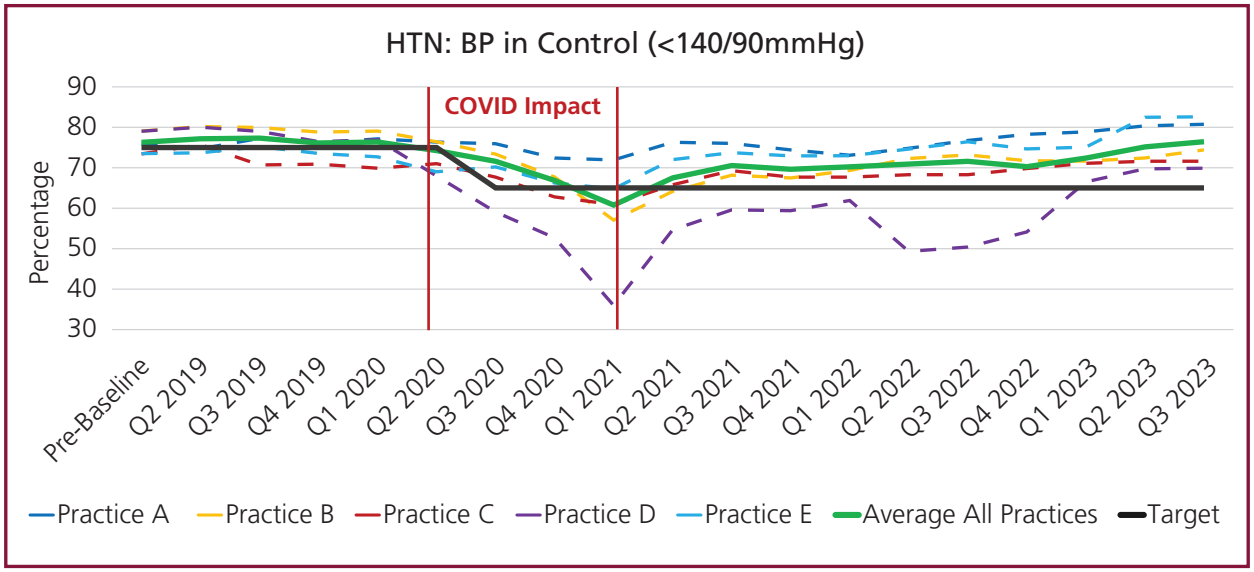
Barriers and Impact of COVID-19

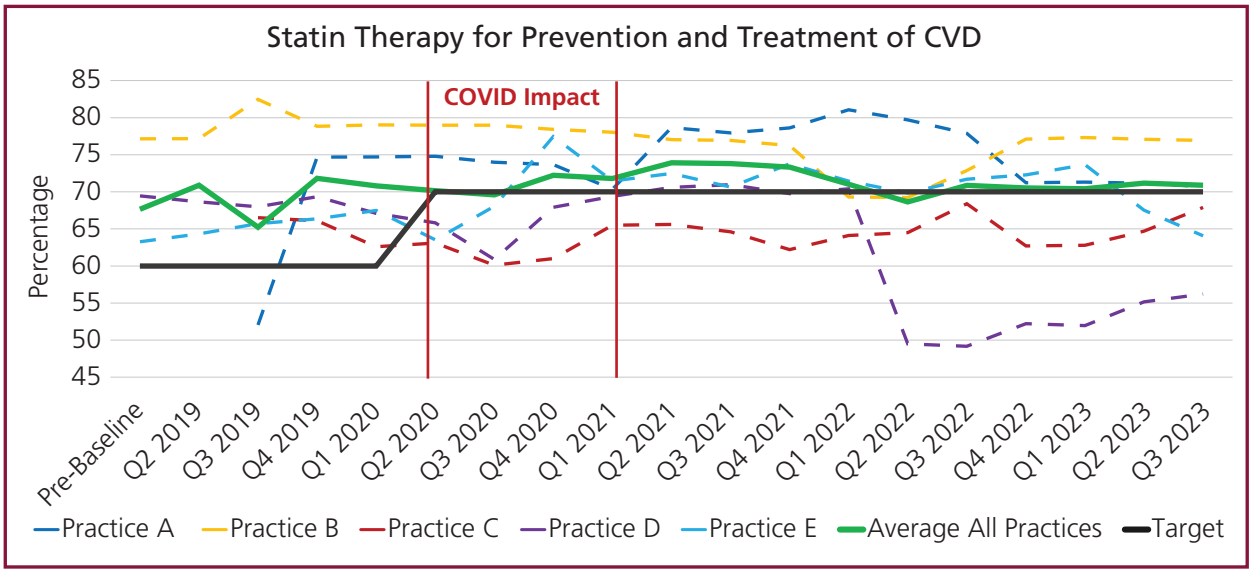
The COVID-19 pandemic continues to have a significant impact on healthcare. Although organizations made improvements in providing telehealth services, performance levels declined over time due to consequences of the pandemic, such as staff turnover and disruptions in primary care visits or preventive services. CCE encompasses a network of high-performing FQHCs and free clinics that demonstrate a commitment to ambulatory care with continued guidance and support from RIDHDS and their partner., FQHCs and free clinics gradually improved clinical quality measures over time - close to or at pre-pandemic rates. Although challenging during the height of the pandemic, practices continued the quality improvement projects required of CCE. Practices reported that belonging to CCE has helped them focus on deliverables that may have gone unmet due to the strains of COVID-19.

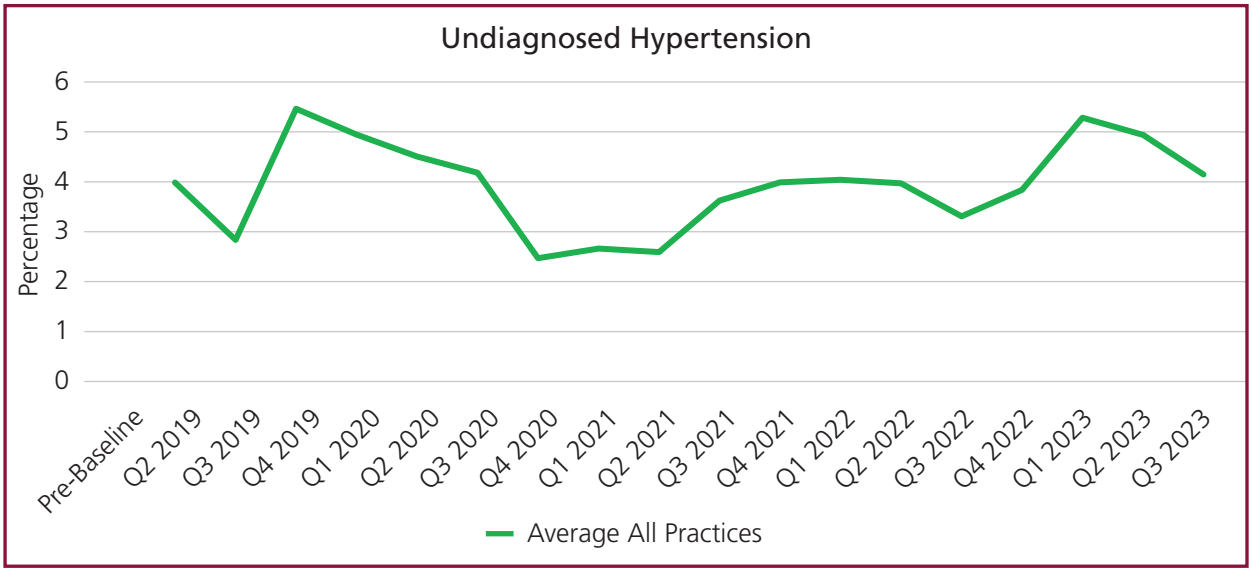
Quarterly Data with Targets

The following graphs display clinical quality measure data from March 2019 through September 2023, specific to Diabetes in Poor Control, Hypertension in Control, Statin Therapy for the Prevention and Treatment of Cardiovascular Disease, and Elevated Blood Pressure without Hypertension Diagnosis. Refer to Table 1 for measure definitions. Most measures were reported based on a 12-month "lookback" period. Data was submitted quarterly to the CCE Portal, which also displayed targets that were set for each measure. During the height of the COVID-19 pandemic, targets were adjusted accordingly.


Diabetes Mellitus: HbA1c in Poor Control (>9 or None)
COVID Impact
Percentage
60
50
40
30
20
10
0
Pre-Baseline
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Q2 2021
Q3 2021
Q4 2021
Q1 2022
Q2 2022
Q3 2022
Q4 2022
Q1 2023
Q2 2023
Q3 2023
Practice A
Practice B
Practice C
Practice D
Practice E
Average All Practices
Target


HTN: BP in Control (<140/90mmHg)
COVID Impact
Percentage
90
80
70
60
50
40
30
Pre-Baseline
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Q2 2021
Q3 2021
Q4 2021
Q1 2022
Q2 2022
Q3 2022
Q4 2022
Q1 2023
Q2 2023
Q3 2023
Practice A
Practice B
Practice C
Practice D
Practice E
Average All Practices
Target


Statin Therapy for Prevention and Treatment of CVD
COVID Impact
Percentage
85
80
75
70
65
60
55
50
45
Pre-Baseline
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Q2 2021
Q3 2021
Q4 2021
Q1 2022
Q2 2022
Q3 2022
Q4 2022
Q1 2023
Q2 2023
Q3 2023
Practice A
Practice B
Practice C
Practice D
Practice E
Average All Practices
Target


Undiagnosed Hypertension
Percentage
6
5
4
3
2
1
0
Pre-Baseline
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Q2 2021
Q3 2021
Q4 2021
Q1 2022
Q2 2022
Q3 2022
Q4 2022
Q1 2023
Q2 2023
Q3 2023
Average All Practices

Where We Go From Here

Implementation of CCE demonstrated RIDHDS's commitment to health equity and primary care quality improvement for diabetes and cardiovascular disease management and prevention. RIDHDS was awarded two CDC cooperative agreements in May 2023, both of which continue the Program's quality improvement efforts for an additional five years. In response to the CDC cooperative agreement notice of funding opportunities (NOFO), RIDHDS will design, implement, and evaluate learning collaboratives to:

- Increase diabetic retinopathy screening in priority populations with diabetes;
- Improve early detection of chronic kidney disease (CKD) in priority populations with diabetes;
- Advance the adoption and use of EHRs or health information technology (HIT), to identify, track, and monitor measures for clinical and social services and support needs to address healthcare disparities and health outcomes for patients at highest risk of cardiovascular disease (CVD) with a focus on hypertension and high cholesterol;
- Promote the use of standardized processes or tools to identify the social services and support needs of patient populations at highest risk of CVD, with a focus on hypertension and high cholesterol, and monitor and assess the referral and utilization of those services, such as food assistance, transportation, housing, childcare, etc.;
- Advance the use of health information systems that support team-based care to monitor population health with a focus on health disparities, hypertension, and high cholesterol;
- Assemble or create multidisciplinary teams (e.g., nurses, nurse practitioners, pharmacists, nutritionists, physical therapists, social workers, and community-based workers) to identify patients' social services and support needs and to improve the management and treatment of hypertension and high cholesterol;
- Build and manage a coordinated network of multi-disciplinary partnerships that address identified barriers to social services and support needs (e.g., childcare, transportation, language translation, food assistance, and housing) within populations at highest risk of CVD;
- Create and enhance community-clinical links to identify social determinants of health (e.g., inferior housing, lack of transportation, inadequate access to care, and limited community resources) and respond to the social services and support needs of populations at highest risk of CVD with a focus on hypertension and high cholesterol;
- Identify and deploy dedicated community health workers (CHWs) (or their equivalents) to provide a continuum of care and services which extend the benefits of clinical interventions and address social services and support needs leading to optimal health outcomes; and
- Promote use of self-measured blood pressure monitoring (SMBP) with clinical support within populations at highest risk of hypertension.

References

[1] Kaiser Permanente, Center for Accelerating Care Transformation (ACT). The chronic care model. ACT Center. 2002. https://www.act-center.org/application/files/1616/3511/6445/Model_Chronic_Care.pdf

[2] Centers for Disease Control and Prevention. State, local, and national partner diabetes programs: DP18-1815, Improving the Health of Americans Through Prevention and Management of Diabetes, Heart Disease, and Stroke. Reviewed December 9, 2022. https://www.cdc.gov/diabetes/programs/stateandlocal/funded-programs/dp18-1815.html

[3] Centers for Disease Control and Prevention. State, local, and national partner diabetes programs: DP18-1817, Innovative State and Local Public Health Strategies to Prevent and Manage Diabetes, Heart Disease, and Stroke. Reviewed December 9, 2022. https://www.cdc.gov/diabetes/programs/stateandlocal/funded-programs/dp18-1817.html

[4] Wagner EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, Bonomi A. Improving chronic illness care: translating evidence into action. Health Aff (Millwood) 2001;20(6):64–78. CrossRef PubMed 4.

[5] Wagner EH, Davis C, Schaefer J, Von Korff M, Austin B. A survey of leading chronic disease management programs: are they consistent with the literature? Manag Care Q 1999;7(3):56–66. PubMed

[6] State of Rhode Island, Department of Health. Rhode Island Behavioral Risk Factor Surveillance System, 2021. Rhode Island Department of Health.

[7] United Health Foundation. America's health rankings: annual report data on state-by-state health performance, past editions, 2000. America's Health Rankings. https://www.americashealthrankings.org/explore/annual/state/RI

[8] Centers for Disease Control and Prevention, National Center for Health Statistics. Rhode Island. Reviewed February 24, 2023. https://www.cdc.gov/nchs/pressroom/states/rhodeisland/ri.htm

[9] United Health Foundation, America's Health Rankings. Health Measures. https://www.americashealthrankings.org/explore/measures

[10] State of Rhode Island, HealthFacts RI. HealthFacts RI public reports: All-Payer Claims Data, 2016-2021. Rhode Island Executive Office of Health and Human Services, Department of Health, Office of the Health Insurance Commissioner, HealthSource RI.

[11] Centers for Disease Control and Prevention. PLACES: local data for better health. Accessed June 12, 2023. https://www.cdc.gov/places

3 Capitol Hill, Providence, RI 02908
Health Information Line: 401-222-5960 / RI Relay 711
www.health.ri.gov

OCTOBER 2023