



Advancing High Performance Health

Together2Goal.
AMGA Foundation

**Together 2 Goal®
Innovator Track
Eye Care Cohort
Case Study**

Coastal Carolina Health Care, P.A.

Organizational Profile

Coastal Carolina Health Care, P.A. (CCHC, cchchealthcare.com), is a multispecialty, physician-owned medical practice comprised of 60 providers, the majority of whom specialize in primary care. The practice—located in the southeastern United States in a rural part of North Carolina—has a primary service area of approximately 150,000 residents. The group was formed in 1998 by the merger of four medical practices. Today, the group has 16 clinical practice sites, a freestanding imaging center, ambulatory surgery center, urgent care, and accredited sleep and echo labs, all with a common integrated electronic health record (EHR). The group serves more than 40,000 patients. The group also operates its own accountable care organization (ACO), which it launched in 2012.

The mission of CCHC is to promote the health of patients by providing timely, high-quality, compassionate, affordable, and personalized health care. The vision is to become the preferred medical group in the area by consistently meeting the changing healthcare needs and expectations of the patients CCHC serves. CCHC core values include:

- **Quality:** Improving the patient experience, including quality and satisfaction
- **Patient-Centered Care:** Engaging patients in shared decision making to encourage active participation in their own care
- **Care Coordination:** Helping patients navigate the healthcare system by supporting collaboration and communication through the use of a common EHR across medical specialties
- **Innovation:** Leading healthcare innovation with an openness to adoption and adaptation of evolving technologies

Executive Summary

According to the 2020 National Diabetes Statistics Report from the Centers for Disease Control and Prevention (CDC), more than 34 million Americans have diabetes, with up to 95% of those having Type 2 diabetes.¹

Diabetes is the leading cause of new cases of blindness in adults, and diabetes-related blindness costs the United

States about \$500 million annually.² The American Diabetes Association (ADA) recommends that people with diabetes get an eye exam following their diagnosis and at regular intervals every one to two years following.³ Despite these recommendations, a significant portion of patients with diabetes are not meeting the recommended screening guidelines.⁴

AMGA convened the Together 2 Goal® (T2G) Innovator Track Eye Care Cohort (Eye Care Cohort) to address this problem by partnering with groups to explore ways to increase eye exam rates for people with diabetes.

CCHC elected to participate in the Eye Care Cohort due to the high prevalence of diabetes and diabetic complications in North Carolina. Diabetic retinopathy (DR) is the most common microvascular complication of diabetes and is the leading cause of new cases of blindness among working-age American individuals. By 2050, the prevalence of DR in patients with Type 1 and Type 2 diabetes who are age 40 and older is projected to increase to 16.0 million (from 5.5 million in 2005), and the prevalence of vision-threatening DR is projected to increase to 3.4 million (from 1.2 million in 2005). North Carolina has been identified as one of the nation's top 10 "diabetes hot spots," where the burden of diabetes will be greatest in the next 10 years. By 2025, the number of people with diabetes in North Carolina is projected to increase to almost 1.9 million, at a cost to the state of \$17.9 billion. In 2012, the prevalence of diabetes among individuals in North Carolina was 10.4%, which was higher than the national mean of 9.3%.⁵

During the Eye Care Cohort, CCHC developed and implemented several improvement interventions focused in the areas of provider and staff education, patient education, information technology, and clinical support.

CCHC started the Eye Care Cohort with a very high screening rate (82%), and the group aimed to achieve a 90% screening rate by the program's conclusion. However, Hurricane Florence hit North Carolina in September 2018, and its effects had a significant impact on CCHC and the community it serves, resulting in a slight decline in screening rates.

Despite the challenges the group faced, CCHC still deems the Eye Care Cohort a success and found that the improvement intervention process helped determine the best strategies to

engage patients and clinicians. For example, CCHC learned that point-of-care tools and actionable data allow for optimal workflow and provider engagement. In addition, the group found that using multimedia educational resources along with outreach calls facilitated patient engagement.

Program Goals and Measures of Success

The high prevalence of diabetes in the CCHC service area was a major concern for patients and clinicians. CCHC clinicians felt that improving diabetes control and early screening were key program goals. Upon entering the collaborative, CCHC did not have a good process for using the EHR to identify patients who had DR. CCHC's goal was to screen 90% of people with diabetes for eye disease, and to improve the process of identifying patients with DR.

The primary measure of the Eye Care Cohort was the proportion of Type 2 diabetes patients in the T2G Cohort with a documented screening for diabetic retinal disease. This measure, selected by the Eye Care Cohort Advisory Committee, was based on an adapted version of the HEDIS 2018 Technical Specifications for Physician Measurement: Comprehensive Adult Diabetes Care: Eye Exam Numerator (see Appendix).

Existing Diabetes Population and Care Structure

CCHC's 16 multispecialty, primary care, neurology, gastroenterology, cardiology, pulmonology, rheumatology, and endocrinology practice sites provide services to nearly 40,000 patients in a small rural geographical area. Of those patients, approximately 25,000 are adults age 18 and older.

The medical group has had a long-term partnership with Allscripts and utilizes the TouchWorks® EHR, TouchWorks Reporting (data analytics), and EagleDream QIS (point-of-care and population management dashboard) in its day-to-day operations. CCHC also has access to health plan claims to identify patients who receive treatment for diabetes and services from outside providers.

Clinicians and clinical staff are required to maintain an active problem list for each patient. Problem lists are updated each time a patient has a change in their clinical condition. CCHC

uses a data mining and an analytical reporting tool to create an electronic registry for patients with diabetes. The registry is used to identify disease progression and compliance with the retinopathy screening measure.

CCHC trains clinical and coding staff to accurately use ICD-10 codes to identify Type 2 diabetes. Once Type 2 diabetes has been entered on the problem list, the patient is automatically placed in the registry. The registry is used for all standardized reporting, text messaging campaigns, and the point-of-care dashboards. Coding education is provided quarterly to improve standardization.

Clinical and coding staff are trained on medical record documentation of eye exams. Terminology specific to eye exams—such as Diabetic Eye Exam (DEE), Dilated Fundus Exam (DFE), DR, Background DR (BDR), and Proliferative DR (PDR)—are reviewed quarterly to ensure staff enter information correctly in the EHR.

CCHC has retrieved, analyzed, and trended rates of eye exams in patients with diabetes since 2012 and continued to do so during the Eye Care Cohort. CCHC's more than 4,000 diabetes patients were placed into a registry for people with diabetes that was used to populate the point-of-care dashboard, quality measure performance reports, and pursuit lists of patients who have not had the appropriate screenings.

Data on DEE rates were reviewed monthly by the Quality Assurance and Review Committee and at monthly practice meetings, office manager meetings, and all staff meetings.

Interventions

To achieve CCHC's goal of increasing DEE rates to 90% and improving documentation of DR, the group deployed the following interventions:

Provider and staff education

- Developed a computerized point-of-care dashboard (see Appendix) for DEE based on collaborative measure specifications, which presented up-to-date patient information at each visit

Patient education

- Created print and video patient education materials (see Appendix)
- Created a fax-back form to help increase awareness of the need for eye exams and to promote clinical data exchange (see Appendix)

Information Technology

- Utilized patient registries that enabled actionable point-of-care dashboards at each clinical practice site to improve rates and target improvement areas (see Appendix)
- Reviewed monthly eye exam rate reports

Clinical support

- Refined and reinforced standing orders and use of the point-of-care dashboard that contains diabetes screening algorithms
- Implemented a request for patients to present the fax-back form at eye appointments
- Used a patient reminder system and patient portal for outreach and patient recall for eye exams (see Appendix)
- Refined internal mechanisms to ensure fundus camera appointments and wait times were not barriers to eye exams

Outcomes and Results

CCHC started the Eye Care Cohort with a very high screening rate of 82.3% and hoped to improve that rate to 90% during the program. Eastern North Carolina was hit by Hurricane Florence in September 2018, however, which had a significant impact on CCHC and resulted in approximately \$100 million in damages to the community. CCHC's screening rate improved to 82.9% before the hurricane and began declining slightly after the hurricane due to staffing shortages and hurricane damage. CCHC finished the Cohort with a screening rate of 78.4% (see Appendix). Although CCHC was not able to achieve its 90% screening rate goal, the collaborative is still viewed as a success. Processes and interventions developed will continue to be utilized to improve screening rates.

Lessons Learned and Ongoing Activities

The Eye Care Cohort was very helpful to CCHC in highlighting areas for improvement. Targeted patient education is beginning to improve eye exam rates for people with diabetes. Exam room posters, patient handouts, clinician discussion, point-of-care tools, and data analysis will all be used in the future to help to continue to improve rates and achieve the 90% screening rate goal.

Additionally, staff education around eye exam algorithms is a continuous process. Many clinical team members are unsure about the correct screening interval and miss opportunities to discuss eye exams with patients. CCHC is evaluating enhancements to clinical decision support tools.

The group is continuing to use the reporting process and all tools implemented during the Eye Care Cohort. All interventions will be updated on a continuous basis.

References

1. Centers for Disease Control and Prevention. 2020. National Diabetes Statistics Report, 2020 (Rep.). Retrieved from [cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf](https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf).
2. Centers for Disease Control and Preventions. n.d. Diabetic Retinopathy. Retrieved from [cdc.gov/visionhealth/pdf/factsheet.pdf](https://www.cdc.gov/visionhealth/pdf/factsheet.pdf).
3. Solomon, S. D., Chew, E., Duh, E. J., Sobrin, L., Sun, J. K., VanderBeek, B. L., Wykoff, C.C., Gardner, T. W. (2017). Diabetic Retinopathy: A Position Statement by the American Diabetes Association. *Diabetes Care*, 40(3), 412-418. doi:10.2337/dc16-2641.
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5. Jani, P D., Forbes, L., McDaniel, P., Viera, A., Garg, S., (2017) Geographic Information Systems Mapping of Diabetic Retinopathy in an Ocular Telemedicine Network. *JAMA Ophthalmology*, 135(7), 715-721; doi:10.1001/jamaophthalmol.2017.1153.

Eye Care Cohort Measure

Measurement is a cornerstone of all facets of the T2G campaign, including the Innovator Track. During the Eye Care Cohort, groups measured rates of documented screening for diabetic retinal disease among the T2G Cohort with Type 2 diabetes and tracked improvement.

In keeping with AMGA Foundation's philosophy to measure improvement using existing industry-standard measures when possible, the denominator for the Eye Care Cohort was defined to be the same as the T2G Cohort for the campaign (i.e., patients with Type 2 diabetes who meet the T2G campaign criteria to be included in the four individual core components and the diabetes bundle measure). This denominator is broadly defined as patients age 18–75 with:

- Two or more eligible ambulatory encounters with an eligible primary care, endocrinology, cardiology, or nephrology provider in the last 18 months **AND**
- At least one Type 2 diabetes on a claim or problem list in that same 18-month period.

For complete denominator measure specifications with inclusion and exclusion criteria, see Together 2 Goal® Campaign Measurement Specifications (v3, April 2019).

The numerator for the measure was determined to be those T2G Type 2 diabetes patients who met the criteria for HEDIS 2018 Technical Specifications for Physician Measurement: Comprehensive Adult Diabetes Care: Eye Exam Numerator.

Screening or monitoring for diabetic retinal disease was identified by electronic data or medical record review and included:

- A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year;
- A negative retinal exam (negative for retinopathy) by an eye care professional in the year prior to the measurement year; or
- A bilateral eye enucleation anytime during the patient's history through the end of the measurement period.

Eye Care Cohort participants were provided detailed measure specifications and relevant HEDIS value sets.

Point-of-Care Dashboard Identifying Care Gaps



Patient Profile

No clinical reminders recorded

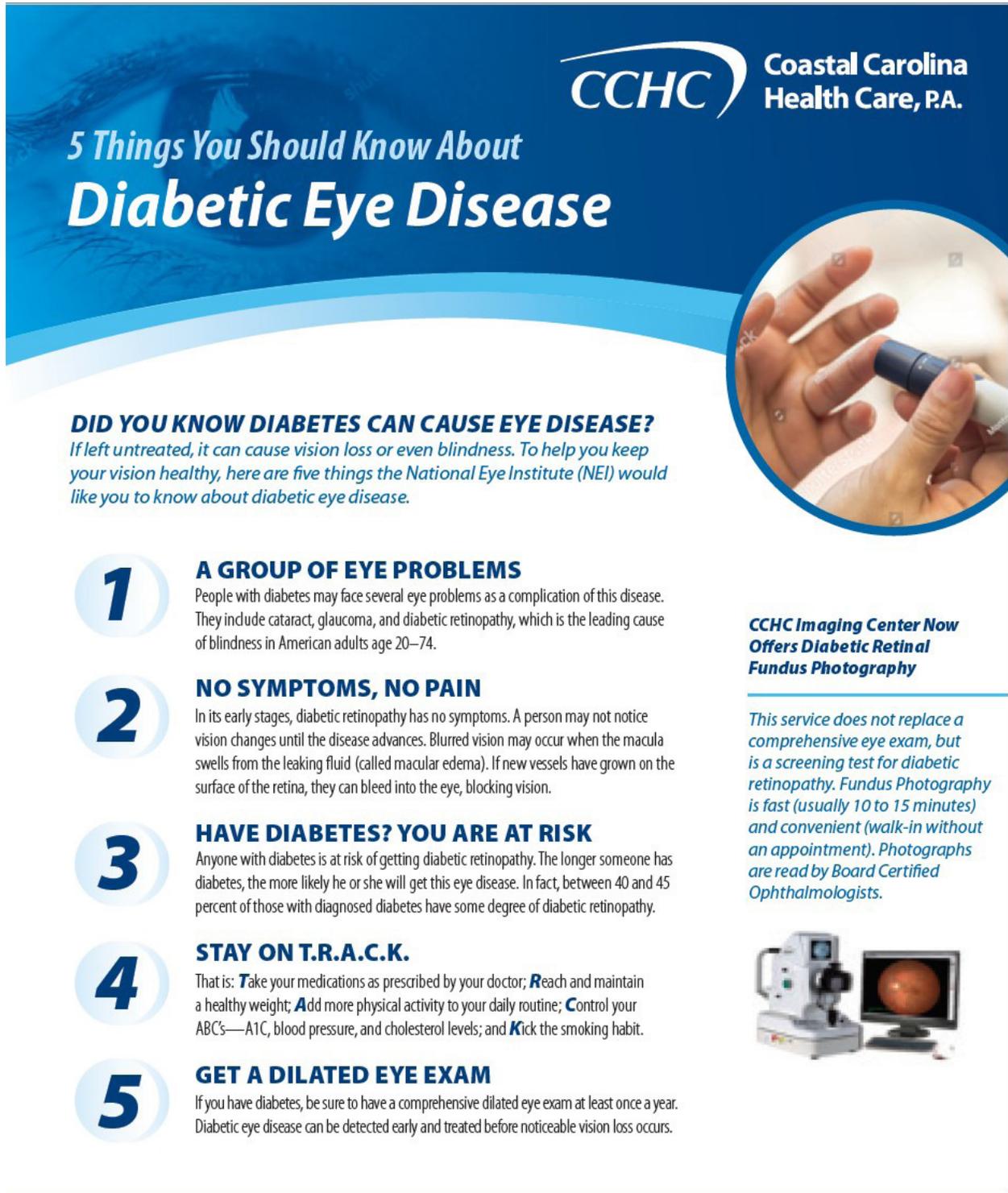
Gaps in Care

All Initiatives ▾

View By: Status ▾

GAPS IN CARE		RESULT & DATE DONE	DUE DATE	STATUS	ACTIONS
Current Flu Season - Influenza Immunization (6+ months)		No vaccination in the compliance window.		● Past Due	
Breast Cancer Screening CMS 125 v7		Mammogram on 02/11/2019	5/14/2021	● Meeting Goal	
Colorectal Cancer Screening CMS 130 v7		Colonoscopy on 06/25/2019	6/24/2029	● Meeting Goal	
Controlling High Blood Pressure (18 - 85)		132/86 on 08/26/2019	8/25/2020	● Meeting Goal	
Diabetes: Eye Exam (18 - 75) CMS 131 v7		Compliant; Eye Exam, negative for retinopathy on 07/31/2019	7/30/2021	● Meeting Goal	
Diabetes: Foot Exam CMS 123 v7		Had a sensory, pulse, and visual foot exam in the measurement period.	4/17/2020	● Meeting Goal	
Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%) CMS 122 v7		5.9% on 08/20/2019.	8/19/2020	● Meeting Goal	
Diabetes: Medical Attention for Nephropathy CMS 134 v7		Chronic kidney disease, stage 2 (mild) on 06-04-2019		● Meeting Goal	
Falls: Screening for Future Fall Risk CMS 139 v7		Fall Risk Screening, Negative on 08/20/2019	8/19/2020	● Meeting Goal	
Medicare AWW - Annual Wellness Visit		Patient had an annual	8/19/2020	● Meeting Goal	

Patient Education Eye Exam Flyer



CCHC Coastal Carolina Health Care, P.A.

5 Things You Should Know About Diabetic Eye Disease

DID YOU KNOW DIABETES CAN CAUSE EYE DISEASE?
If left untreated, it can cause vision loss or even blindness. To help you keep your vision healthy, here are five things the National Eye Institute (NEI) would like you to know about diabetic eye disease.

- 1 A GROUP OF EYE PROBLEMS**
People with diabetes may face several eye problems as a complication of this disease. They include cataract, glaucoma, and diabetic retinopathy, which is the leading cause of blindness in American adults age 20–74.
- 2 NO SYMPTOMS, NO PAIN**
In its early stages, diabetic retinopathy has no symptoms. A person may not notice vision changes until the disease advances. Blurred vision may occur when the macula swells from the leaking fluid (called macular edema). If new vessels have grown on the surface of the retina, they can bleed into the eye, blocking vision.
- 3 HAVE DIABETES? YOU ARE AT RISK**
Anyone with diabetes is at risk of getting diabetic retinopathy. The longer someone has diabetes, the more likely he or she will get this eye disease. In fact, between 40 and 45 percent of those with diagnosed diabetes have some degree of diabetic retinopathy.
- 4 STAY ON T.R.A.C.K.**
That is: **T**ake your medications as prescribed by your doctor; **R**each and maintain a healthy weight; **A**dd more physical activity to your daily routine; **C**ontrol your ABCs—A1C, blood pressure, and cholesterol levels; and **K**ick the smoking habit.
- 5 GET A DILATED EYE EXAM**
If you have diabetes, be sure to have a comprehensive dilated eye exam at least once a year. Diabetic eye disease can be detected early and treated before noticeable vision loss occurs.

CCHC Imaging Center Now Offers Diabetic Retinal Fundus Photography

This service does not replace a comprehensive eye exam, but is a screening test for diabetic retinopathy. Fundus Photography is fast (usually 10 to 15 minutes) and convenient (walk-in without an appointment). Photographs are read by Board Certified Ophthalmologists.



MORE INFO

For more information, email cchc@cchealthcare.com or call 252.633.4111.

Fax-Back Form



DIABETIC EYE EXAM FAX-BACK FORM

DATE: _____

PATIENT NAME: _____

DATE OF BIRTH: _____

TO: COASTAL CAROLINA HEALTH CARE
Name
CENTRAL MEDICAL RECORDS INDEXING DEPARTMENT
Location
252-514-2745
Facsimile Number

FROM: _____
EYE SPECIALIST NAME

OFFICE NAME

FAX NUMBER

COMMENTS:
PLEASE FAX THIS FORM ALONG WITH A COPY OF THE PATIENT'S EYE EXAM TO THE NUMBER ABOVE.

NOTE: The information contained in this facsimile message is privileged and confidential patient information, intended only for the use of the addressee named above. Disclosure of that patient information to any other party is prohibited. If the reader of the message is not the intended recipient or the employee or agent responsible to deliver it to the recipient, you are hereby notified that dissemination, distribution, or copying of this information is prohibited. If you have received this communication in error, please notify us immediately by telephone collect.

This document consists of _____ pages, including this cover sheet

Operator's Name _____ Time: _____

Standardized Monthly Reporting Using Data Registry

Coastal Carolina Health Care, P.A.										
Diabetic Eye Exam										
September 2019										
	Panel Size	Diabetic 18-75	Diabetic w/ Retinopathy 18-75	% of Diabetic Pts w/o Retinopathy w/ Eye Exam			% Diabetic Retinopathy w/ Eye Exam			
	Sep-19	Sep-19	Sep-19	Sep-19	Aug-19	Jul-19	Sep-19	Aug-19	Jul-19	
Practice 1										
Cliniican	1,169	135	18	62.39%	60.87%	66.37%	55.56%	55.56%	61.11%	
Cliniican	782	128	10	61.02%	61.86%	69.23%	60.00%	60.00%	60.00%	
Cliniican	780	86	2	53.57%	54.12%	57.14%	100.00%	100.00%	100.00%	
Practice 1 Total	2,731	349	30	59.56%	59.43%	64.97%	60.00%	60.00%	64.52%	
Practice 2										
Cliniican	907	122	8	77.19%	78.26%	80.70%	87.50%	85.71%	85.71%	
Cliniican	1,627	226	9	79.72%	80.37%	82.63%	77.78%	66.67%	77.78%	
Cliniican	1,551	161	14	55.78%	57.05%	57.89%	50.00%	50.00%	58.33%	
Cliniican	774	123	4	42.86%	43.48%	41.88%	75.00%	60.00%	33.33%	
Cliniican	1,053	140	5	86.67%	86.76%	87.77%	60.00%	60.00%	80.00%	
Practice 2 Total	5,912	772	40	69.81%	70.64%	71.70%	67.50%	62.50%	66.67%	
Practice 3										
Cliniican	995	75	1	93.24%	92.11%	88.31%	100.00%	100.00%	100.00%	
Cliniican	1,129	168	17	89.40%	90.32%	88.05%	94.12%	100.00%	100.00%	
Cliniican	857	126	14	94.64%	97.25%	93.64%	92.86%	92.86%	100.00%	
Cliniican	1,272	254	53	83.58%	83.82%	84.95%	71.70%	75.47%	79.25%	
Cliniican	1,553	214	26	76.60%	78.07%	82.45%	69.23%	72.00%	80.00%	
Cliniican	975	189	13	67.05%	67.78%	69.27%	84.62%	84.62%	84.62%	
Cliniican	1,546	198	7	85.86%	86.60%	92.27%	100.00%	100.00%	100.00%	
Cliniican	1,508	233	21	88.68%	87.50%	86.57%	80.95%	78.95%	84.21%	
Practice 3 Total	9,835	1457	152	83.68%	84.18%	85.10%	79.61%	82.24%	85.81%	
Practice 4										
Cliniican	755	131	7	48.39%	49.19%	56.35%	57.14%	57.14%	57.14%	
Cliniican	1,019	113	11	57.84%	56.00%	56.57%	63.64%	72.73%	72.73%	
Cliniican	1,477	307	28	63.80%	64.64%	64.89%	60.71%	57.14%	75.00%	
Cliniican	1,413	177	10	56.89%	58.79%	63.86%	50.00%	50.00%	50.00%	
Cliniican	894	184	10	67.82%	68.24%	70.59%	70.00%	54.55%	72.73%	
Practice 4 Total	5,558	912	66	60.28%	60.91%	63.58%	60.61%	58.21%	68.66%	
Practice 5										
Cliniican	686	105	12	68.82%	69.89%	78.49%	50.00%	58.33%	61.54%	
Cliniican	1,692	254	13	62.66%	59.92%	63.03%	53.85%	46.15%	50.00%	
Practice 5 Total	2,378	359	25	64.37%	62.69%	67.37%	52.00%	52.00%	55.56%	
Practice 6										
Cliniican	1,233	212	20	45.31%	47.37%	48.68%	75.00%	80.00%	84.21%	
Practice 6 Total	1,233	212	20	45.31%	47.37%	48.68%	75.00%	80.00%	84.21%	
Practice 7										
Cliniican	871	147	8	74.82%	75.36%	76.98%	62.50%	66.67%	50.00%	
Cliniican	933	125	12	49.56%	48.25%	49.56%	66.67%	69.23%	69.23%	
Cliniican	719	193	8	56.22%	56.45%	56.15%	75.00%	80.00%	80.00%	
Cliniican	601	67	5	30.65%	29.51%	28.33%	60.00%	40.00%	40.00%	
Practice 7 Total	3,124	532	33	56.71%	56.51%	57.11%	66.67%	67.65%	64.71%	
CCHC Total	30,771	4,593	366	68.32%	68.75%	70.71%	69.95%	70.38%	74.52%	
Eye Exam every two years for patients who do not have an active dx of diabetic retinopathy										
Eye Exam every year for patients who have an active dx of diabetic retinopathy										

Text Messaging Program Overview

Type 2 Diabetes CareMessage Program



Program Description

The CareMessage Type 2 Diabetes program empowers patients to take charge of their health through self-management and self-monitoring, and educates them on their condition, nutrition, exercise, stress management and medication. This texting program is ideal for patients who are newly diagnosed or want to learn more about the condition and self-management.*

Features

- 3-5 messages per week for 25 weeks
- Adheres to national standards, such as the ADA
- Supported by findings in the medical literature, content experts, clinical reviewers and user feedback
- Extra messages for patients taking insulin and/or medication
- Additional culturally tailored messages for African American patients
- Recipes specifically developed for people with diabetes
- Based on portions of the Health Belief Model
- Emphasizes the connection between self-monitoring, self-management, and the ABC's (A1C, Blood Pressure, Cholesterol)

I am doing things that I did not do before, such as doing exercise, having tranquility, be more positive for myself, taking myself into account, appreciating myself as a person and taking my medication how they are supposed to because I wouldn't take them how I was supposed to before.

A patient enrolled in the Type 2 Diabetes program

Metrics Tracked

- Self-efficacy and motivation to change
- Medication adherence (for users that report currently taking insulin and/or diabetes pills)
- Behavior change
- User satisfaction with the texting program

*Note: This program is not intended for patients with pre-diabetes. For patients with pre-diabetes we recommend our Nutrition, Exercise or Goal Setting programs.

Text Message Set-Up

Title

Method Text Voice

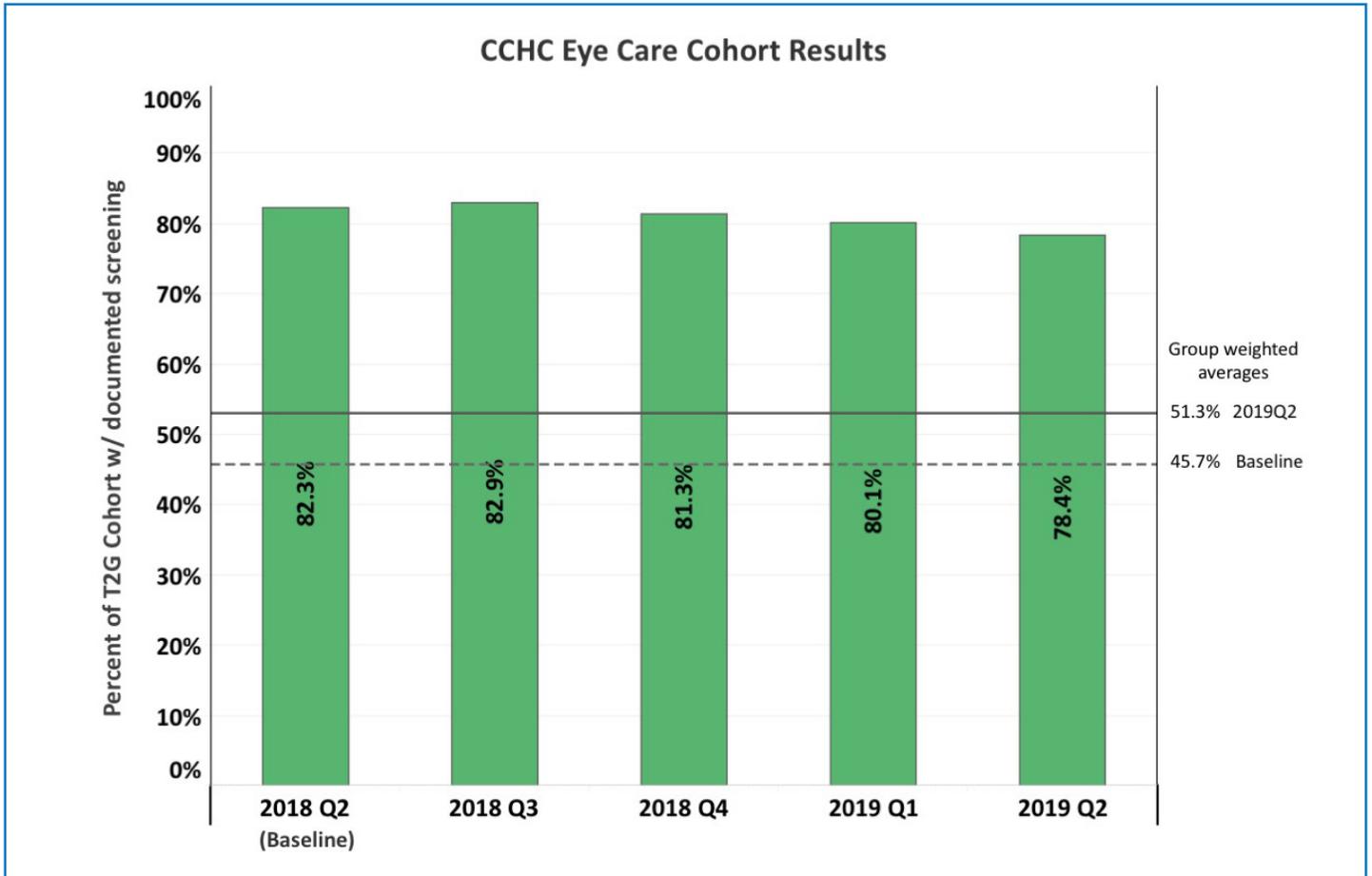
Type ▼

Message English

Our records indicate you are due for an eye exam. Call your eye or primary doctor to schedule or arrange for an appointment. Text Stop to opt out of messages.

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CCHC Eye Care Cohort Results



Project Team

Kenneth W. Wilkins, Jr., M.D.
President, Initiative Sponsor

Carrie Hagan, COO
Initiative Lead

Shanna Cherry
Initiative Trainer

Matt Tipton
Director, Information Systems

Matthew Begley
Data Analyst



AMGA Foundation

One Prince Street
Alexandria, VA 22314-3318

amga.org/foundation