AMGA

Advancing High Performance Health

Together 2 Goal

AMGA Foundation

Together 2 Goal®
Innovator Track
Cardiovascular
Disease Cohort
Case Study

Geisinger

Organizational Profile

Founded in 1915, Geisinger (geisinger.org) is an integrated health services organization comprised of approximately 32,000 employees, including 1,800 employed physicians. The organization serves over three million residents throughout 45 counties in central, south-central, and northeastern Pennsylvania and southern New Jersey. In addition to an expansive clinical enterprise that includes 13 hospital campuses and two research centers, Geisinger has a school of medicine and an affiliated health plan with nearly 600,000 members.

The organization is widely recognized for innovative use of its electronic health record (EHR), first adopted in 1999, as well as the development of innovative care delivery models such as ProvenHealth Navigator®, ProvenCare®, and ProvenExperience®. According to a recent report by the Hospital and Health System Association of Pennsylvania (HAP), Geisinger contributes more than $9.9 billion annually to the local, regional, and state economy.

Executive Summary

According to the *2017 National Diabetes Statistics Report* from the Centers for Disease Control and Prevention (CDC), an estimated 30.3 million Americans had diabetes. Approximately 5% had type 1 diabetes and the remaining 95% had Type 2 diabetes (diabetes). Over the last 20 years, the number of adults with diabetes has more than tripled, and the total direct and indirect estimated cost of diagnosed diabetes in the United States in 2012 was $245 billion.[1]

Due to factors such as high blood sugar, high blood pressure, and obesity, cardiovascular disease (CVD) is the leading cause of death for people with diabetes. The American Heart Association (AHA) considers diabetes to be one of the seven major controllable risk factors for CVD. However, statistics indicate that people with diabetes are two to four times more likely to die from heart disease than people without diabetes. At least 68% of people with diabetes age 65 or older die from some form of heart disease, and 16% die of stroke.[2]

Geisinger elected to participate in the AMGA Foundation's Together 2 Goal® (T2G) Innovator Track Cardiovascular Disease Cohort (CVD Cohort) based on a clear need to improve outcomes for patients living with diabetes and CVD. To drive meaningful improvement in the quality of care, Geisinger developed and deployed the following care redesign tactics centered around combating clinical inertia and optimizing medication therapy:

- Clinical inertia tactics
    - Anticipated Management Program (AMP) Tools
    - Automated Patient Outreach
    - Amplified Diabetes Huddles
    - Point-of-Care (POC) hemoglobin A1c (HgA1c) Machines
- Medication therapy optimization tactics
    - Diabetes Medication Algorithm
    - Clinician Education
    - Diabetes "Tweet Sheet"
    - Epic EHR Decision Support

During the course of the year-long collaborative, Geisinger achieved significant quality improvement in the areas of lipid management and glycemic control while sustaining high-quality performance around antiplatelet therapy for secondary prevention. Additionally, care redesign efforts contributed to a paradigm shift in diabetes treatment by increasing utilization of therapies with demonstrated cardiovascular risk reduction benefits.

Program Goals and Measures of Success

The primary goal of the CVD Cohort was to improve cardiovascular outcomes for patients living with diabetes by establishing best practices to reduce risk. Measures of success (see Appendix) were set forth by AMGA Foundation based on industry-standard measures including: NCQA-HEDIS; United States Preventive Services Task Force; 2013 American College of Cardiology/American Heart Association (ACC/AHA) Prevention Guidelines; and 2018 American Diabetes Association (ADA) Standards of Care.

Geisinger aimed to achieve population-level cardiovascular risk reduction by promoting evidence-based best practices and reducing unwarranted clinical variability through providing clinician education and decision support, leveraging

technology and team-based care to overcome clinical inertia, and increasing utilization of diabetes medications with cardiovascular benefits.

An existing, robust EHR and IT infrastructure allowed for effective care redesign through population risk stratification and care coordination, development of best practice alerts (BPAs) and decision support, and automated outreach to engage patients with clinicians from the multidisciplinary care team. Additionally, the Geisinger IT infrastructure allowed the team to monitor both collaborative-specific and expanded quality measures in real time, which led to continuous refinement of care improvement efforts throughout the year-long campaign.

Existing Diabetes Population and Care Structure

Geisinger uses Epic for its EHR, and a Cerner diabetes registry is used to identify, stratify risk, and facilitate care coordination for the Geisinger diabetes population. By the conclusion of the CVD Cohort, the diabetes population at Geisinger had grown from 37,511 to 40,906 patients, and the system had identified approximately 117,000 patients with prediabetes. Even more concerning, baseline CVD Cohort data demonstrated a staggering 34% of diabetes patients at Geisinger had concurrent CVD.

The majority of care for the rapidly growing Geisinger diabetes population is provided by multidisciplinary teams across 47 primary care medical home sites, which encompass approximately 150 physicians, 125 advanced practice providers (APPs), 40 clinical pharmacists, and 35 educators. Additionally, endocrinology services are available for high-risk or complex segments of the population, with a team including eight physicians, 12 APPs, and five educators.

Interventions

Utilization of Anticipated Management Program Tools

During the CVD Cohort, Geisinger leveraged Anticipated Management Program (AMP)—a report used daily for all patients seen in a Geisinger primary care clinic—to promote awareness of diabetes-specific care gaps (e.g., appropriate statin therapy) and ensure that the daily huddle process was driving quality improvement. The AMP report lists a summary of patient-specific open care gaps by condition. Each morning during daily huddle, the primary care team reviews the AMP report for all patients scheduled to be seen and a plan of care is developed. Additionally, the AMP process serves as a care coordination prompt, as primary care providers (PCPs) can quickly identify patients in need of close follow-up by the care team for diabetes management.

Automated Patient Outreach

Geisinger developed automated patient outreach, which was deployed separately from PCP office visits, to overcome diabetes-related clinical inertia. As part of the project, which was a partnership between the Care Gaps team and Ambulatory Pharmacy, all patients with a Geisinger PCP and an HgA1c more than 12 months old or uncontrolled (>9%) were identified. Letters communicating the importance of routine HgA1c assessment and glycemic control were auto-generated and written on behalf of the PCP, and then distributed to patients via mail or the patient portal, MyGeisinger. Patients with an overdue HgA1c were asked to report to the lab for repeat measurement, while patients with an HgA1c >9% were provided a phone number to schedule an office visit with a clinical pharmacist for medication optimization. The automated outreach helped overcome clinical inertia by engaging patients with pharmacist care team resources, which contributed to improvement of diabetes quality metrics such as lipid management during the collaborative.

Amplified Diabetes Huddles

To support PCPs in managing the burden of a rapidly growing diabetes population as well as drive system-wide quality improvement during the collaborative, Geisinger deployed team-based care via the amplified diabetes huddle project. Implemented across 15 of 47 primary care clinics, amplified diabetes huddles coordinated efforts between clinical pharmacists, nurse educators, and registered dietitian nutritionists to identify and engage patients with an HgA1c >9% at the POC. Each week, the multidisciplinary care team leveraged EHR reporting to identify patients with poor glycemic control who were scheduled for a PCP office visit. The team collaborated to develop a personalized care plan for each identified patient based on modifiable cardiovascular

risk factors, system-wide diabetes best practices, and collaborative quality measures. As part of the discussion around patient-specific open care gaps and cardiovascular risk, the team determined which disciplines—pharmacy, nursing, or nutrition—were best suited for routine follow-up care moving forward. The care plan was discussed with the PCP during the daily morning huddle, and a guided transition to the designated member of the care team was facilitated for each patient following their scheduled PCP office visit.

Point-of-Care HgA1c Testing

POC HgA1c testing was deployed during the collaborative to complement the automated outreach efforts for patients with an overdue or poorly controlled HgA1c. POC HgA1c measurement was incorporated into the standard nurse rooming process across Geisinger primary care sites for patients with a previous HgA1c not at goal or greater than six months old, as identified by the AMP report. POC assessment during the rooming process ensured PCPs had the information needed during the office visit to make appropriate medication therapy and care coordination decisions.

The POC HgA1c devices have also been incorporated into routine clinical practice for care team members such as pharmacists, nurse educators, and registered dietitian nutritionists. Care team members complete HgA1c measurement during initial diabetes office visits and often repeat monthly until HgA1c is at goal, as the close monitoring allows for rapid intensification of therapy and avoids clinical inertia. The POC HgA1c tactic indirectly contributed to improvements in diabetes quality metrics beyond glycemic control (such as lipid management or utilization of cardioprotective medicines) by identifying and funneling patients to the multidisciplinary care team.

Diabetes Medication Algorithm

The medication treatment algorithm, which was developed prior to the CVD Cohort to serve as a system-wide blueprint for diabetes management based on national guidelines and primary literature, served as the cornerstone of Geisinger's efforts during the collaborative. The algorithm was developed and implemented to improve diabetes-related cardiovascular outcomes, reduce total cost of care, and eliminate unwarranted variability in clinical decision making, all of which aligned with the goals of the collaborative. Constructed as an adaption of

the American Association of Clinical Endocrinologists (AACE) clinical practice guidelines, the core focus of the algorithm was to prioritize early utilization of glucagon-like peptide-1 (GLP-1) and sodium-glucose Cotransporter-2 inhibitor (SGLT-2) therapies in combination with metformin while decreasing the prescribing of medication classes that lacked cardiovascular risk reduction benefits. Implementation of the algorithm involved alignment of Geisinger hospital and health plan formularies, clinician education and development of decision support tools, and deployment of multidisciplinary care teams. Leveraging the algorithm was a key component to achieving the goals of the collaborative, as the care improvement tactics deployed to execute on GLP-1 and SGLT-2 medication strategy were leveraged to also address campaign-specific quality metrics.

Clinician Education

To promote utilization of the diabetes medication algorithm, Geisinger deployed a six-month education campaign with support from the multidisciplinary diabetes care team platforms, including pharmacy, health management, and clinical nutrition. During the campaign, provider groups spanning primary care, endocrinology, cardiology, hospital, and emergency medicine were educated on the medication algorithm and its supporting literature; hospital and health plan formulary updates; and broader diabetes bundle quality measures.

Following the initial education campaign, virtual grand rounds and diabetes video vignettes were developed to support long-term prescriber alignment with the medication algorithm as well as diabetes bundle measure and best practices. Virtual grand rounds were facilitated by the Endocrinology Department and focused on clinical trial, guideline, and medication labeling updates. Additionally, several video vignettes were produced and made accessible in the EHR to guide clinicians on medication therapy decision making, review Geisinger and collaborative-specific diabetes bundle measures and care gaps, and offer practical tips and tricks around medication-related patient counseling.

Diabetes "Tweet Sheet"

The concept of a diabetes-specific "Tweet Sheet" was developed as a streamlined medium to keep Geisinger clinicians informed of collaborative updates and clinical best practices, system-level quality performance, and practical

tips and tricks. Distributed monthly via email across the Geisinger clinical enterprise, the single page "Tweet Sheet" encompassed four or five brief bullet points, allowing the multidisciplinary team to stay updated in a time efficient manner. During the CVD Cohort, Geisinger leveraged the "Tweet Sheets" to provide quarterly updates on collaborative-specific quality performance, disseminate clinical best practices related to the collaborative, and promote awareness of advances in diabetes care related to cardiovascular risk reduction.

EHR Decision Support

To reduce unwarranted variability in clinical decision making, Geisinger leveraged their EHR infrastructure to develop diabetes-specific decision support during the collaborative. A comprehensive diabetes order set based on national guidelines and aligned with collaborative-specific quality metrics was created in the EHR. The order set included sections for laboratory monitoring, medication therapy, routine screenings, referrals to care team resources, and patient education materials. Additionally, a hyperlink to review the diabetes medication algorithm was incorporated into the order set for clinicians to access as needed.

In addition to the diabetes order set, Geisinger identified several opportunities to align EHR capabilities to drive quality improvement during the collaborative. To promote awareness of cardiovascular risk and prompt patient-centric risk reduction efforts, the team added the 10-year atherosclerotic cardiovascular disease (ASCVD) risk score to clinician office visit note templates. As part of the amplified diabetes huddle project, a column was added to provider schedules that listed each patient's last HgA1c result, allowing for efficient patient risk stratification and POC coordination. Finally, BPAs and AMP reporting were refined to provide clear direction to clinicians around appropriate statin therapy based on patient-specific cardiovascular risk.

Outcomes and Results

Geisinger achieved quality improvement in the areas of lipid management and glycemic control, increased utilization of GLP-1 and SGLT-2 therapies with demonstrated cardiovascular benefits, and sustained high-quality performance around secondary prevention antiplatelet therapy. With respect to lipid management, Geisinger achieved a 5.2% absolute increase in prescribing of high-intensity statin therapy for patients with diabetes and established CVD (see Appendix), which represented an impact on more than 1,300 people with diabetes. As a result of the improved adherence with evidence-based statin use for secondary prevention, 542 additional diabetes patients achieved an LDL less than 70 mg/dL. With respect to glycemic control, Geisinger reduced the proportion of patients with an HgA1c > 9% by 4.9%, despite the patient population growing by more than 3,000 patients. With respect to shifting the diabetes treatment paradigm, during the collaborative more than 3,700 patients were newly initiated on GLP-1 and SGLT-2 agents with cardioprotective benefits (see Appendix).

Lessons Learned and Ongoing Activities

Care transformation "takes a village"

Geisinger's robust EHR and data infrastructure allowed for efficient identification and risk stratification of patients during the collaborative, but without the efforts of the multidisciplinary care team, there would have been no quality improvement action arm. During the collaborative, ambulatory pharmacists, nurse educators, and registered dietitian nutritionists collaborated to optimize medication therapy, educate patients and providers, and develop and implement diabetes best practices. By leveraging the multidisciplinary care team, Geisinger was able to overcome provider clinical inertia and drive quality improvement efforts across a growing patient population.

Deploy complementary quality tactics

In addition to demonstrating the value of team-based care, Geisinger illustrated the importance of developing complementary tactics to drive quality improvement and overcome clinical inertia. For example, while automation allowed the organization to efficiently send thousands of letters to patients with poorly controlled disease, the POC tactics—such as the HgA1c measurement and amplified diabetes huddle—helped engage patients while on-site for PCP appointments who otherwise may not have responded to the letter campaign. Leveraging multiple strategies to engage patients allowed Geisinger to maximize the impact of the quality tactics deployed.

Future Direction

Moving forward, Geisinger will remain focused on improving care for patients living with diabetes by decreasing cardiovascular morbidity and mortality. For example, clinical pharmacists will be integrated into several Cardiology practices to develop diabetes-related best practices and care improvement tactics. Additionally, Geisinger will be leveraging data to guide targeted outreach for patients with diabetes and concurrent CVD to increase utilization of GLP-1 and SGLT-2 therapies. Finally, patient education materials will be developed which promote the relationship between diabetes and cardiovascular outcomes, while also highlighting patient-specific modifiable risk factors.

References

1. Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2017. https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf. Accessed October 10, 2019.

2. Cardiovascular Disease and Diabetes. American Heart Association website. heart.org/en/health-topics/diabetes/why-diabetes-matters/cardiovascular-disease--diabetes. Updated August 30, 2015. Accessed October 10, 2019.

Measures of Success for Cohort

	Measure	Measure Description
1	Non-tobacco user	Proportion of T2G patients whose most recent tobacco status is determined to be "tobacco-free".
2a	Daily aspirin or antiplatelet in patients age ≥ 50, secondary prevention	Proportion of T2G patients eligible for secondary prevention with documentation of daily aspirin or another antiplatelet, or documented exception or contraindication during the measurement period.
2b	Daily aspirin or antiplatelet in patients age ≥ 50, primary prevention	Proportion of T2G patients eligible for primary prevention with documentation of daily aspirin or another antiplatelet, or documented exception or contraindication during the measurement period.
3a	Any statin, secondary prevention	Proportion of T2G patients eligible for secondary prevention on a statin during the measurement period.
3b	High-intensity statin, secondary prevention	Proportion of T2G patients eligible for secondary prevention on a high-intensity statin during the measurement period.
3c	LDL cholesterol < 70 mg/dL, secondary prevention	Proportion of T2G patients eligible for secondary prevention with a measured LDL < 70mg/dL.

DIABETES #TWEET SHEET

QUICK MONTHLY DIABETES UPDATES TO HELP KEEP YOU INFORMED

February 2019

Caring — The American Diabetes Association and American College of Cardiology recently published aligned guidelines promoting the use of GLP-1 and SGLT-2 therapy in patients with diabetes based on life-saving cardiovascular risk reduction benefits! Click ADA & ACC to view!

Caring — Did you know??? Since September 2018 we have reduced the amount of Diabetes patients with an uncontrolled HbA1c>9 by 4% helping 1542 patients help better manage their disease. We are only 6% away from hitting the national benchmark!
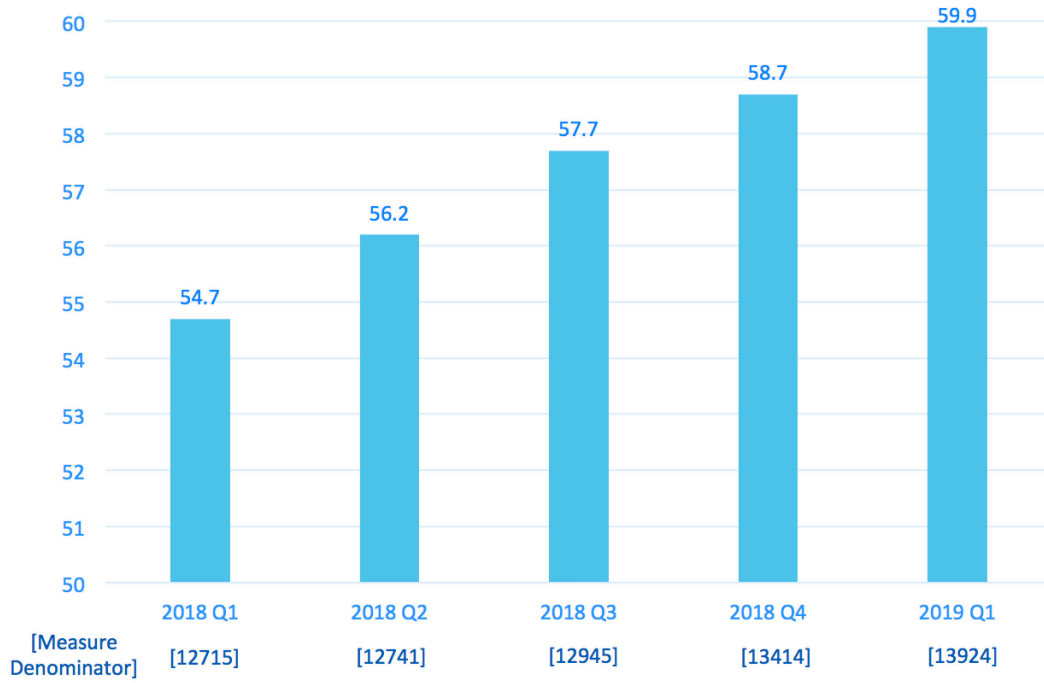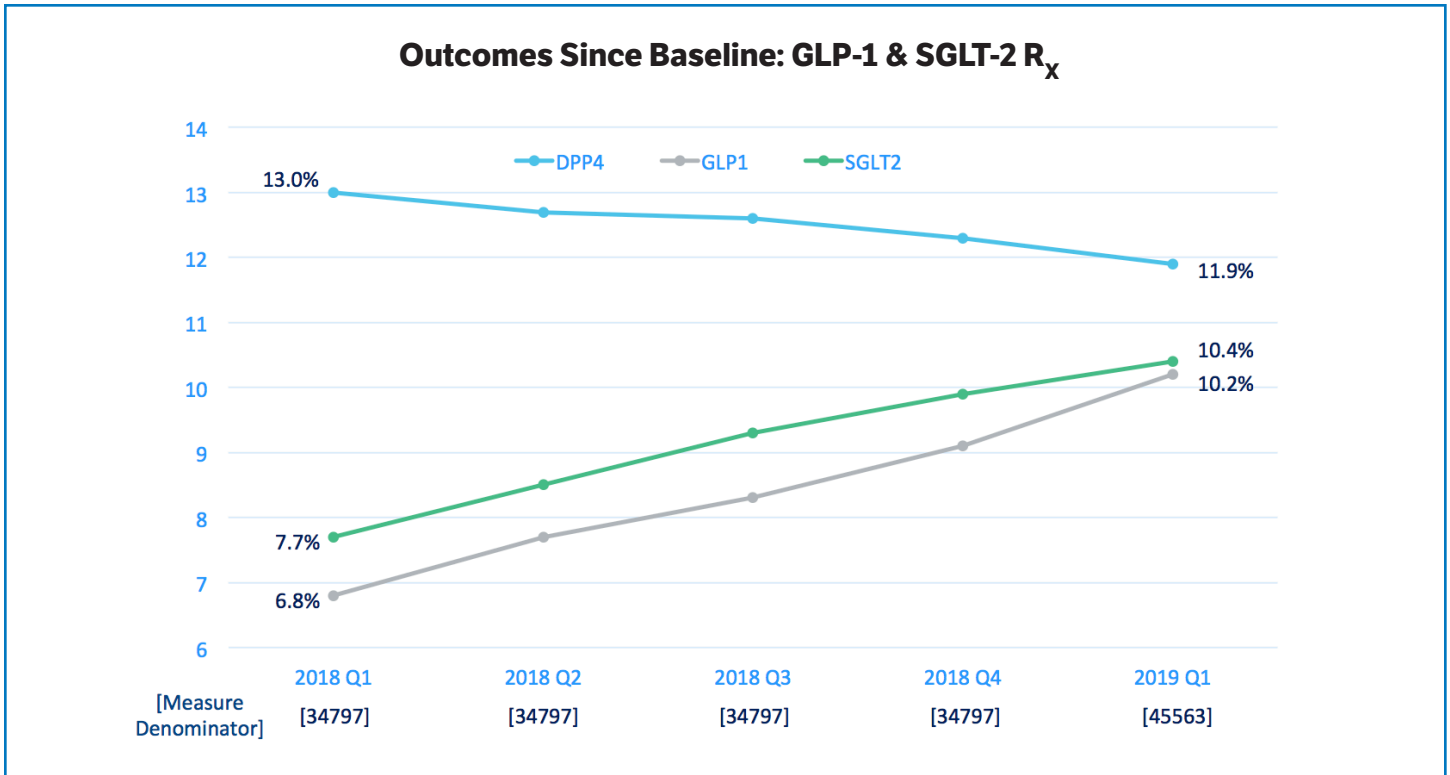
Caring — Amplified Diabetes Huddles are now live at **TEN** Community Medicine Sites helping to deliver precision care to patients with an A1c >9. These multidisciplinary teams are compiled of clinic staff, Health Managers, Pharmacists and Nutritionists that huddle weekly to offer personalized care to our patients.

Caring — Diabetes Management video part II will feature one of our Registered Dietitian Nutritionist/Diabetes Educator and Clinical Pharmacist educating our Primary Care Team on Diabetes Self-Management. Click here to view!

Appendix

Outcomes Since Baseline: R$_X$ High Intensity Statin

[Measure Denominator]	2018 Q1 [12715]	2018 Q2 [12741]	2018 Q3 [12945]	2018 Q4 [13414]	2019 Q1 [13924]
	54.7	56.2	57.7	58.7	59.9

Outcomes Since Baseline: GLP-1 & SGLT-2 R$_X$

DPP4 — GLP1 — SGLT2

[Measure Denominator]	2018 Q1 [34797]	2018 Q2 [34797]	2018 Q3 [34797]	2018 Q4 [34797]	2019 Q1 [45563]

DPP4: 13.0% ... 11.9%

SGLT2: 7.7% ... 10.4%

GLP1: 6.8% ... 10.2%

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