

IMPROVING HEALTH CARE

After more than three years of effort by employers, pharmacists and patients from coast to coast, we proudly celebrate the successful completion of the Diabetes Ten City Challenge (DTCC)!



The results are clear—the innovative health care model born more than 10 years ago in Asheville, N.C., is scalable and effective across multiple industries, employers and geographies. This issue of *Newsline* highlights the new economic and clinical results of the DTCC program and its impact on those involved.

Congratulations and thank you to all of the employers, coalition representatives, pharmacists, network coordinators, patients, communities and staff involved in the DTCC. Your contributions of time, talent and resources literally changed lives in each of the 10 cities. Whether you were an advocate, coach, decision-maker, record-keeper, trainer, participant or interested third party, you played an integral role in the program's success.

Our gratitude goes to GlaxoSmithKline for their generous support, which made this project possible. The company clearly shares the vision of a health care system where the patient is the central focus of the care process. As the momentum builds and other visionary employers want to adopt this approach, the program will continue through HealthMapRx as a result of the APhA Foundation's joint venture with Mirixa.

Let us all continue to work together to create a new "health care" system that we can all be proud of, whether we are a payer, provider or patient.

—William M. Ellis
Chief Executive Officer
APhA Foundation



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Driving Change, One Patient at a Time

Diabetes Ten City Challenge pharmacists conduct cholesterol and diabetes screenings at the City of Charleston to identify health needs and encourage participation in the program.

D iabetes strikes nearly 24 million Americans of all races, genders and ages – 7.8% of the U.S. population. With annual costs of \$174 billion, it not only accounts for more than 24 million hospital days and 15 million lost work days, diabetes multiplies the potential for heart disease, stroke, blindness, amputation and kidney failure.

The Diabetes Ten City Challenge (DTCC) offered a way for employers, pharmacists and people with diabetes to unite against the devastating disease – and it worked. People in the program for at least 12 months showed improvement in all key clinical indicators, and health care costs were contained, in the innovative, employer-sponsored program conducted by the American Pharmacists Association (APhA) Foundation with partial funding from GlaxoSmithKline.

Through the DTCC, employers established a voluntary health benefit for employees,

dependents and retirees with diabetes, and waived co-payments for diabetes medications and supplies if they worked with a pharmacist “coach” to manage their conditions. Participants met regularly with pharmacists to manage their medications, monitor key indicators, and bring their diabetes under control through diet, exercise and other lifestyle changes. Pharmacists shared their significant knowledge as counselors and confidants. Communities benefited from collaborative relationships to better meet patients’ needs.

“We wanted this program to fundamentally change the way health care is managed, deliv-

DTCC ECONOMIC RESULTS

Average total health care costs were reduced by **\$1,079** per patient per year compared to projected costs if the DTCC had not been implemented.

ered and paid for, and that is happening,” said William Ellis, chief executive officer of the APhA Foundation in Washington, D.C. “We’ve significantly added to the value-based benefit design movement. Four years ago it was a new idea but now it is quite common to see waived co-pays, pharmacist coaching and counseling services.”

From supermarket produce clerks to senior executives, the DTCC engaged hundreds of people in managing diabetes in cities from Charleston, S.C., to Honolulu, Hawaii. Along with scores of pharmacist coaches, physicians and diabetes educators, they demonstrated the power of partnership and the impact of putting patients at the center of their own care.

Pharmacists deliver value in Florida

Manatee County government in the Tampa Bay, Fla., area joined the DTCC as a way to improve outcomes in their in-house diabetes management effort. Approximately 90 county employees enrolled in the program, meeting with pharmacist coaches at their work sites or the employee pharmacy. “The pharmacist coach is a key component to the program,” said Bob Goodman, employee benefits manager. “The only way you are going to be successful is a person-to-person approach – a telephonic approach will not bring equal results.”

Goodman appreciated the DTCC’s patient monitoring tools and high-quality data analysis, using the information to demonstrate to management how the program would benefit both the county and its insured health plan members.

The outcomes were very positive. While Manatee had previously initiated a “Diabetic Management” program, in the first year of implementing the DTCC as part of their comprehensive health management and support programs, the county’s cost for diabetes-related hospital admissions dropped from \$500,000 to around \$70,000 and has stayed in that range for three years.

“This type of program is especially important in the current economy, when people may not have the money for their medications but need to keep taking them to stay out of the hospital.” Goodman said.

A peer-reviewed article with detailed DTCC results will be published in the May/June 2009 issue of the *Journal of the American Pharmacists Association*.

DIABETES TEN CITY CHALLENGE SITES



Coaching for positive outcomes in Georgia

DTCC Pharmacist Coach Samee Ellerbee, RPh, a certified diabetes educator from Augusta, Ga., travels about 250 miles each way to meet with DTCC participants in Dalton, Ga. A 30-year pharmacy veteran, Ellerbee jumped at the chance to step into a consulting role with patients through the DTCC.

“From a public health perspective, prevention is really the key,” she said. “If you prevent further adverse outcomes, you are going to have a healthier workplace, community, state and nation. This is policy in action and the Diabetes Ten City Challenge proves it.”

Ellerbee shares her considerable knowledge with 16 patients including Jim Herman, 64, who is among 107 DTCC participants at Hamilton Medical Center in Dalton, Ga. Herman, a self-described “health nut,” enrolled in the program shortly after joining Hamilton as hospice chaplain in 2007. After 12 years managing his diabetes, Herman was quite knowledgeable and took advantage of the DTCC opportunity to learn more. Using the health club membership provided by his employer, Herman started swimming regularly and won six medals at the state Senior Olympics. He qualified for the national competition to take place in August 2009.

“Since I’ve been in the diabetes program I started monitoring my blood sugar regularly and set goals for myself to stay on track,” Herman said, “but even with all my knowledge and exercise, it was working with Samee (my pharmacist coach) that really made the difference in my weight, my hemoglobin A1C* and my control of diabetes,” he said. Since he joined the program, Herman has lost 20 pounds and reduced his A1C to 5.8 from an original level over 7.

Meeting goals in Hawaii

In Honolulu, Daryl Yasuoka was diagnosed with diabetes three years ago after having a blood test at the local Times Supermarket health fair. The DTCC has helped him set goals, dramatically change his eating habits and adjust his medication dosage so he doesn’t feel lightheaded at work. Since joining the program two years ago with an A1C level of 11 and working with his pharmacist coach, he began testing his blood sugar twice a day with a forearm strip and recording the readings on his computer. Now his A1C is 6.9.

“A lot of times you only see the doctor for five minutes, you talk briefly and you are out of there,” Yasuoka said. “With my pharmacist coach I am able to sit down, talk about what is going on and not feel rushed. She would bring new information to every meeting – it was really eye-opening when she shared a chart for the glycemic levels in traditional Hawaiian food, which helped me to see how I had to change my eating habits.”

Recognizing diabetes dangers in Maryland

Jim and Rhonda Mou of Romney, W.Va., joined the DTCC through Rhonda’s employer, the Western Maryland Health System in nearby Cumberland, Md. Through pharmacist coaches Dale Klemm, RPh, MBA, and Julie Caler, PharmD, they have learned to check blood sugar if they are feeling sluggish or sleepy and to set goals for managing their diabetes. Jim, a church pastor, started an exercise program and has lost about 36 pounds since

*The A1C laboratory test (also known as glycosylated hemoglobin) measures a person’s average blood glucose control over the past two to three months. The American Diabetes Association recommends that A1C levels be less than 7. Lower A1C levels are associated with a lower risk of small vessel disease complications, such as kidney disease, blindness, and stroke.

CLINICAL RESULTS IMPROVED

Over 12 months, for participants in the DTCC:

Mean A1C decreased from 7.5 to 7.1

Mean LDL cholesterol decreased from 98 to 94

Blood pressures improved from
133/80 to 130/78

May 2008; Rhonda has dropped 11 pounds.

“The best part is to have your eyes wide open to the dangers of diabetes if you don’t manage it,” said Jim Mou. “The coaching is excellent and the education we have received really has sustained me with a better understanding of what I’m battling.” He also shares what he has learned with church members to help them know what questions to ask their doctors.

Empowering people in Chicago

DTCC pharmacist coach and trainer Starlin Haydon-Gratting, MS, RPh, sees the pharmacist role as helping prevent problems by providing personal support and listening to patients. As DTCC pharmacy network coordinator for the Chicago area, she sees the program from both pharmacist and patient perspectives.

“This program enlightens and empowers people, and everybody works at their own pace,” Haydon-Gratting says. “This is a personal relationship between the patient and the pharmacist – if we convey the appropriate message, in the long run patients take better care of themselves and avoid expensive problems later. The waived co-pays provide that long-lasting motivation ‘carrot’ that keeps them in the game. This program fills the critical gap between a person getting diagnosed with a chronic illness and living with it for a long time.”

Value through accountability in Pittsburgh

In Pittsburgh, 23 companies are eligible to participate in the DTCC through the Pittsburgh Business Group on Health (PBGH), one of the first coalitions to enroll in the DTCC. PBGH Executive Director Christine Whipple says the face-to-face interaction with pharmacist coaches increases participants’ ownership of their own care. “People enrolled in the program have seen tremendous value and are now engaged in taking care of their health. Seeing employees with diabetes becoming as healthy as they can is resonating with employers,” Whipple said. “Employers recognize that this is a valuable component of their benefits strategy that they want to expand and grow.”

A team effort

In the end, participants, pharmacists and employers alike confirm that the DTCC takes collaboration, communication and commitment on the part of everyone involved.

“To care for these diabetes patients takes a well-coordinated team effort between the physician, the employer, the health coalition, the pharmacist coach and other healthcare providers that fit into the program,” Haydon-Gratting said. “We all have to be in synch with each other. This program demonstrates the pharmacist role as linking these people together for the best interest of the patient.”

Care Measures Improved

Participants		Care Measure
Pre DTCC	Post DTCC	
51%	92%	Recorded cholesterol test
32%	65%	Current influenza vaccination
57%	81%	Current eye exam
34%	74%	Current foot exam



Pharmacist coach Hilde Berdine, PharmD, BCPS, prepares to demonstrate blood sugar testing for DTCC participant Linda Garofalo at Duquesne University in Pittsburgh.

Participant Demographics

Gender Distribution

Female 49%
Male 51%
Average age: 56.5 years
(82% over 50)

Ethnicity Distribution

Caucasian 80%
African-American 13%
Hispanic 3%
Native-American 2%
Asian 1%
Other 1%

Education Distribution

8th Grade or Less 2%
Some High School 3%
High School Graduate 32%
Some College 32%
College Graduate 20%
Post-Graduate Education 6%
Not Available 5%

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Aggregated data was combined from participating employers in all ten DTCC cities, reporting on 573 participants who had Baseline and Year 1 medical and pharmacy claims through December 31, 2007, and two or more documented visits with pharmacists. They had an average of six pharmacist visits and 14.8 months in the program. Analysis compared initial and most recent clinical data collected during patient care visits with community-based pharmacists for participants meeting inclusion criteria.

Diabetes Facts and Figures*

- 23.6 million Americans (7.8% of the U.S. population) have diabetes, but only 17.9 million have been diagnosed (As of 2007).
- Diabetes increased 13.5% from 2005 to 2007.
- Diabetes was the seventh leading cause of death listed on death certificates in 2006, but the U.S. Centers for Disease Control estimate diabetes is under-reported on death certificates by as much as 40%.



Pharmacist Coach Dale Klemm, RPh, MBA, of Cumberland, Md., shows DTCC participant Sandy Ryan how to check her foot as part of regular diabetes care, which includes an annual foot exam.

Cost of Diabetes in the U.S.*

- In 2007, diabetes cost the U.S. \$116 billion in direct medical costs and an additional \$58 billion for indirect costs such as lost workdays, restricted activity and disability due to diabetes.
- Approximately 1 of every 5 health care dollars is spent caring for someone with diagnosed diabetes, while approximately 1 of 10 health care dollars is attributed to diabetes.
- In 2007, diabetes-related absenteeism accounted for 15 million lost work days.



DTCC Pharmacist Coach Misty Meiser, PharmD, meets with participant Nikole Skifstad, wife of a City of Colorado Springs employee, at the city's employee pharmacy.

COMPLICATIONS*

- Adults with diabetes are 2 to 4 times more likely to die of heart disease or have a stroke than those without diabetes.
- Diabetes is the leading cause of new cases of blindness among adults ages 20–74 (24,000 new cases each year) and the leading cause of kidney failure in the U.S.
- 60% to 70% of people with diabetes have mild to severe forms of nervous system damage, the leading cause of leg and foot amputations from non-traumatic injury.
- People with diabetes are more likely to die from influenza or pneumonia than those without diabetes.



Pharmacist Coach James Sterrett, PharmD (left), and DTCC participant Bobby Stephens (right) of Charleston, S.C., cross the city's landmark Ravenel bridge, which Stephens walks almost daily as part of an exercise routine he started while in the DTCC.

*Sources: American Diabetes Association and U.S. Centers for Disease Control