

A Diabetes Ten City Challenge update published quarterly by the American Pharmacists Association Foundation

DOCUMENTED IMPROVEMENT

We are pleased to announce that interim results published in the March/April issue of the *Journal of the American Pharmacists Association (JAPhA)* show that participants in the Diabetes Ten City Challenge (DTCC) have improved across all key clinical and satisfaction indicators.



The *JAPhA* article documents clinical improvements in all of the recognized standards for diabetes care, including decreases in A1c, LDL cholesterol and blood pressure; and increases in flu vaccinations and foot and eye exams.

We saw significant increases in patient satisfaction with diabetes care and in the number of participants with self-management goals for nutrition, exercise and weight.

The results to date prove that the DTCC's collaborative-practice model is effective for managing diabetes and replicable in diverse locations and employers. And the 31 employers, more than 1,300 employees and hundreds of local pharmacists who are part of the DTCC are proving that these efforts can be successful in transforming lives and communities across the country.

All of us at the APhA Foundation and GlaxoSmithKline believe that the future of health care lies in empowering individuals to take charge of their health and providing the tools and support they need to self-manage chronic diseases.

We congratulate everyone involved in the DTCC and look forward to sharing stories of your continued success in the coming year.

—William M. Ellis
Chief Executive Officer
APhA Foundation

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Patients, Pharmacists, Partnerships in Cumberland

Six years after being diagnosed with diabetes, Sandy Ryan felt she needed some help managing her condition. Her blood sugar levels were less consistent than in the past and she found it more difficult to make the right food choices. So when her employer offered the chance to participate in the Diabetes Ten City Challenge (DTCC), she signed up right away.

"In the beginning I had my diabetes under control and got my sugars down, but then I didn't stay on the diets," said Ryan, 65, a laboratory technician for Western Maryland Health System (WMHS) in Cumberland, Maryland. The leading

Pharmacist Dale Klemm, demonstrates to DTCC participant Sandy Ryan how to check her foot as part of self-management for diabetes care. One of the program requirements for patients is to receive a foot exam annually from their physician.

employer in the mountain region bordered by Pennsylvania and West Virginia, WMHS began offering the program to its 2,400 employees and their dependents in 2006.

"We saw in regular reports from our medical insurance provider that a percentage of our population with diabetes was not following up on their medical care," said June Ward, benefits manager for WMHS. "When we heard about the Patients, Pharmacists, Partnerships (P3) program using pharmacist coaches, and the further opportunity to be part of the Diabetes Ten City Challenge, we wanted to try it."

Partnering with a network coordinator at the Maryland Pharmacists Association and supported by the University of Maryland, in summer 2006, WMHS established the

Diabetes Ten City Challenge program, known locally as the Maryland Patients, Pharmacists, Partnerships (P3). The health system agreed to waive co-pays on diabetes medications and supplies for insured employees and dependents if they worked with a pharmacist coach to manage their diabetes. Pharmacist network coordinators at the University of Maryland trained and assigned pharmacists.

WMHS employees responded enthusiastically to the offer—approximately 80 patients signed up for the program in the first month and more than 40 patients have enrolled since then. In fall 2006, the WMHS program in Cumberland became part of the Diabetes Ten City Challenge, which analyzes the impact of similar efforts across ten cities nationwide.

Incentives for change

Sandy Ryan and her husband Charlie both joined the program, partly because of the waived co-pays for diabetes medications and diabetes-related supplies. Like other participants around the country, they met with their respective pharmacist coaches monthly for the first three months to assess their knowledge of diabetes, focus on education and set physical and lifestyle goals for managing their condition. Following the initial orientation period, they meet with their coaches quarterly to evaluate progress and ensure they are staying on track.

“In a typical session, Sandy brings in her glucose meter and we download her past 30 days of blood sugar readings,” said her pharmacist coach, Dale Klemm, RPh, MBA, who consults privately with Sandy in the WMHS employee health center. “We get her weight, blood pressure and heart rate, and discuss any changes in health history or medications. We check on standard goals, how often she is exercising, when she had dental and eye exams, and hold her accountable for taking care of her diabetes.”

Since joining the program, Ryan has completed seven pharmacist visits. She says she has learned more about diabetes and nutrition, as well as how her medications work and how best to use them. She pays more attention to diet and has started exercising two or three times a week. As a result, Ryan has seen improvements in her hemoglobin A1c level, a key diabetes indicator, and feels more accountable for managing her condition.

Accountability that drives action

“You can have all the help out there you want, such as the good information Dale gives me, but if I don’t actually do what I need to do, it won’t do any good,” Ryan said. “This program helps me take actions and do the right thing.”

Klemm appreciates the opportunity to be an “accountability partner” and educator to the 10 people he coaches in the DTCC. While he had counseled some patients during his 24-year career in pharmacy, he says this program is different because of the ongoing relationship with the patient and the ability to see results in the lab values and behaviors.

“For me, the most rewarding thing is not just when patients make progress on their goals, but when you see they can connect the dots and understand why they made progress,” Klemm affirmed. “You read about things in textbooks, but through this program we really see the impact on health of managing sugar, blood pressure and cholesterol, as well as regular doctor visits, immunizations, diet, exercise and proper medication use. The combination of all of these things is truly the mainstay of diabetes care.”

Life challenges

Stressful lifestyles can impact people’s health, and helping participants deal with the challenges in their lives is part of the coaching role, said Julie Caler, PharmD, WMHS clinical pharmacist and regional pharmacy network coordinator who oversees the program.

“Sometimes stress elevates sugar levels,” Caler said. “One of our discussion topics is stress and sometimes our most important role is helping people talk through triggers of their stress and how to address them.”

“We see the impact stress and work schedules have when our hospital census is up and at the same time employees are out sick,” said Klemm. “Even people who work the night shift chronically are a lot harder to control than the people who work day shift.”

Expanding the program

To continue meeting the special needs of the WMHS employees, the health system is looking at ways to make the DTCC even more helpful for participants. One idea they are piloting this spring is a clinic approach where pharmacists will have specific office hours at the employee health center and be available for drop-in appointments.

Another concept they are developing is a cooking class with healthy foods, a topic in

which DTCC participants have expressed considerable interest. Caler is working with the hospital dietary department to create a class explaining diabetic-friendly food options at home, at work and while dining out. As part of the session, participants will learn to prepare meals and review local restaurant menus.

Maryland’s P3 program also is expanding far beyond the Diabetes Ten City Challenge. Several employers across the state have been involved in similar programs through an effort coordinated by Christine Lee, PharmD, of the University of Maryland School of Pharmacy.

“Any program that promotes the care of diabetes is worth trying, because diabetes is so serious and it affects so many different parts of our health,” Ward said. “Achieving compliance isn’t easy but we’ve seen positive results from this program.”

DTCC SOUNDBITE

“My husband Dave has been a diabetic for 35 years, he was a heavy smoker and did not have the best eating habits. He did not see his doctor on a regular basis, nor did he see an eye doctor, podiatrist or dentist as he should have for the past several years.

Through the Diabetes Ten City Challenge, the trained pharmacist not only taught my husband to use his blood glucose monitor on a regular basis, she made him understand why he should monitor his blood sugar on a regular basis. She provided counseling to help my husband take control of his disease.

The program has helped my husband stop smoking, lower his blood sugar and gain much-needed weight. He now has much better eating habits and tests his sugar about four times a day (he used to test it about once every two weeks). He has made appointments with his eye doctor and dentist.

This program is allowing Dave to take control of his illness and not let it run his life.”

Sue Nutter, Office Coordinator
Frostburg Health Center, WMHS

It's working: DTCC Interim Results Show Clinical Progress

Interim results show that participants in the Diabetes Ten City Challenge (DTCC) improved across all key clinical and satisfaction indicators in the early stages of the program, according to the American Pharmacists Association (APhA) Foundation. Initial data show a positive trend in controlling diabetes, the chronic disease that affects 21 million Americans and costs the U.S. more than \$174 billion annually.

"The data show significant improvement in all clinical and diabetes care indicators measured," said Toni Fera, PharmD, principal author of an article on the results appearing in the March/April issue of the *Journal of the American Pharmacists Association*. "These results track exactly with data from past projects where similar clinical improvements translated to savings to employers in total direct medical costs for participants."

Key Findings

The report analyzed aggregate data on 914 DTCC participants who were in the program at least three months as of September 30, 2007. It documented clinical improvements in all the recognized standards for diabetes care, including:

- **Decreases in laboratory measures** (mean) for hemoglobin A1c, LDL cholesterol and blood pressure over the initial year of the program
- **Increases in the number of participants** with current influenza vaccinations, foot examinations and eye examinations
- **21% increase** in the number of participants achieving the American Diabetes Association goal of A1c level <7.0
- **Increase from 43.8% to 57.7%** in participants achieving nationally recognized National Cholesterol Education Program goals for LDL cholesterol

- **15.7% increase** in the number of people achieving recognized goals for systolic blood pressure.

In addition to clinical measures, the initial results indicated progress in key humanistic outcomes:

- The number of DTCC participants who felt their overall diabetes care was "very good to excellent" increased from 39% to 87%.
- More than 97% of participants reported being "very satisfied" or "satisfied" with diabetes care provided by DTCC pharmacists.
- The number of participants with self-management goals to control their diabetes also increased significantly over the course of the program: from 22% to 66% with nutrition goals, from 24% to 72% with exercise goals and 23% to 64% with weight goals.

Key Outcomes Measured

Clinical Indicators

(recognized standards for diabetes care)

	Mean Initial Measure	Mean Ending Measure	Mean Change
A1c (glycosylated hemoglobin) (American Diabetes Association goal <7.0)	7.6	7.2	-0.4*
LDL cholesterol level (National Cholesterol Education Program Goal: <100)	96.3	93.3	-3.8*
Blood Pressure (JNC VII Goal of <130/80) <small>Recommended by NIH Seventh Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, December 2003</small>			
Systolic	131	129	-2.5*
Diastolic	79.3	77.3	-2.3*

*Statistically significant change

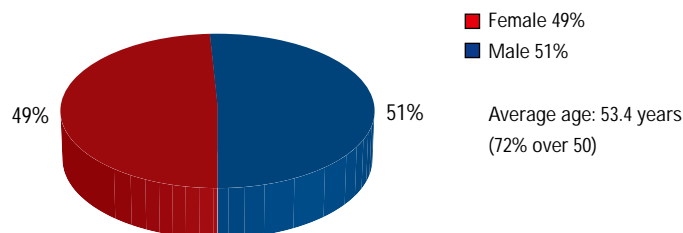
Care Measures	Initial	Follow-up
Current influenza vaccination	43%	61%
Current foot examination	38%	68%
Current eye examination	60%	77%

Self-Management Goals	Initial	Follow-up
Nutrition goal	22%	66%
Exercise goal	24%	72%
Weight goal	23%	64%

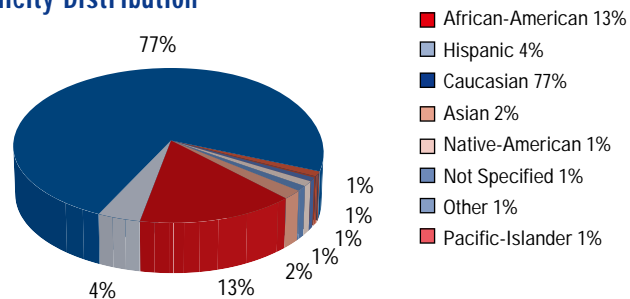
Patient Satisfaction	Initial	Follow-up
Overall diabetes care good/excellent	39%	87%
Very satisfied/satisfied with pharmacist	N/A	97%

Participant Demographics

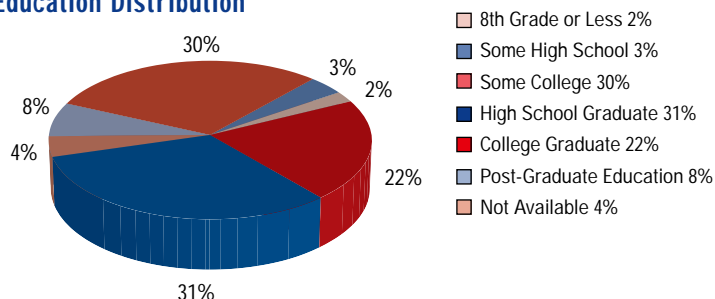
Gender Distribution



Ethnicity Distribution



Education Distribution



WHO'S WHO *in the DTCC*



Julie Caler, Pharm D
Clinical Pharmacist
Western Maryland Health System

Role in DTCC:

Julie is regional coordinator for the DTCC in Western Maryland and a pharmacist coach for 20 participants. She began coaching while finishing her residency in Baltimore and commuted two hours to her patient visits until she relocated to Cumberland in 2007.

Why your organization chose to participate:

"WMHS recognized the value in investing in their employees' health to improve employee satisfaction as well as overall productivity of the organization. They had done a small-scale version of the program a few years ago and realized its potential impact."

Most rewarding part of the experience:

"Patient interactions during and between our appointments are motivating to me personally and professionally. The concept of overall wellness and preventative medicine is my main motivator for becoming a practitioner. I am ever thankful to have the opportunity to participate in this program."

Lesson learned:

"Though pharmacists often wish they had more time with their patients, compared to the average physician visit, even 20-30 minutes of solid attention on one patient is recognized and appreciated. Many patients say accountability is the main benefit of this program, and an occasional email or phone call (or update in the hallway), goes a long way to help them to stay on track with medications as well as the lifestyle factors of diet, exercise and stress management."



June Ward
Human Resources Benefits Manager
Western Maryland Health System

Role in DTCC:

June manages benefits programs for employees and their dependents and evaluates their effectiveness. She handled initial enrollment for the DTCC and now monitors the value of the program and its ongoing patient enrollment.

Why your organization chose to participate:

- "(1) Recognizing that diabetes is significant within our own employee population, we had been monitoring the utilization and compliance by our diabetic members as part of a disease management program.
(2) WMHS is concerned about the overall welfare benefit of our employees.
(3) We previously implemented an internal diabetes program onsite and found this program effective and with favorable results."*

Most rewarding part of the experience:

"Hearing from the patients who feel the program has educated them on the seriousness of their disease and what is available to assist them in achieving a better quality of life."

Lesson learned:

"The value of funding education and prevention of diseases. It takes effort and resources from both the employee and employer, but in the end we are confident of the value of this program."



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