

One Year's Experience

The Lakeshore Diabetes Project: from Asheville to Wisconsin

by Brian Jensen, RPh

Editor's note: The following report was presented during the 2004 PSW Annual Meeting in Green Bay

When the Lakeshore Diabetes Project was last presented (*JPSW* July/August 2003), discussion centered on the network development process. This status update will focus on what the network has achieved, the lessons we have learned and our replication plans.

WHAT IS THE LAKESHORE DIABETES PROJECT?

Just over a year ago, 18 pharmacists representing eight pharmacy practices united to implement and test a collaborative, patient-focused diabetes care model. This model, with methods to systematically assess patients and deliver improved care with subsequent cost-savings, has broad implications for the future of health care and, in particular, pharmacy practice. Termed the Lakeshore Diabetes Project, these pharmacists have realized the goal of collaborative practice through affiliation with the APhA Foundation Patient Self-Management: Diabetes (PDM:D) program as one of its five national pilot sites. This innovative program revolves around the coordinated efforts of each employer, local health care providers including pharmacists, physicians and diabetes educators- and health insurers to enable employees to better manage their disease. Economic, clinical and humanistic metrics were measured and reported at quarterly intervals.

The goals of this pilot project were three-fold. First, and central to any care model, is the desire to improve the delivery of care to patients with diabetes. More than 50% of people with diabetes are not achieving control of the disease (as defined by a hemoglobin A1c of less than 7%). In 2002, in the United States, diabetes was associated with \$132 billion

in medical care costs and lost wages. This program is built on the philosophy that better health leads to lower medical costs. The second objective was to create opportunities for the advancement of pharmacy practice. The unique position that pharmacists bring to the health care system, acting as a bridge between patients and other members of the health care team, is leveraged in this model. It is our belief that by utilizing pharmacists with special training in a coaching role, both the care provided and its cost can be improved.

Finally, the challenge exists to prove how this care can be wrapped inside of a viable business model in which all stakeholders win. In meeting these goals, we can realize a preferred health care scenario for the 21st century.

WHAT HAVE WE ACHIEVED?

Our pilot project year ended in September. Over the past year, we had 336 formal patient visits involving 75 participants. While the numbers might seem small, they were sufficient to test model systems of care as well as to prepare us for the replication steps. Clinical outcome

metrics were tracked and recorded by the pharmacists providing care. These included such objective measurements as hemoglobin A1c, LDL-C, and blood pressure changes. Lifestyle metrics included nutrition, exercise and weight goal setting and achievement. Patient performance was followed with foot, eye and dental examinations as well as medication adherence documented in Web-based records.

Through the pilot program, hemoglobin A1c values have been reduced from 7.7 to 7.1. Remarkably, in just 12 months, there has been a 37% increase in the number of patients with a hemoglobin A1c value less than or equal to 7%. The number of patients with current LDL-C values rose from 71% to 91% with a reduction from an initial average of 114 to 105 mg/dL. Blood pressure values improved modestly with an average systolic reduction of 141 mmHg to 139 and an average diastolic reduction of 82 mmHg to 81. There was a 30% increase in the number of patients with current results recorded in their medical record.

The importance of the pharmacist as care coach and cheerleader is underscored by the lifestyle changes achieved in this program. Impressive increases in the number of patients with a defined nutrition, exercise and weight goal and subsequent achievement of that goal were reported. (see Table 1) There also has been dramatic improvement in other key indicators of diabetes care, such as influenza vaccinations and foot and eye examinations. (see Table 2)

TABLE 1. CLINICAL – NUTRITION, EXERCISE, WEIGHT
Self-Identified Goals to 26-Apr-04 (n=56)

INITIAL VISIT PERCENTAGES	LATEST VISIT PERCENTAGES
Nutrition 0% with goal 0% achievement	Nutrition 55% with goal 56% achievement
Exercise 18% with goal 13% achievement	Exercise 61% with goal 61% achievement
Weight 18% with goal 10% achievement	Weight 59% with goal 31% achievement
Mean duration between initial and latest Visit = 6.9 months	

Humanistic outcome metrics included patient perceptions of overall diabetes care received and, in particular, pharmacist care provided both at baseline and at six months.

Overall satisfaction with diabetes care increased, with 57% of responses falling within 8-10 on a 10-point scale at baseline, to 87% favorable response at six months. 95.7% of patients were either very satisfied or satisfied with pharmacist-provided diabetes care.

A concern frequently voiced by employers/payers is one of return on investment. Economic outcome metrics sought to provide this measured feedback. Using TPA and PBM datasets, changes in health care costs paid for participants were compared with baseline using the same period for the prior year. Employers agreed to share this data with the project leaders for planned quarterly analysis and reporting. To date, only two of the five participating employers have fulfilled their responsibilities. Apparently, the phrase “herding cats” applies to more than just pharmacists! Based on the available current data and historical performance using the Asheville experience, we are projecting an almost \$2,500 savings in total health care cost per participant for the first year. Ongoing evaluation and data analysis is planned.

WHAT HAVE WE LEARNED?

The model requires collaboration and one of the most important principles is to realize that the patient is the hub around which everything turns. Providers, including pharmacists, must realize they each have unique skills and that they can contribute to better patient outcomes, but no one provider has all the answers for all the patients. Members of the team, including the patient, will bring their particular focus to the education process. In the case of the Lakeshore Diabetes Project, this issue surfaced several times. As such, it was critical to define the various provider roles to ensure a smooth process of care at an early stage and refocus providers throughout the year. Working as a critical part of the care team, diabetes educators are the key players for the initial education process and for situational referrals. Established referral criteria included patients who had

never received structured diabetes education or had had an interval of greater than five years since their last training, knowledge deficits in exercise, nutrition, medication management and monitoring as well as support efforts for behavioral change. The pharmacist’s role is one of a care coach. In this role, pharmacists meet with patients on a regular basis to review treatment and patient specific goals, and to assess patient knowledge, skills and performance. Basic physical assessments are also performed involving blood pressure, weight and periodic foot examination. Together, we help patients manage their disease. They manage well or poorly largely on the support they get. Through the first nine months of the project, 35 referrals were made by pharmacists to diabetes educators.

Closely linked to collaboration is the need for clear communication. Participants are contacted within one week of their pharmacist match and regularly thereafter to remind them of visits, goals, tasks, etc. Diabetes educators are contacted with any referral to review findings as well as patient needs and the objectives for the referral. Once the patient is enrolled, the patient’s physician is contacted to review program principles and specific physician goals. Certainly progress notes are shared following each visit. Finally, our pharmacists regularly communicate with each other using a variety of formats. Using grand rounds, a dedicated list serve and site visits, we share our concerns and successes, apply new ideas and support each other in this endeavor.

Finally, the need for partnerships on a local, state and national level is quite apparent.

I applaud the commitment shown by the 18 brave pharmacists who represent the pharmacy profession in all practice settings. They have found ways to make

this care model work in a real world setting. PSW, in providing administrative support, has been an important partner in connecting providers and employers. The UW School of Pharmacy has provided invaluable support in skill building and ongoing research. Finally, the APhA Foundation has worked actively with our site to ensure its success. It is my hope that these combined efforts will have a lasting impact on Wisconsin pharmacy.

The time has come for the lessons learned to be applied in other sites and situations. We need to move to full-scale production. Locally, this will involve a transition from pilot to ongoing program status. We plan to expand to other employers and other disease states such as smoking cessation. Pharmacists and employers from several areas of the state have expressed interest in project implementation. Morton Pharmacy has taken the first steps and prepared their pharmacists for this expanded role. A network headed by pharmacists Ken Ford and John Johnson is beginning to form in the La Crosse area. Meetings continue to build demand for this model at the state level with Medicaid/BadgerCare and the Wisconsin Employee Trust Fund. When the model was first presented to a small group of pharmacists over two years ago, we had no idea of how it could be accomplished in a market lacking any large employers or formal network of pharmacists. Patience, persistence and hope were required. The surprise within every new discovery is that there is always more to be discovered. This is certainly true as we continue to apply the lessons learned in new and exciting ways to improve patient care. ●

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TABLE 2. CLINICAL – FLU VACCINE, FOOT, EYE EXAMS to 26-Apr-04 (n=56)	
INITIAL VISIT PERCENTAGES	LATEST VISIT PERCENTAGES
Influenza Vaccination - 41% current Foot Exam - 43% current Eye Exam - 52% current	Influenza Vaccination - 59% current Foot Exam - 64% current Eye Exam - 70% current
Mean duration between initial and latest Visit = 6.9 months	