

Community Partnerships in the Elimination of Health Disparities: Addressing Barriers to Care

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Abstract

The University of Toledo College of Pharmacy has developed partnerships with two area community health centers to address health disparities and barriers to care in medically underserved populations. Through the provision of clinical pharmacy services and the operation and management of a clinic pharmacy, patient access to pharmaceutical care is enhanced. Increased access to pharmaceutical care may eliminate certain barriers to care. This article describes the implementation, selected outcomes, and challenges of the partnerships.

The need to eliminate health disparities in the community has brought the University of Toledo College of Pharmacy into partnership with two federally funded community health centers, The Family Medical Center of Michigan and The Neighborhood Health Association of Toledo. This article describes two partnerships, one of which is based on a federally funded grant whose purpose was to provide clinical pharmacy services to both community health centers. The second partnership involves The College's operation of pharmacy services at an in-house pharmacy for The Neighborhood Health Association of Toledo. These experiences illuminate issues related to barriers to health care and the challenges of partnerships.

Understanding Health Disparities and Barriers to Care

The National Institutes of Health defines health disparities as differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups. (Healthy People 2003) Health disparities are an ever-increasing problem in the US and their elimination has national, state, and local interest. Healthy People 2010 is a government publication outlining the health status of our nation. It is a set of objectives for the Nation to achieve over the first decade of the new century. The report covers 28 focus areas, including cardiovascular disease and stroke, diabetes, and respiratory diseases. Healthy People 2010 has two broad goals: first, to increase the life span of healthy life for all Americans, and secondly, to eliminate health disparities. The report shows that many

health disparities, especially those involving chronic diseases, are related to barriers to care (Healthy People 2000).

Health disparities and barriers to care are closely related and can affect almost anyone. A study by Philips (2000) showed that of 22,000 people surveyed, a substantial percentage in all racial/ethnic groups experienced barriers to care. Ten to 30 percent reported forgoing needed care or having difficulties obtaining it, not having a usual source of care, or encountering organizational barriers such as long waiting lines. The study revealed that 16% of families reported at least one barrier to care. Although barriers to care can affect persons in any demographic group, low-income minority groups experience the most acute barriers in access to care (Lillie-Blanton et al. 1996).

Notable barriers to care include socioeconomic status, access, location, cultural differences, and language differences (Spector 1996). Socioeconomic status affects health in numerous ways. Adequate income increases access to appropriate health care and facilitates engagement in health promoting behaviors such as exercise and proper nutrition. Income's relationship to health is cyclical in that good health leads to more opportunity to learn or work which may lead to better employment, which may lead to greater access to health care benefits. Greater access to health care benefits, then, may lead to better health, and so on and so on. Even though Medicaid may be an option for many citizens with insufficient income, many are not eligible to receive it. Spector (1996) reported that only 27% of families with incomes below \$14,000 have Medicaid, 35% have private insurance, and 37% have no coverage at all. According to Rabinowitz (2003), the US Census Bureau estimates that over 41.2 million Americans were without health insurance in 2001. Minorities are disproportionately over-represented in the uninsured population (Hoffman and Schlobohm 2000).

Access refers to the availability of quality health care services in addition to the ability to utilize those services. Access can be affected by location, such as in rural areas or by lack of health care benefits to cover needed office visits, prescription drugs, or medical procedures. Access also includes logistical issues such as transportation and the time it takes to obtain medical attention.

Cultural and language differences may also be barriers to care. Cultural differences include health beliefs and attitudes that may differ from patient to provider. These differences may affect the communication between patient and provider and therefore, lead to less than optimal outcomes for the patient. According to Lillie-Blanton et al. (1996), obstacles to care can reflect the prejudices of providers or patients either about racial/minority groups or about institutional practices. Some of the cultural insensitivities of providers may arise from lack of awareness about social customs or about the social environment of the populations served and can be purely unintentional. Alternatively, patients may distrust providers and/or the health care system due to previous personal or vicarious experiences. In regard to language differences, Spector (1996) estimates that 13% of the US population speaks a language

other than English at home. Therefore, it is possible that many patients are receiving health care information in languages other than those with which they are most familiar. Culturally competent care takes the health beliefs, language, and attitudes of the patient into consideration in the provision of care.

Each of the aforementioned barriers can have a negative impact on the long-term treatment needed for chronic diseases. This is especially true for hypertension, diabetes, and asthma, three costly diseases with major disparities in America's minority communities.

HRSA: Closing the Health Gap

In an effort to address the widening "health gap," the federal Health Resources Services Administration (HRSA) promoted a nationwide campaign aimed at 100% access to care and "zero" health disparities. HRSA is the principle public health service agency responsible for increasing access to basic quality health care for uninsured and medically underserved citizens. In 2002, HRSA invested more than \$1.5 billion in community health centers. Community health centers are a primary source of care for the nation's uninsured or underinsured citizens. HRSA used these monies to establish new access sites in urban and rural underserved areas, as well as expanded benefits such as pharmacy services in established health centers.

A major funding area for the HRSA campaign was the Clinical Pharmacy Demonstration Projects. Pharmacists are uniquely positioned as the most accessible health care providers in the community and therefore have the responsibility to help the country meet the goals outlined in Healthy People 2010 (Babb and Babb 2003). Pharmacists have been proven to be effective in helping patients to manage chronic diseases such as diabetes, hypertension, and asthma (Cranor et al. 2003; Park et al. 1996; Pauley et al. 1995). Pharmacists have the knowledge base and skills necessary to aid in the elimination of health disparities and in the reduction of barriers to care.

In order to qualify for funding, a minimum of two distinct community health centers and one college of pharmacy were required. Colleges of pharmacy were incorporated in order to access the most advanced pharmacy knowledge in addition to the ability to monitor project outcomes through research. One of the first seven funded projects was The University of Toledo partnership with The Family Medical Center of Michigan and The Neighborhood Health Association of Toledo. Table 1 lists the Clinical Pharmacy Demonstration Project partners nationwide. Following the table is a description of the partners focused on in this manuscript.

Table 1. Nationwide Clinical Pharmacy Demonstration Projects

Health Centers	School of Pharmacy
El Rio Santa Cruz Neighborhood HC* Mariposa CHC, Chiricaua CHC, Morenci County CHC, San Miguel CHC	University of Arizona
Siouxland CHC* Panhandle Community Services HC, Council Bluffs CHC Charles Drew HC, Indian Chicano HC	University of Nebraska
Whittier Street HC* Uphams Corner HC, Harbor Health Services, Inc. Mattapan CHC	Northeastern University
Family MC of Michigan* Neighborhood Health Association	University of Toledo
Aaron E. Henry Community Health Services Center, Inc.* G.A. Carmichael Family HC, Delta HC, Dr. Arenia C. Mallory CHC	University of Mississippi
Community Health Centers* State Migrant Program, Wasatch Homeless Health Care	University of Utah
Community Health Association of Spokane* NE Washington Health Program, Native Health of Spokane	Washington State University
Bond CHC* North Florida MC, Leon County Health Dept.	Florida A&M
Health Resource Alliance of Pasco* Tampa CHC, Manatee County Rural Health	Florida A&M
CHC of South Columbus* Stewart Webster Rural Health, Inc., Columbus Regional MC	Auburn University
Chiricahua CHC* El Rio Santa Cruz Neighborhood HC, Marana HC	University of Arizona
Coastal Family HC* Greene Area Medical Extenders	University of Mississippi
Eau Clair Cooperative HC* Richland Community Health Care Association	University of South Carolina
Hill Health Corporation* Fair Haven HC	University of Connecticut

* denotes lead Health Center
 CHC= Community Health Center
 HC= Health Center
 MC= Medical Center

The Partners

The University of Toledo College of Pharmacy (UTCP)

The University of Toledo College of Pharmacy (UTCP) will celebrate its centennial in 2004. The College has approximately 1,500 undergraduate and graduate students and 40 faculty members. UTCP offers a four-year Bachelors of Science in Pharmaceutical Sciences degree as well as the six-year Doctor of Pharmacy degree. In addition to professional development coursework, Doctor of Pharmacy students participate in specialized experiential rotations to prepare them for practice in many settings, including community health centers. As for graduate studies, the College offers the M.S. in Pharmaceutical Sciences degree as well as a Ph.D. in Medicinal Chemistry.

Family Medical Center of Michigan, Inc. (FMC)

Located in Monroe County, Michigan, on the Michigan-Ohio border, FMC is a community health center organized in 1978 to meet the primary medical care needs of the area's citizens. The center has two sites, Temperance and Carleton. Both sites are located in communities designated as Medically Underserved Areas (MUA). MUAs are federal designations of a geographic area that meet the criteria of needing additional primary health services. FMC serves a primarily rural population and is the only health care facility in the service area that serves the uninsured and underinsured migrant population. The Center serves patients of all ages, regardless of their ability to pay.

FMC services include family practice and pediatric care, obstetrics/gynecology, behavior and mental health, and podiatry. FMC has agreements with two local pharmacies to provide medications at a reduced rate to uninsured clients. The FMC service area population is approximately 167,692. More than 20% of the service area population lives below 200% of poverty. FMC served as the lead center for the demonstration project. Figures 1 and 2 describe the FMC patient population by race and payment method.

Figure 1. FMC Population by Race

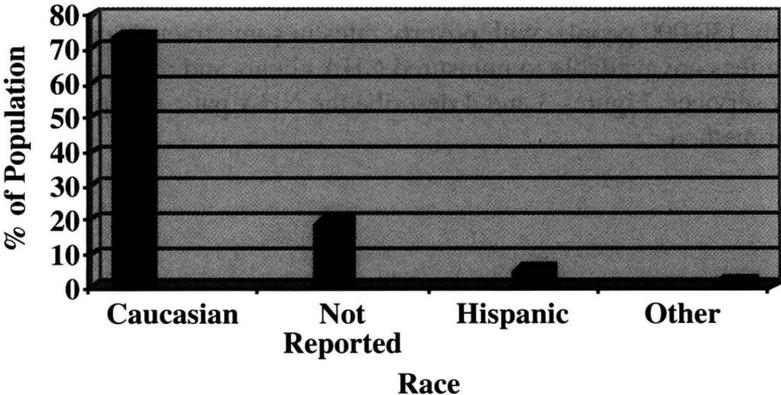
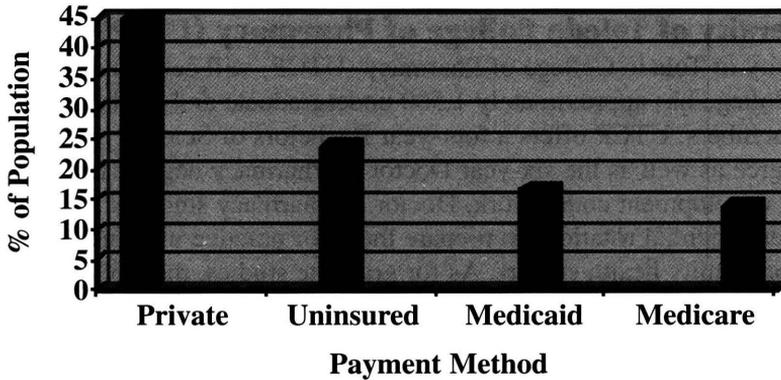


Figure 2. FMC Population by Payment Method



Neighborhood Health Association of Toledo, Inc., (NHA)

Over 30 years ago, grassroot organizations within Toledo’s African-American and Latino neighborhoods established community health centers in response to residents’ needs for accessible, affordable, quality health care. Today, these centers form the foundation of NHA, the second largest community health care system in Ohio. NHA is the only Federally Qualified Health Center in northwest Ohio. NHA provides medical services to infants, children, and adults. Eight NHA sites, located across the city of Toledo, serve a primarily urban population.

Medical services offered through NHA include family practice, internal medicine, cardiology, OB/GYN, pediatrics, optometry, and midwifery. NHA also provides laboratory services, WIC, social services, bilingual translation (English/Spanish), immunizations, and family planning. Additional programs include the Homeless Healthcare Network and Sickle Cell Program of Northwest Ohio. NHA’s Cordelia Martin clinic has an in-house pharmacy that can be utilized by all NHA patients.

The NHA service area consists of 43 contiguous census tracts inhabited by approximately 130,000 people, with poverty rates in some tracts exceeding 80%. Sliding scale fees are available to uninsured NHA clients and apply to medical as well as pharmacy services. Figures 3 and 4 describe the NHA patient population by race and payment method.

Figure 3. NHA Patients by Race

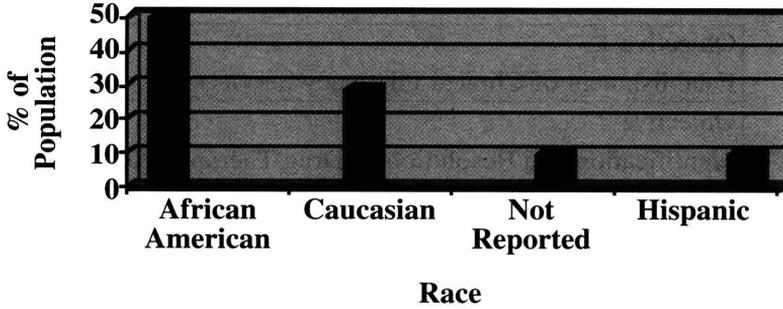
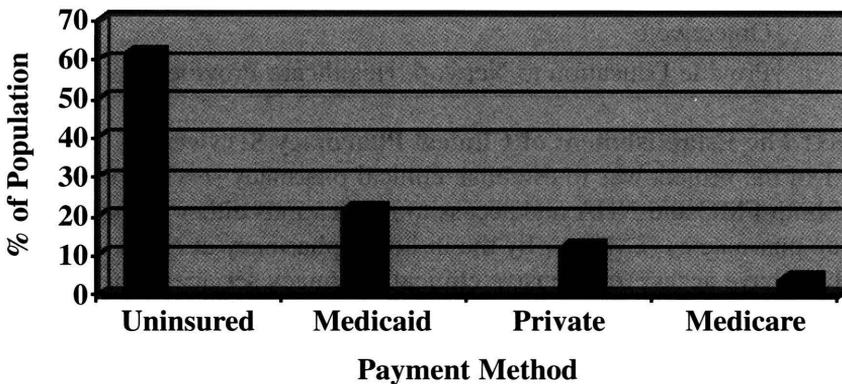


Figure 4. NHA Patients by Payment Method



Although FMC and NHA differ in racial composition and payment method of patients, health disparities and barriers to care exist for both populations. Both centers exist in medically underserved areas and a large number of patients in both populations are uninsured and live below poverty.

The UTCP Partnerships: Addressing Barriers to Care

Together, through specific goals and objectives, the UTCP partnerships address several barriers to care. Following is a description of the two partnerships and an explanation of how barriers to care are addressed.

Partnership 1: The Clinical Pharmacy Demonstration Project

Partnership 1 is the Clinical Pharmacy Demonstration Project. As mentioned in Table 1, this partnership is a collaboration between all three partners, The University of Toledo College of Pharmacy, The Family Medical Center of Michigan, and The Neighborhood Health Association of Toledo. The project was funded over a two-year period and culminated in July 2003. Table 2 lists the six major Project Objectives.

Table 2. UTCP/FMC/NHA Clinical Pharmacy Demonstration Project Objectives

Objective 1 Establishment of Clinical Pharmacy Services
Objective 2 Identification and Resolution of Drug Therapy Problems
Objective 3 Implementation of Diabetes Disease State Management
Objective 4 Development of Experiential Training Sites
Objective 5 Pharmacy Cost Control Initiatives
Objective 6 Provide Education to Network Healthcare Providers

Objective 1: The Establishment of Clinical Pharmacy Services

Objective 1 of the project was to establish clinical pharmacy services in the centers. Patients of both FMC and NHA had access to medications either through contracts with outside pharmacies (FMC) or by the in-house pharmacy at NHA. However, clients did not have access to extensive clinical pharmacy services. The clinical pharmacy services performed in this project are based on the concept of pharmaceutical care. Pharmaceutical care is defined as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient’s health-related quality of life (Hepler and Strand 1989) Through pharmaceutical care, pharmacists work with patients and other providers to (1) identify drug-related problems, (2) resolve drug related problems, and (3) prevent drug related problems. It is the process by which pharmacists work with patients to eliminate, reduce, or prevent a disease state or symptomology.

In order to accomplish this objective, one clinical pharmacist was hired through the grant and one clinical pharmacist faculty member was provided by UTCP. The clinical pharmacists worked with other UTCP faculty and clinic healthcare providers to develop protocols for the delivery and implementation of clinical pharmacy services. For example, patient consent forms, provider referral forms, and specific guidelines on what the pharmacists would cover with patients were developed during this time period. Clinical pharmacy services were provided at four clinics within the network, namely the Temperance and Carleton clinics of FMC, and The Cordelia Martin and Daisy Smith clinics of NHA.

Objective 2: Identification and Resolution of Drug Therapy Problems

As fulfillment of Objective 2, the clinical pharmacists identified and resolved drug therapy problems and provided numerous consults on drug therapy questions. They maintained specific hours at the clinics and served as resources on drug therapy to providers and patients alike. Questions such as “What are the current treatment options

for diabetic gastroparesis?” and “Which antibiotics are appropriate for use in pregnancy?” were common. Upon request of providers, the pharmacists reviewed patients’ charts and recommended needed changes in drug therapy. Patients having difficulty in managing drug therapy could make appointments with the pharmacists free of charge.

The inclusion of clinical pharmacy services in Objectives I and II addressed the access barrier by providing the most current pharmacy knowledge to patients and providers. According to Schering Report XXIV (2002), only a minority of the 100 physicians surveyed were confident that they have all the information they need about the medications their patients are taking. Additionally, physicians in the study estimate that 25% of their patients who take prescription drugs are putting themselves at risk due to a lack of compliance and not following the physician’s instructions relative to medication use. Medication-related morbidity and mortality cost our nation billions of dollars each year (Johnson and Bootman 1995). Therefore, proper prescribing and patient adherence to drug therapy are not to be taken lightly. Clinical pharmacists serve as valuable sources of information to prescribers and patients regarding the proper choice of medication, proper dosage, drug interactions, and possible adverse effects. Access to more appropriate prescribing and drug information facilitates faster patient recovery or control and may save time, money, and lives.

Objective 3: Implementation of Diabetes Disease State Management

Objective 3 was to implement a clinical pharmacist-led Disease State Management (DSM) program in diabetes. Such programs focus on creating a plan of care that emphasizes the prevention of complications while evaluating the clinical, humanistic, and economic outcomes of the plan. Since it is based on a coordinated effort between the patients and healthcare providers, DSM can be effective in conditions in which patient self-care efforts significantly affect the disease state. As such, diabetes is an excellent candidate for DSM. Diabetes was chosen by HRSA as a national focus of all Demonstration projects. Today, more than 13 million people in the United States are known to have diabetes and another 5 million are unaware that they have it (Centers for Disease Control and Prevention 2002). Diabetes is a very costly disease. According to The American Diabetes Association (2003), diabetes cost our society \$132 billion in 2002. That translates to nearly one of every five dollars spent on health care. With nearly a third of total diabetes dollars spent on drugs, insulin, and monitoring supplies, care for this disease is likely the largest and most important market for pharmaceutical goods and services.

Diabetes exhibits significant health disparities in the US. For example, Healthy People 2010 (2000) reports that the relative number of persons with diabetes in African American, Hispanic, and American Indian populations is one to five times greater than in white communities. Deaths from diabetes are two times higher in the African American population than in the white population. Also, since proper diabetes care can be expensive, the disease may have more negative impact on those of low socioeconomic status.

Overall, 56 patients enrolled in the Diabetes DSM program, (32 NHA, 24 FMC). Patients were recruited by self or provider referral. The clinical pharmacists counseled the patients on proper medication use and administration, blood glucose monitoring, diet, exercise, smoking cessation, and other lifestyle issues. The clinical pharmacists provided culturally relevant written information on diabetes management to support the lessons learned during the counseling sessions. Patients were scheduled to see the pharmacist every three months, or more often if necessary. Sessions lasted approximately 30 minutes. Although patient dropout was a significant challenge, preliminary data analyses showed improvement in the diabetes-related clinical outcomes for patients who continued with the program. This program was free of charge to participating patients.

In addition to clinical outcomes, humanistic and economic outcomes were also focused on in the DSM program. Many people with diabetes have restrictions in normal functioning brought about by complications of the disease. Thus, health related quality of life (HRQOL) is an important factor in determining the appropriateness of treatment for diabetic patients. Epidemiologic studies have shown that patients with diabetes typically have lower HRQOL scores than those in the general public (Rubin and Peyrot 1999). HRQOL was assessed in this project by the use of diabetes specific and general quality of life instruments. Results showed mean HRQOL scores similar to other published scores for diabetes patients (Khandelwal 2002).

Economic outcomes place a dollar value on patient-related humanistic and clinical outcomes. This type of outcome helps to determine if the benefit of implementing a program outweighs the costs. A meta analysis conducted by Schumock et al. (1996) showed that for every dollar invested in clinical pharmacy services, an average of \$16.70 was saved. Monies saved can then be reinvested into other patient care areas. Costs focused on in the UTCP Demonstration Project include repeat clinic visits, emergency room visits, and hospitalizations due to lack of disease control. The economic analyses of this project are ongoing at this time.

As with Objectives 1 and 2, the use of a clinical pharmacist in diabetes DSM increases patient access to more comprehensive care. Diabetes can often be controlled by proper medication use, diet, and exercise. However, strategies that could lessen the burden of this disease are often not available to or used regularly by patients. Free access to diabetes DSM, such as that provided in this project, could be a major asset to those battling this deadly and costly disease. Cost savings due to better diabetes control could allow the centers to provide even more needed services.

Objective 4: Development of Experiential Training Sites

Objective 4 involved the use of the network centers as experiential training sites for UTCP students. Undergraduate and graduate students benefited from their involvement in the project. The centers served as ambulatory rotation sites for undergraduate UTCP and University of Michigan students. In addition to working alongside the clinical pharmacists, students worked on a variety of projects for the network. For example,

they offered in-services on various medications to clinic providers and conducted a “Healthy Heart Day” program at several network clinics.

Another component of Objective 4 was the development and implementation of a pharmacy residency program. A residency in pharmacy practice with emphasis in community care is defined as an organized, directed, postgraduate training program that centers on development of the knowledge, skills, and abilities needed to pursue pharmaceutical care for patients in the community pharmacy setting (APHA and ASHP 2002). A residency builds upon pharmacy practice experience, experiential education, and other forms of academic instruction. Subsequently, the residency received accreditation from the American Society of Health Systems Pharmacists.

Exposing pharmacy students to culturally diverse patient populations and to the needs of the medically underserved improves their chances of becoming culturally competent practitioners. In this way, barriers to care due to cultural differences can be reduced.

Objective 5: Pharmacy Cost Control Initiatives

As fulfillment of Demonstration Project Objective 5, Pharmacy and Healthcare Administration graduate students performed pharmacy management related projects in the NHA in-house pharmacy. They assisted with assuring appropriate inventory prices, monitoring pharmacy costs, and in obtaining reimbursement from third party payers. These activities were successful in recovering thousands of dollars to the NHA pharmacy budget.

Objective 6: Provider Education

Continuing Education is vitally important to the continued growth of health care professionals. Several opportunities for the advancement of knowledge were provided through the project. Clinic providers attended in-services given by pharmacy students on the use of several medications. In order to become more culturally competent, project pharmacists along with selected UTCP faculty attended conferences on diabetes care in diverse populations and on care to the medically underserved. As a joint component of Partnership 2, NHA providers attend quarterly continuing education programs on diabetes, hypertension, and asthma. Enhancing the knowledge base of health care providers increases patients’ access to appropriate care. The more knowledgeable and culturally competent providers are, the better care they give to patients.

Although data collection for the Demonstration Project ended in July 2003, the activities developed during the project are still provided by UTCP at the NHA clinics. FMC decided not to continue the provision clinical pharmacy services.

Partnership 2: UTCP/NHA Pharmacy Management Partnership

Partnership 2 was initiated as a result of the positive relationship that developed between UTCP and NHA during the implementation of the Demonstration Project. NHA had operated an in-house pharmacy for several years prior to involvement with the College; however, upon request of the NHA CEO, UTCP assumed responsibility for pharmacy operation and management of resources. With funds provided by NHA, UTCP hired a Pharmacy Director who also serves as a faculty member. Partnership 2 was launched on December 1, 2001.

Many successful efforts have resulted from this collaboration. First and foremost, there has been an increase in new and refill prescription volume for the pharmacy. Insufficient access to prescription drugs can be a major barrier to care for many patients. As more eligible patients utilize pharmacy services, outcomes for diseases will likely improve. Although there may be additional drug costs for the clinic, savings in other areas should be realized as patients utilize fewer services due to emergency treatment. On June 24, 2003 the pharmacy celebrated prescription “30,000” along with news media and patients. To date, the pharmacy has filled over 36,000 prescriptions.

Another outcome of the partnership was the revision of the NHA pharmacy formulary. A formulary is a list of medications that are approved for use by a health care organization. Formulary management is a formalized system that helps organizations to promote clinically sound, cost-effective pharmaceutical care (Academy of Managed Care Pharmacy 1997). Efficient and effective use of pharmacy resources can reduce overall drug costs and improve patient access to more affordable care. The Pharmacy Director and UTCP faculty reviewed the existing formulary. Together, they selected the most cost-effective medications for inclusion on the list. The new formulary contains 71 fewer line items than the previous one. This change should result in substantial drug inventory savings for the pharmacy.

Paying minimal costs for drugs purchased is another way to reduce inventory expenditures. The partnership facilitated this goal by enhancing participation in the federal government’s 340B pricing program. 340B Pricing provides discounts on selected outpatient drugs for covered entities that serve the nation’s most vulnerable patient populations. The 340B Drug Pricing Program resulted from enactment of the Veterans Health Care Act of 1992, or section 340B of the Public Health Service Act. This program reduces the cost of drugs to federal purchasers and federal agencies, who in turn pass on the savings to federally funded health care organizations who meet certain requirements through the Pharmacy Affairs Branch.

According to von Oehsen III (2001), 340B prices are, on average, 54% lower than Average Wholesale Price. These prices were found to be 24% lower than those available to group purchasing organizations, which typically receive substantially lower drug costs due to negotiated contracts with pharmaceutical manufacturers. Hospital participants in 340B have experienced an average of \$2 million in savings annually.

In order to facilitate control of all medications in the clinic, both inside and outside of the pharmacy, a new drug sample policy was developed and implemented. Receiving samples that are provided by pharmaceutical manufacturers helps many patients that cannot afford to purchase medications. However, in accordance with Ohio State law, drug samples cannot be dispensed in a pharmacy. A physician can dispense these medications. However, if there is no formal tracking system in place, there is no way to monitor what samples are being brought into and dispensed from a facility. The new policy requires that physicians sign a receipt for samples and that all samples received or dispensed are recorded on a Sample Medication Log Sheet. Additionally, pharmaceutical company sales representatives are not allowed access to the sample storage area.

Patient Assistance Programs is another mechanism that pharmaceutical manufacturers use to help uninsured or underinsured patients gain access to medications. A major program used by the NHA pharmacy is the Pfizer Sharing the Care program. Sharing the Care is funded in partnership with the National Governors' Association and the National Association of Community Health Centers. Through the program, Pfizer provides its medications to over 380 federally qualified community, migrant, and homeless health centers in communities across the country. Over two million uninsured low-income patients receive medications on this program (Pfizer 2003). At the Neighborhood Health Association, patients who are financially eligible receive a voucher for a Pfizer medication from their physician. The voucher is brought to the NHA pharmacy, and the patient receives the prescription for one dollar. The one-dollar fee helps to cover dispensing costs of the pharmacy and is not charged by Pfizer. This program has been successfully operated with great response from practitioners and patients alike.

Since the inception of the partnership, the number of patients utilizing the Pfizer program has grown substantially. For example, 4,400 Sharing the Care prescriptions were filled in 2002. In only the first three months of 2003, the number of STC prescriptions filled had already reached 2,300. Therefore, many patients for whom lack of access to medications was a barrier to care have been provided life enhancing drug treatment. Although the pharmacy does incur additional dispensing costs to offer the Pfizer program, NHA feels that it is part of their mission to provide this service.

A future goal of the partnership is to provide access to medications at other NHA sites. Even though patients served by all NHA clinics can use the pharmacy at the Cordelia Martin center, logistical barriers such as distance, time, and lack of transportation may not allow easy use of the facility. Options such as robotic dispensing and telepharmacy are under investigation at this time.

Partnership Challenges

As with any collaboration, there were difficulties in the implementation of the Partnerships. The first challenge to implementation can be viewed from a marketing perspective as a perceptual gap. A perceptual gap occurs when the recipient (clinic providers or patients) is not familiar with the services provided by the clinical pharmacist (Smith 1983). Pharmacists have long been primarily viewed as drug product dispensers and secondarily as sources of information. In clinical pharmacy practice, the “product” is often information regarding drug therapy and management of disease. A drug product may or may not be dispensed. The perceptual gap in this instance led to the initial underutilization of the clinical pharmacists, wherein providers were not readily referring patients for drug therapy review or disease state management. This dilemma was resolved as the pharmacists met one on one with providers to explain the full range of services available through clinical pharmacy. This dilemma is further attenuated in Partnership 2, in the quarterly Continuing Education sessions attended by clinic providers and UTCP faculty. During these meetings, upcoming activities are presented to the providers, and questions and concerns regarding the delivery of pharmacy services are addressed.

The second partnership challenge pertained to the generation and dissemination of project research. Unfortunately, in the past, vulnerable populations have been exposed to unscrupulous research practices. In order to assure the protection of all human subjects involved, all project activities regarding patients were approved by The University of Toledo Human Subjects Research Review Committee and by the Center directors. It was agreed that all data released would be in aggregate form, and would not refer to any individual patient. Patients participating in the Demonstration Project signed consent forms. There was no requirement for patients to participate in the research project in order to receive care from the pharmacists. Patients who did not want to participate in the research component of the project were still allowed to see the pharmacists free of charge.

Conclusion

Health disparities and barriers to care are a major national dilemma. All health care providers have a part to play in their elimination. Pharmacists are no exception. The partnerships addressed in this manuscript focused on the elimination of health disparities through increased access to pharmaceutical care. Although data analyses and measurement of outcomes are still ongoing, the UTCP partnerships appear to be beneficial to those served. Through the partnerships, several barriers to care are addressed. Patients were provided with valuable information on medication use in addition to culturally relevant information on diabetes management. Patient access to life-saving medications was increased through patient assistance programs, medication sample policy revision, and formulary management. Clinic providers received valuable medication-related information through continuing education programs and consultation with pharmacists. The NHA pharmacy recovered funds through thorough review of charges and saved money by enhancing participation in medication discount

programs. The tangible and intangible benefits of the partnerships will likely continue for many years to come.

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