

**New Mexico Vision Project for People with Diabetes**  
**Summary Report**  
**March 12, 2010**

**Introduction and Background**

Diabetic retinopathy is the leading cause of blindness for adults in the United States. This disease can be prevented with timely and appropriate screening, examination and treatment. The New Mexico Vision Project for People with Diabetes originated with a need identified by the New Mexico Department of Health Diabetes Prevention and Control Program (DPCP). In 2006, while reviewing the Healthcare Effectiveness Data and Information Set insurance data (HEDIS - quality of care measures collected from commercial, Medicare and Medicaid insurance), from 2001-2005 and Behavioral Health Risk Factor Surveillance System (BRFSS) data from 1999-2005, the DPCP noted that the rates of dilated eye exams among people with diabetes were inconsistent and not showing steady improvement. The DPCP believed the key players in patient eye health should be gathered to discuss possible reasons for these data and to identify potential solutions.

In January 2007, the DPCP and New Mexico Health Care Takes On Diabetes (NMHCTOD) convened statewide partners to discuss this need and to identify steps to address it, with the ultimate goal of reducing diabetes-related blindness. Participants included ophthalmologists, optometrists, health plan representatives, physicians, the New Mexico Medical Review Association (NMMRA - the quality improvement organization for the Centers for Medicare and Medicaid Services), Indian Health Service and others. Over time, this group expanded to represent other organizations such as health care systems serving veterans and Federally Qualified Health Centers.

**Dilated Eye Exam Work Group**

In April 2007, a Dilated Eye Exam Work Group (DEEWG) was formed and found that there were three key factors that kept eye exams from occurring as frequently as recommended by the American Diabetes Association (ADA): 1) Health care professionals (HCP) are aware of the need for annual retinal exams for people with diabetes, but access to eye care specialists and understanding insurance benefits are barriers for both the patient and the HCP; 2) Diagnostic codes for dilated eye exams for patients with diabetes can be confusing with eye care professionals unsure of which codes to use. If the HCP omits or uses incorrect codes, lack of evidence for a dilated eye exam in the annual HEDIS audit can create difficulties with tracking rates of exams as well as insurance and health plan coverage; and 3) Some patients do not understand what a dilated eye exam is and may assume that procedure is automatically done if they get glasses.

The main activities the DEEWG conducted in the last three years are:

- Creating HCP and consumer educational materials on diabetes-related vision problems and retinal eye exams;
- Formative inquiry with Ben Archer (BA) Clinics about possible barriers to patients getting eye exams;
- Follow-up survey with BA HCP regarding the use of professional materials; and
- EyePACS - a diabetic telemedicine retinopathy screening (DTRS) system. This was not activated by the DEEWG, but followed closely as a promising approach to help increase retinal eye exam rates.

### **Health Care Professional and Consumer Materials**

DEEWG first concentrated on developing educational and marketing materials for HCP and consumers to inform and raise public awareness. For HCP, attention focused on clarifying insurance codes that if entered correctly, would allow reimbursement for dilated eye exams for people with diabetes (PWD) as part of their medical exams. Additional HCP materials were the ADA standards of eye care as well as support materials to be given to patients to remind them about appointment schedules and to inform them about eye care resources. Consumer materials in English and Spanish were developed or adapted to be attention-getting, easy to read, low literacy, and culturally appropriate. These primarily addressed diabetes and related vision problems (including pictures) while emphasizing the importance of getting dilated eye exams.

### **Formative Inquiry**

A formative inquiry was launched in February 2007 with the stated objectives to 1) determine the effectiveness of the HCP and consumer printed materials (in English and Spanish) created by the workgroup; 2) identify barriers to dilated eye exams for people with diabetes (PWD) and HCP; and 3) identify barriers to follow-up treatment for patients that have been diagnosed with eye pathology. Although effectiveness was stated as an objective by DEEWG and by the moderator of the group interviews, this was not measured as part of the inquiry.

Ben Archer Health Centers clinic system (BAHC), operating throughout the state's southern region and with an electronic registry of about 2,000 PWD, joined the DEEWG in October 2007. BAHC was selected for this project based on readiness and capabilities. In April 2008, a DPCP contractor conducted focus groups and interviews about the educational materials and barriers to getting dilated eye exams with 45 BAHC PWDs (i.e. consumers) and 18 HCP in Las Cruces, Alamogordo and Hatch. The results indicated that the majority of consumers (97%) and HCP (94%) liked the message, look, language, and readability of the printed materials.

HCP and consumers identified the following barriers to getting dilated eye exams: 1) lack of insurance/money to pay for dilated eye exams; 2) lack of transportation to get to eye care specialists; and 3) a lack of local eye care specialists. HCP also mentioned inconsistent feedback from eye care specialists regarding eye exam results of PWD who had been referred to them.

Although the HCP materials had been evaluated for style, message clarity and patient appropriateness, it had not been evaluated for effectiveness with patients. A training introducing the HCP materials was conducted in January 2009 at a BAHC staff meeting. The materials were for direct HCP use as well as tools to be used with their patients. They consisted of: *New Mexico Diabetes Care Guidelines*, *Don't Lose Sight* education brochure, *Health Plan* contact information, *Health Plan Collection* information, *Patient Reminder* cards, and *Eye Care Resources* (for both HCP and patients), all of which were also available on an accompanying CD.

In April 2009 a written survey about the HCP materials was administered to 45 clinic staff serving 6 BAHC clinics. The majority (89%) of the HCP noted that they had not used the HCP materials and from the comment section, the majority of staff did not remember the materials from the training. The remaining 9% of HCP reported using materials a minimum of 0 to 10 times and 2% (1 person) used them 11-25 times. These were disappointing results. These did not necessarily reflect directly on the quality or usefulness of the materials themselves. Causes for these results may be attributed to:

- The difference between the number of staff that received the training and the number of staff that took the survey (there were no available lists for the training and the survey distribution to compare the numbers);
- The lack of adequate marketing of materials in the training (i.e. not enough emphasis on the importance of testing the materials in their clinics);
- The distribution process (only 1 packet was given to each clinic);
- Other realities that are often endemic with overworked clinic staff having time to access and distribute new materials; and
- There was no scheduled follow-up to ensure that clinic staff were using the materials.

Data from BAHC for the period August 8, 2007 through August 6, 2008 indicate that 49 PWD (16.6% of total PWD served that year) received dilated eye exams. From January 1 through June 30, 2009, as part of a DPCP contract with BAHC, 41 PWDs from 3 clinics were provided with transportation to Las Cruces Public Health Office for an EyePACS screening. This resulted in an estimated increase of 20% of PWD who were able to get retinal eye exams within that six month period.

### **EyePACS**

As the formative inquiry was being conducted, DEEWG became aware of an innovative program called EyePACS. This program, a diabetic retinopathy telemedicine screening (DTRS) system utilizing a digital imaging camera, was designed to be accessible to underserved populations. This web-based program - store and forward technology - developed at the University of California at San Francisco and Berkeley, facilitates communication among primary care and eye care clinicians.

The University of New Mexico's Health Sciences Center Department of Ophthalmology (UNMHSCDO) purchased a digital imaging camera. In October 2008, under the supervision of Dr. Roy Sanchez (a participant of the DEEWG), the camera and EyePACS program were installed at the Las Cruces Public Health Office. In the nine months that it was in operation, a total of 190 PWD received retinal screenings, of which:

- 19 (10%) were diagnosed with serious retinopathy and
- 48 (25%) had moderate retinopathy.

These patients were referred for dilated eye exams for more substantial diagnoses. However, anecdotal data suggests that the majority of patients never received follow-up treatment due to a lack of accessible eye care specialists.

In an article by Javitt (1996), EyePACS was shown to be a cost-effective<sup>1</sup>, accessible, early pre-identification tool for eye disease, particularly for PWD who cannot get a dilated eye exam in a timely manner. The advantages to this program are:

- The imaging camera can be installed relatively easily in rural and semi-rural areas where eye care specialist care is lacking;
- An individual can be trained to administer the screening, eliminating the need for a specialist on-site;
- An EyePACS trained and certified eye specialist performs the reading and translation remotely, which may solve the problem of a lack of eye care specialists in rural and frontier areas; and
- Patient information is transmitted back to the referring primary care HCP from the eye care specialist, closing the patient information loop.

In July 2009 the UNMHSCDO temporarily suspended the EyePACS program due to concerns about the privacy of patient data that were electronically transmitted, how to bill for insurance and other legal issues that needed to be finalized between UNM and the Las Cruces Public Health Office.

## **Results and Discussion**

Since there was no evaluation about effectiveness, it's unclear how effective the HCP and consumer materials were in increasing knowledge and/or awareness regarding diabetic vision problems and the importance of annual retinal eye exams. The materials were generally well received by both HCP and consumers who were interviewed about style, content, clarity and readability. It's unfortunate that the clinic didn't implement a quality improvement process to help HCP use the materials with their patients.

The focus and group interviews demonstrated useful results and HCP and consumers agreed on the identified barriers. With the exception of the small contract with BAHC to provide transportation for PWD referred for retinal eye exams, there has been little follow-up to focus on any of the other barriers that were identified. It would appear that a substantial amount of resources would have to be applied to address any one of the

identified barriers. For instance, HCP are reluctant to refer patients to eye care professionals and other specialists when they know that access to those professionals is a major barrier.

Because of the suspension of the EyePACS program, the DEEWG is unable to gain a full picture of its long-term effectiveness. However, the results from its nine months of operation were impressive (35% identified with some level of retinopathy).

### **Recommendations**

As resources allow, the DPCP will continue to work with NMHCTOD and other DEEWG partners to support the recommendations of the DEEWG.

The DEEWG will:

- 1) Continue to support the University of New Mexico Health Sciences Center Department of Ophthalmology. Meet with them to a) determine the status of their diabetic retinopathy telemedicine screening system and b) explore the possibility of their developing a business plan to address issues such as cost, reimbursement, and access to vision screening and follow-up care for people with diabetes.
- 2) Meet with members of the New Mexico Medical Society and Ophthalmological and Optometric Associations about solutions and resources to access barriers for vision screenings and follow-up care for eye pathology, particularly with uninsured and underinsured patients with diabetes.
- 3) Re-convene the diverse group of partners that met in January 2007 to share this report and seek input on statewide policy recommendations that will improve access to vision screening and follow-up care for people with diabetes.
- 4) Continue to educate people with diabetes about the importance of annual eye exams. New Mexico Health Care Takes On Diabetes will continue to distribute vision health materials developed by the DEEWG to consumers and health care professionals.