INTRODUCTION

Dilated eye examination is a standard of care (SOC) in the management of patients with diabetes mellitus (DM)\(^1\). Since type 2 DM (T2DM) constitutes the preponderant number of DM patients cared for by primary care providers (PCP), it is very imperative that the caregivers understand the pathobiological complications of DM in the eyes of their patients. Though better understood today than by the peoples living on the banks of river Nile about 4,000 years ago\(^2\), T2DM is an indolent disease that requires urgent and aggressive management upon diagnosis. At the rate that the disease is manifesting in every continent of the world, it is, therefore, a global epidemic\(^3\).

Epidemiology - USA ± Kentucky

In the USA, according to American Diabetes Association and the Center for Disease Control (ADA/CDC), about 24 million or 8% of Americans are diagnosed with DM and yet about 6 million are not aware that they have the disease; another 55-60 million others live with pre-DM status.\(^4\,^6\) Kentucky ranks high in the number of citizens afflicted with DM at 11.4% of our population in 2009 data\(^6\).

WHY AN EYE EXAMINATION?

Blindness from DM is an irreversible diagnosis and this catastrophic complication can be remedied by early diagnosis and treatment of the patient. The often cited Diabetes Control and Complications Trial (DCCT) followed 1441 with T1DM for a mean 6.5 years\(^7\). Early diagnosis and intensive treatment with insulin delayed the onset and slowed the progression of diabetic retinopathy by average of 76% and 54%, respectively. Another study of T2DM patients treated with insulin, Kumanoto University study\(^8\), demonstrated an average reduction of 69% worsening in retinopathy.

In their paper, Laufgraben and Meattey emphasized the need for baseline eye examinations because of progressive nature of retinopathy - sight threatening incidence of retinopathy could be as low as 0.3% in the early years of DM up to 3.9% in a five-year period\(^9\). The authors reminded us that “over 60% of T2DM have some degree of retinopathy”. The important message was that people with diabetes had a 25-fold increased risk of developing blindness that could be prevented by astute clinicians.

A “Traffic Flow” Model for Diabetes Eye Care

Retrospective review of patients with DM in my practice, in 2004, for the Diabetes Recognition Program (DRP) of the ADA/ (continued on back)
Free Provider Tools

With limited time in busy office settings, it is typically a challenge to make sure that patients get a retinal exam and provide the level of care indicated in Diabetes Clinical Practice Guidelines. To assist you in this challenge, the Kentucky Diabetes Network has developed a Diabetes Care Tool (flow sheet) and a sample set of Diabetes Care Standing Orders. Use of these tools can help streamline and improve the process for diabetes care.

Potential benefits include: provider time extended by empowering designated staff to initiate outlined tests and procedures, serves as a reminder or protocol to simplify ordering procedures and record keeping, identifies patients who are missing tests and provides a way to continually improve care. The tools are available for download in the Kentucky Diabetes Network website at www.KentuckyDiabetes.net. All materials are free, may be duplicated, or can be individualized for your organization. For an electronic file, send a request to Lonna at lonna.boisseau@ky.gov or by phone at 1-502-564-7996, extension 3807.

Reita Jones, BSN
Kentucky Diabetes Network & KY Diabetes Prevention & Control Program

Free Patient Education Materials

To assist you with informing your diabetes patients about the importance of an annual dilated eye examination, the Kentucky Diabetes Network has an educational brochure and poster available at no charge.

If you have Diabetes, Protect your Eyesight brochures are available in English and Spanish. Posters are only in English. Both pieces can be ordered by sending a request to Lonna at lonna.boisseau@ky.gov

Greater Louisville DRE Eye Providers

Communication between physicians and eye care professionals is an essential component to improve the rates of diabetic retinal eye exams in Kentucky. In the Louisville area, the Kentuckiana Health Collaborative (KHC), the Kentucky Diabetes Network (KDN), and the Greater Louisville Medical Society (GLMS) are combining efforts to increase the rate of diabetic retinal eye exams (DRE). To ensure that the flow of communication from physician to eye care professionals and back is seamless, a list of eye care professionals who will perform a retinal examination for diabetic patients and send a report back to the patient's PCP and/or Endocrinologist is being created. This DRE provider list serves as an additional resource for physicians. An Eye Exam Form, which provides physicians with a concise report of the DRE exam has also been created by GLMS for providers to use statewide who do not already have a form that they use.

Across Kentucky, communities can form similar coalitions and create a DRE provider list to increase DRE rates in their area. To obtain a copy of the Eye Exam Form or for more information on how to start a DRE provider list in your area, please contact Jessica Williams at 502-736-6368 or jessica.williams@glms.org.

Jessica Williams
Greater Louisville Medical Society
NCQA Diabetes Recognition Program (DRP) Certification

I. Providers Recognized for Quality of Care

To provide clinicians with tools to support the delivery and recognition of consistent high quality care, NCQA in partnership with the American Diabetes Association (ADA) have developed the Diabetes Recognition Program (DRP). Recognized clinicians are rewarded for taking the steps needed to ensure high-quality care—by identifying patients already getting the care according to the standards and by going the extra mile to identify patients who would benefit from additional interventions. Recognition demonstrates to your patients you are giving the best care possible. In turn, you earn increased respect from your peers and patients, and distinguish yourself as a leader in your community.

II. How to Achieve Recognition

The DRP program has 10 measures covering areas such as: HbA1c control, blood pressure control, LDL control, eye examinations, neuropathy assessment and more. Eligible providers will abstract data from the charts of 25 diabetes patients and submit this information to NCQA for review. NCQA has designated as a PQRI registry. Physicians who earn DRP Recognition from NCQA may opt to have NCQA submit their clinical quality data to Medicare for use in PQRI. Eligible professionals who participate in Medicare’s PQRI program receive financial rewards (2 percent of each Medicare claim in 2009) for collecting and reporting data about the quality of their care.

III. A Model of Success

The Greater Louisville Medical Society’s Physicians Take AIM at Diabetes Program is a grant funded program that assists GLMS member family practitioners, internists and endocrinologists with meeting the standards of the National Committee for Quality Assurance’s Diabetes Recognition Program. Since the first phase of Take AIM began in January 2008, 77 GLMS physicians earned the NCQA distinction. The program covers the cost of the audit required by NCQA and offers a wide variety of support services to physicians and their practices such as easy-to-understand diabetes education materials for patients. Take AIM is part of GLMS efforts to reduce variation in health care utilization by ensuring that appropriate levels of care are provided within the context of specific clinical parameters.

Use of standardized services for chronic conditions like diabetes is an effective way of reducing morbidity and mortality.

To find out more about the NCQA DRP Program, please go to www.ncqa.org. For more information on the Take AIM program, please contact Dottie Hargett, Director of the Take AIM program at 502-736-6348 or at dottie.hargett@glms.org.

Jessica Williams
Greater Louisville Medical Society

Diabetes Care Community Report Summary

The Kentuckiana Health Collaborative and the Kentucky Health Quality Agenda (KHQA) send private annual Consolidated Measurement Reports to healthcare providers in Kentucky and Southern Indiana to provide feedback on the quality of care their patients received on select measures, including diabetes. Anthem, Humana, Passport Health, and Kentucky Medicaid provide administrative data for these reports using criteria established by HEDIS®. The below table is a summary of these data in aggregate (www.khcollaborative.org).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c Tested</td>
<td>81%</td>
<td>82%</td>
<td>81%</td>
<td>85%</td>
<td>96%</td>
<td>98%</td>
<td>98%</td>
<td>99%</td>
<td>84%</td>
<td>85%</td>
<td>81%</td>
</tr>
<tr>
<td>LDL-C Screening Performed</td>
<td>81%</td>
<td>84%</td>
<td>82%</td>
<td>82%</td>
<td>97%</td>
<td>98%</td>
<td>99%</td>
<td>99%</td>
<td>88%</td>
<td>82%</td>
<td>76%</td>
</tr>
<tr>
<td>Eye exam (retinal) performed</td>
<td>51%</td>
<td>42%</td>
<td>35%</td>
<td>40%</td>
<td>78%</td>
<td>71%</td>
<td>61%</td>
<td>67%</td>
<td>44%</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>Nephropathy monitored</td>
<td>45%</td>
<td>75%</td>
<td>75%</td>
<td>81%</td>
<td>92%</td>
<td>97%</td>
<td>96%</td>
<td>99%</td>
<td>71%</td>
<td>70%</td>
<td>77%</td>
</tr>
</tbody>
</table>

If you are interested in seeing your Dilated Retinal Exam rate for your patients, you may have access to a free, confidential report from the Kentuckiana Health Collaborative (KHC). You must have a minimum of 5 diabetes patients from participating health plans’ data to have a private report created for your review. To learn more, please visit www.khcollaborative.org or call the KHC Executive Directors at 502-238-3601.

Randa Deaton & Mary Lyle
Executive Directors, Kentuckiana Health Collaborative

Notes:
1. HEDIS is a set of standardized performance measures designed to ensure that purchasers & consumers have the information they need to reliably compare the performance of managed health care plans, National Committee for Quality Assurance.
2. Measures reflect overall performance of all Louisville area providers as available from the participating plans’ administrative data. Kentuckiana includes Jefferson, Oldham, and Bullitt counties in Kentucky and Clark, Floyd, Harrison, and Scott counties in Southern Indiana.
3. Kentuckiana benchmark is an average rate for the top-ranked providers in the Louisville area whose patients account for 10% of the total population in this report with respect to each measure.
4. Kentucky includes all counties in Kentucky. Measures reflect overall performance of all KY providers as available from the participating plans’ administrative data.
5. Kentucky Benchmark is an average rate for the top-ranked providers in KY whose patients together account for 10% of the total population in this report with respect to each measure.
6. Due to HEDIS measure specification changes in 2007 for nephropathy monitoring (Comprehensive Diabetes Care), results for this cannot be trended to previous years’ results.
7. Kentucky Medicaid was added in 2008 to the statewide reports; therefore, true comparisons from previous years are not valid.
Front Page continued...

NCQA program for BTE (Bridges to Excellence) revealed that 40-45% of my patients had received a DRE. To correct the deficit, my practice developed and adopted the "Traffic Flow Model" (see Figure 1). Within six months, DM DREs had risen to 87-92%. Though the model was burdensome during its early trial, it is now an excellent tracking tool that is used without a second thought.

- **Efficiency in Consultancy**
  In the US, adults 40 years and older have 40% prevalence of retinopathy with 8% of them bearing sight-threatening retinopathy$. To avoid delay in your practice for scheduling ophthalmologic examination or for the patient missing eye examination, an efficient protocol must be agreed to by the offices of the attending physician (PCP) and the consulting Eye Care Professional, see Fig. 1.

The essence of referral to the Eye Care Professional is communication - a secure and confirmed "traffic" flow of personnel-to-personnel contacts between both offices. A patient is scheduled by the PCP; the patient is seen by the Eye Care Professional (or did not show up for the appointment) and the visit or non-visit is confirmed by the personnel in the Eye Care Professional's office who conveyed transaction to the personnel in the PCP office. In the PCP office, a designated personnel logs the consultation report in the patient's record (or called the non adherent/no show patient to emphasize the importance of DM eye examination).

- **Excellence in Retinal Care**
  Choose ONE Eye Care Professional practice, as the main consultancy unit to see 70 - 80% of all your patients that require retinal examinations, and probably 2 other offices to "service" your patients, in case of variable health insurance coverage rule.

![Figure 1: Traffic Flow Model](image)

Why?
1. Communication sharpness is needed between your practice and the consultancy practice,
2. Quality of care provided by the specialist must be confirmed by your practice,
3. Efficiency in service delivery by the consultant,
4. Excellence in EBM (evidence-based medicine) to confirm your DM knowledge,
5. Contribute Significant Quality-of-Life (QOL) Outcome to the patient

**CONCLUSION**
Efficiency and excellence in retinal eye examination are essential in the 21st Century practice of DM. About 50% or more of newly blind people became so as a major result of DM complication. PCP's must increase their knowledge capacities of EBM to translate their practices into centers of excellence in DM. Intensive insulin treatment should be the choice to lower hemoglobin A$_1$C to below 7% for prevention of progressive retinopathy. DM and other specialty guidelines are pushing clinical measures and the outcome of any standard-of-care by a clinician should be the yardstick$^{10}$ of his/her competence or the knowledge deficits for preventive care of diabetic retinopathy.

A. O’tayo Lalude, M.D.
Family Medicine, Director of Diabetes
Jewish Physician Group-Westside
Medical Office

**REFERENCES**


**Greater Louisville Eye Exam (GLEE) Initiative**

The Greater Louisville Eye Exam (GLEE) Initiative for Diabetes is a collaborative effort between the Kentucky Diabetes Network (KDN), Kentuckiana Health Collaborative (KHC), Greater Louisville Medical Society, Humana Health Plan, and Bluegrass Family Health. The goal of this initiative is to educate both physicians and patients on the importance of yearly dilated retinal eye exams for patients with diabetes. This publication is a result of this collaboration.