

USING EHR TOOLS TO OPTIMIZE OPHTHALMOLOGIC OUTCOMES IN PATIENTS WITH DIABETES

Improving outcomes requires improved communication among practitioners.

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Although ophthalmologists provide specialized services for patients with diabetic retinopathy (DR), referrals for DR screening lie largely in the hands of providers in the primary care and endocrinology settings. The American

Diabetes Association (ADA) and the American Association of Clinical Endocrinologists (AACE) have each published guidelines to emphasize the importance of a comprehensive dilated retinal examination by an ophthalmologist or optometrist at or around the time of diagnosis and within 5 years of diagnosis of type 2 and type 1 diabetes, respectively.^{1,2}

Once DR has been diagnosed in these patients, ADA and AACE guidelines recommend that dilated examinations be performed at least annually, or more frequently depending on the severity of the disease, which is in line with recommendations of the American Academy of Ophthalmology and American Optometric Association.^{3,4} Furthermore, these guidelines say, primary care providers and endocrinologists should be educated on the signs and symptoms that indicate a need for a referral to ophthalmology.^{1,2}

Evidence suggests that the aforementioned guidelines are not always followed. This article describes some common features of electronic health record (EHR) systems that can be used on a daily basis to facilitate the eye care of patients with diabetes in collaboration with other health care providers.

IDENTIFYING AN ISSUE

An analysis of data from the National Health and Nutrition Examination Survey (NHANES) indicated that only 59.7% of US adults 40 years or older with diabetic

macular edema (DME) reported that they had received a dilated eye examination in the past year. In addition, only 44.7% of patients with DME reported being informed by a physician that they had clinically visible DR.⁵ Another recent medical record review at an eye institute demonstrated that only 31% of patients with diabetes but without DR received annual screening.⁶

A recent study conducted at Cleveland Clinic evaluated whether endocrinology and primary care providers asked about or examined ophthalmic issues during their office encounters with patients with diabetes. The study also investigated whether a referral for ophthalmic evaluation was provided to patients. A review of the medical records of 1250 patients with diabetes found that 82.9% of patients evaluated by endocrinologists and 27.5%



AT A GLANCE

- According to NHANES, only about 60% of US adults 40 years or older with DME reported that they had received a dilated eye examination in the past year.
- If ophthalmologists and diabetologists work together to ensure that timely DR prevention and treatment measures are implemented, this can help to optimize patients' visual outcomes.
- Routine communication between ophthalmologists and diabetic care providers is also important in maintaining the loop of continuous care. An EHR system can be helpful in this regard.

Health Maintenance Summary

DILATED RETINAL EXAM	Overdue	4/21/2016	
	Done	4/21/2015	SmartData: OPHTH DILATION DROPS
	Done	6/3/2013	SmartData: OPHTH DILATION DROPS
	Done	10/15/2012	SmartData: OPHTH DILATION DROPS
	Dilated Retinal Exam Performed	9/21/2010	
	Done	9/21/2010	SmartData: OPHTH DILATION DROPS

Figure 1. The health maintenance feature of an EHR system can track reminders for patients' tests and screenings and can be populated manually by other health care providers.

of patients seen by primary care physicians were queried regarding the presence of any ocular complaints. Additionally, past and future ophthalmology appointments were verified in 78.5% of the endocrinology encounters, but in only 31% of primary care visits.⁷

RESOURCES FOR PREVENTION AND TREATMENT

If ophthalmologists and diabetologists work in concert to ensure that timely DR prevention and treatment measures are implemented, this will help to optimize patients' visual outcomes.

There are a variety of tools available in EHR systems that can help to facilitate communication among specialists in the care of patients with diabetes.

Keep Track of Tests and Screenings

One of the features embedded within many EHR systems is a health maintenance tool (Figure 1). When

activated, this tool adds reminders for completion of HbA1c tests, annual dilated retinal examinations, and annual diabetic foot checks. For example, when patients come to the Cleveland Clinic ophthalmology offices and receive technician-administered eye drops for pupillary dilation, the health maintenance field for dilated retinal examination is populated automatically. If a patient is seen outside of the Cleveland Clinic system, the diabetic care provider can manually populate this health maintenance field in the clinic's EHR. This allows the Cleveland Clinic's diabetologist to determine which patients have not met this metric so that letters can be sent to invite these patients to come in for DR screenings.

Stay in Touch With Other Health Care Providers

Routine communication between the ophthalmologist and the diabetic provider is also important in maintaining the loop of continuous care. An EHR can be helpful by

The screenshot displays an EHR communication manager interface. At the top, there are navigation tabs: 1.PCP, 2.Patient, 3.All Referring, 4.Additional Physicians, 5.Previous, 6.Last, 7.Other. A search bar labeled 'Search all contacts' with an 'Add' button is on the right. Below this, the recipient is identified as 'To: Coumadin Doctor, MD'. A contact list table shows details for 'Coumadin Doctor, MD' with fields for Name, Mod, Rel, AltAddress, IB, Fax, Mail, Outside Msg, and Information (6780 MAYFIELD ROAD, MAYFIELD HEI OH 44124). Action buttons 'Set Primary', 'Edit', 'Remove', and 'Clear All' are below the table. The main area shows a letter composition screen for 'Diabetic Letter' with a toolbar including 'Insert SmartText' and other editing tools. The letter content reads: 'Dear Dr. Doctor, I wanted to update you on our mutual patient Baby Zzec, who was seen at Cleveland Clinic Cole Eye Institute on 7/6/2016 for a diabetic eye exam. My findings were as follows: (E11.331) Type 2 diabetes mellitus with moderate nonproliferative retinopathy and macular edema, without long-term current use of insulin (HCC) (primary encounter diagnosis) Enclosed you will find a complete report of my findings and recommendations. If I can'. A 'Report' dropdown at the bottom shows 'CCF KAL OPHT CHART REVIEW REPORT'.

Figure 2. An EHR system's communication manager can be used to fax a letter with updated ocular findings to a patient's primary care physician's office.

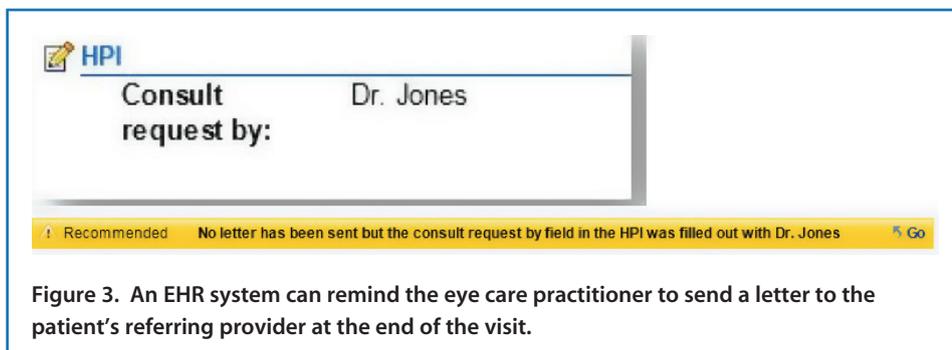


Figure 3. An EHR system can remind the eye care practitioner to send a letter to the patient's referring provider at the end of the visit.



Figure 4. Using a central enterprise imaging platform available with most EHR systems, ophthalmologists can share a patient's imaging photos with other physicians and with the patient.

illustrate the level of DR and to share this information with other physicians is a central enterprise imaging platform. Use of this feature can allow all of a patient's physicians to see the imaging that has been performed on the patient (Figure 4). All images from all clinical locations are stored in the central enterprise imaging platform, enabling the eye care provider to refer to

these images when explaining to patients the reasons for their vision loss and the need for treatment. Patients can also have access to these images through a patient portal and can review them with their family members to promote better understanding of their disease.

A PROMISING ASSET

There are a variety of tools at our disposal in EHR systems that can help us to optimize the vision outcomes of patients with diabetes. The use of EHR systems has revolutionized the care that physicians can provide to patients. Hopefully DR screening rates and the detection of DR can be improved with the use of these tools. ■

reducing the number of clicks and by providing relevant information to the diabetologist in a quick and efficient fashion. The communication manager in an EHR system can allow an ophthalmology provider to fax a letter directly from the EHR to a patient's primary care physician's office with an office visit note in just three clicks (Figure 2). This can make the primary provider aware of the latest ocular findings without him or her having to search through the record.

Provide Patient Updates

Another tool that can help facilitate better communication among practitioners is a reminder to the ophthalmologist to send a communication to the referring provider (Figure 3). In some EHR systems, this reminder occurs at the closure of the patient encounter, when the EHR system detects a name placed in the referring provider field. If a letter has not been sent, this reminder tool provides the user with a pop-up alert that a consult letter should be generated for this encounter.

Incorporate a Visual Element

A feature that can enable ophthalmologists to better

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