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| Body System: Special Sensory | | |
| Session Topic: Diabetic Retinopathy | | |
| Educational Format | | Faculty Expertise Required |
| REQUIRED | Interactive Lecture | Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required. |
| OPTIONAL | Problem-Based Learning (PBL) | Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u> |
| Professional Practice Gap | Learning Objective(s) that will close the gap and meet the need | Outcome Being Measured |
| <ul style="list-style-type: none"> • Diabetic patients with limited access to ophthalmologists have low screening rates for diabetic retinopathy • Only 50%-60% of patients with diabetes adhere to annual dilated fundus exam recommendations. • Because diabetic retinopathy is asymptomatic nature, patients often do not seek eye care until they notice changes in their vision • Physicians have knowledge gaps with regard to identifying patients at high risk for eye disease • Physicians have knowledge gaps with regard to managing the referral of patients with suspected diabetic retinopathy • Primary care physicians do not routinely use clinical guidelines in managing care for patients with diabetes | <ol style="list-style-type: none"> 1. Screen diabetic patients for ocular complications according to evidence-based clinical guidelines. 2. Identify symptoms associated with common retinal disorders. 3. Reduce the risk or slow the progression of diabetic retinopathy through optimized glycemic and blood pressure control. 4. Manage referral of diabetic patients with suspected retinopathy to an ophthalmologist who is knowledgeable and experienced in the management and treatment of diabetic retinopathy. | Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations. |



| ACGME Core Competencies Addressed (select all that apply) | | |
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| X | Medical Knowledge | Patient Care |
| | Interpersonal and Communication Skills | Practice-Based Learning and Improvement |
| | Professionalism | Systems-Based Practice |
| Faculty Instructional Goals | | |
| <p>Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.</p> <ul style="list-style-type: none"> • Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations • Facilitate learner engagement during the session • Address related practice barriers to foster optimal patient management • Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the <u>References</u> section below are a good place to start <ul style="list-style-type: none"> ○ Visit http://www.aafp.org/journals for additional resources ○ Visit http://familydoctor.org for patient education and resources • Provide physician-learners with evidence-based recommendations to reduce the risk or slow the progression of diabetic retinopathy through optimized glycemic and blood pressure control. • Provide physician-learners with evidence-based recommendations on screening diabetic patients for ocular complications according to evidence-based clinical guidelines. • Provide strategies for identifying symptoms associated with common retinal disorders. • Provide physician-learners with strategies and resources to help them optimize the referral of diabetic patients with suspected retinopathy to an ophthalmologist who is knowledgeable and experienced in the management and treatment of diabetic retinopathy. • Provide recommendations regarding guidelines for Medicare reimbursement. • Provide recommendations to maximize office efficiency and guideline adherence to the diagnosis and management of diabetic retinopathy. • Provide an overview of newly available treatments, including efficacy, safety, contraindications, and cost/benefit relative to existing treatments. • Provide instructions regarding the incorporation and use of the PCMH/ACO/Primary Care Core Measure Set into practice. | | |

Needs Assessment:

Many systemic diseases can manifest into an ocular manifestation. One of the most common is diabetic retinopathy, which is the leading cause of blindness in American Adults; and because of its asymptomatic nature, patients often do not seek eye care until they notice changes in their vision.^{1,2} The number of cases of diabetic retinopathy has increased from 4.06 million in 2000, to 7.6 million in 2010; with projections of 14.5 million by 2050.² Diabetic patients with limited access to ophthalmologists have low screening rates for diabetic retinopathy; therefore, it is



important for family physicians to be proficient at screening for diabetic retinopathy, especially when serving poor or underserved patient populations.³ Heart disease and stroke account for 65 percent of deaths in patients with diabetes, and hypertension is a major risk factor for these macrovascular complications. In addition, hypertension markedly increases the risk of microvascular complications, such as nephropathy and retinopathy.⁴ Adults older than 65 years should be screened for vision problems every one to two years, with attention to specific disorders, such as diabetic retinopathy, refractive error, cataracts, glaucoma, and age-related macular degeneration. Prompt recognition and management of sudden vision loss can be vision saving, as can treatment of diabetic retinopathy, refractive error, cataracts, glaucoma, and age-related macular degeneration.⁵

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment Survey indicates that family physicians have significant knowledge gaps with regard to recognizing and managing ocular complications of systemic disease, especially retinal disease and diabetic complications.⁶ More specifically, CME outcomes data from 2015 AAFP FMX (formerly Assembly) *Retinal Disease* sessions, suggest that physicians have knowledge and practice gaps with regard to screening and diagnosing for retinopathy; identifying at risk patients; performing effective examinations; understanding the various types of retinal changes seen in diabetic retinopathy; and knowing when to refer.⁷

These findings are validated by a National Eye Institute *Primary Care Physicians and Eye Health: Results of a National Web-Based Survey* study which revealed a need for primary care physicians to receive continue medical education on identifying patients at high risk for eye disease and how to counsel and refer their patients to seek vision care.⁸ Studies show that only 50%-60% of patients with diabetes adhere to annual dilated fundus exam recommendations.⁹ Written communication between ophthalmologists and primary care physicians can increase adherence to follow-up eye examination recommendations.¹⁰

Some family physicians may not be aware of updated clinical guidelines and results of clinical interventions from retrospective studies that prove such recommendations to be effective. Research suggests that primary care physicians do not routinely use clinical guidelines in managing care for patients with diabetes, and often do not provide optimal coordination of care with specialists.¹¹ For example, the Diabetes Control and Complications Trial (DCCT) reported that intensive diabetes therapy aimed at lowering glycemic levels reduces the risk of diabetic retinopathy, nephropathy and neuropathy.^{5,12-14} Diabetes in pregnancy is associated with risks to the woman and to the developing fetus. Miscarriage, pre-eclampsia and preterm labor are more common in women with pre-existing diabetes. In addition, diabetic retinopathy can worsen rapidly during pregnancy.¹⁵

Physicians may improve their care of patients at risk for developing diabetic retinopathy, or those who have developed diabetic retinopathy by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:

- Australian Diabetes Society, National Health and Research Council. Clinical Practice Guidelines for the Management of Diabetic Retinopathy¹⁶
- American Diabetes Association (ADA). Standards of medical care in diabetes--2014¹⁷



- American Optometric Association. Evidence-based Clinical Practice Guideline Eye Care of the Patient with Diabetes Mellitus¹⁸

Physicians may improve their care of patients with diabetic retinopathy by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:^{5,14,15,19}

- Patients should be routinely screened for visual impairment.
- Optimal glucose control in persons with diabetes prevents progression of retinopathy.
- Routine eye examinations should be performed in persons with diabetes to identify and prevent progression of retinopathy.
- All older persons with diabetes should have a dilated eye examination within one year of diabetes diagnosis, and at least annually thereafter.
- Controlling blood pressure in older persons with and without diabetes may reduce the risk of ischemic vascular complications that can cause vision loss.
- Smoking is linked to several causes of progressive visual impairment; smoking cessation counseling should be a routine aspect of care for older persons.
- Offer retinal assessment at 16–20 weeks to women with pre-existing diabetes if diabetic retinopathy was present at their first antenatal clinic visit.
- Offer retinal assessment (see recommendation 1.1.32) to women with diabetes seeking preconception care at their first appointment (unless they have had an annual retinal assessment in the last 6 months) and then annually if no diabetic retinopathy is found.
- 1.3.24 Offer pregnant women with pre-existing diabetes retinal assessment by digital imaging with mydriasis using tropicamide following their first antenatal clinic appointment (unless they have had a retinal assessment in the last 3 months), and again at 28 weeks. If any diabetic retinopathy is present at booking, perform an additional retinal assessment at 16–20 weeks. [2008, amended 2015]
- 1.3.25 Diabetic retinopathy should not be considered a contraindication to rapid optimisation of blood glucose control in women who present with a high HbA1c in early pregnancy. [2008]
- 1.3.26 Ensure that women who have preproliferative diabetic retinopathy or any form of referable retinopathy diagnosed during pregnancy have ophthalmological follow-up for at least 6 months after the birth of the baby. [2008, amended 2015]
- 1.3.27 Diabetic retinopathy should not be considered a contraindication to vaginal birth.

Physicians can improve patient satisfaction with the referral process by using readily available strategies and tools such as, improving internal office communication, engaging patients in scheduling, facilitating the appointment, tracking referral results, analyzing data for improvement opportunities, and gathering patient feedback.^{20,21}

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in



the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

The American Academy of Family Physicians Academy has participated in the Core Measures Collaborative (the Collaborative) convened by America's Health Insurance Plans (AHIP) since August 2014. The Collaborative is a multi-stakeholder effort working to define core measure sets of various specialties promoting alignment and harmonization of measure use and collection across both public and private payers.

Participants in the Collaborative included Centers for Medicare and Medicaid Services (CMS), the National Quality Forum (NQF), private payers, provider organizations, employers, and patient and consumer groups. This effort exists to decrease physician burden by reducing variability in measure selection, specifications and implementation— making quality measurement more useful and meaningful for consumers, employers, as well as public and private clinicians.

With significant AAFP input, a PCMH/ACO/Primary Care Core Measure Set has been developed for primary care. The goal of this set is to decrease burden and allow for more congruence between payer reporting programs.²²

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Pharmacologic management of hypertension in patients with diabetes.⁴
- Vision loss in older persons⁵
- The visually impaired patient¹⁴
- NICE: Diabetes in pregnancy: management of diabetes and its complications from preconception to the postnatal period¹⁵
- Australian Diabetes Society, National Health and Research Council. Clinical Practice Guidelines for the Management of Diabetic Retinopathy¹⁶
- American Diabetes Association (ADA). Standards of medical care in diabetes--2014¹⁷
- American Optometric Association. Evidence-based Clinical Practice Guideline Eye Care of the Patient with Diabetes Mellitus¹⁸
- Making diabetes checkups more fruitful²³
- Patient-physician partnering to improve chronic disease care²⁴
- Engaging Patients in Collaborative Care Plans²⁵
- Simple tools to increase patient satisfaction with the referral process²⁰
- Diabetic Retinopathy | Overview (patient education)²⁶

References

1. Ammary-Risch NJ, Huang SS. The primary care physician's role in preventing vision loss and blindness in patients with diabetes. *Journal of the National Medical Association*. Mar 2011;103(3):281-283.



2. National Eye Institute. Statistics & Data: Diabetic Retinopathy. 2010; <http://www.nei.nih.gov/eyedata/diabetic.asp>. Accessed July, 2014.
3. Farley TF, Mandava N, Prall FR, Carsky C. Accuracy of primary care clinicians in screening for diabetic retinopathy using single-image retinal photography. *Annals of family medicine*. Sep-Oct 2008;6(5):428-434.
4. Whalen KL, Stewart RD. Pharmacologic management of hypertension in patients with diabetes. *American family physician*. Dec 1 2008;78(11):1277-1282.
5. Pelletier AL, Thomas J, Shaw FR. Vision loss in older persons. *American family physician*. Jun 1 2009;79(11):963-970.
6. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.
7. American Academy of Family Physicians (AAFP). AAFP FMX CME Outcomes Report. Leawood KS: AAFP; 2015.
8. National Eye Institute, National Eye Health Education Program. *Primary Care Physicians and Eye Health: Results of a National Web-Based Survey*. National Eye Institute;2012.
9. Aleo CL, Murchison AP, Dai Y, et al. Improving eye care follow-up adherence in diabetic patients with ocular abnormalities: the effectiveness of patient contracts in a free, pharmacy-based eye screening. *Public health*. Jun 25 2015.
10. Storey PP, Murchison AP, Pizzi LT, et al. IMPACT OF PHYSICIAN COMMUNICATION ON DIABETIC EYE EXAMINATION ADHERENCE: Results From a Retrospective Cohort Analysis. *Retina (Philadelphia, Pa.)*. Jun 23 2015.
11. Beaser RS, Okeke E, Neighbours J, Brown J, Ronk K, Wolyniec WW. Coordinated primary and specialty care for type 2 diabetes mellitus, guidelines, and systems: an educational needs assessment. *Endocrine practice : official journal of the American College of Endocrinology and the American Association of Clinical Endocrinologists*. Nov-Dec 2011;17(6):880-890.
12. Writing Group for the DERG, Orchard TJ, Nathan DM, et al. Association between 7 years of intensive treatment of type 1 diabetes and long-term mortality. *JAMA : the journal of the American Medical Association*. Jan 6 2015;313(1):45-53.
13. Nathan DM, Cleary PA, Backlund JY, et al. Intensive diabetes treatment and cardiovascular disease in patients with type 1 diabetes. *The New England journal of medicine*. Dec 22 2005;353(25):2643-2653.
14. Rosenberg EA, Sperazza LC. The visually impaired patient. *American family physician*. May 15 2008;77(10):1431-1436.
15. Webber J, Charlton M, Johns N. Diabetes in pregnancy: management of diabetes and its complications from preconception to the postnatal period (NG3). *British Journal of Diabetes*. 2015;15(3):107-111.
16. Australian Diabetes Society, National Health and Research Council. Clinical Practice Guidelines for the Management of Diabetic Retinopathy. 2007. <https://www.nhmrc.gov.au/guidelines/publications/di15>. Accessed July 2014.
17. American Diabetes Association (ADA). Standards of medical care in diabetes--2014. *Diabetes care*. Jan 2014;37 Suppl 1:S14-80.
18. American Optometric Association. Evidence-based Clinical Practice Guideline Eye Care of the Patient with Diabetes Mellitus (CPG3). 2014;



- <http://www.aoa.org/optometrists/tools-and-resources/clinical-care-publications/clinical-practice-guidelines?sso=y>. Accessed July, 2015.
19. Havas S, Donner T. Tight control of type 1 diabetes: recommendations for patients. *American family physician*. Sep 15 2006;74(6):971-978.
 20. Jarve RK, Dool DW. Simple tools to increase patient satisfaction with the referral process. *Family practice management*. Nov-Dec 2011;18(6):9-14.
 21. American Academy of Family Physicians (AAFP). FPM Toolbox: Referral Management. 2013; <http://www.aafp.org/fpm/toolBox/viewToolType.htm?toolTypeId=26>. Accessed July, 2014.
 22. American Academy of Family Physicians (AAFP). PCMH/ACO/Primary Care Core Measure Set. 2016; <http://www.aafp.org/practice-management/improvement/measures.html>. Accessed May, 2016.
 23. White B. Making diabetes checkups more fruitful. *Family practice management*. Sep 2000;7(8):51-52.
 24. Denmark D. Patient-physician partnering to improve chronic disease care. *Family practice management*. May 2004;11(5):55-56.
 25. Mauksch L, Safford B. Engaging Patients in Collaborative Care Plans. *Family practice management*. 2013;20(3):35-39.
 26. FamilyDoctor.org. Diabetic Retinopathy | Overview. 1996; <http://familydoctor.org/familydoctor/en/diseases-conditions/diabetic-retinopathy.html>. Accessed July, 2014.