

PRINT-A new vision for diabetic eye exams in primary care offices

OSF Innovation pilots new technology in eight offices with hopes to expand

Like it was for many people, 2021 didn't start out great for 47-year-old Betsy Huffman of Bloomington, Illinois. Her new year began with a long recovery from a December 2020 hospital stay connected with complications from undiagnosed Type 2 diabetes.

Huffman then suffered a mild stroke earlier this year. Her follow-up treatment involved trips to a cardiologist and a pulmonologist. It's difficult for her to discuss without crying. Huffman's mother also had diabetes, so she knew the difficult lifestyle changes and new medications she faced. Changes Huffman knew she'd have to stick to for the rest of her life. That's also why, admittedly, she kept putting off yet another trip to a medical office to get a dilated eye exam to check for diabetic retinopathy – the number one cause of blindness in the U.S.

Huffman, who is a legal assistant at a Bloomington law firm, experienced blurry vision at times, but chalked it up as a response to new medications. Despite the repeated urging of her OSF HealthCare primary care doctor, Huffman ignored getting her eyes checked for retinopathy – until recently. New high-tech eye testing equipment arrived at her primary care office and after a regular check-up, all Huffman had to do was walk down the hall for her eye exam. An excited care team cheered her on, telling Huffman she could be the first to use the new equipment. Huffman had time off from work so, no more excuses.

"I just didn't want to face it. I don't know. Being blind is a fear though. That's why I'm glad they did this because like I said it gave me a push because I probably still would not have made that appointment yet."

Maintaining good blood sugar, blood pressure and cholesterol levels helps prevent diabetic retinopathy and diabetic macular edema. "OSF Innovation regularly seeks to understand the pain points and experiences of our frontline care givers and patients," explains Becky Buchen, senior vice president of OSF Innovation. "With the knowledge that many patients with diabetes were not getting regular dilated eye exams from an ophthalmologist, our Performance Improvement team within Innovation, in collaboration with our Medical Group, launched a pilot with [Digital Diagnostics](#), a company that received the first-ever Food and Drug Administration (FDA) clearance of IDx-DR, a digital diagnostic tool that can diagnose diabetic retinopathy during a patient visit without the need for a physician or eye care specialist."

The technology takes photos of the back of retina and uses artificial intelligence to evaluate the extent of damage to blood vessels. The test typically takes a few minutes and in most, but not all cases, doesn't require eyes be dilated.

Unfortunately, Huffman's exam showed a positive result for diabetic retinopathy. While she's scared of what's to come, Huffman now has a follow-up appointment with an ophthalmologist to establish a care plan to determine next steps in her diabetes management. Huffman has no regrets about getting the IDx-DR exam at her OSF HealthCare primary care office.

"The fact that it was right there and to be able to do it and get it over with ... it's a good thing!"

Michael Mansfield, a medical office assistant with OSF, is passionate about this effort. He recently delivered a report to Kimberly Hart, a patient diagnosed with diabetes within in the past 12 months.

"This is your diagnostic result – no diabetic retinopathy detected, so no referral needed to an ophthalmologist, so that's great. Next steps, we're gonna re-test in 12 months," he tells her. Hart responds, "Ok."

Hart admits she's still coming to terms with her diabetes diagnosis and the lifestyle changes it requires, but her results come as a relief.

"That is awesome news. I don't want to have those diseases related to my diabetes so I'm pretty excited about that and I'm glad you get the results right away. You don't have to wait, (she laughs)."

OSF HealthCare launched the diabetic eye exams in eight primary care locations starting in May. Among the 147 OSF patients with diabetes tested using IDx-DR, 21% had a positive diagnostic result for diabetic retinopathy.

OSF Innovation finds solution to a growing problem

Dr. Mark Meeker, vice president of Community Medicine at OSF HealthCare, says the number of people with diabetes receiving treatment is growing to tens of thousands across the OSF Ministry. Most primary care providers aren't proficient

in giving dilated eye exams because it isn't part of routine visits. Yet many patients with diabetes put off going to an additional appointment at a different office to get a dilated eye exam every year or two.

Dr. Meeker says he recently saw a patient who put off getting his eyes checked because he gets docked for every absence from work, even if it's for a legitimate reason such as a doctor's visit. So, with busy schedules and work realities, Dr. Meeker stresses it's important to make exams as convenient as possible. IDx-DR makes in-office testing quick and easy, plus it uses artificial intelligence to diagnose diabetic-related eye damage – so it's much more accurate than a typical eye exam given in a primary care setting.

He explains, "The AI can see the early changes of diabetic retinopathy that we may not be able to see with our own eyes. If the AI sees that, then, the appropriate referrals can be made."

Testing in primary care offers a one-stop shop, approach for patients, but Dr. Meeker says it also off-loads exams from extremely busy eye doctors so they can focus on treating already-diagnosed conditions. It also helps medical providers know their patients better so they can help them keep their diabetes under control and stay on top of eye care to avoid complications.

Dr. Meeker says seeing is believing for some patients who get to see the photos taken during the exam and potential areas of concern the images reveal.

"So the ophthalmologists have tremendous technologies to treat diabetic retinopathy now with lasers and whatnot. But there's nothing as good as prevention. And the way you prevent it is to tightly control the diabetes to begin with. So as soon as we see those retinopathy changes, if we can really get the attention of the patient to really pay attention to their sugar control, we can decrease that progression through prevention, not just through treatment."

OSF HealthCare should learn later this summer if it receives a grant that would cover costs for two years of training to expand the new, high-tech diabetic eye exam from eight primary care offices to additional sites in communities served by OSF. Currently the IDx-DR exam is available at:

OSF Medical Group, Alton	OSF Medical Group, on Glen Park in Peoria
OSF Medical Group, College Avenue in Bloomington	OSF Medical Group, Illinois Route 91 in Peoria
OSF Medical Group, Galesburg	OSF Medical Group, Streator
OSF Medical Group, Loves Park	OSF Medical Group, Washington