

Point-of-Care retinal testing closes diabetic eye exam care gap in primary care during COVID

The Primary Care Practice

Johns Creek Primary Care collaborates with Emory Healthcare Network on a common set of quality measures and goals

Johns Creek Primary Care is a private practice member of Emory Healthcare Network in the metro Atlanta area and a Patient Centered Medical Home (PCMH). As a PCMH, the group is committed to delivering comprehensive medical care and providing the latest medical advances to their patients.

The practice's patient mix is largely covered by commercial insurance (59%), Medicare (40%) and self-pay (1%). As part of the Emory Healthcare Network, the practice holds value-based contracts that pay for achieving measures considered standard of care, including completion of eye exams for patients living with diabetes.

The Care Gap Challenge

Low rates of diabetic eye exams exacerbated during COVID

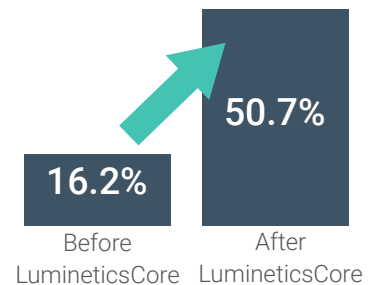
Diabetic retinopathy (DR) is a complication of diabetes that results in approximately 60,000 new cases of blindness every year in the US.¹ Early diagnosis and management of DR is critical, as the diabetic eye exam is one of the more formidable challenges for people living with diabetes.

The exam requires specialist consultation, often necessitating extensive planning to account for transportation, child care, and time off. During COVID, especially in spring 2020, total office visits at Johns Creek were drastically reduced to protect patients and office staff. In-person visits were converted to telemedicine when possible and sick visits were attended to with the patient in their cars. Similarly there was a **significant decrease in examinations with eye care specialists for their patients living with diabetes.**

Impact Summary



Compliance rates for diabetic retinal exams increased from 16.2% to 50.7% based on year-over-year data comparison.



Referable cases of diabetic retinopathy more than doubled.



Diabetic eye exam quality metric easily met.

Entire service provided and diagnostic report generated at the point-of-care

For patients with diabetes, 85% will develop diabetic retinopathy within 20 years. Providers at Johns Creek Primary Care consistently referred their patients for annual eye exams as preventive care. Yet even through direct patient referrals and patient reminders, only 16.2% adhered to this potentially vision-saving test. As a result, John’s Creek was unable to satisfy their quality metric for diabetic eye examinations and many patients remained untreated. LumineticsCore™ (formerly IDx-DR) was implemented as a solution at John’s Creek Primary Care in fall 2019.

LumineticsCore is the first FDA-cleared point-of-care autonomous AI system that completes the diabetic eye exam and diagnoses diabetic retinopathy (DR) (including macular

edema) without physician oversight.

At Johns Creek, patients who have not had a documented eye exam in the last 12 months are offered LumineticsCore at the end of their visit. No physician over read is needed as LumineticsCore provides a diagnosis and recommendation for next steps at the point-of-care. **Especially during COVID, the point-of-care service eliminated the need for patients to attend an extra appointment with an eye care specialist and completed the exam for individuals who might not have otherwise received one.**



Identification of diabetic retinopathy cases increased 2.5-fold.

The Impact

Practice achieved target performance on quality measure for diabetes eye exam

With the guidance to limit non-emergent medical care during COVID, the number of patients referred to eye care providers dropped from 106 to 44 during the study period as patients were hesitant to complete another medical visit.

However, the number of patients examined by

the autonomous AI increased from zero to 318, thus avoiding the extra visit and more than compensating for the patients not referred. **With the addition of LumineticsCore, performance on the diabetic eye exam measure increased from 16.2% to 50.7%, and identification of diabetic retinopathy cases increased 2.5-fold.**

Date Range	Total Patients with Diabetes	Documented Exams At Eye Care		Exams With AI	
		Total Exams at Eye Care	Positive (DR or DME Detected)	Total Exams with AI	Positive (Referrable DR or DME)
2018 - 2019	655	106	13	N/A	N/A
2019 - 2020*	655	44	6	318	35

*COVID restrictions in place

Prior to LumineticsCore, Johns Creek was unable to satisfy their target for diabetic eye exams. Since making this point-of-care exam available to patients, even during COVID, they easily met their goal and more than satisfied their quality metric.

The quality metric was satisfied after implementation of LumineticsCore.

Everybody wins

Patients win

Patients are provided easier access to diabetic retinal testing at the point-of-care, thereby achieving standard of care with at least one less doctor appointment.

Providers and patient-centered medical homes win

Immediate results allow for comprehensive care and the opportunity for improved compliance with quality metrics.

Eye care specialists win

Patients with potentially treatable levels of diabetic retinopathy are provided an actionable referral, increasing high yield referrals to eye care.

The addition of the autonomous AI system, LumineticsCore, in this primary care setting increased access to care, improved performance on quality measures, and **found cases of disease that would have otherwise gone missed and likely caused preventable blindness.**



LumineticsCore really is cutting edge technology that helps me market to patients, prevent vision loss from diabetes, and improve my quality scores.



*Lee Herman, MD, FACP
Johns Creek Primary Care*

Digital Diagnostics' first FDA de novo cleared product is the AI diagnostic platform, called LumineticsCore. LumineticsCore detects diabetic retinopathy (including macular edema) at the point-of-care without physician oversight and is deployed across the globe in healthcare settings.

Visit [digitaldiagnostics.com](https://www.digitaldiagnostics.com) to learn more about the Digital Diagnostics platform.