Using AI to Scale a Retinal Testing Program

DIGITAL DIAGNOSTICS
AI the right way.®

University Medical Center
New Orleans
LCMC Health

The Diabetic Retinopathy Testing Problem

University Medical Center (UMC) is a community-based hospital within the LCMC Health system in New Orleans dedicated to making a difference in the lives of patients with diabetes

New Orleans has a high percentage of people with diabetes but a shortage of ophthalmologists, creating a backlog for the annual eye exam for diabetes.

Many people never get an exam, which can delay diagnosis and treatment, leading to vision loss or blindness.

UMC New Orleans' challenges

UMC faced a number of challenges with improving their diabetic retinopathy (DR) exam compliance rate, which was close to 10%

First, many patients simply were not following through on referrals to ophthalmology because of the extra time and money involved with another healthcare appointment.

Another challenge was the overburdened schedules of eye care specialists, resulting in long wait times for patients, which contributed to low DR exam compliance.

According to Debra Brown, a nurse practitioner at UMC, "We realized that the ophthalmology staff at UMC could not accommodate the number of patients that were required to come to their program."

UMC Efficiency Improvements
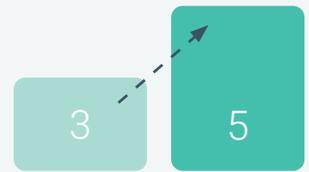
3 → 5
# of days per week DR testing available to patients
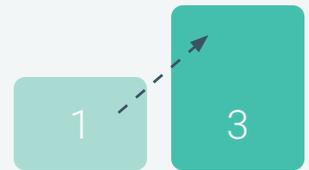
1 → 3
# of operators able to administer the DR exam

10 → 22
# of patients that can be scheduled in a day

The Solution: LumineticsCore

Seeking a better solution, UMC partnered with Digital Diagnostics to bring the DR exam to primary care with the revolutionary AI diagnostic system

LumineticsCore™ (formerly IDx-DR) is the first FDA-cleared AI diagnostic system for the detection of DR (including macular edema). It is autonomous, meaning it does not require a physician to interpret the results, enabling non-eye care providers to administer the DR exam. The system produces a diagnostic result at the point-of-care in less than a minute.

At UMC, LumineticsCore has eliminated the patient backlog and has enabled same day referral appointments for patients with positive exam results. Before LumineticsCore was implemented at UMC, DR testing was only available 3 days a week with a cap of 10 people per day.

With LumineticsCore, UMC now provides DR testing 5 days a week, with 3 trained operators to run the machine, and the ability to see 22 patients a day.

"It's a better and more efficient system that allows us to do more exams."
- UMC operator

After completing a 9-month pilot, UMC reported increases in efficiency and patient access. Over 805 patients completed their annual exam with LumineticsCore who would not have been seen otherwise.

Of the patients tested with LumineticsCore, 25% received a positive DR diagnosis, providing the opportunity for intervention that could potentially prevent vision loss for 199 people.

Beyond seeing increased access for patients, reimbursement revenue increased for UMC across public and private payers.

Operators also became more skilled at capturing high-quality images with the LumineticsCore image quality check, with over 90% of patients receiving sufficient image quality for a diagnosis.

Conclusion

By making a high-quality diagnostic assessment more accessible for patients at UMC, LumineticsCore is helping to prevent potential vision loss.

The diabetes center at UMC has hopes to expand the use of LumineticsCore as it continues to grow. "I think this will be a big piece of our diabetes center build out," said one UMC hospital administrator.

Results after a 9-month pilot

805+

patients tested with LumineticsCore

25%

of patients tested positive for DR

Digital Diagnostics
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