

Improving Population Health via a Quality Measurement Analysis: Diabetic Eye Exam

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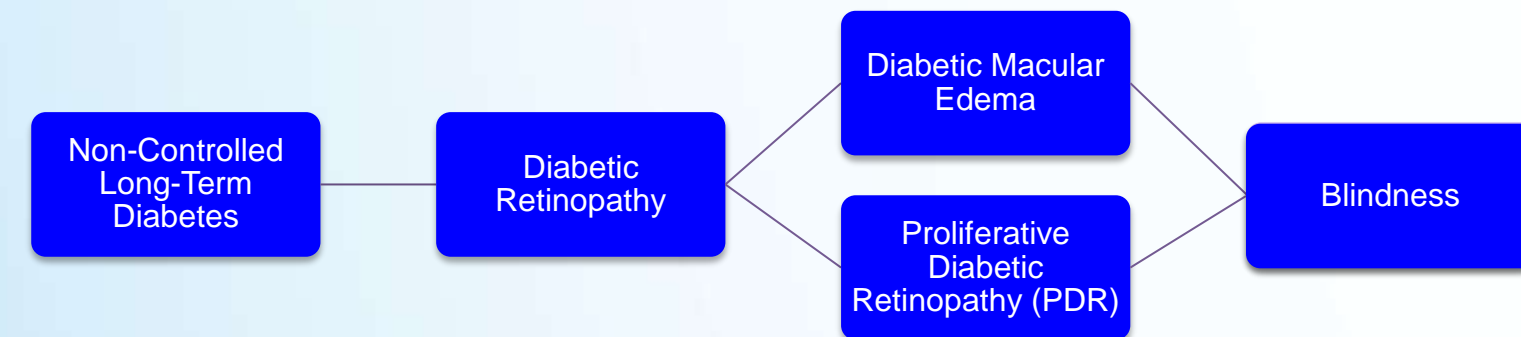
INTRODUCTION

Diabetic retinopathy is one of the leading causes of blindness in many nations. Ocular microvascular complications can lead to diabetic macular edema or proliferative diabetic retinopathy (PDR), which leads to loss of sight. PCP's, Optometrists, Ophthalmologists, or Retinal Specialists can diagnose diabetic retinopathy. Those providers can use the following diagnostic tools: dilated eye exam, 7-field stereoscopic fundus photograph, fluorescein angiography, or optical coherence tomography (OCT). As of January 2015, within Lehigh Valley Physicians Group, the data shows that out of the 24,861 patients diagnosed with diabetes in need of eye exams, only 5,482 patients have received one. Evidence shows that screening for diabetic retinopathy has reduced the rate of visual loss by greater than 25%. In order to improve the quality care of the diabetic patient population, how quality is measured needs to be further analyzed and addressed.

PLAN

- Analyze quality measurements implemented by the provider and payer within LVHN through program manuals
- Determine discrepancies within measurements
- Detect areas of opportunity to implement change
- Observe the influence of reimbursement and policy

Figure 1



Diabetic Ocular Ailments. Long-term diabetes commonly leads to diabetic retinopathy, which then can become more severe. If not caught early and managed, diabetic retinopathy can lead to blindness.

LITERATURE CITED

American Diabetes Association. Standards of Medical Care in Diabetes. *Diabetes Care*. Jan 2010; 33(S11-S61): 511-561. doi: 10.2337/dc10-S011.

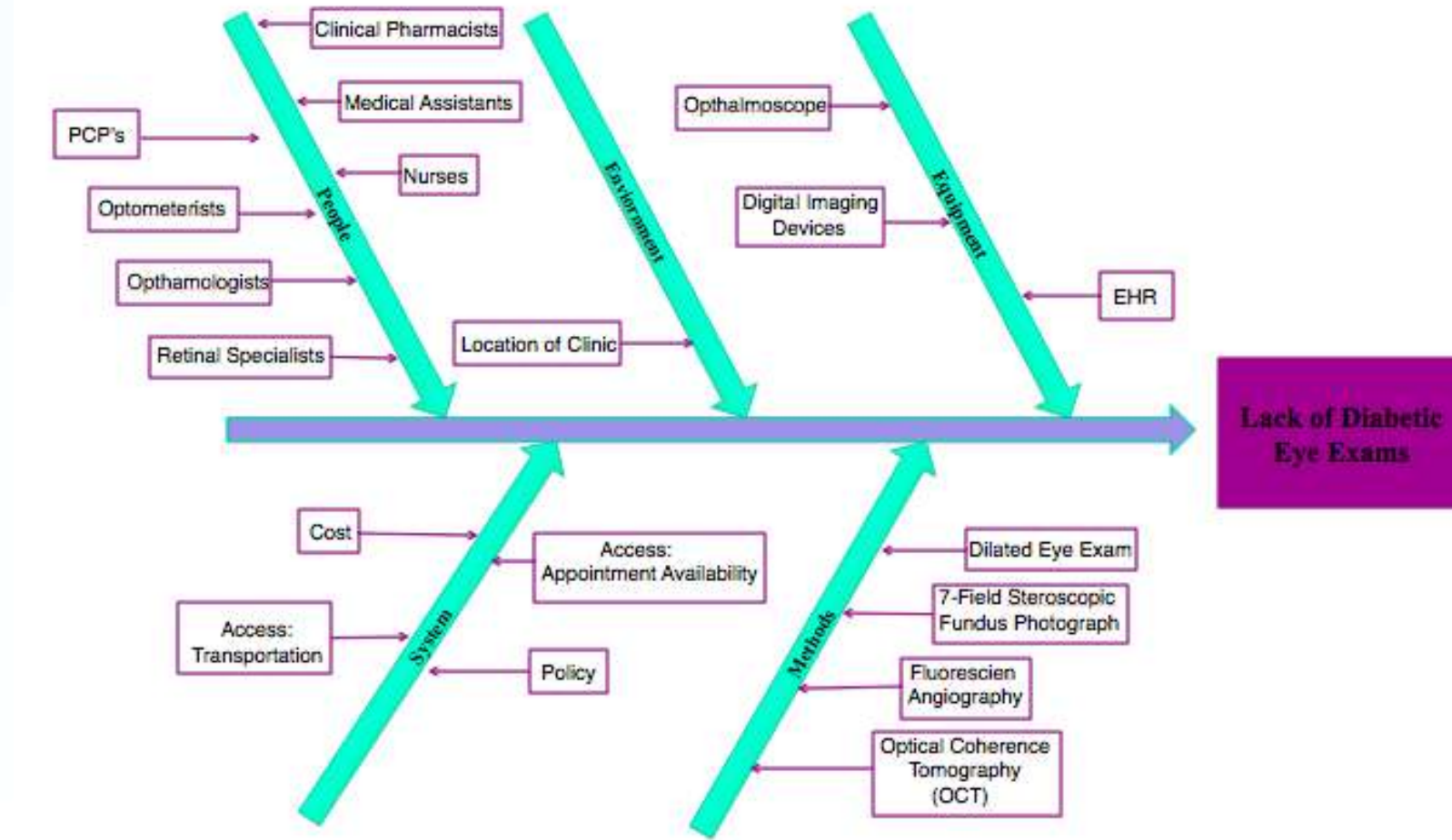
Bragge P, Gruen RL, Chau M, Forbes A, Taylor HR. Screening for Presence or Absence of Diabetic Retinopathy: A Meta-analysis. *Arch Ophthalmol*. 2011;129(4):435-444. doi: 10.1001/archophthalmol.2010.319.

Chen AH1, Murphy EJ, Yee HF Jr. eReferral—A New Model for Integrated Care. *N Engl J Med*. 2013 Jun 27;368(26):2450-3.

Coughlin, Laura. AAP Clinical Report on Diabetic Retinopathy. *Am Fam Physician*. 2005; 72(7):1403. 1403rd ser. 72.7

Ferris FL, III. How Effective Are Treatments for Diabetic Retinopathy?. *JAMA*. 1993;269(10):1290-1291. doi:10.1001/jama.1993.03500100088034.

Figure 2

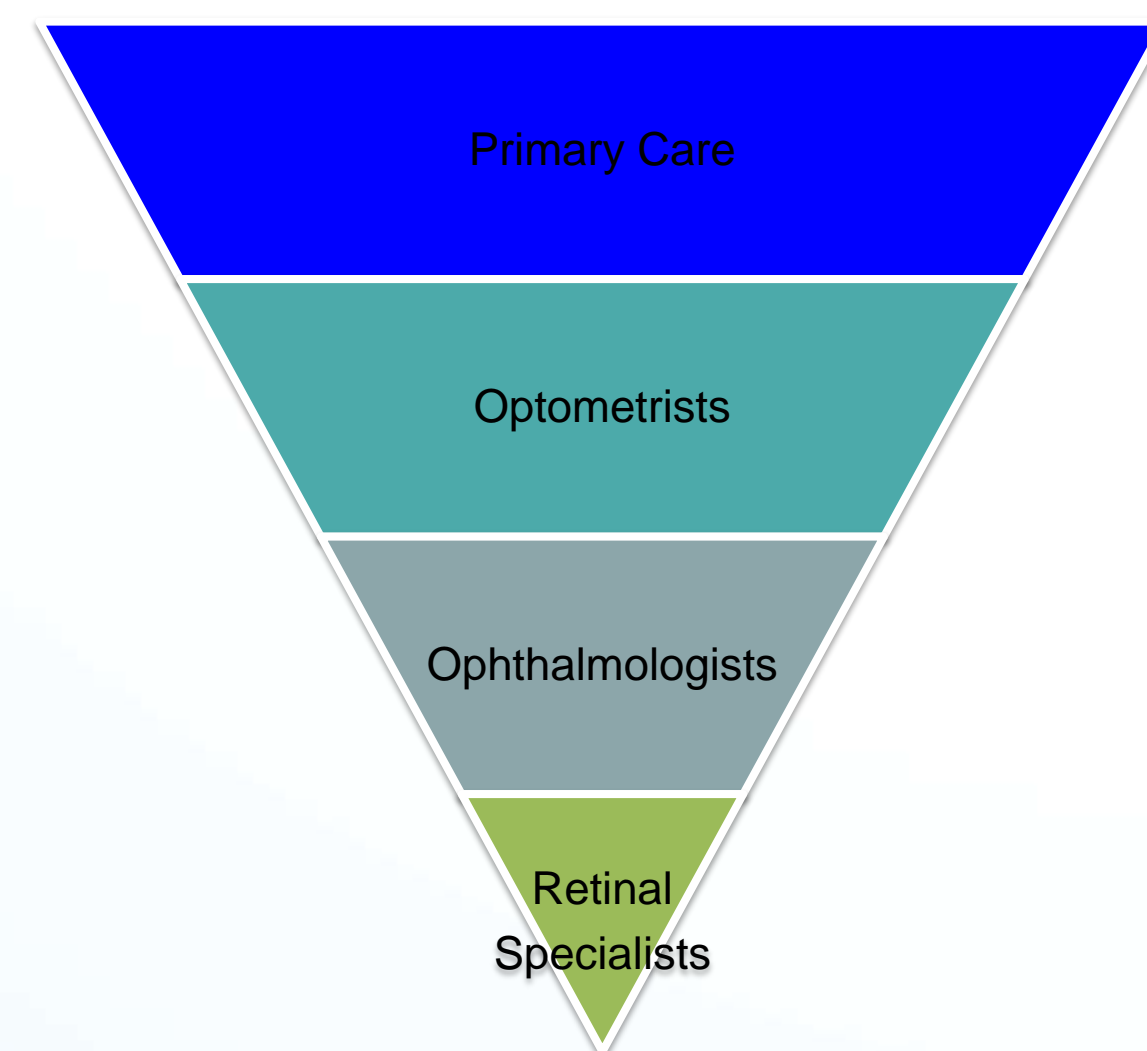


Ishikawa Diagram showing the different branches involved in conducting a diabetic eye exam. These components all interplay in the quality of care patients are receiving within the community.

METHODS

- Analyzed 246 quality measurements among the following contracts: LVPHO, Highmark MA, Highmark Senior Bundle, Highmark PCMH, CMS ACO, PQRS GPRO, CBC QIP, AmeriHealth PerformPlus, and Aetna ACS.
- Defined numerators and denominators per quality measurements
- Ranked measurements by how common they were among the contracts
- Looked at the following measurement in further detail: 'Comprehensive Diabetic Care: Eye Exam Performed'
- Dissected workflow documents and Epic Tip Sheets
- Learned about reimbursement models and its convoluted system

Figure 3

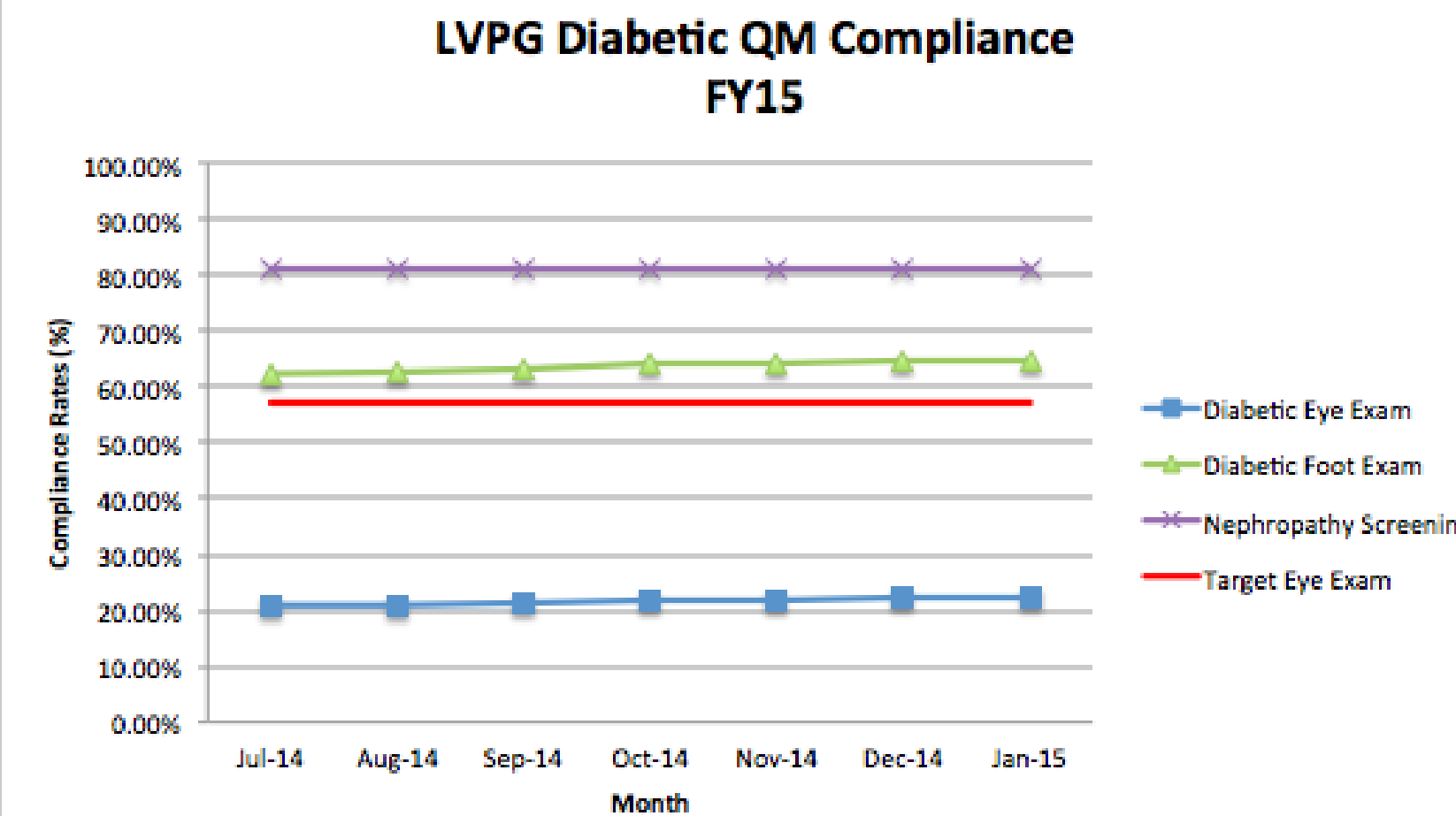


Who should screen for diabetic retinopathy? The pyramid above shows providers who could perform a digital eye exam and send it to be read or perform a funduscopy. Proper segmentation of not only the providers, but also the clinical staff needs to be further analyzed.

RESULTS

- Determined that the measurements were not standardized among contracts. 85% of measurements were seen in 3 or less contracts and 15% of measurements were standardized between 4 or more contracts.
- Observed that 78% of the quality measurements were process based, and only 17% were outcome based. 5% were mixed.
- There was a quality measurement for performing a diabetic eye exam within the following contracts: LVPHO, CBC QIP, Highmark MA, Highmark Senior Bundle, Highmark PCMH, CMS ACO, and AmeriHealth PP. Out of these contracts, only three, LVPHO, CMS ACO and AmeriHealth PP, expect both the eye exam itself and the results of the exam to be documented. All other contracts only require documentation of a performed exam.
- Data is exchanged between provider and payer by claims through coding or data extraction from EMR's.

Figure 4



LVPG's Compliance on Diabetic QM's. The graph above shows how LVPG is performing on the diabetic eye exam (blue), diabetic foot exam (green), and nephropathy screening (purple) quality measurements. It is clear that diabetic eye exam compliance is significantly below both other diabetic QM's, as well as the group's target goal of 57% (red line).

CONCLUSIONS

After analyzing the quality measurements and taking a deeper look into the quality metric for diabetic eye exams, the overall conclusion comes to the lack of standardization between providers and payers. There needs to be a more unified way of evaluating quality of care supported by evidence-based clinical data.

As previously mentioned, majority of the quality measurements seen in this study were process based, including the measurement for diabetic eye exams. Therefore, majority payers are incentivizing providers for ordering the exam rather than the result (e.g. whether they had diabetic retinopathy, macular degeneration, blindness, etc.). However, for our state of healthcare to progress, not only do surrogate outcomes need to be reported, but patient-oriented ones need to be as well. Payers should additionally incentivize keeping patients healthier, thus attribute reimbursement for outcomes that reflect a healthy population (e.g. patients that are not blind or do not have retinopathy as a result of diabetes). Focusing on patient-oriented outcomes will not only improve current quality of care, but will also emphasize preventive medicine. Unfortunately, this can only be accomplished if there is a change in policy.

Furthermore, one issue with measuring whether patients receive diabetic eye exams is proper documentation. Since patients can see a variety of providers for their eye exam, documentation gets lost in the process. If patients see providers outside the system, eye exams must manually be scanned and inputted into the EMR. This process hurts both the patient and the hospital by not being able to accurately track population health and reducing reimbursement while increasing cost. Thus, the data presented by Figure 4 to the left, could also be the result of improper documentation, showing that it does not accurately reflect on how the providers are meeting the needs of their patients.

FURTHER INFORMATION

- Implementation of guidelines for proper segmentation of providers who can perform diabetic eye exams is necessary for improvement of the system
- The use of Telemedicine can help more individuals gain access to diabetes management and other components of healthcare
 - E-consults and eReferrals can be used
- Further research should be conducted after implementation of updated workflows and training for maximizing the use of Epic
- This will allow better utilization of each member in the system, reduce cost, better communication, and most importantly, increase quality of patient-centered population healthcare.

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