

EYE CARE IS MEDICAL CARE

ANNUAL DILATED EYE EXAMS SHOULD BE INTEGRAL – NOT SUPPLEMENTAL – TO EMPLOYEE MEDICAL PLANS

INTRODUCTION

The eyes are major organs. Assessing their health should be as routine as listening to heart sounds. Yet the eyes hold a peculiar status when it comes to employee benefits. They are absent from preventive benefits in most medical plans.

Covering dilated annual eye exams through a supplemental vision plan casts the eyes themselves as supplemental. Employees typically opt for vision plans out of need for glasses or contacts. But a refraction to determine a prescription is not a full examination. There's far more to the eyes than how well they focus.

A benefit plan that includes regular dilated eye exams as a preventive service – with no co-pay or deductible charge – lowers barriers to detecting a host of serious conditions early enough to prevent or diminish their impact. This includes conditions that threaten the eyes directly, such as glaucoma, diabetic retinopathy, and macular degeneration, as well as those with broader impact on overall health, such as diabetes, high blood pressure, autoimmune diseases, and various cancers.^{1,2}

For employers, the potential savings from early detection of ocular and systemic conditions far surpass the costs of providing dilated eye exams through the same plan, and on the

same terms, as routine physicals.³ Providing integrated preventive eye health coverage also helps an organization demonstrate that it cares about its employees' overall health and well-being – a quality that helps attract and retain talent.⁴

The COVID-19 pandemic has only accentuated the importance of quality employee medical coverage, including comprehensive eye care. In a workplace that has gone increasingly virtual, heightened reliance on monitors, phones, and tablets presents its own challenges to the eyes and to overall health.⁵ This more sedentary COVID lifestyle is disrupting routines, exercises and diet that will exacerbate systemic diseases such as diabetes and hypertension, which can be identified and monitored through dilated eye examination. Achieving economies of preventive versus reactive health care has never been more critical.

All the more reason for benefit managers to rethink plan designs and place comprehensive eye care benefits on an equal footing with all other components of primary preventive care.

DR. STEVEN EISS, OD, Chair, AOA's Third Party Center Executive Committee

KIM DWYER, Vice President, Inspira Health and past chair of the Midwest Business Group on Health (MBGH)

EYE HEALTH IN THE UNITED STATES

Millions of Americans contend with eye conditions, such as cataracts, diabetic retinopathy, glaucoma, and age-related macular degeneration (AMD), that can cause significant vision loss and greater plan expense if not detected and treated early. These and other ocular diseases become more prevalent and more severe with increasing age.⁶⁻⁹ The annual economic impact of major eye conditions among U.S. adults over the age of 40 years is more than \$145 billion.¹⁰ As the population ages, these costs will inevitably increase, and as the number of older adults who remain in the workforce continues to grow, rising costs will likely impact employee benefit plans.

At the same time, about 6.8% of children younger than 18 years have a diagnosed eye or vision condition, including more than 174,000 children between the ages of 3 and 5 years.¹¹ If unaddressed at this age these conditions can have a lifelong impact on development and health, social and educational growth, and even future job opportunities.^{12,13} Preschool and kindergarten children with uncorrected hyperopia (farsightedness) scored significantly lower than their peers in tests of early literacy. Some children with undetected eye or vision problems may be misdiagnosed with ADHD and receive unnecessary medication or special education services.¹⁴⁻¹⁶

Although correcting vision represents only one aspect of comprehensive eye care, its value inside and outside the workplace is substantial. More than 150 million Americans wear glasses or contact lenses to correct refractive errors such as hyperopia, myopia (nearsightedness), and astigmatism (distortion due to a misshapen cornea or lens).¹⁷ Presbyopia, which impairs near-vision activities such as reading, affects nearly everyone starting in their 40s.^{18,19} On a global scale, uncorrected refractive error results in lost productivity amounting to \$202 billion annually.²⁰ Lack of proper vision correction can also result in increased worker compensation claims.²¹

DILATED EYE EXAMS: THE LYNCHPIN OF PREVENTIVE EYE CARE

**>55 MILLION
US ADULTS**

At high risk for vision loss
did not receive a dilated
eye examination in 2017⁵

>300,000 PATIENTS
With undiagnosed type 2
diabetes were identified
by optometrists in 2017⁷

Annual dilated eye exams assess not only visual status but the health of the eyes and eye tissues. The dilated eye provides a window on changes and abnormalities that can threaten sight, as well as diseases and conditions not confined to the eyes – such as diabetes, hypertension, and certain autoimmune diseases and cancers – that can pose profound risks to overall health.¹

Dilated eye exams performed by a doctor of optometry can detect more than 270 diseases and abnormalities.² In 2017 alone, doctors of optometry identified and diagnosed previously undiagnosed type 2 diabetes in more than 300,000 patients.²² Regular dilated eye exams can also document changes in vision and eye health and general health over time, monitoring whether and to what degree a diagnosed condition is progressing.

Still, many Americans who need these eye exams are not getting them. A 2017 National Health Interview Survey found that of the more than 93 million adults in the United States at high risk for vision loss, fewer than 60% (about 55 million) received a dilated eye exam in the preceding year.²³ On the pediatric side, fewer than 15% of preschool children receive an eye exam,²⁴ contrary to evidence-based American Optometric Association (AOA) guidelines²⁵ and the inclusion of annual pediatric eye exams among the ten essential health benefits mandated by the Affordable Care Act for small-group plans.²⁶

WHY PROVIDE COMPREHENSIVE EYE CARE AS A PREVENTIVE MEDICAL BENEFIT?

Direct and Indirect Cost Savings

Turning to one representative disease area, we know that measures such as intensive glycemic control can prevent or slow the progression of diabetic retinopathy (DR).²⁷ Given all the available preventive and therapeutic tools, some 90% of blindness caused by diabetes is preventable.¹⁰ Early detection and treatment of diabetic eye disease helps preserve vision and reduce costs for multiple stakeholders.¹⁰

Specifically, from the employer's perspective, a 2008 study drawing on claims data from 17 large companies demonstrated that plan participants with DR incurred higher direct (health care) and indirect (work loss) costs than diabetic participants without DR. The cost differential skyrocketed with worsening disease. Members with sight-threatening proliferative DR (PDR) incurred more than twice the annual costs of those with earlier-stage DR. Preventing progression to PDR represented an annual savings of almost \$17,000 per employee.²⁸

That one year of savings could pay for a lifetime of comprehensive dilated eye exams. Yet unless an underlying disease is already detected, most medical plans do not provide these exams at no charge to members, despite covering the costly treatments and procedures those exams could have helped prevent.

Stemming Unnecessary ED Visits

Incorporating comprehensive preventive eye care into the same plan that covers the rest of the body helps reinforce the role of the doctor of optometry as more than solely a vision correction specialist. Establishing the relationship on these terms can influence costs in various ways, including emergency department (ED) utilization.

Americans made approximately 1.5 million visits to hospital emergency departments for eye-related issues in 2016, yet only 1.1% of these visits resulted in hospital admission.²⁹ This means that almost 99% of ED visits for eye-related problems could potentially have been handled by a doctor of optometry in a much more cost-effective setting.

The pandemic has actually provided proof of concept in this regard. In a survey conducted between April 22 and May 6, 2020, doctors of optometry provided care to more than 200,000 patients who would have otherwise sought urgent or emergency care, thus saving finite ED resources for COVID-19 patients and relieving patients from potential increased exposure to the SARS-CoV-2 in high-risk emergency settings.³⁰

Addressing the Impact of Digital Device Use

As both work and home life have gone increasingly virtual under COVID-19 constraints, concerns have increased over how overreliance on screen viewing can impact employee health and productivity. Screen use has already increased measurably during the pandemic, as documented in a recent survey of adults in the US and UK. Among the 2,000 responders in the US, average daily time spent in front of computers, phones, and tablets increased from an already alarming 17 hours pre-lockdown to 19 hours since lockdown.⁵

One result of excess screen time, Computer Vision Syndrome, can produce symptoms including eye strain, headaches, blurred vision, dry eyes, and neck/shoulder pain. These symptoms can persist and worsen if not addressed and can lead to mistakes and reduced productivity at work, and now at home.³¹

Productivity also suffers among employees performing close computer work with uncorrected vision. One study of employees working continuously at computer screens found that refractive errors can diminish productivity by up to 20%.²¹ Correcting even minor, barely noticeable refractive errors achieved cost-effective improvements in productivity. Correction of more severe refractive errors resulted in progressively greater productivity gains.³²

Because screen time is not merely a vision issue but a health issue, a dilated eye exam, provided at no charge as part of a plan's preventive care services, creates a proper space for discussing the full impact of screen time on the eyes and health at large.

Morale and Loyalty

Employees appreciate organizations that support their overall health and well-being. In one recent survey, 88% of respondents recognized that good vision is central to overall health.¹² Another survey found that motivated, high-value employees were seven times more likely to work for an organization when they perceived it as caring about what matters to them in life.⁴

Providing comprehensive eye benefits as part of the medical plan, like routine physicals, is one way employers can show they care. It acknowledges the eyes as part of the body and eye health as inseparable from the health of the whole person. It also avoids any confusion around whether and how to maintain eye health using a standalone vision plan. Although having vision coverage can improve access and utilization of eye care services,¹² a 2011 report found that one-third of enrollees in standalone vision plans did not use them for

**>70% OF
EMPLOYERS WITH
100+ EMPLOYEES
Are actively/considering
integrating eye care into
their health plans in the
next 5 years¹²**

dilated eye exams.³³ For such individuals, having a vision plan may not on its own ensure prompt action against diseases detectable in the eye before irreparable and costly harm can result. Employers also benefit by eliminating the gap in comprehensive eye benefits that otherwise causes significant gaps in data and information between employers, health plans and standalone vision plans.

As many employers adopt high-deductible health plans, the need to make an annual dilated eye exam part of preventive benefits, not subject to deductible, becomes absolutely essential. Otherwise, failure to seek care because of significant out-of-pocket expenses will incur higher medical costs from diseases whose progression could have been averted through early detection.

Encouragingly, companies are starting to appreciate the value of integrating preventive eye care into their primary medical benefits plans. More than 70% of employers with 100 or more employees say they are considering or actively pursuing this action in the next 5 years.³⁴ It's both a prudent and affordable choice. Actuarial data indicate that the change could cost less than \$5 per month for children and other participant categories.

CONCLUSION

More than half of the of the U.S. population receives employer-sponsored health benefits.³⁵ Most plans provide coverage for diagnosed conditions of the eye but do not include dilated eye exams as a comprehensive preventive benefit on par with routine physicals. As a result, employers still risk enormous costs resulting from:

- Delay in diagnosing macular degeneration, glaucoma, cataracts, and other sight-threatening conditions.^{12,36,37}
- Missed opportunities to detect diseases, such as cancer, diabetes, and cardiovascular diseases that have gone undiagnosed.^{1,2,38}
- Plan members not seeking eye care.¹⁰
- Higher incidence of vision loss.^{12,36,37}
- Increased emergency department use for lack of a family eye doctor the patient could call first.²⁹
- Lower employee productivity.³²

As advanced, but expensive treatments emerge and become standards of care, the gamble one takes by not providing eye exams as a preventive medical benefit becomes increasingly high stakes. Returning to diabetes, early DR typically has no symptoms; only an eye exam can diagnose it at a time when tightened glycemic control and other measures can prevent or delay its progression.²⁷ Once it has progressed, monthly injections into the eye may be indicated, at about \$2,000 per dose. That amounts to \$24,000 a year for the medication alone.^{39,40}

It's time for plan administrators to truly examine how they are spending their money. With today's growing focus on managing risk and keeping people healthy, it only makes good sense to include a comprehensive eye exam as part of your plan's preventive services.

About the American Optometric Association

The American Optometric Association (AOA) is the leading authority on and advocate for quality eye health care, representing more than 44,000 doctors of optometry, optometry students and optometric professionals. As the sole primary eye care provider in many communities across America, doctors of optometry are often a patient's first entry point into the health care system, and have extensive, ongoing training to examine, diagnose, treat, and manage disorders, diseases, and injuries that affect the eye and visual system.

REFERENCES

1. Mukamal R. 20 Surprising Health Problems an Eye Exam Can Catch. January 16, 2020. <https://www.aoa.org/eye-health/tips-prevention/surprising-health-conditions-eye-exam-detects>. Accessed July 14, 2020.
2. American Optometric Association. Start With Eye. 2020. https://www.aoa.org/documents/2020/AOA-Start-With_Eye_Toolkit.pdf. Accessed July 14, 2020.
3. Lee YH et al. Comparison of access to eye care appointments between patients with Medicaid and those with private health care insurance. *JAMA Ophthalmol.* 2018;136:622-629.
4. Mercer. 2020 Global Talent Trends Report. Available at: <https://www.mercer.ca/content/dam/mercer/attachments/north-america/canada/ca-2020-global-talent-trends-2020-report.pdf>. Accessed September 1, 2020.
5. Vision Direct. How much time do we spend looking at screen? June 20, 2020. <https://www.visiondirect.co.uk/blog/research-reveals-screen-time-habits>. Accessed September 1, 2020.
6. National Eye Institute. Glaucoma Data and Statistics. Last updated July 2019. <https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/glaucoma-data-and-statistics>. Accessed July 8, 2020.
7. National Eye Institute. Cataracts Data and Statistics. Last updated July 2019. <https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/cataract-data-and-statistics>. Accessed July 8, 2020.
8. National Eye Institute. Diabetic Retinopathy Data and Statistics. Last updated July 2019. <https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/diabetic-retinopathy-data-and-statistics>. Accessed July 8, 2020.
9. National Eye Institute. Age-Related Macular Degeneration Data and Statistics. Last updated July 2019. <https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/age-related-macular-degeneration-amd-data-and-statistics>. Accessed July 8, 2020.
10. Centers for Disease Control and Prevention. Fast Facts of Common Eye Disorders. June 9, 2020. <https://www.cdc.gov/vision-health/basics/ced/fastfacts.htm>. Accessed July 2, 2020.
11. Varma R, Tarczy-Hornoch K, Jiang X. Visual impairment in preschool children in the United States: Demographic and geographic variations from 2015 to 2060. *JAMA Ophthalmol.* 2017;135:610-616.
12. National Academies of Sciences, Engineering, and Medicine. 2016. Make Eye Health a Population Health Imperative: Vision for Tomorrow. Washington, DC: The National Academies Press. <https://doi.org/10.17226/23471>.
13. Davidson S and Quinn GE. The impact of pediatric vision disorders in adulthood. *Pediatrics.* 2011;127:334-339.
14. American Optometric Association. School-Age Vision: 6 to 18 Years of Age. <https://www.aoa.org/patients-and-public/good-vision-throughout-life/childrens-vision/school-aged-vision-6-to-18-years-of-age>. Accessed July 17, 2020.
15. American Optometric Association/Health Policy Institute. Issue Brief: One in Four U.S. Students Missing the Equivalent of 135 Days of School Content Each School Year. <https://www.aoa.org/AOA/Documents/Advocacy/HPI/One%20in%20Four%20US%20Students%20Missing%20Equivalent%20of%20135%20Days.pdf>. Accessed July 22, 2020.
16. U.S. Department of Education. A Guide to the Individualized Education Program. July 2000. <https://www2.ed.gov/parents/needs/speced/iepguide/index.html>. Accessed July 22, 2020.
17. American Academy of Ophthalmology. Eye Health Statistics. 2015. <https://www.aoa.org/newsroom/eye-health-statistics>. Accessed July 8, 2020.
18. National Eye Institute. Refractive Errors. Last updated July 11, 2019. <https://www.nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/refractive-errors>. Accessed July 7, 2020.
19. American Optometric Association. Optometric Clinical Practice Guideline: Care of the Patient with Presbyopia. 2011. <https://www.aoa.org/documents/optometrists/CPG-17.pdf>. Accessed July 14, 2020.
20. Chua SYL and Foster PJ. The Economic and Societal Impact of Myopia and High Myopia. In: Ang M and Wong TY, eds. Updates on Myopia. 2020; SpringerOpen.
21. Heiting G. Worker productivity and computer vision syndrome. Updated February 2017. <https://www.allaboutvision.com/cvs/productivity.htm>. Accessed July 6, 2020.

22. American Optometric Association. 21st-Century Optometric Care for the 21st-Century Pandemic. December 10, 2018. <https://www.aoa.org/news/clinical-eye-care/21st-century-optometric-care>. Accessed July 14, 2020.
23. Saydah SH et al. Eye care among US adults at high risk for vision loss in the United States in 2002 and 2017. *JAMA Ophthalmol*. 2020;138:479-489.
24. Centers for Disease Control and Prevention. Vision Loss and Age. June 12, 2020. <https://cdc.gov/visionhealth/risk/age.htm>. Accessed July 2, 2020.
25. American Optometric Association. Evidence-Based Clinical Practice Guideline: Comprehensive Pediatric Eye And Vision Examination. 2017. <https://www.aoa.org/AOA/Documents/Practice%20Management/Clinical%20Guidelines/EBO%20Guidelines/Comprehensive%20Pediatric%20Eye%20and%20Vision%20Exam.pdf>. Accessed September 1, 2020.
26. Health Markets. The 10 Essential Benefits: All You Need to Know. July 10, 2020. <https://www.healthmarkets.com/resources/health-insurance/need-to-know-about-10-essential-health-benefits/>. Accessed September 1, 2020.
27. American Diabetes Association. Microvascular complications and foot care: standards of medical care in diabetes-2020. *Diabetes Care*. 2020;43(Suppl 1):S135-S151.
28. Lee LJ, Yu AP, Cahill KE, et al. Direct and indirect costs among employees with diabetic retinopathy in the United States. *Curr Med Res Opin*. 2008;24(5):1549-1559.
29. American Optometric Association/Health Policy Institute. Most Eye Emergency Department Visits can Be Treated in Optometry Clinics. December 2019. https://www.aoa.org/documents/HPI/HPI%20December_2019.pdf. Accessed July 17, 2020.
30. American Optometric Association/Health Policy Institute. Urgent and Emergency Care by Optometrists Significantly Reduces Risks, Workloads in Emergency Departments During COVID-19 Pandemic. June 26, 2020. <https://www.aoa.org/Documents/COVID-19/Emergency%20Department%20Diversion%20Brief.pdf>. Accessed July 21, 2020.
31. American Optometric Association. Computer Vision Syndrome. <https://www.aoa.org/patients-and-public/caring-for-your-vision/protecting-your-vision/computer-vision-syndrome>. Accessed July 14, 2020.
32. Daum KM, Clore KA, Simms SS, et al. Productivity associated with visual status of computer users. *Optometry*. 2004;75(1):33-47.
33. National Association of Vision Care Plans. Invigorating Interest in the Vision Benefit. Indianapolis, IN: National Association of Vision Care Plans: October 2013.
34. Kent J. 70% of Employers Offer Packaged Health, Dental, Pharmacy Benefits. Private Payers News. <https://healthpayerintelligence.com/news/70-of-employers-offer-packaged-health-dental-pharmacy-benefits>. Accessed July 8, 2020.
35. Berchick ER, Barnett JC, Upton RD. Current Population Reports, P60-267(RV), Health Insurance Coverage in the United States: 2018, U.S. Government Printing Office, Washington, DC, 2019.
36. Chan CH et al. The impact of lack of government-insured routine eye examinations on the incidence of self-reported glaucoma, cataracts, and vision loss. *Invest Ophthalmol Vis Sci*. 2014;55:8544-8549.
37. Jin Y-P et al. Government-insured routine eye examinations and prevalence of nonrefractive vision problems among elderly. *Can J Ophthalmol*. 2013;48:167-172.
38. Kaufman EJ, Mahabadi N, Patel BC. Hollenhorst Plaque. [Updated 2020 Aug 10]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470445/>
39. Health Markets. The 10 Essential Benefits: All You Need to Know. July 10, 2020. <https://www.healthmarkets.com/resources/health-insurance/need-to-know-about-10-essential-health-benefits/>. Accessed September 1, 2020.
40. Lucentis® (ranibizumab injection) [prescribing information]. South San Francisco: Genentech, Inc.; 2018.