

School-Based Vision Care: Lessons Learned from Vision for Baltimore

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Disclosures

- Dr. Collins has the following financial relationships to disclose:
 - Grant funding: Abell Foundation, Arnold Foundation, Knights Templar Eye Foundation, and Robert M. and Diane v.S. Levy Family Foundation
 - Board of Directors: Warby Parker Impact Foundation
 - Medical Advisory Council: Versant Health
- Dr. Neitzel has no financial relationships to disclose

Objectives

- Describe the Vision for Baltimore program
- Discuss vision screening and eye exam findings
- Report results of a 2-year academic impact study
- Discuss program implementation

Vision for Baltimore Overview

- Launched in Fall 2016
- Provides vision screenings, eye exams, and glasses to kids directly in schools
- Serving all Baltimore City Public Schools with PreK – 8th grade students over a 3-year cycle



All Care is Delivered Directly at School

- Screenings are performed by Baltimore City Health Department
- Eye exams are provided by Vision To Learn optometrists
- If glasses are needed, they are dispensed at school
- City Schools does extensive outreach across schools to optimize participation
- Johns Hopkins School Vision Advocates work directly with schools to support the program



Vision for Baltimore Impact to Date



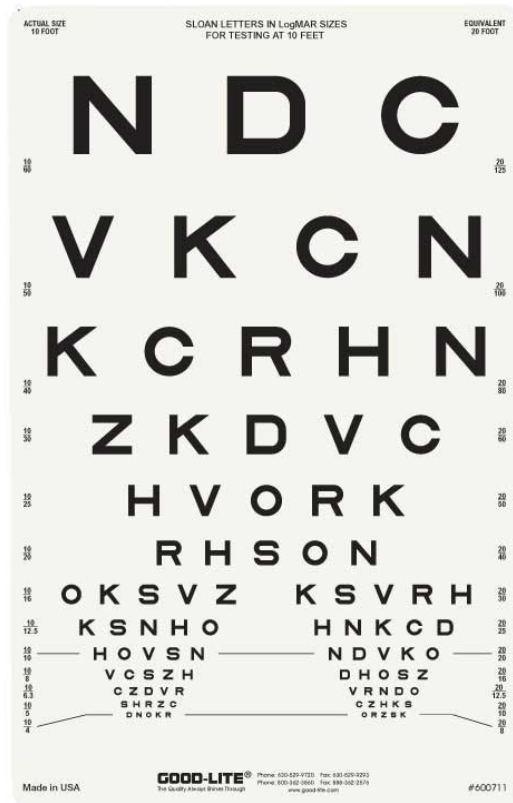
- **65,000+** students screened
- **11,400+** eye exams completed
- **8,220+** students provided glasses

Vision for Baltimore during COVID-19



- COVID-19 infection control precautions
- Screening and exam protocols modified
- Exams provided by appointment on-site at schools
- Increased health education & outreach

How many students in Vision for Baltimore failed a vision screening?



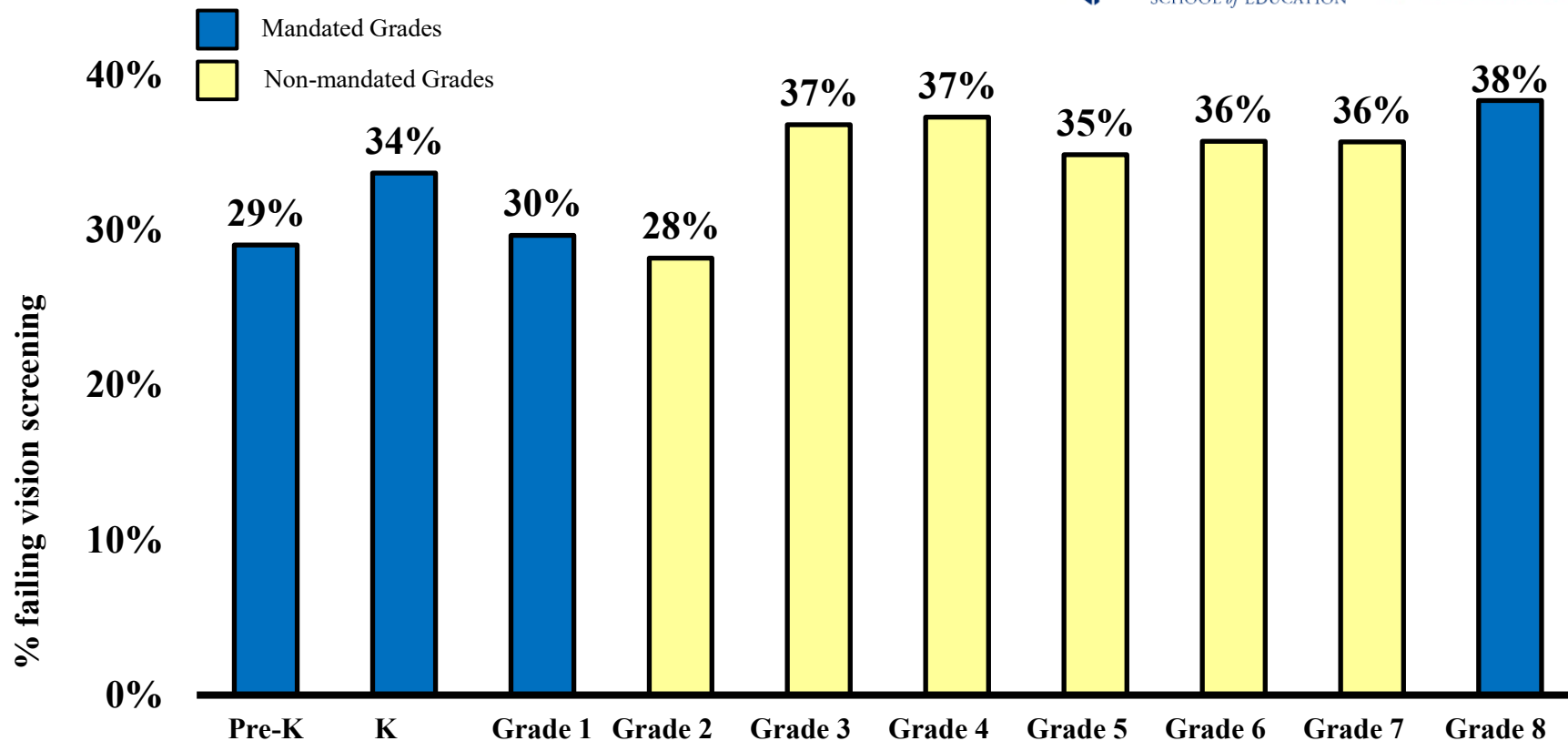
Vision Screening Failure Rate by Grade Levels



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Pre-K = pre-kindergarten; K = kindergarten

Percentage showing proportion of students who failed among those enrolled per grade level

Milante et al, J AAPOS 2021;25:29.

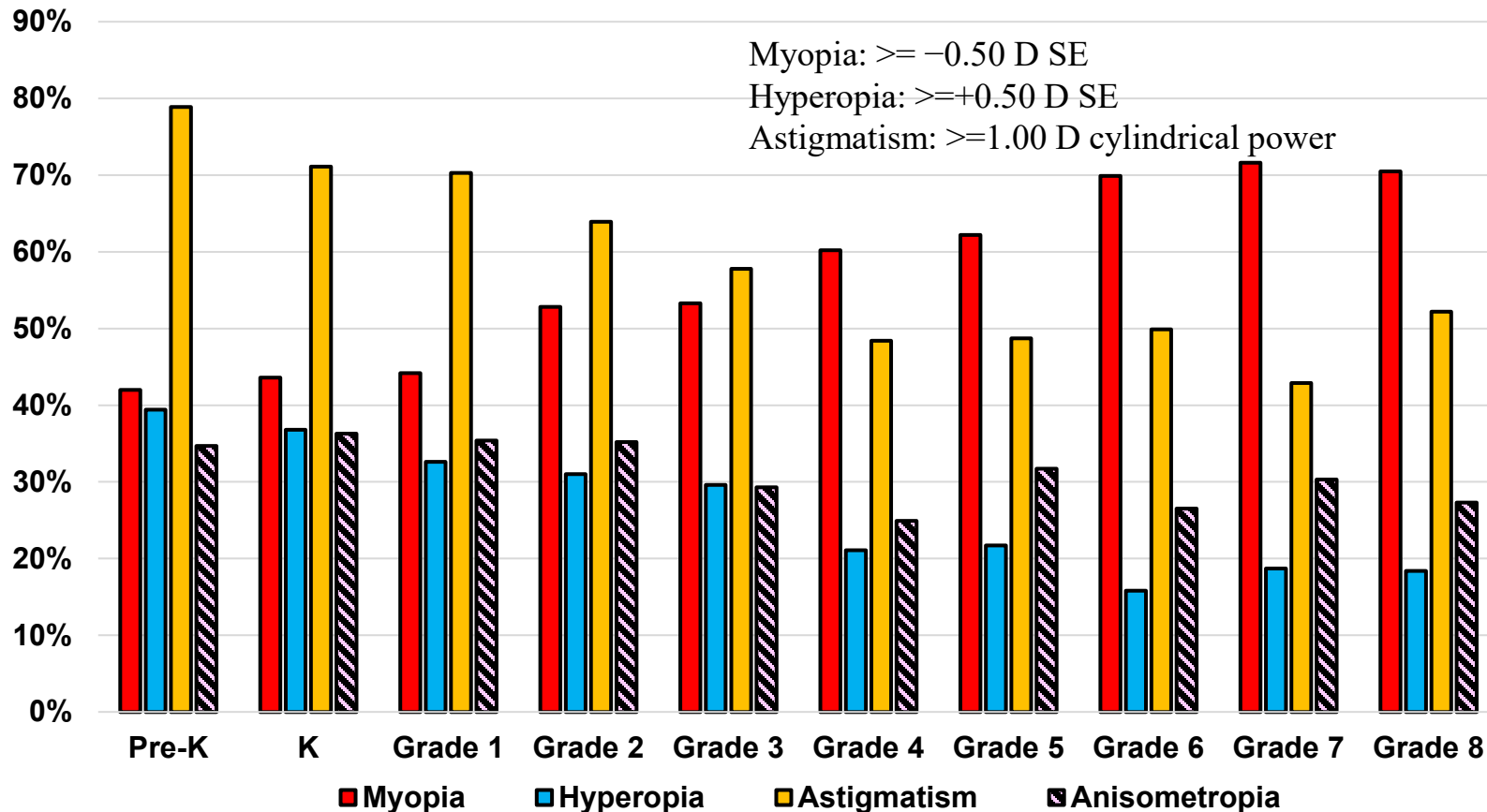


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What were the refractive error findings for students examined through the Vision for Baltimore program?



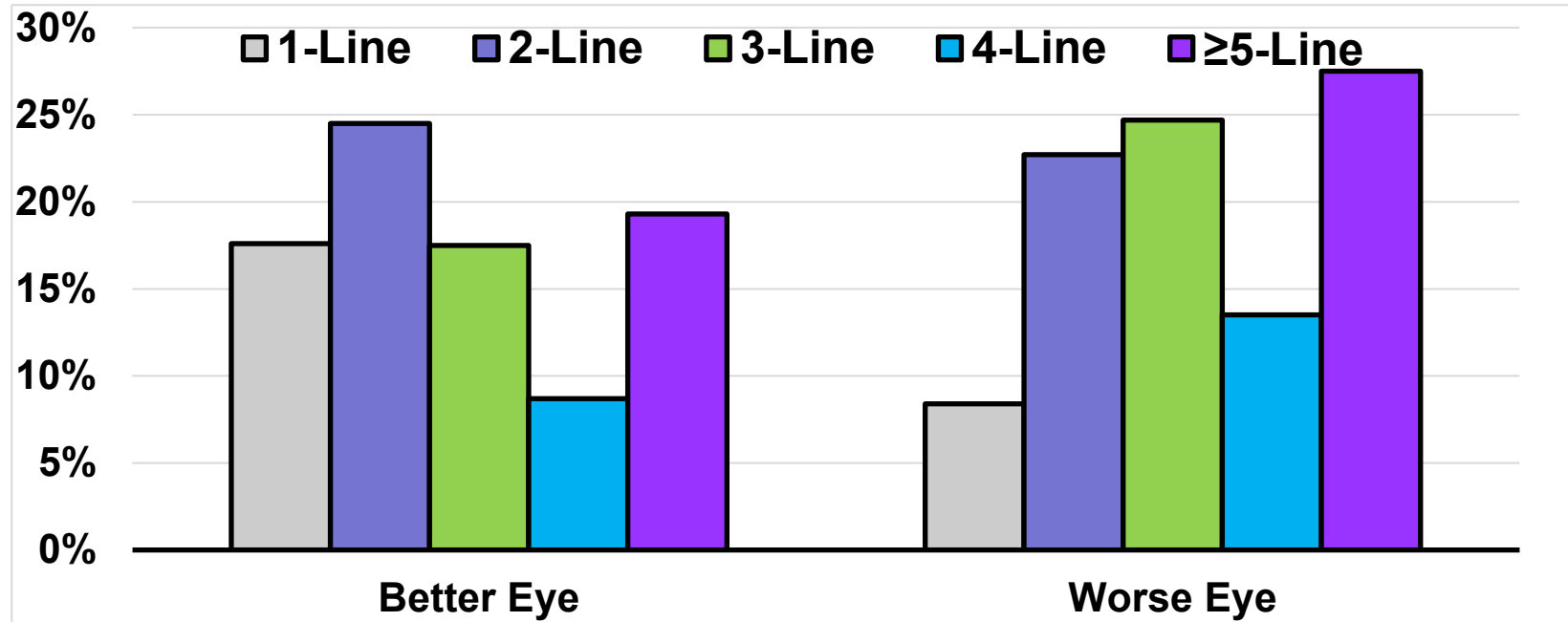
Refractive Error Types by Grade



How much of a difference do glasses provided through Vision for Baltimore make for vision?



Vision Improvement with Eyeglasses



Do glasses make a difference for learning?

- 1. STUDENT LEARNING OUTCOMES
- 2. ATTENDANCE, BEHAVIOR, AND SOCIAL SKILLS
- 3. STUDENT ENGAGEMENT AND PARTICIPATION
- 4. STUDENT SELF-ESTEEM AND CONFIDENCE



Study Design

- The Vision for Baltimore academic study was designed to measure the effect of a school-based vision program on academic achievement for students who received glasses
- Cluster randomized trial comparing test scores and academic progress for students over 3 years

Research

JAMA Ophthalmology | **Original Investigation**

Effect of a Randomized Interventional School-Based Vision Program on Academic Performance of Students in Grades 3 to 7
A Cluster Randomized Clinical Trial

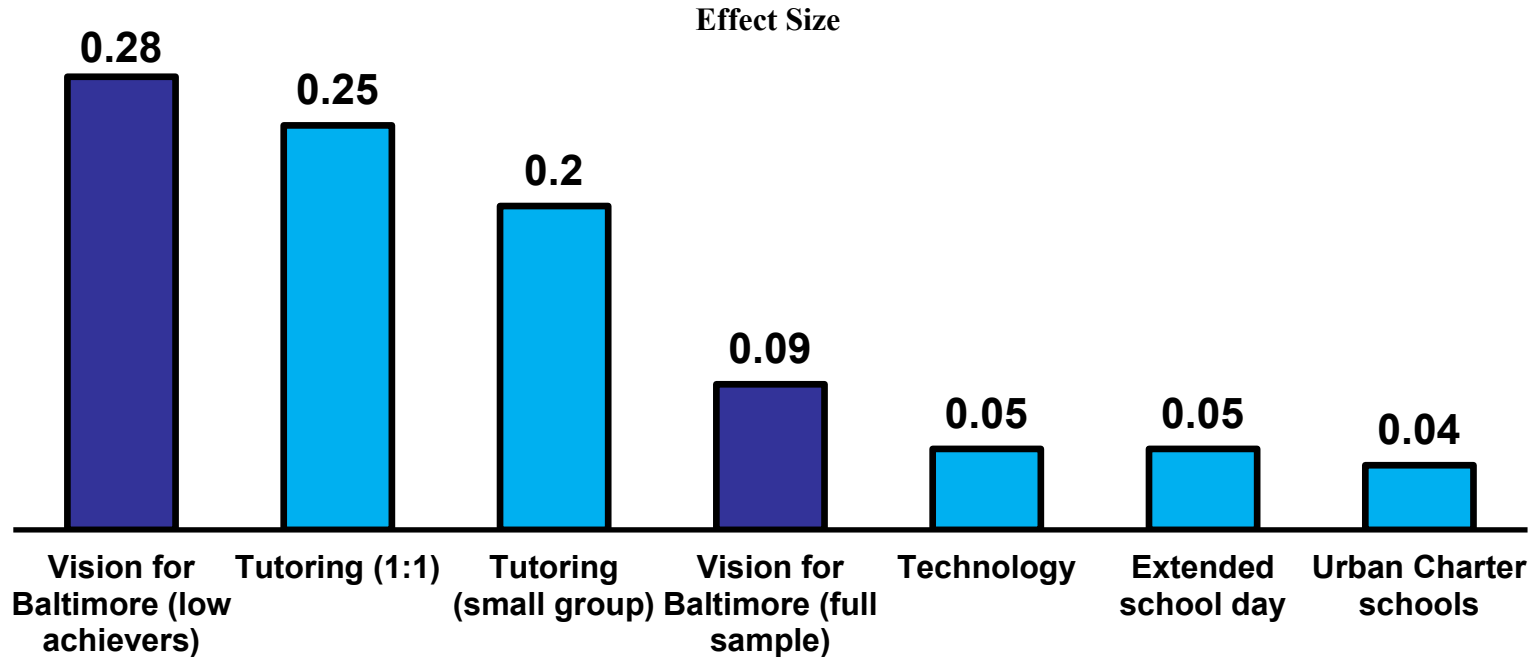
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Megan E. Collins, MD, MPH

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Key Findings

- Study results show positive impact of eyeglasses on academic achievement
 - Improved test scores in i-Ready English Language Arts
Particularly large gains in reading for girls, students in special education, students performing in the lowest quartile at baseline

How does Vision for Baltimore compare to other educational interventions?



Effect size: the difference in score on a particular academic test between the intervention and control groups measured in standard deviation units.

Learning Gain Equivalents

- All students
 - **Two to four months** of additional education
- Students performing in the lowest quartile and students in special education
 - **Four to six months** of additional learning

How do we engage the school community?

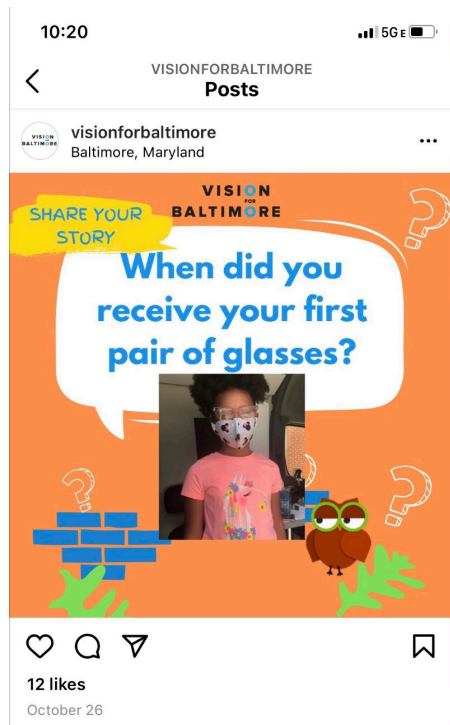


Wearing glasses regularly

- School communication about students who need glasses
- Providing replacements for lost/broken glasses
- Role of parent and teacher reminders



Outreach and Education for Teachers and Parents



PROTECTING YOUR CHILD'S EYES DURING VIRTUAL LEARNING

Megan E. Collins, MD, MPH
Wilmer Eye Institute
Johns Hopkins University

Moderator:
Christine Sy Santos Levy
Vision for Baltimore Coordinator

.bin:
<https://jhjhm.zoom.us/j/99473814472>

Vision
for
Baltimore
celebrates

WORLD
SIGHT
DAY
OCT 8TH
4:00-4:30

FOR MORE INFORMATION,
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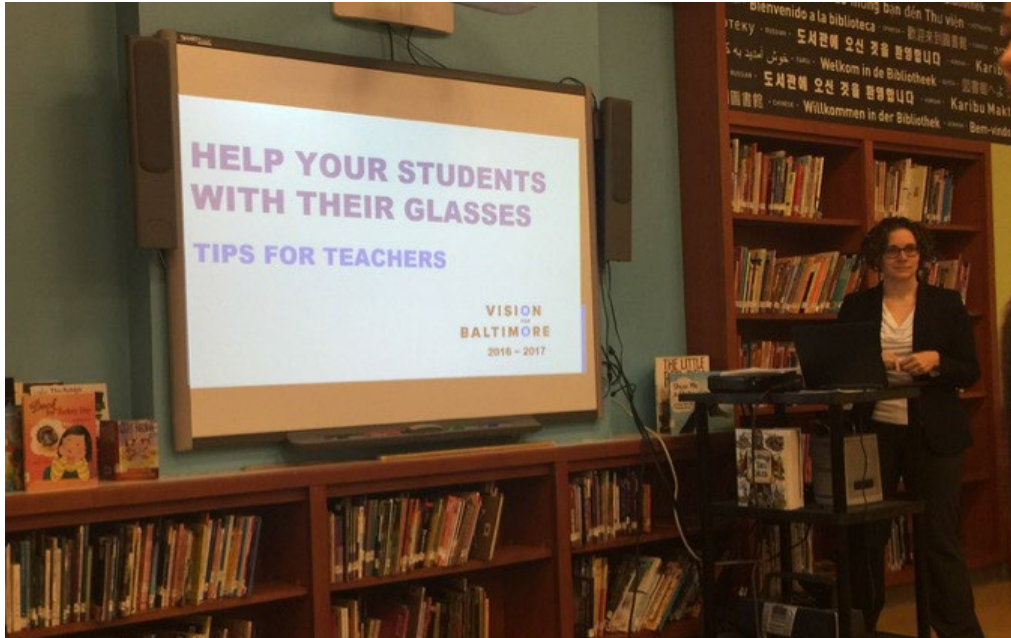
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Looking Ahead

"Vision for Baltimore hits 10,000" contest
Prizes and Gift Baskets
Educational webinars and videos
Helpful tips



Educational Programs for Teachers and Parents



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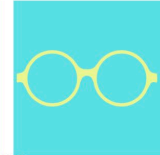
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Educational Programs for Students



What are lessons learned from school-based vision program stakeholders?

We conducted 41 focus groups with parents and teachers in Baltimore and Chicago, both cities with large school-based vision programs

Reasons for Non-Participation

- Lack of program awareness
- Misunderstanding of cost and eligibility
- Negative attitudes about vision care and eyeglasses
- Having an existing eye care provider
- Mistrust

Parent and Teacher Perspectives about School-Based Vision Programs

Strengths

- Convenience (location, time, and cost)
- Comprehensive nature of the program
- Screening/exam experience
- Quality of the eyeglasses
- Replacements provided

Limitations

- Communication
- Organization
- Time lag to receive eyeglasses
- Missed instructional time
- Uncertainty about results when parents not present

Teacher and School Staff Perspectives



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- Teachers incorporated many activities into their classroom routines to support SBVPs, including:
 - Program outreach to parents
 - Promotion of healthy eyeglass wear habits for students
- Teachers assumed roles that may address barriers to student participation in SBVPs identified in our prior research, including:
 - Lack of awareness or misinformation about SBVPs
 - Challenges with returning consent forms

Parent Perspectives about Program Improvements

- Communication
 - Timeline of school-based vision programs
 - Components of the screening and exam processes
- Education
 - Eyeglasses use and maintenance
 - Prescription changes
 - Need for repeated screenings or exams in the future
- Eyeglasses resources
 - Lanyards
 - Eyeglass cleaner

Vision for Baltimore Equity Impact

- **One third** of Baltimore students failed a vision screening
- Vision for Baltimore successfully connected these children with eye exams and eyeglasses
- The Hopkins research study demonstrates how Vision for Baltimore **improves vision and learning** for students in need
- Vision for Baltimore can serve as a model to advance health and educational equity for disadvantaged students in school districts across the United States

Thank you!

Questions?

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