MEMORANDUM February 27, 2015

TO: School Board Members

FROM: Terry B. Grier, Ed.D.
Superintendent of Schools

SUBJECT: **VISION PARTNERSHIP, 2013–2014**

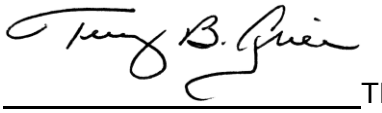
CONTACT: Carla Stevens, 713-556-6700

The Vision Partnership is an alliance between the Houston Independent School District (HISD) and One Sight Vision Partnership that began in 2009 to address the vision and vision-related health needs of students who cannot afford eye care services. Campus-based vision screenings are offered to district students at all grade levels at no cost. In addition, through the Vision Partnership follow-up evaluations, consultations, corrective eyewear, and fittings for corrective eyewear are provided to students at no cost during special events that are held throughout the school year at multiple clinics in non-academic community locations. This may enable students to fully engage in the academic opportunities the district offers. The goal of the Vision Partnership is to enhance student achievement by ensuring that the basic vision and vision-related health needs of HISD students are met.

Key findings are as follows:

- Campus-based vision screenings were provided to 89,650 students in 2012–2013 and 92,894 students in 2013–2014, an increase of 3.6 percent. A total of 12.3 percent and 11.9 percent, respectively, in 2012–2013 and 2013–2014 needed vision correction.
- From the 2009–2010 school year to the 2013–2014 school year, an estimated 17,077 HISD students have received services through the Vision Partnership program, including 2,999 in 2013–2014.
- A total of 117 or 41.8 percent of HISD's 280 schools had students to participate in vision clinics provided through the Vision Partnership program, 17 (12.7 percent) fewer schools than the 134 schools that participated in 2012–2013.
- Vision-screened students who received vision correction met the passing standards in reading at higher rates than did students districtwide at grades 3, 6, 7 and 8 in 2013–2014.
- Vision Partnership participants who received vision correction met the passing standards at higher rates than did students districtwide in reading at grades 3, 5, and 6 in 2013–2014.
- Vision-screened students and Vision Partnership participants who received vision correction met the passing standards at higher rates than did students districtwide in mathematics at grades 6 and 7 and in writing at grade 7 in 2013–2014.

Should you have any further questions, please contact my office or Carla Stevens in Research and Accountability at 713-556-6700.



TBG

Attachment

cc: Superintendent's Direct Reports
Chief School Officers
Gwendolyn Johnson
Susan Kaler

HOUSTON INDEPENDENT SCHOOL DISTRICT

RESEARCH

Educational Program Report

VISION PARTNERSHIP
2013 – 2014

HISD | Research and Accountability

ANALYZING DATA, MEASURING PERFORMANCE.

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VISION PARTNERSHIP
2013–2014

EXECUTIVE SUMMARY

Program Description

The Vision Partnership is part of an alliance between the Houston Department of Health and Human Services (HDHHS) and the One Sight Foundation that began in 2007 to address the vision and vision-related health needs of students who cannot afford eye care services. Through a partnership that began in 2009 between HDHHS and the Houston Independent School District (HISD), vision screenings, consultations, and fittings for corrective eyewear are provided at no cost to students or their families during special events that are held throughout the school year at multiple clinics in non-academic community locations. Services are provided through HISD, OneSight and See to Succeed (known as Kids Vision Partnership), and various community organizations and are led by the Houston Department of Health and Human Services and supported by the Houston Health Foundation.

The goal of the Vision Partnership is to enhance student achievement by ensuring that the basic vision and vision-related health needs of HISD students are met. Vision health may enable students to fully engage in the academic opportunities the district offers. The Vision Partnership program aligns with the latter part of the district's Strategic Direction Core Initiative 3, "Rigorous Instructional Standards and Supports." This report provides information on the district's initial campus-based vision screenings and the participants' academic performance, as well as three aspects of the Vision Partnership program: student participation, barriers to program participation, and the academic performance of students served by the program. Due to limitations of the student-level participation and service outcome data, this report is strictly descriptive and is not intended to be used to make causal inferences of the program's effectiveness at improving student performance in academic achievement.

Highlights

- School-level data for 223 schools in 2012–2013 and in 2013–2014 revealed that campus-based vision screenings were provided to 89,650 students in 2012–2013 and to 92,894 students in 2013–2014, an increase of 3.6 percent in students. Comparable annual reports for 2012–2013 and 2013–2014 indicated that 12.3 percent and 11.9 percent, respectively, of the screened students needed vision correction.

- Of the students failing the initial vision screening, 92.1 percent and 96.5 percent of the students were referred to a specialist.

- Based on school-level data, of the 10,178 and 10,686 students who were screened and referred to a vision specialist for evaluation and treatment in 2012–2013 and 2013–2014, 66.1 percent and 63.0 percent, respectively, were treated.

- A total of 2,999 HISD students were identified as recipients of Vision Partnership services during the 2013–2014 school year. From the 2009–2010 school year to the 2013–2014 school year, an estimated 17,077 HISD students have received services through the program, including a decrease of 32.4 percent from the 4,437 participants in 2012–2013 to 2,999 in 2013–2014.

- In 2013–2014, 117 (41.8 percent) of HISD's 280 schools had students to participate in the Vision Partnership program, 17 fewer schools than the 134 schools that participated in 2012–2013.
- The population of Vision Partnership participants comprised notably larger proportions of female, Hispanic/Latino, economically disadvantaged, at-risk, and LEP students than the general population of HISD students.
- Obstacles to vision correction for students included nurses' lack of access to current Chancery vision screening data, and students returning parental/guardian consent forms.
- In 2013–2014, vision-screened students at grades 3, 6, 7 and 8 and Vision Partnership participants at grades 3, 5, and 6 met the passing standards in reading at higher rates than did students districtwide.
- The screened students and Vision Partnership participants met the mathematics passing standards at higher rates than did students districtwide at grades 6 and 7 in 2013–2014.
- The screened students and Vision Partnership participants met the writing passing standard at a higher rate than did students districtwide at grade 7 in 2013–2014.
- Overall, the greatest challenge to program participation in 2013–2014 involved the ongoing identification of and follow-up with students who may have needed vision correction to insure/ensure they received the appropriate care and corrective eyewear in a timely manner to support their vision and educational needs.

Recommendations

- Collaborate with Chancery personnel to build avenues through which Chancery screens may provide isolated, current year datasets to support campus nurses in maintaining current vision care records and tracking changes in the status of students' vision-related needs. Collaborate with IBM Cognos personnel to model datasets consistent with the needs of nurses in (1) providing students' vision care services and (2) reporting valid service and outcome data related to students' vision care.
- Develop strategies to ensure the collection, reporting and consistency of data for all program participants and activities, particularly documentation of valid student identification numbers, data entry into Chancery for all vision-related activities including delivery and receipt of corrective eyewear or reasons for non-delivery. Provide checks within datasets and cross-checks between datasets for improved data quality, which is necessary for rigorous analyses of student outcomes.
- It is recommended that nurses with greater case-management skills and comprehensive vision care service information collaborate with new nurses and other nurses who may benefit from the interaction, given the diverse case-management capacities and range of knowledge about available vision care services that exists among nurses.
- Improve communication with parents regarding vision care services for students and fulfilling parental roles necessary for student participation in the related services.
- Further maximize the benefits of the program for students by exploring strategies to ensure that students who are motivated are able to receive corrective eyewear and fitting and repair (if needed), beginning with the first semester of the school year.
- Vision Clinic screening results and all subsequent services should be entered into the Chancery database by school nurses as soon as possible following the date of the clinic visit. This will (1) improve the capacity of nurses and program administrators to utilize up-to-date student records to

monitor the extent to which students' vision needs are resolved and (2) improve the alignment between nurses' school-level reports to the state and the student-level Chancery reports.

- To maximize the education-related benefits of vision correction for students, HISD program administrators and service providers should explore strategies to expedite students' vision correction and ensure expedient eyewear maintenance is provided.
- It is recommended that program providers, campus nurses, campus educators, and students work together to develop systems to protect, maintain the upkeep of, and preserve students' new corrective eyewear.

Administrative Response

It is important that we continue district strategies such as the One Sight Vision Partnership, to support connectedness with community resources that provide a cost effective and efficient way to remove vision deficits as a barrier to learning and remove cost and transportation as barriers to accessing these services. Vision screening in HISD, as mandated by the Texas Special Senses and Communications Disorders Act must continually engage with partners such as the Houston Department of Health and Human Services, Eye Care for Kids, Christian Community Services Center and the University of Houston School of Optometry to connect students with resources for care, regardless of socio economic status.

Having less-than optimal vision can contribute to students being fatigued and avoiding tasks that require good vision. In addition, behaviors such as turning the head to see, covering one eye, losing place while reading, and avoidance of reading tasks can be demoralizing and may impact school attendance, particularly as students get older and vision problems increase.

While limitations of the report are noted, recommendations reflect reasonable expectations that can improve future program outcomes and data analysis. It is imperative that we continue to strive to achieve quality data necessary to inform program delivery and effectively evaluate student outcomes. Replication of such an important program supported by external funding sources depends on quality data and students, such as those identified in this report, depend on us to continue to contribute to improving the quality of their lives. Health and Medical Services appreciates the support of Department of Research and Accountability and we look forward to working collaboratively with the Houston Department of Health and Human Services to implement steps for improved data collection and program management.

Introduction

A critical component of the foundation for academic achievement is healthy vision. Impaired vision reduces one's abilities to read, concentrate, and process information. Poor vision may impede academic success and lead to academic frustration and behavioral problems. The Vision Partnership is an alliance between the Houston Department of Health and Human Services (HDHHS) and the One Sight Foundation that began in 2007 to address the vision and vision-related health needs of students who need but cannot afford eye care services. Vision screenings, consultations, and fittings for corrective eyewear are provided at no cost to students or their families during special examinations that are held throughout the school year at multiple clinics in non-academic community locations. Since 2009, services have been provided through HISD, OneSight and See to Succeed (known as Kids Vision Partnership), and various community organizations - led by the HDHHS and supported by the Houston Health Foundation. The goal of the Vision Partnership is to enhance student achievement by ensuring that the basic vision and vision-related health needs of HISD's students are met. This enables students to fully engage in the academic opportunities the district offers.

Starting at the beginning of each school year, students enrolled in HISD schools are screened by HISD nurses for vision impairments. When the need for vision correction seems apparent, the district's nurses and health care professionals make student referrals for specialists' examinations, which are followed by professional treatment when needed. The Vision Partnership is one of the programs that provides an avenue for students who are identified as needing vision correction to receive eye care and corrective eyewear free of charge. Beginning with the 2011–2012 school year, HISD has paid the cost of student transportation to the clinic sites rather than requiring schools to do so out of their campus budgets, as previously required. Student participants have received comprehensive vision examinations that have included tests for disease, acuity, color blindness, depth perception, and muscle balance.

The Vision Partnership program aligns with the latter part of the district's Strategic Direction Core Initiative 3, "Rigorous Instructional Standards and Supports." The budget for the 2013–2014 program was $100,000 to provide transportation to Vision Partnership Clinics and corrective eyewear for eligible students. The purpose of this report is to provide information on student participation in the program, as well as student participation in the campus-based vision screenings and student involvement with other sources of vision care or correction. Also, barriers to students receiving vision correction and the academic performance of students who received corrective eyewear after they received campus-based vision screenings or were served by the Vision Partnership program are provided in this report. Due to limitations of the data, this report is strictly descriptive and is not intended to be used to make causal inferences of the program's effectiveness at improving student achievement.

Methods

Data Collection and Analysis

- Multiple sources of data were used in the evaluation of this program. Information on the participation and results of students in 2012–2013 and 2013–2014 campus-based vision screenings were obtained from summary datasheets provided by the HISD Manager of Medical and Health Services based on campus nurse submissions for the Texas Department of State Health Services Child Health Reporting System report (campus-level data). Data regarding students' vision-related services and solutions were obtained through the Chancery Student Information System (Chancery SIS) Vision Screening database (student-level) and the 2013–

2014 Nurse Survey. The primary source of student data for One Sight and See to Succeed (Vision Partnership) clinic utilization was the HDHHS.

- The HDHHS submitted more than 11,000 duplicated records for Vision Partnership participants from various districts and schools. Following the removal of duplicated records and records for non-HISD students and students with incorrect identification numbers, there were records for 2,999 HISD students who participated in the program during the 2013–2014 school year. The actual number of HISD Vision Partnership participants could not be determined.

- Demographic and academic outcome data were retrieved through the district's Chancery, Public Education Information Management System (PEIMS), and State of Texas Assessments of Academic Readiness (STAAR) databases. School levels were obtained from the HISD District and School Profiles 2013–2014.

- The percentages of participating students who met the "satisfactory" performance standard in reading at the same grade levels in 2013–2014 were assessed. Where available, results are presented for grades 3–8 in 2013–2014. STAAR results for grade 8 math and STAAR End of Course 2013–2014 results for grades 8–10 were available for fewer than five students who participated in the program. In this analysis of students' academic performance, the performance of the districtwide student population is used merely as a context to consider the performance of program participants. Districtwide results were obtained from the district's 2013–2014 STAAR Grades 3–8 Results: Phase-In Standards report.

- Student performance indicators for all identified students who participated in the initial campus-based vision screenings and received vision correction through any source were analyzed in addition to the performance of a subset of screened students who participated in the Vision Partnership and received vision correction through unidentified sources. Students' 2013–2014 STAAR results were assessed for screened students (n=912), and for Vision Partnership participants (n=319) by grade level for grades 3–6.

- A series of interviews with the HISD Manager of Medical and Health Services and the 2013–2014 Nurse Survey administered to campus-based nurses from May 14, 2014 through May 22, 2014 yielded insights regarding program involvement and impediments to program participation. A total of 120 campus nurses (or 45.5 percent) out of the 264 nurses (including 262 listed on the School Nurse Roster for 2013–2014 plus two nurses who were hired as of May 2014) responded to the survey. Of the 120 respondents, 73 (60.8 percent) were on campuses that participated in the Vision Partnership program. A total of 67 of the 73 nurses (or 91.8 percent) responded to Nurse Survey items about the Vision Partnership program. Due to rounding, percentages of survey responses reported may not equal 100.

Data Limitations

- Due to inconsistencies in data retrieved from different sources, there are limitations to the data. See **Appendix A** (pages 36–38) for detailed limitations and a full explanation.

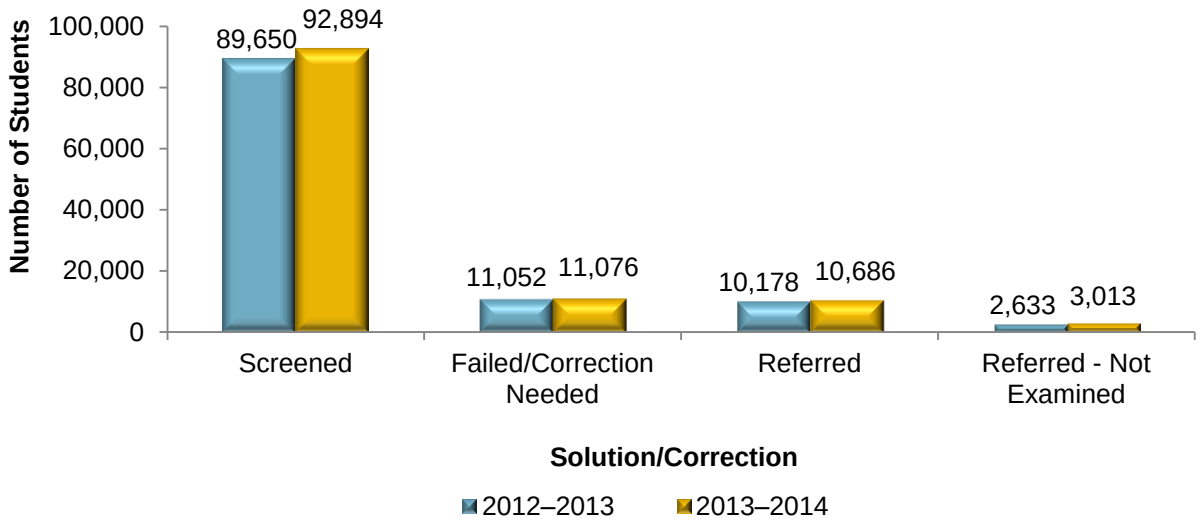
Results

How many students participated in the HISD campus-based vision screenings in 2012–2013 and 2013–2014?

- Based on school-level data reported to the Texas Department of State Health Services (TDSHS) from campus nurses for 223 schools in 2012–2013 and 223 schools in 2013–2014, campus-based initial vision screenings were provided to 89,650 students in 2012–2013 and to 92,894 students in 2013–2014, an increase of 3.6 percent (**Figure 1**).

- Comparable annual reports for 2012–2013 and 2013–2014 indicated that 12.3 percent and 11.9 percent of the screened students failed and needed vision correction in the respective years. Of the students failing the initial vision screening, 92.1 percent and 96.5 percent of the students were referred to a specialist, but 25.9 percent and 28.2 percent of the referred students were not examined by a specialist in 2012–2013 and 2013–2014, respectively.

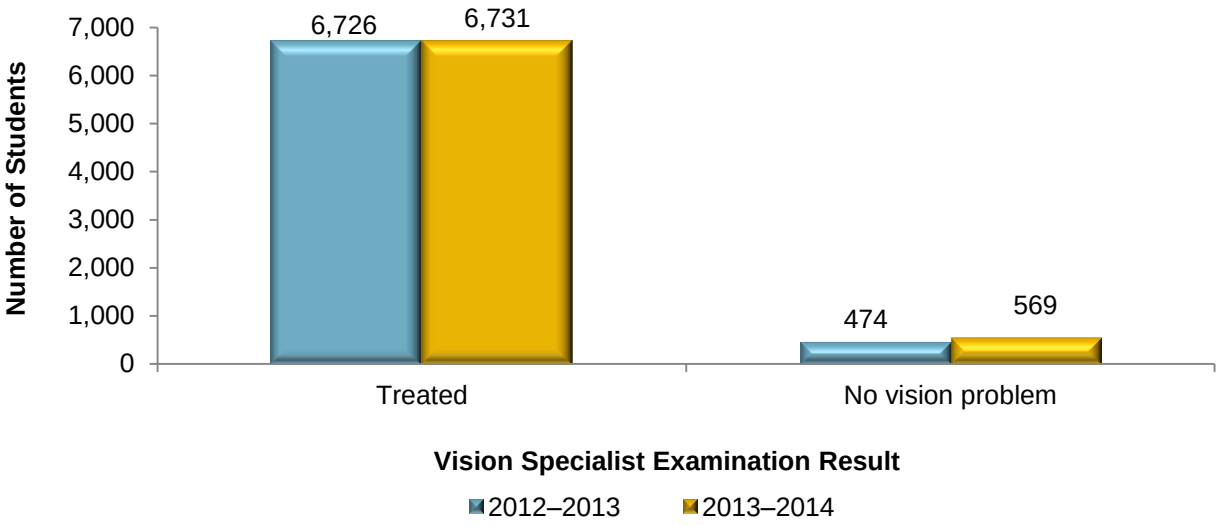
Figure 1. Number of students screened during campus-based vision screenings and the results of the screenings as reported to TDSHS, 2012–2013 and 2013–2014



- **Figure 2** reveals that of the 10,178 and 10,686 students who were referred to a vision specialist for evaluation and treatment in 2012–2013 and 2013–2014, respectively, 66.1 percent and 63.0 percent were treated in 2012–2013 and 2013–2014, respectively. The results reported to TDSHS are comparable across the two years and indicate that at least one-third of the students who were identified as needing vision care did not receive it following the initial screening.

- In addition, Figure 2 shows that 4.7 percent of the examined students in 2012–2013 and 5.3 percent of them in 2013–2014 were examined by a vision specialist and were found to have no vision problem. This bodes well for the accuracy of campus-based screenings in determining students' need for vision care by a specialist.

Figure 2. Number of students screened during campus-based vision screenings and the result of the screening as reported to TDSHS, 2012–2013 and 2013–2014



- **Figure 3** reveals that of the 7,454 and 2,038 students who failed the initial screening in 2012–2013 and 2013–2014, respectively, 3,028 or 40.6 percent and 1,001 or 49.1 percent of the students received eye glasses or contact lenses in 2012–2013 and 2013–2014, respectively.

- Another 2.4 percent in 2012–2013 and 4.4 percent in 2013–2014 did not need vision correction. Again, the large differences from 2012–2013 to 2013–2014 may be artificial and result from missing data or inconsistencies in data entry by campus nurses from one year to the next.

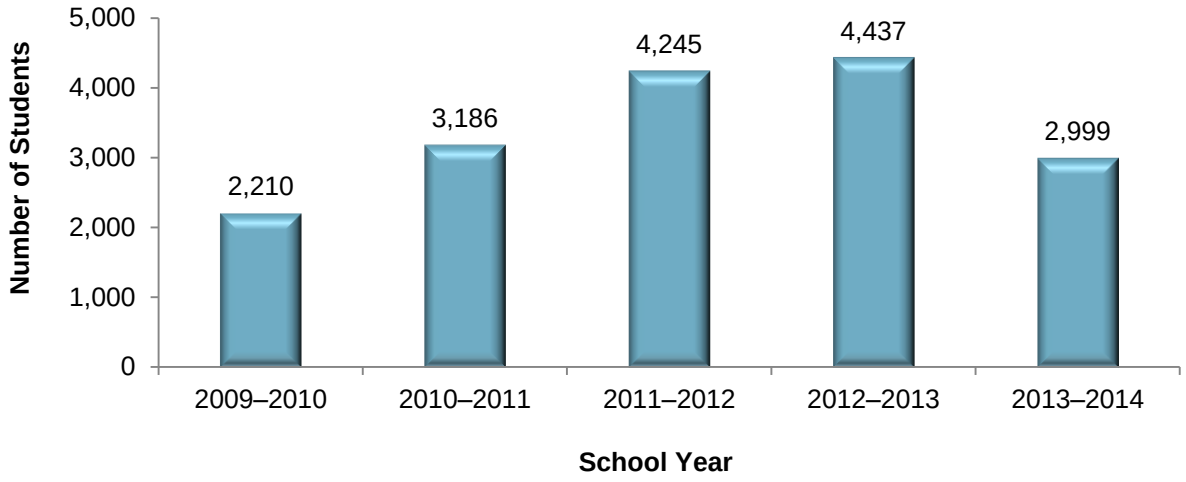
Figure 3. Chancery results for vision-related solutions for students screened during campus-based vision screenings, 2012–2013 and 2013–2014

Note: The total number of treated students equals the total of students across solution/correction types.

How many students and schools participated in a Vision Partnership Clinic?

- During the five years of program implementation from 2009–2010 to 2013–2014, Vision Partnership Clinics have provided screenings and/or treatments to at least 17,077 HISD students. Based on available data, program participation increased 35.7 percent from 2,210 in 2009–2010 to 2,999 in 2013–2014, which included a decrease of 32.4 percent from the 4,437 participants in 2012–2013 to 2,999 in 2013–2014 (**Figure 4**).

Figure 4. Vision Partnership participants, 2009–2010 to 2013–2014

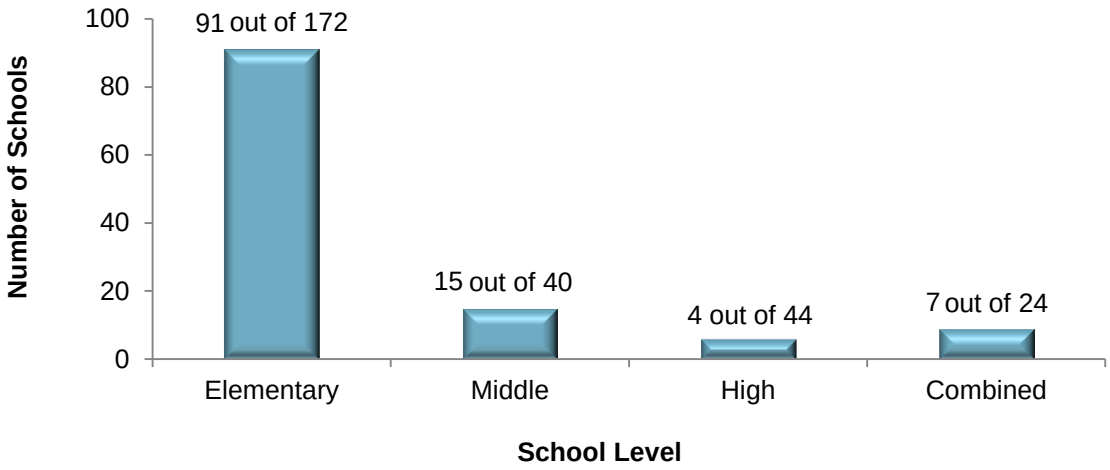


Note: Participants refers to students who were screened at a Vision Partnership Clinic and who may or may not have received vision correcting eyewear through a Vision Partnership provider.

- **Figure 5** shows the academic levels of the 117 identified HISD schools with students who participated in at least one 2013–2014 Vision Partnership Clinic. In 2013–2014, a total of 117 (41.8 percent) of HISD's 280 schools had students to participate in the Vision Partnership program. This was 17 fewer schools than the 134 schools that participated in 2012–2013 (Research and Accountability, June 2014).

- The number of participating schools decreased as the academic level increased. The highest level of participation was for elementary schools followed by middle and combined level schools. Of the 172 elementary schools in the district in 2013–2014, 52.9 percent participated in the program. In addition, 37.5 percent of HISD's 40 middle schools, 9.1 percent of the district's 44 high schools, and 29.2 percent of its 24 combined schools participated in the program.

Figure 5. Campus participation in Vision Partnership Clinics and percent of participating HISD schools by school level, 2013–2014



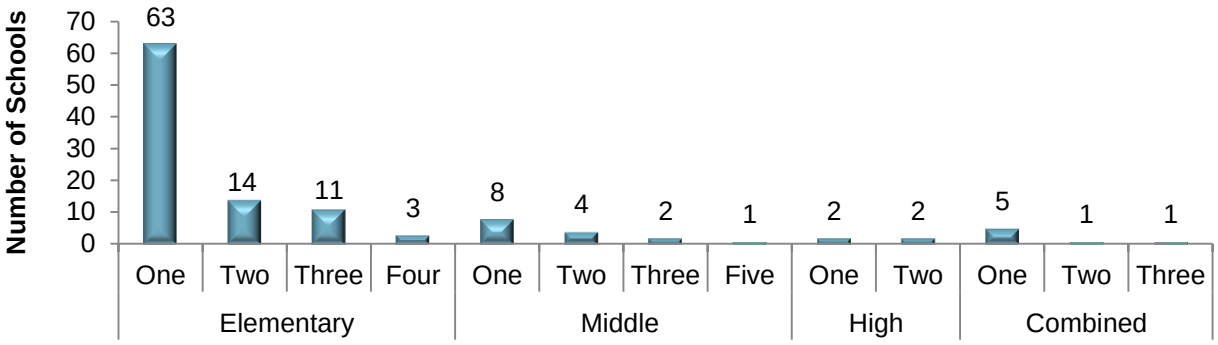
Source: HDHHS 2013–2014 Vision Partnership Clinic database; HISD School Information 2013–2014 database.

- HISD students from the 117 schools participated in a total of 339 visits to Vision Partnership Clinics in 2013–2014, including one to five visits per school. This constituted an 85.2 percent increase in clinic visits when compared to the 183 visits to Vision Partnership Clinics in 2012–2013, which also included one to five visits per school (Research and Accountability, June 2014).

- The number of clinic visits conducted by schools is shown by school level in **Figure 6**. Most of the 117 schools participated in one clinic (n=78 or 66.7 percent), with elementary schools comprising more than 80.8 percent of those schools.

- A total of 21 schools (17.9 percent) participated in two clinics and 66.7 percent of those schools were also elementary schools. Fourteen schools (12.0 percent) participated in three clinics, with elementary schools comprising nearly 78.6 percent of these schools. Three elementary campuses (2.6 percent) participated in four clinic visits and one middle school (0.9 percent) participated in five clinics. (**Table 1**, page 39–40.)

Figure 6. Number of campuses by the number of Vision Partnership Clinic visits and school level, 2013–2014

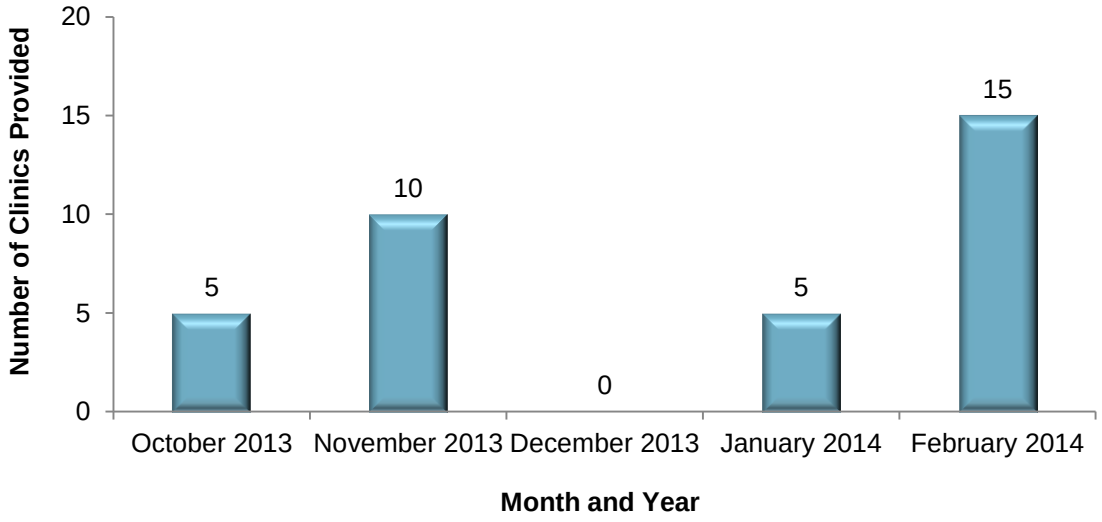


Source: HDHHS 2013–2014 Vision Partnership Clinic database; HISD School Information 2013–2014 database.

- Opportunities for students to attend a Vision Partnership Clinic were provided each month with the exception of December, between October 2013 and February 2014 of the 2013–2014 school year. **Figure 7** shows the months for the 35 Vision Partnership Clinic dates on which students were invited to participate to receive eye care and corrective eyewear.

- Fifteen clinic dates were provided in the fall semester and 20 clinic dates in the spring semester. This represented a 34.6 percent increase over the 26 clinic dates (11 dates in the fall and 15 dates in the spring) provided during 2012–2013 school year, with four additional clinic dates in the fall 2013 and five additional clinic dates in the spring 2014, (Department of Research and Accountability, June 2014). Data were not sufficient to provide accurate student counts by month or by clinic date.

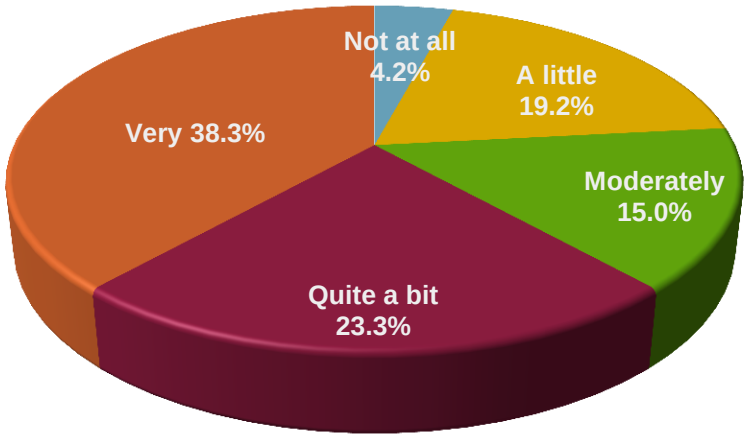
Figure 7. Number of Vision Partnership clinics provided by month and year, 2013–2014



- The 2013–2014 Nurse Survey data for 120 school nurses in 2013–2014 revealed nurses' familiarity with the Vision Partnership program varied a great deal and the degrees of familiarity differed notably between nurses on campuses where the program was implemented and nurses on campuses where the program was not implemented (**Figure 8 and Figure 9**, page 14).

- Figure 8 shows 61.6 percent of respondents reported they were "quite a bit" or "very" familiar with the program, 15.0 percent reported "moderately", and 23.4 reported "a little" or "not at all" familiar with Vision Partnership. Of them, 73 (60.8 percent) stated their campuses participated and 47 (39.2 percent) stated their campuses did not participate in the program this year. (Figure 9 reveals more information regarding this.)

Figure 8. 2013–2014 Nurse Survey responses to "How familiar are you with the Vision Partnership program?"

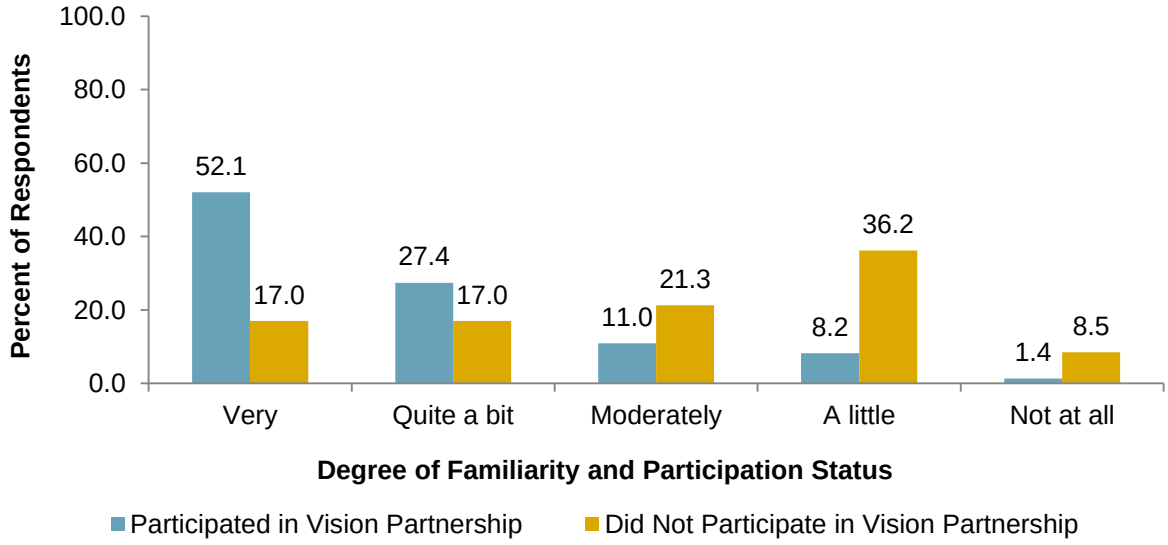


- The 2013–2014 Nurse Survey responses indicated that some nurses did not know what services were provided for students' vision care or did not know much about students' opportunities for vision care. Figure 9 shows that more nurses on campuses that participated in the program had greater familiarity with the program than the nurses on campuses that did not participate in the program.

- Of the 73 nurses on participating campuses, 58 or 79.5 percent reported they were "very" or "quite a bit" familiar with the program and eight nurses or 11.0 percent reported they were "moderately" familiar with the program, and seven nurses or 9.6 percent said they were "a little" or "not at all" familiar with the Vision Partnership program.

- On the other hand, a different trend was found among the 47 nurses on campuses that did not participate in the program. A total of 21 or 44.7 percent of the nurses said they were "a little" or "not at all" familiar with the program, while 10 nurses or 21.3 percent reported being "moderately" familiar and 16 nurses or 34 percent indicated they were "quite a bit" or "very" familiar with the program.

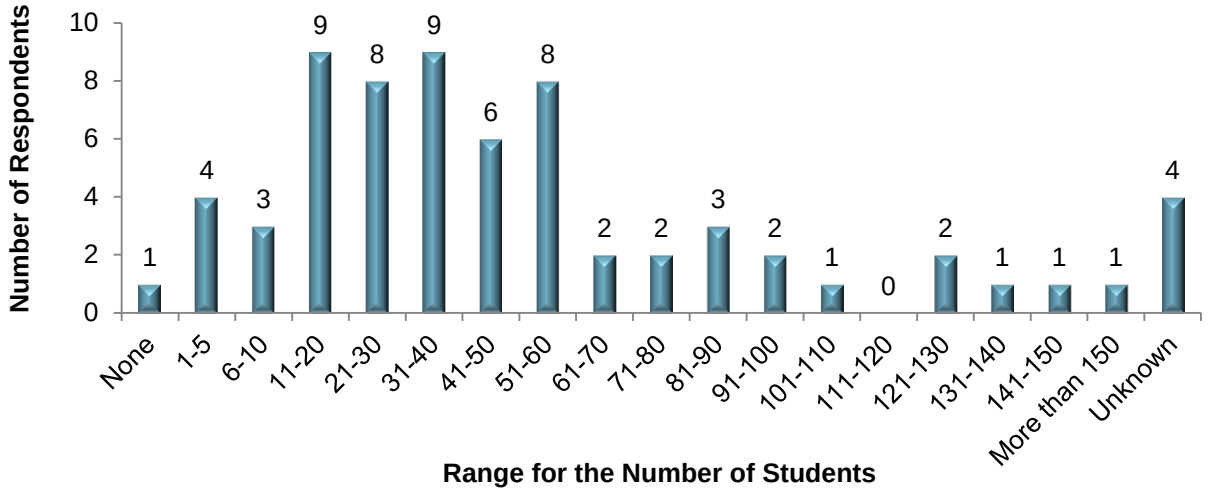
Figure 9. Status of campus participation in Vision Partnership by nurses' degree of familiarity with the program, 2013–2014



- When asked how many students were given a voucher to participate in a Vision Partnership Clinic, 67 (or 91.8 percent) of the 73 Nurse Survey respondents whose campuses participated in the program indicated they referred as few as “one to five” students and as many as “more than 150” students.

- **Figure 10** presents the number of respondents by the range of the number of students that were provided a voucher for Vision Partnership Clinic participation during the 2013–2014 school year. The largest groups of respondents (to total 40 nurses or 59.7 percent) reported providing between 11 and 60 students with vouchers. Eight of the 67 nurses (11.9 percent) stated vouchers were provided for 10 or fewer students and six nurses (9.0 percent) reported vouchers were provided to more than 100 students on their campuses. Four nurses (6.0 percent) were unable to state the number of vouchers provided for students.

Figure 10. Nurse Survey respondents’ reports for the range for the number of vouchers provided to students for Vision Partnership Clinic participation, 2013–2014



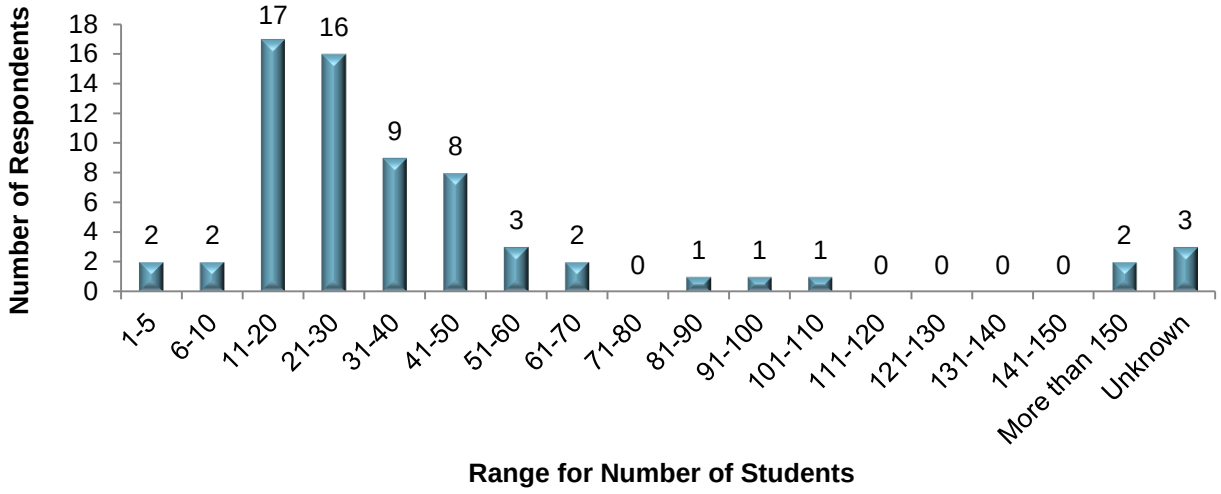
- A total of 67 (or 91.8 percent) of the 2013–2014 Nurse Survey 73 respondents whose campuses participated in the program reported a range for the number of students who were examined in a Vision Partnership Clinic in 2013–2014. **Figure 11** presents the number of respondents by the range of the number of students that were examined at a Vision Partnership Clinic during the 2013–2014 school year.

- The largest groups of respondents comprised 33 out of 67 nurses (49.3 percent) who reported between 11 and 30 students were examined at Vision Partnership Clinics, while 17 nurses (25.4 percent) reported between 31 and 50 students were examined.

- Five nurses (7.5 percent) indicated between 51 and 70 students were examined, three nurses (4.5 percent) stated that between 81 and 110 students were examined, and two nurses (3.0 percent) reported examinations at Vision Partnership Clinics were provided for more than 150 of their students. Four nurses (6.0 percent) stated 10 or fewer of their students were examined at Vision Partnership Clinics.

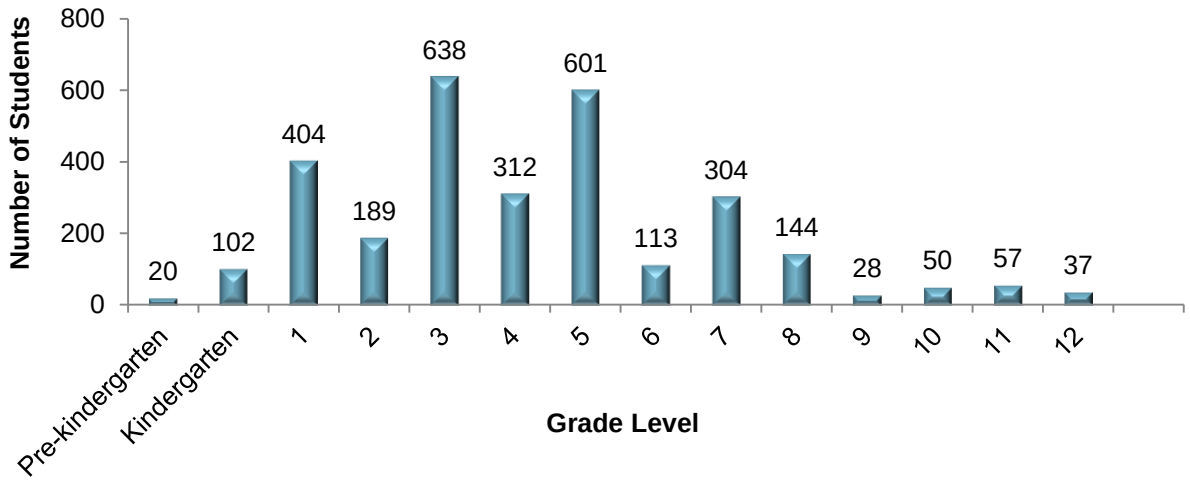
- The nurses' estimates for students' participation in the program fell short of the numbers provided through the other data sources used for this report.

Figure 11. Number of Nurse Survey respondents by the range for the number of students examined at Vision Partnership Clinics, 2013–2014



- Based on HISD students identified by the HDHHS as Vision Partnership participants, **Figure 12** shows the number of identified students who participated in a Vision Partnership Clinic in 2013–2014 by grade level (n=2,999). The largest groups were 1st, 3rd, and 5th grade students. The smallest groups were in pre-kindergarten, kindergarten, and high school. A total of 75.6 percent of participants were in pre-kindergarten to grade 5, 18.7 percent were in grades 6–8, and 5.7 percent were in grades 9–12. (**Table 2**, page 40.)

Figure 12. Number of Vision Partnership participants by grade level, 2013–2014

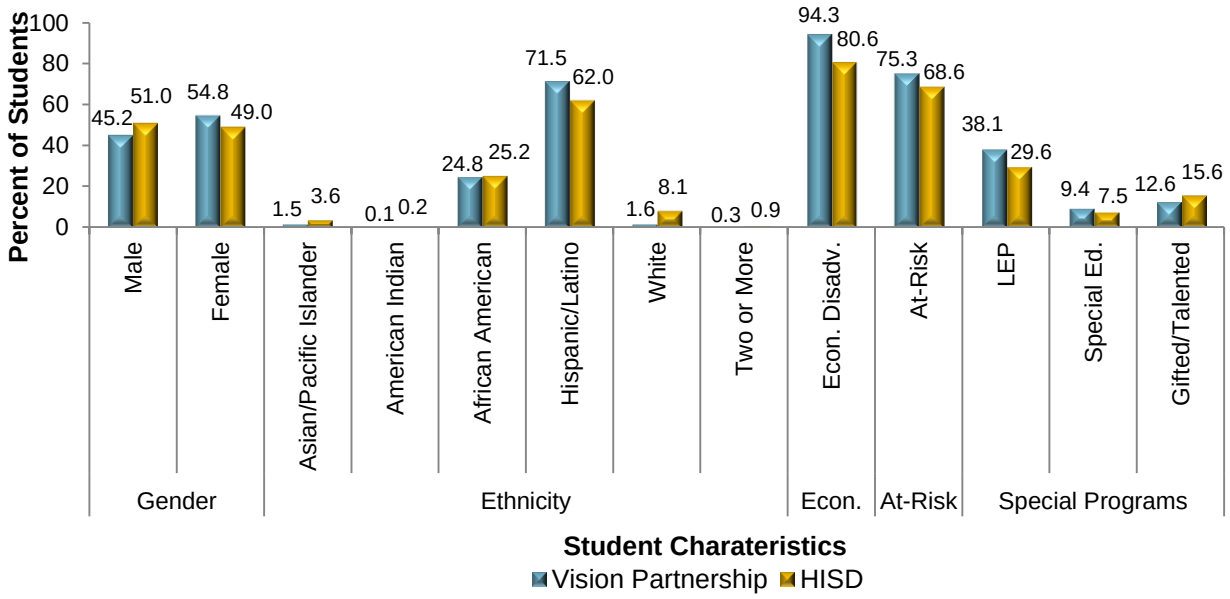


Source: Source: HDHHS 2013–2014 Vision Partnership Clinic database; Chancery, August 19, 2014; HISD School Information 2013–2014 database.

- The characteristics of students who participated in a Vision Partnership Clinic in 2013–2014 and the characteristics of all students across the district 2013–2014 are presented in **Figure 13**. The population of Vision Partnership participants comprised notably larger proportions of female, Hispanic/Latino, economically disadvantaged, at-risk, and LEP students than the general population of HISD students; while proportions of male and White students were notably larger among HISD students districtwide.

- Proportions of Vision Partnership participants and their peers across the district were most comparable (i.e., equal to or less than 1.0 percentage point difference) regarding students with the following characteristics: American Indian, African American, and two or more races. More moderate differences in proportions between the program participants and students across the district included the following characteristics (from smallest to largest difference): Asian/Pacific Islander, special education, and gifted/talented students. (**Table 3**, page 41.)

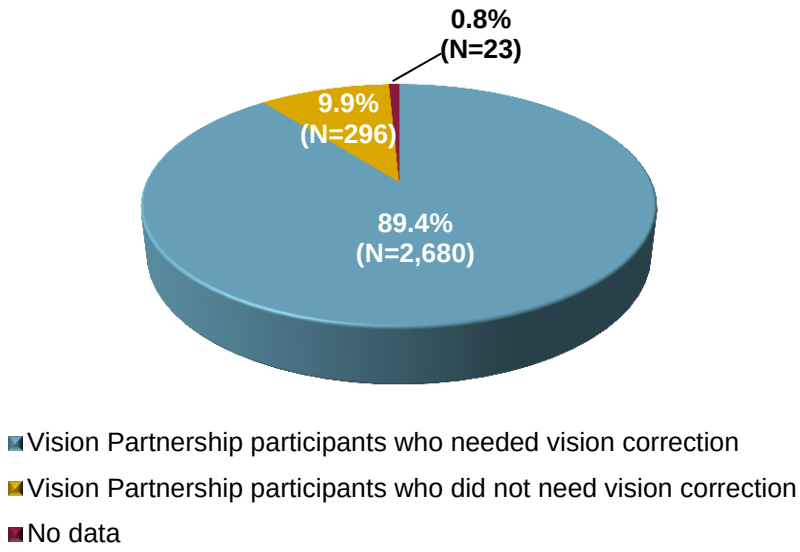
Figure 13. Demographic characteristics of Vision Partnership participants, 2013–2014



Source: HDHHS 2013–2014 Vision Partnership database; Chancery, August 19, 2014; PEIMS 2013–2014; and 2013–2014 HISD District and School Profiles.

- Of the 2,999 students who were identified through vision screenings on their campuses as needing vision correction and who were examined at Vision Partnership Clinics during the 2013–2014 school year, 2,680 (or 89.4 percent) of them needed some form of vision correction (**Figure 14**). No data were available for 23 (0.8 percent) of the clinic participants. This indicated a higher rate of confirmation of need when compared to 3,850 (86.8 percent of the 4,437) students for whom confirmations of need for vision correction were made at Vision Partnership Clinics in 2012–2013.

Figure 14. Number and percent of Vision Partnership participants who needed and who did not need vision correction, 2013–2014



Source: HDHHS 2013–2014 Vision Partnership database

What were other sources of students' vision correction in 2013–2014?

- Nurse Survey respondents indicated the following sources were used in addition to the Vision Partnership to obtain vision correction for students: Eye Care for Kids, See Optic Latina, Medicaid for private practitioners, free vouchers provided by the National Association of School Nurses (for specified service providers), Christian Community Services Center (CCSC), University of Houston Optometry, and parental/guardian selected source to address their child's vision needs.

What were the challenges for students to receive vision correction in 2013–2014?

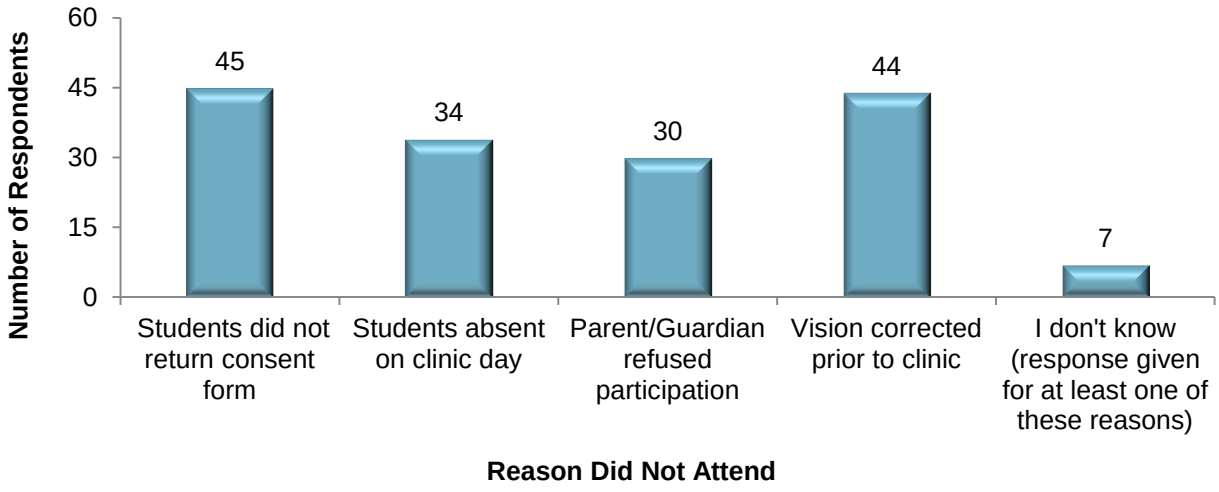
- Results from the Nurse Survey, communications with HDHHS Vision Partnership administrators, and a series of interviews with the Manager of Medical and Health Services yielded the following insights regarding impediments to ensuring that students receive vision correction.
- Nurses' lacked the ability to access the current school year's or any single year's Chancery vision screening data solely, which made it difficult for them to readily identify which students did not pass a vision screening in 2013–2014 (or previously in 2012–2013) and which students continued to need outreach or follow-up to ensure they received a follow-up examination and/or corrective eyewear, if needed.

- HISD employs new nurses each year. The responsibilities and tasks of campus nurses are extensive. In addition, some nurses are not on their campuses for timeframes sufficient to coordinate vision care activities because some serve multiple campuses or serve in multiple capacities on a campus. The case-management skills among nurses were also highly diverse. Therefore, constraints relative to time, case management skill-level, and knowledge about vision care resources resulted in a variety of efforts expended by nurses. These factors resulted in a variety of responses from students and parents/guardians to nurses' efforts or lack of efforts to address students' vision care needs.

- **Figure 15** shows duplicated 2013–2014 Nurse Survey responses for 67 (91.8 percent) of the 73 nurses whose campuses participated in the Vision Partnership program which indicated students missed vision care opportunities primarily because students did not return signed parental/guardian consent forms for various reasons including students did not take the consent forms home or parents could not read English or Spanish. A total of 67.2 percent of survey respondents identified this as a key problem. It affected more than 50 students on two campuses.

- Nurses also indicated students missed vision care opportunities because their vision was corrected prior to their scheduled (or rescheduled) clinic visits (65.7 percent), students were absent on the day of their clinic event (50.7 percent), and parents/guardians refused their childrens' participation in vision care opportunities (44.8 percent). The latter reason affected as many as 50 students on three campuses. In addition, individual nurses replied that some students transferred out of the school before the clinic event, the nurse needed to attend a funeral, and campus teachers did not release students to board the bus on the day and they were left behind. (See **Table 4**, page 41 for additional details.)

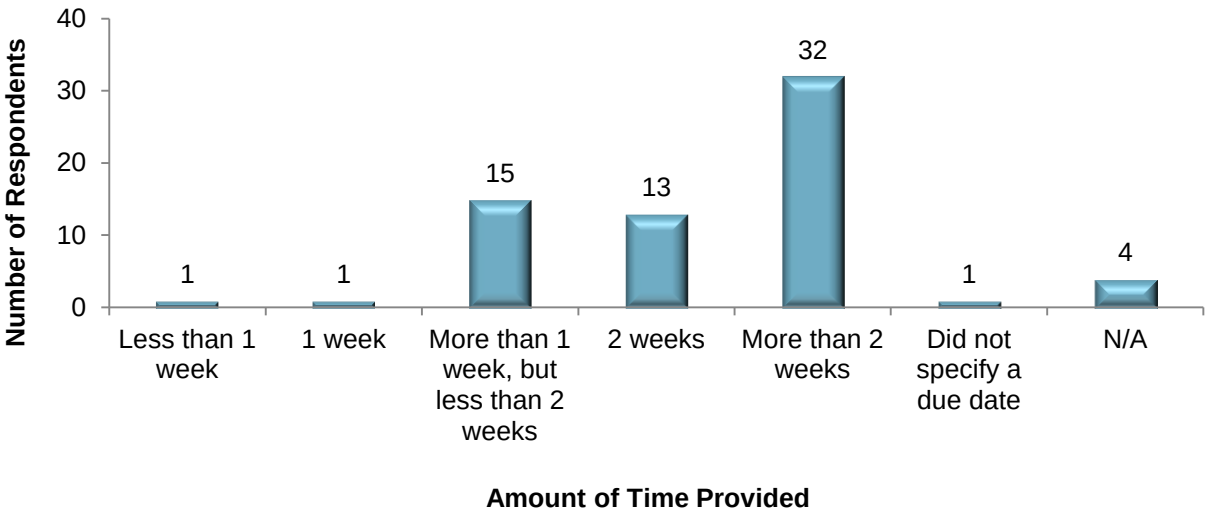
Figure 15. Number of Nurse Survey responses* by the reasons students who were referred to Vision Partnership Clinics and did not attend, 2013–2014



*Note: Nurses may have provided multiple responses.

- The 2013–2014 Nurse Survey responses revealed the amount of time students were provided to return signed parent/guardian consent forms for Vision Partnership participation. **Figure 16** shows that of the 67 participating and responding nurses, 47.8 percent stated students on their campuses were allowed more than two weeks to return signed consent forms, and 23.9 percent said students were provided at least one week, but less than two weeks to return signed consent forms. Only one nurse (1.5 percent) indicated that no due date was specified.
- Additional survey data revealed that more than 71 percent of nurses reminded about three-fourths or more of the parents to return consent forms. More specifically, 45 out of the 67 (67.2 percent) nurses reported they reminded "all" of the students' parents to return consent forms for student participation in the Vision Partnership program, while three nurses (4.5 percent) said they reminded "none" of the parents to return students consent forms.

Figure 16. Number of Nurse Survey respondents by the amount of time provided for students to return Vision Partnership consent forms, 2013–2014

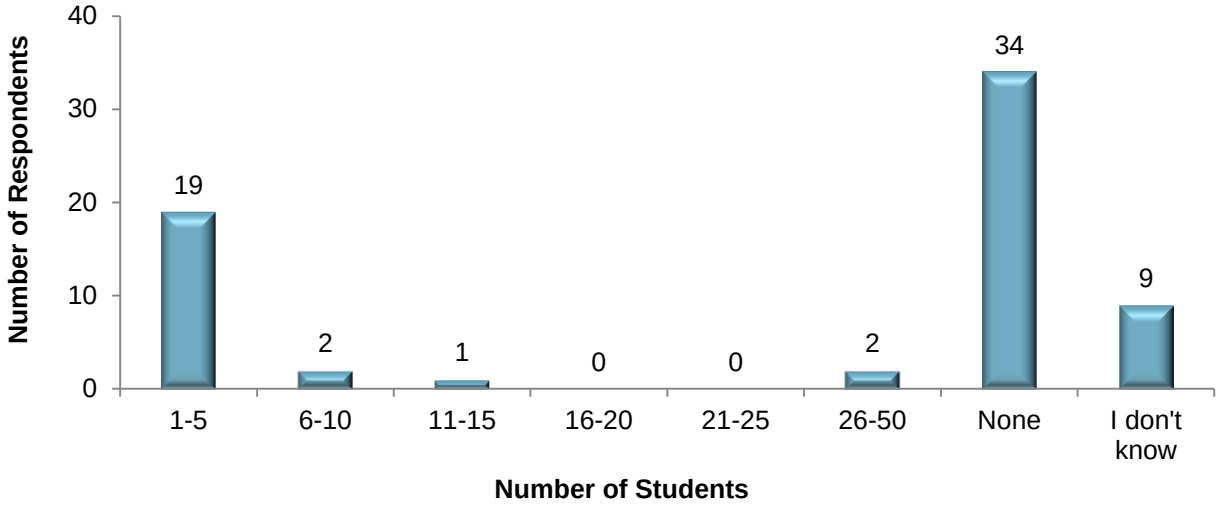


- Some students who were referred to the Vision Partnership Clinics still did not attend the clinic events. This problem occurred even though some of the nurses conducted follow-up efforts and the HDHHS conducted telephone outreach to parents/guardians whose children either had not returned signed consent forms or whose children had returned signed consent forms, but had not participated in a Vision Partnership Clinic.
- According to Nurse Survey responses, even after vision specialists confirmed students needed corrective eyewear, some parents insisted their child did not need vision correction. Nurses stated that some parents and students did not understand the importance of an eye examination and corrective eyewear.
- Survey responses also indicated that some students break or lose their corrective eyewear within one or two weeks of receiving them and there were no resources readily available for maintenance and repair of students' eyewear. Additionally, some students would not wear their corrective eyewear.
- Impediments specific to Vision Partnership participation included those stated previously. In addition, some nurses did not receive the clinic examination results which were necessary for

documentation and follow-up, and some students were told they would receive corrective eyewear but they did not receive them.

- When asked how many students on their campuses who were examined in Vision Partnership Clinics needed corrective eyewear, and did not receive the eyewear, the largest group of 34 nurses (50.7 percent of the 67 Nurse Survey respondents) indicated "none". **Figure 17** presents the number of respondents by the range of the number of students that did not receive corrective eyewear through the program as expected during the 2013–2014 school year. Over all, the results indicate that at least 94 students did not receive vision correction following program participation.

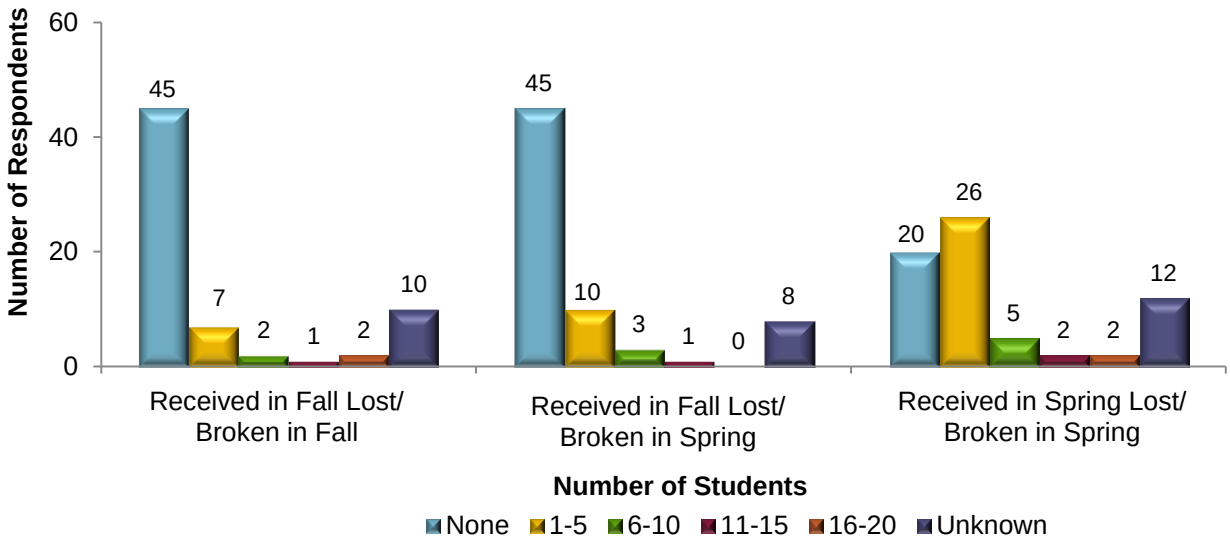
Figure 17. Number of Nurse Survey respondents by the range for the number of students examined at a Vision Partnership Clinic, needed vision correction, and did not receive corrective eyewear, 2013–2014



- The HDHHS Vision Partnership administrators reported that, with the exception of a "few" students (the actual number was unknown), Vision Partnership participants who needed corrective eyewear received them through the program. Further, the primary reason HDHHS provided for why students who attended a Vision Partnership Clinic and needed vision correction did not receive them was that the Vision Partnership referred students for additional evaluation or other services. As indicated, 50.7 percent of the 2013–2014 Nurse Survey respondents confirmed these statements. In addition, 37 of the 67 respondents (55.2 percent) indicated the students who did not receive corrective eyewear through the program were referred for additional services or pediatric eye care or other special eyewear (21 nurses or 31.3 percent).
- Some of the corrective eyewear was delivered six weeks after the clinic date and parents complained about the long wait. In other cases, corrective eyewear was not delivered when promised or not delivered at all. Another nurse stated that a parent reported taking the prescription for eyewear to a private doctor who stated the prescription missed some important details.
- For some nurses, participation in the Vision Partnership was too complicated due to the new referral and follow-up system, multiple permission slips, the requirement to provide student lunches, and the "lack of information" regarding bus scheduling.

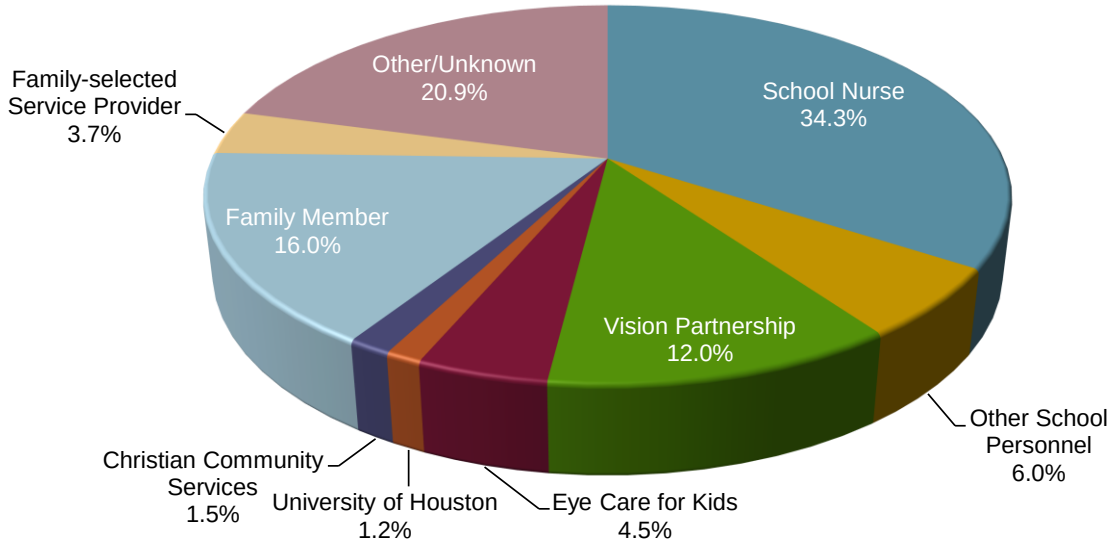
- Other nurses stated that driving long distances to submit the Vision Partnership consent forms was a barrier, as well as completing the student information spreadsheet, finding sufficient numbers of chaperones, and scheduling initial examinations early enough in the year to have students attend clinic dates and receive corrective eyewear during the fall semester so that students have more time to learn with the support of corrective eyewear. The repeated rescheduling of clinic visit dates with little notice of the change further exacerbated these barriers. Six out of 45 comments (13.3 percent) on the Nurse Survey identified the latter concern as a key problem.
- Corrective eyewear frame adjustments were made at the time of eyewear delivery to students. However, strategies to address wearing of eyewear properly, frame adjustments after student use, and eyewear durability and ongoing repair have not been sufficiently implemented.
- **Figure 18** presents nurses' responses regarding the number of students who received corrective eyewear and lost or broke them. The semester the eyewear was received and the semester the eyewear was lost or broken are shown. Most of the 67 responding nurses (45 or 67.2 percent) reported "none" of the students' eyewear was lost or broken during the fall and less than one-half the number of nurses (20 or 30.0 percent) reported this for the spring semester.
- Nurses' responses regarding students who received eyewear in the fall semester, revealed at least 62 students needed replacement or repair during the fall in which they received corrective eyewear and at least 39 students needed replacement or repair by the spring semester. For students receiving eyewear in the spring semester, at least 110 students needed eyewear replacement or repair during the spring semester in which they received the corrective eyewear.

Figure 18. Number of Nurse Survey respondents by the range of the number of students who received corrective eyewear and lost or broke them by semester, 2013–2014



- **Figure 19** (page 24) presents the sources that the 67 school nurses who responded to related survey items identified for providing eyewear repair for students. The number of school nurses that stated they themselves repaired students' eyewear (34.3 percent) was at least twice the number of nurses reporting any other known source of repair, followed by a family member, Vision Partnership, other school personnel, Eye Care for Kids, and a family-selected service provider.

Figure 19. Percentage of Nurse Survey respondents by source used to repair students' corrective eyewear, 2013–2014



- Nurse Survey responses regarding suggestions for program improvements included:
  - ensure that new nurses receive details about programs for students' vision correction,
  - improve the process for referral to a vision specialist so that parents clearly understand what is needed for their child to receive corrective eyewear,
  - increase the time allowed to obtain parental/guardian consent,
  - decrease the amount of time students must wait during the clinic visits to improve student behavior,
  - ensure more-timely delivery of corrective eyewear to students,
  - ensure that students receive vision correction before they take the state-mandated tests,
  - improve clinic visit scheduling strategies to avoid postponements/rescheduling,
  - improve follow-up procedures conducted by the HDHHS to avoid repetitive calls to campus nurses, unclear and illegible name tags for staff at the clinics,
  - ensure that examination results are given to campus nurses for each student and that the results are accurate,
  - send electronic examination results to the school to omit the long wait for the results at the end of the clinic visit,
  - provide strategies for student behavior management during clinic visits when the students are in several different rooms,

- provide strategies for securing make-up days for students who were absent on the day of the event,
- limit the number of students attending each clinic visit,
- provide a step-by-step guide for program participation,
- allow students to go to the examination with their parents,
- provide resources for parents who receive a referral to a vision specialist for additional services, but cannot afford to take their child, and,
- for their hard work, provide t-shirts and special refreshments for chaperones and nurses during their wait at clinic visits.

How did performance of HISD students who received vision correction (through any source) after the 2013–2014 campus-based vision screenings compare to districtwide student performance?

- The percentages of 2013–2014 program participants and students districtwide who met the "satisfactory", Phase-in 1 performance standards on the English and Spanish versions of STAAR reading, math, and writing examinations at each grade level tested were compared by subject and grade level. STAAR results for grade 8 math and STAAR End of Course 2013–2014 results for grades 8–10 were not presented due to the availability of data for fewer than five students who participated in the program.

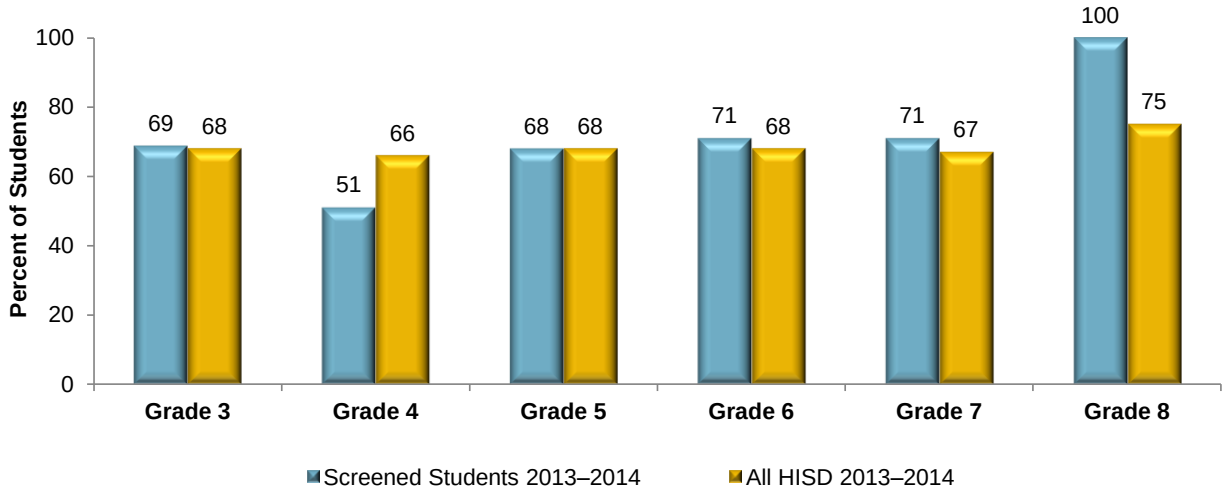
- The students assessed in the following section were identified participants of the initial campus-based screenings, who failed the screening, and received vision correction through any source (n=912). In this analysis of students' academic performance, the performance of the districtwide student population is used merely as a context within which to consider the performance of program participants.

- **Table 5** (page 42) includes the demographic characteristics of all HISD students and the 912 screened students who received vision correction. Proportions of Hispanic/Latino, economically disadvantaged, at-risk, and LEP students among the screened students who received vision correction were notably larger (i.e., equal to or greater than a 5.0 percentage point difference) than the proportions of these students among the districtwide student population. The proportions of African American (16.3 percent) and White (2.2 percent) students among the Vision Partnership participants who received vision correction was notably smaller than the proportion of African American (25.2 percent) and White (8.1 percent) students districtwide.

- **Figures 20–22** show the percentages of vision-screened students who received vision correction (i.e. those identified as grades 3–8 participants of HISD campus-based screenings) and students districtwide who met the "satisfactory" performance standards (Phase-in 1) on the STAAR reading, mathematics, and writing exams, respectively. As noted in the data limitations, due to data quality issues described in Appendix A (page 36), the performance results are not intended to be used to make causal inferences of the program's effectiveness at improving student performance in academic achievement.

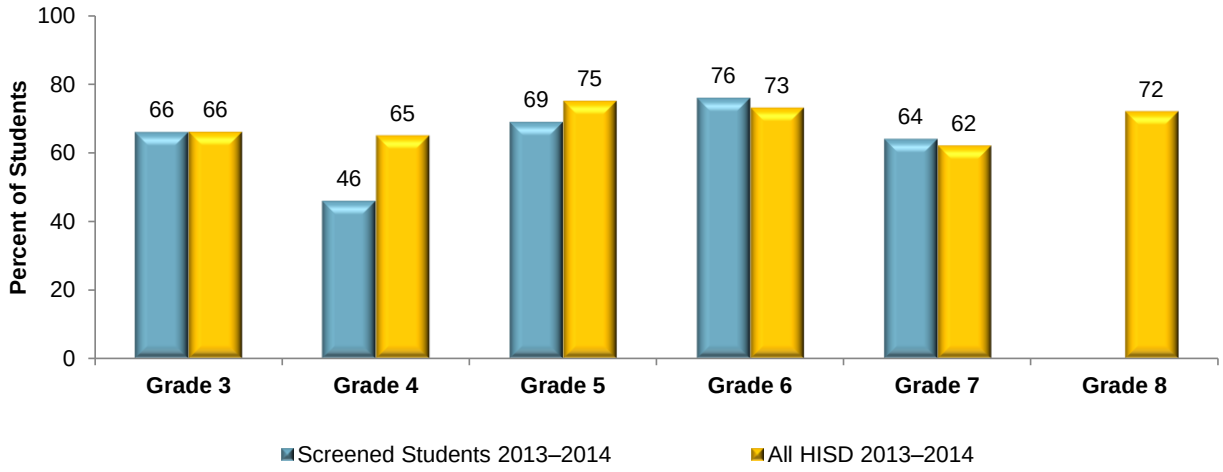
- Figure 20 shows vision-screened students who received vision correction met the passing standards at higher rates than did students districtwide at grades 3, 6, 7 and 8 and at the same rate at grade 5 in 2013–2014.

Figure 20. Comparison of grade level rates of students who met the "satisfactory" performance standard on the English and Spanish STAAR reading exam for identified students who received initial campus-based vision screenings, failed, and received vision correction through any source and all HISD students, 2013–2014



- Figure 21 shows vision-screened students who received vision correction met the "satisfactory" performance standards in mathematics at higher rates than did students districtwide at grades 6 and 7 and at the same rate at grade 3 in 2013–2014.

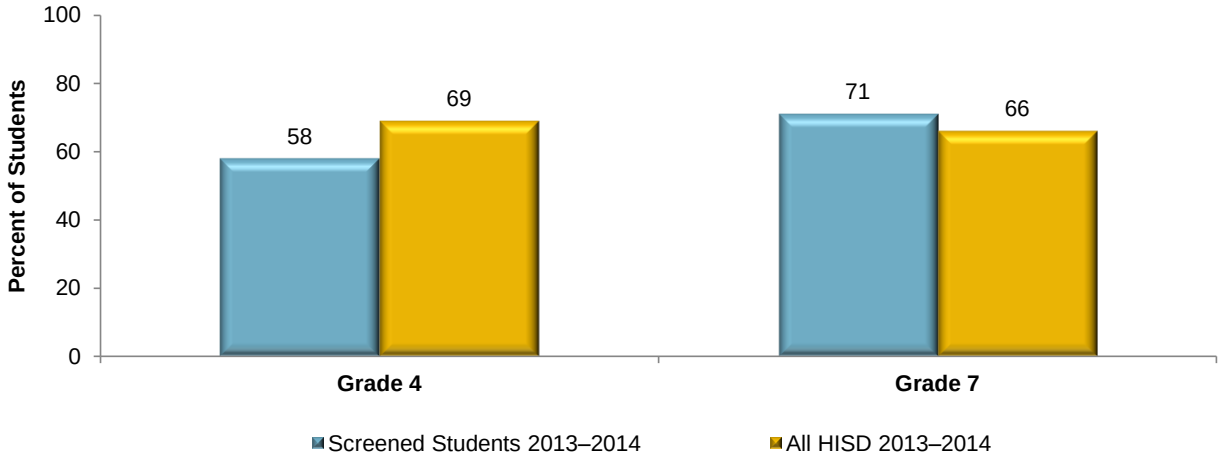
Figure 21. Comparison of grade level rates of students who met the "satisfactory" performance standard on the English and Spanish STAAR mathematics exam for identified students who received initial campus-based vision screenings, failed, and received vision correction through any source and all HISD students, 2013–2014



Note: 2013–2014 data for fewer than five program students were available for grade 8.

- Figure 22 shows grade 4 students districtwide met the "satisfactory" standard in writing at a higher rate than did vision-screened students who received vision correction in 2013–2014. However, the vision-screened students who received vision correction at grade 7 met the passing standard at a higher rate than did students districtwide in 2013–2014.

Figure 22. Comparison of grade level rates of students who met the "satisfactory" performance standard on the English and Spanish STAAR writing exam for identified students who received initial campus-based vision screenings, failed, and received vision correction through any source and all HISD students, 2013–2014



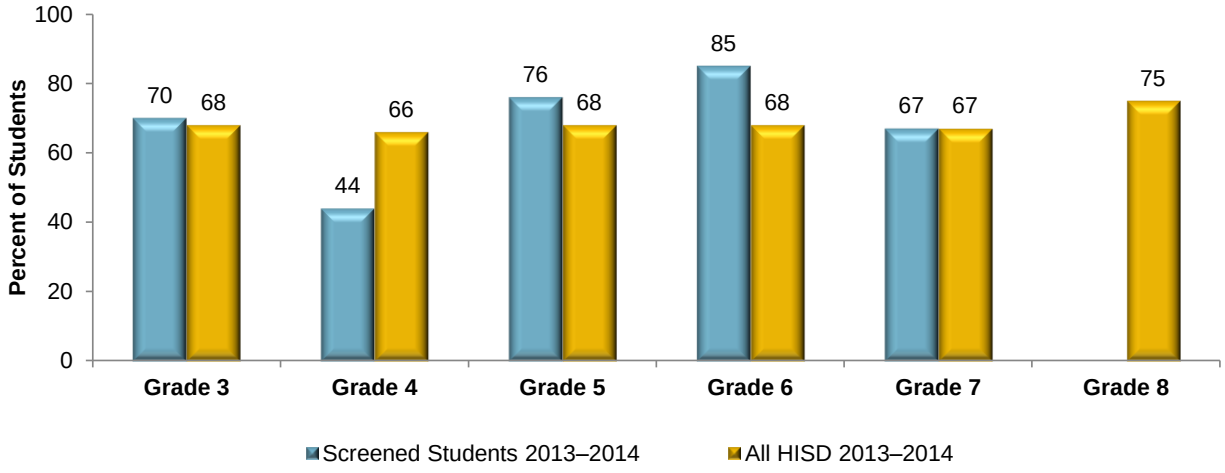
How did performance of HISD students who participated in the campus-based vision screenings and in the Vision Partnership compare to districtwide student performance?

- **Table 5** (page 42) includes demographic characteristics of all HISD students and a subset of the 912 students who participated in campus-based screening. The subset was comprised of 319 students who attended Vision Partnership clinics and received corrective eyewear. However, the specific source(s) of the students' corrective eyewear were not available. Consistent with the demographics of the identified students who were screened and received vision correction (n=912), the proportions of Vision Partnership participants who received vision correction (n=319) comprised notably larger proportions (i.e., equal to or greater than a 5.0 percentage point difference) of Hispanic/Latino, economically disadvantaged, at-risk, and LEP students than the general population of HISD students. The proportions of African American (19.7 percent) and White (3.1 percent) students among the Vision Partnership participants who received vision correction was notably smaller than the proportion of African American (25.2 percent) and White (8.1 percent) students districtwide.

- **Figures 23–25** show the percentages of students who participated in the Vision Partnership program and received vision correction and students districtwide who met the "satisfactory" performance standards (Phase-in 1) on the STAAR reading, mathematics, and writing exams, respectively. As noted in the data limitations, due to data quality issues described in Appendix A (page 36), the performance results are not intended to be used to make causal inferences of the program's effectiveness at improving student performance in academic achievement.

- Figure 23 shows Vision Partnership participants who received vision correction met the passing standards at higher rates than did students districtwide at grades 3, 5, and 6 and at the same rate at grade 7 in 2013–2014.

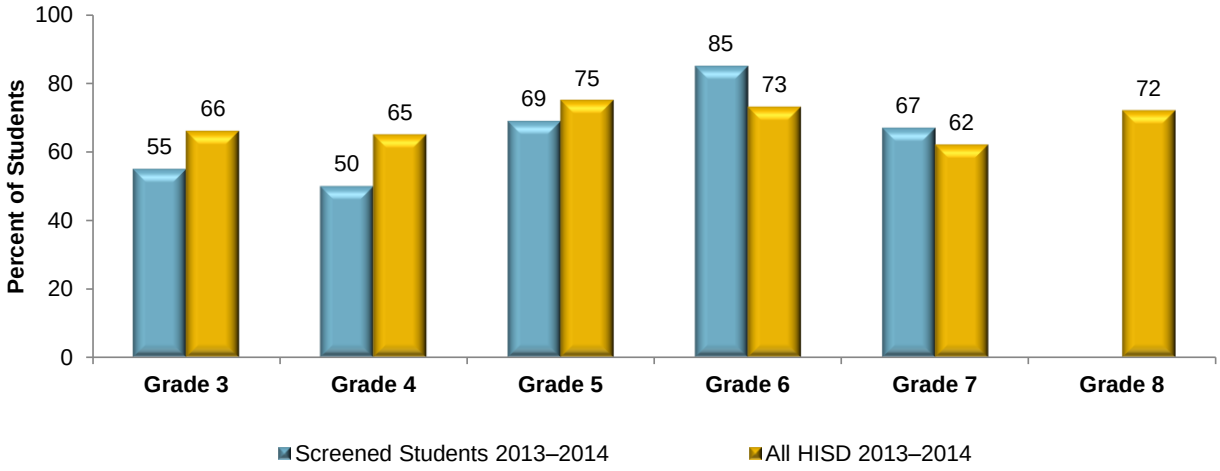
Figure 23. Comparison of grade level rates of students who met the "satisfactory" performance standard on the English and Spanish STAAR reading exam for all HISD students and the identified students who received an initial campus-based vision screening, failed the screening, participated in the Vision Partnership, and received vision correction, 2013–2014



Note: 2013–2014 data for fewer than five program students were available for grade 8.

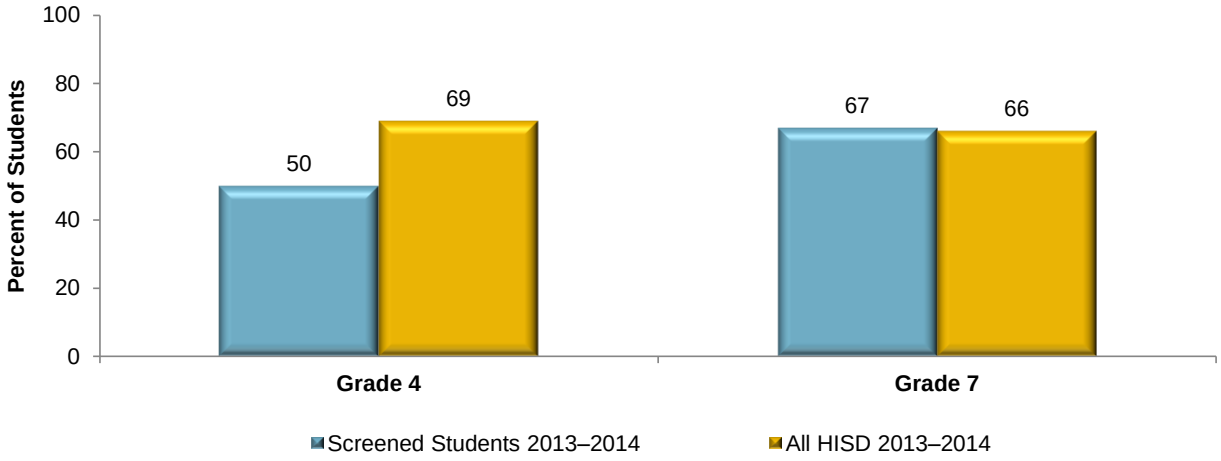
- Figure 24 shows vision-screened Vision Partnership participants who received vision correction met the passing standards at higher rates than did students districtwide at grades 6 and 7 in 2013–2014.

Figure 24. Comparison of grade level rates of students who met the "satisfactory" performance standard on the English and Spanish STAAR mathematics exam for all HISD students and the identified students who received an initial campus-based vision screening, failed the screening, participated in the Vision Partnership, and received vision correction, 2013–2014



- Figure 25 shows vision-screened Vision Partnership students who received vision correction met the passing standards at a higher rate than did students districtwide at grade 7 in 2013–2014.

Figure 25. Comparison of grade level rates of students who met the "satisfactory" performance standard on the English and Spanish STAAR writing exam for all HISD students and the identified students who received an initial campus-based vision screening, failed the screening, participated in the Vision Partnership, and received vision correction, 2013–2014



Discussion

Campus-based vision screening for school-aged learners is a crucial investment of time, energy, and money because children require an array of visual abilities to navigate and achieve excellence in school (American Optometric Association, 2014). For most students, good vision is vital to their daily and long-term academic success. The Texas Department of State Health Services (TDSHS) Child Health Reporting System report submitted by HISD states nearly 90,000 district students in 2012–2013 and 93,000 district students in 2013–2014 received campus-based vision screenings. Research on campus-based vision screening programs has found a substantial portion of children who experience vision-related problems and learning difficulties (Basch, 2010) and has estimated a rate of 20 percent of students who experience problems with their vision (Ferebee, 2004). In this light, the findings of this report are quite low for HISD's percentage of students who participated in campus-based initial vision screenings and failed their screenings (12.3 percent in 2012–2013 and 11.9 percent failed in 2013–2014, according to the campus-level TDSHS vision screening report data). Considering Ferebee's (2004) research, these findings are only slightly more than one-half what may be reasonably expected. However, it is important to note that the differences reported from 2012–2013 to 2013–2014 and the differences found between datasets in 2013–2014 may be artificial and result from missing data or inconsistent data entry by campus nurses. Triangulation between TDSHS, Chancery, HDHHS, and 2013–2014 Nurse Survey data sources revealed a low level of consistency across these data sources. Unfortunately, poor data quality posed serious problems for effectively assessing HISD students' vision screenings, evaluation services, and their related academic performance outcomes. It is imperative that the quality of HISD's vision screening and Vision Partnership data is improved, if these datasets are to be used to inform program delivery and to assess student outcomes effectively.

Student-level Chancery data and school-level TDSHS data indicated that only 2.4 percent to 4.7 percent of the examined students in 2012–2013 and 4.4 percent to 5.3 percent of them in 2013–2014 were examined by a vision specialist and were found to have no vision problem. This seems to bode well for the accuracy of campus-based screenings in determining students' need for care by a vision specialist. However, school-level TDSHS data for 2012–2013 and 2013–2014 also indicated that each year more than 25 percent of students who were screened, identified as needing vision care, and referred to a specialist for treatment did not receive services for their vision-related health needs. Despite the array of significant efforts that were made by campus nurses and the HDHHS in 2012–2013 and 2013–2014 to better provide vision screenings, follow-up and subsequent eye examinations, vision consultations, and corrective eyewear for students who were in need of them, un-served students remain an important and ongoing challenge.

The Vision Partnership provided an important opportunity for students who needed eye care and vision correction to receive them at no cost to students and their families. In the last five school years, 17,077 HISD students have been served at Vision Partnership Clinics. However, student participation decreased 32.4 percent from 4,437 participants in 2012–2013 to 2,999 participants in 2013–2014. Students from only 117 of HISD's 280 schools were participants in the Vision Partnership program. However, as indicated, the recent declines in participation may be artificial, particularly in light of the fact that more Vision Partnership Clinic dates were provided this year. There were 35 clinic dates this year versus 25 dates last year. Furthermore, HISD students participated in 339 clinic visits to Vision Partnership Clinics in 2013–2014, which represented an 85.2 percent increase when compared to 183 clinic visits in 2012–2013.

Relevant research suggests African American and Hispanic youth have been found to be less likely than White students to possess corrective lenses (Kemper, Gurney, Eibschitz-Tsimhoni, & Del Monte, 2007). Researchers have also suggested that children from low-income families are disproportionately affected by vision impairments, with substantial evidence supporting causal linkages between academic performance and vision-related learning problems (Basch, 2010). Based on the available Chancery data, the 2013–2014 population of Vision Partnership participants (n=2,999) and the students who received 2013–2014 campus-based vision screenings and needed vision correction (n=912) comprised notably larger proportions of Hispanic/Latino, economically disadvantaged, at-risk, and LEP students than the general population of HISD students. However, the proportions of African American students among the screened students (16.3 percent) and the Vision Partnership participants (24.8 percent) who needed vision correction were smaller than the proportion of African American students districtwide (25.2 percent). While further attention is needed to ensure that African American students in HISD who are in need of vision care are not being underserved, the remaining related findings of this report are consistent with the literature in regard to Hispanic/Latino, economically disadvantaged, at-risk, and LEP youth in HISD. Unfortunately, student mobility, language, and absenteeism are among the potential barriers that Hispanic, economically disadvantaged, at-risk, and LEP students may be more likely to experience than their counterparts, and these factors may negatively affect the district's efforts to help meet these students' vision health needs in a timely manner.

The primary obstacles to receiving vision correction that were identified by the Manager of Medical and Health Services and campus nurses (e.g. did not return signed parental/guardian consent forms, absent on date of clinic visit, and parents/guardians refused participation in vision care opportunities) may have been heightened among the aforementioned student groups of HISD's screened students who needed corrective eyewear. Nearly 38 percent of the 2013–2014 Nurse Survey respondents suggested the non-return of parent/guardian consent forms was an obstacle to students' vision correction that affected as many as 50 students on three campuses. About 67 percent of survey respondents stated students on their campuses were allowed at least two weeks to return signed parent/guardian consent forms. Additionally, only about 67 percent of the nurses reported they reminded "all" of the students' parents to

return consent forms for student participation in the Vision Partnership program. Clearly, to further address these issues through heightened communication with school nurses and administration and parents is likely to help ensure more students receive the vision care they need. It may prove beneficial to explore best practices to heighten the return of parent/guardian consent forms, reduce student absences during clinic dates. In addition, further consideration to cultural factors for the aforementioned student groups may be necessary to further increase program participation as well as to increase the number of these students who receive corrective eyewear promptly.

Other obstacles to vision correction for students (as reported by the HISD Manager of Medical and Health Services and/or campus nurses) included nurses' lack of access to current Chancery vision screening data, varied degrees of nurses' case management skills and knowledge about vision care opportunities, parents and students did not understand the importance of an eye examination and corrective eyewear, rescheduled clinic events, poor coordination of student participation on clinic event days, students broke/lost/would not wear their corrective eyewear, non-receipt of examination results which were necessary for documentation and follow-up, non-receipt of corrective eyewear, eyewear delivered late in the school year, and no source for expedient, high-quality repair of eyewear.

Survey data revealed that more nurses on campuses that participated in the Vision Partnership program had greater familiarity with the program than the familiarity of the nurses on campuses that did not participate in the program. Nearly 45 percent of nurses whose campuses did not participate reported they were "a little" or "not at all" familiar with the program, while almost 10 percent of nurses whose campuses participated in the program reported they were "a little" or "not at all" familiar with the program. While causation cannot be assumed, increased knowledge about the Vision Partnership as well as all vision care services available for HISD students may encourage greater participation with Vision Partnership. It may prove advantageous to address in the New Nurse Training meetings and/or the School Nurse Advisory group this topic, case-management skills, other home- and school-based obstacles to students' vision correction, and the suggestions for program improvement made by campus nurses. Obstacles such as multiple-rescheduled clinic dates, the handling of examination results, eyewear delivery and non-delivery issues, eyewear repair, and missing program data elements may require additional interventions with continued oversight by HISD's Manager of Medical and Health Services and the HDHHS program administrators to rectify the problems that impede improved service delivery to students in need of vision correction.

Among HISD students receiving corrective eyewear in the fall semester, at least 62 students needed replacement or repair in the fall and at least 39 students needed replacement or repair by the spring semester. At least 110 students who received corrective eyewear in the spring semester needed eyewear replacement or repair during the spring semester in which they received the corrective eyewear. The number of school nurses that stated they themselves repaired students' eyewear was at least twice the number of nurses reporting any other known source of repair. Overall, however, there was a lack of data regarding who received corrective eyewear, when students received corrective eyewear, and whether or not students who needed corrective eyewear had functional, corrective eyewear in their possession when they were tested on the state-mandated assessments. In cannot be determined by the findings of this evaluation that students who received vision correction in 2013–2014 actually had the benefit of their vision correction during any significant portion of the school year, sufficient to impact their state-mandated tests scores or course grades.

Based on the numbers included in the TDSHS report, there was an inability to identify a comparable amount of students who participated in the campus-based vision screenings using HISD's Chancery and IBM Cognos data. In addition, based on the original dataset provided by the HDHHS, there was also an inability to identify all HISD students who participated in the Vision Partnership program (through linking HISD to HDHHS data). Therefore, the very basic analysis of academic performance for participating

students provided in this report includes only a subset of all students who participated in the vision health services provided by the district and provides only descriptive statistics. The performance results are not intended to be used to make causal inferences of the program's effectiveness at improving student performance in academic achievement. With improved data quality, more rigorous analyses using paired samples and comparison groups may be conducted in future analyses, employing data that more closely matches HISD's student counts as provided by campus nurses for the TDSHS report and as provided through the HDHHS dataset for HISD students.

As noted in the data limitations section of this report, the performance results are not intended to be used to make causal inferences of the program's effectiveness at improving student performance in academic achievement, due to poor data quality. However, it is encouraging that at certain grades and subjects the percentages of the HISD students who participated in the initial campus-based screenings and/or the Vision Partnership program and received vision correction were higher than the districtwide passing rages. The value of the program to students whose families may otherwise be unable to meet their students' vision care needs is unquestionable. However, the quality of HISD's vision health data and HDHHS's Vision Partnership data must be improved if they are to be used to effectively inform program delivery and to assess program participants' academic performance.

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Appendix A

Data Limitations

- The differences from 2012–2013 to 2013–2014 in the number of Chancery records entered/retrieved for students who received a campus-based initial screening and in the number of students with records that indicated they failed the initial screening may be (entirely or to some extent) artificial as a result of missing data or inconsistent data entry by campus nurses within a year or from one year to the next.

- The actual number of HISD students who participated in the 2013–2014 campus-based initial screenings, Vision Partnership, and other vision care services could not be determined due to poor data quality. Campus-level data (Texas Department of State Health Services (TDSHS) report) and student-level data (HISD's Chancery Vision Screening database) for the campus-based initial vision screenings were not comparable. Inconsistencies between these data sources precluded confirmation of students' participation in campus-based screenings, Vision Partnership, as well as other community-based vision care services to which they were referred or they/their parents/guardians chose. Only 496 or 16.5% of the 2,999 HISD students identified among the Vision Partnership records were found among the 27,859 Chancery Vision Screening records for 2013–2014. For these reasons, Chancery data for campus-based screenings were not included in the primary analyses, but are provided in **Appendix C** along with 2013–2014 Nurse Survey findings regarding campus-based screenings.

- The Houston Department of Health and Human Services (HDHHS) submitted more than 11,000 duplicated records for Vision Partnership participants from various districts and schools. Of them, there were 4,933 duplicated records for students who attended at least one Vision Partnership Clinic and who were coded as "AISD/HISD", "HISD" or "HISD/PISD" students. Following the removal of duplicated records and students attending non-HISD schools, there were 3,781 unduplicated student records. Correct student identification numbers could not be found for 782 (20.7 percent) students after matching students' last and first names, date of birth, and HISD campus from the data provided by the HDHHS with district databases. This resulted in retaining Vision Partnership records for 2,999 of the students who participated in the program during the 2013–2014 school year. The actual number of HISD Vision Partnership participants could not be determined.

- HDHHS and Chancery data were not sufficient to determine whether or not screened students (campus-based) who did not have valid Vision Partnership records actually did not participate in the Vision Partnership. Nor were Chancery data sufficient to identify all students who received campus-based vision screenings (as indicated by the students counts submitted for the TDSHS Child Health Reporting System report) or to determine the date or source of students' vision correction. In addition, the HDHHS's Vision Partnership data were not sufficient to determine which students received corrective eyewear through the partnership. This resulted in the use of Chancery data to identify students who received corrective eyewear (glasses or contact lenses) through any (unidentified) source in 2013–2014. The sources and dispensation dates were not documented. Also, referral data were not consistently documented.

- Student-level service-related outcome data were not sufficient to confidently group students based on their service outcomes and conduct comparative analyses between students who participated in campus-based vision screenings, Vision Partnership Clinics, and/or other vision

care services and students who experienced different, program-specific service-related outcomes. Therefore, the analysis of students' academic performance provided here uses the performance of the districtwide student population as merely a context to consider the performance of screened students (including Vision Partnership participants) who obtained vision corrective eyewear. The results should not be used to determine program effectiveness but rather as descriptive information. Also, the results are to be considered in light of the demographic similarities and differences between the identified students who were screened on their campuses and received vision correction, Vision Partnership participants who were initially screened on their campuses and received vision correction, and HISD students districtwide.

- Unidentified participants of the campus-based screenings and Vision Partnership Clinics that were present within the districtwide datasets made it impossible to ensure the exclusion of unidentified participants from the selection of matched comparison groups. Therefore, matched comparison groups were not available. It is important to note that in the absence of a comparison groups, the analysis of students' academic performance provided here uses the performance of the districtwide student population as merely a context to consider the performance of screened students and Vision Partnership participants who received corrective eyewear in 2013–2014. The results should not be used to determine program effectiveness but rather as descriptive information

- Chancery data were used to determine which students received vision correction. However, these data did not specify the vision care program(s) that provided students' eyewear for their vision correction. Therefore, student-level program-specific outcome data were not sufficient to conduct comparative analyses between students participating in the initial campus-based vision screenings, Vision Partnership Clinics, and/or other vision care programs and services who experienced various program-specific outcomes.

- A complete roster of students who participated in a Vision Partnership Clinic could not be confirmed due to insufficient student information submitted to the Vision Partnership. Incorrect student identification numbers were provided to Vision Partnership Clinic personnel by HISD campus nurses, and in turn, were incorrectly documented in the data used for this evaluation, which was received from Vision Partnership clinic administrators. Therefore, clinic data from the HDHHS for these students could not be linked with the students' HISD demographic or performance files. The actual number of HISD participants is unknown and calculated decreases from last year's participation counts may be a function of the poor data quality.

- The HDHHS Vision Partnership administrators reported corrective eyewear was dispensed by a Vision Partnership Clinic to all 2013–2014 HISD participants who needed vision correction with the exception of a "few" unidentified students who needed referrals for their special vision needs. However, data to determine the specific participants to whom corrective eyewear was dispensed and was not dispensed through a Vision Partnership Clinic were not available. Vision Partnership Clinic data did not identify when or to which students corrective eyewear was dispensed. Nor was data sufficient to determine if and why vision correction was not provided to students who needed it. Vision Partnership referral data were not consistently documented. Chancery data regarding student participation in the Vision Partnership and other vision care programs were not sufficient to determine the vision care programs used by students for their vision correction.

- Analyses of the changes in student performance following their vision correction in 2013–2014 were limited by (1) the lack of student-level data from HISD or the HDHHS regarding if and when

students received corrective eyewear (including whether or not students possessed functional, corrective eyewear during the administration of the 2012–2013 performance assessments, prior to receiving corrective eyewear after the 2013–2014 campus-based screenings) and (2) 2013–2014 STAAR End of Course results for grades 8–10 were available for fewer than five students who participated in the program and were not included in this report. This limitation appears to be a consequence of the poor data quality regarding district student identification numbers.

Appendix B

Table 1: Vision Partnership Participants (n=2,999) by School, 2013–2014

Elementary Schools (n=91)

School	Students	# Clinic Visits	School	Students	# Clinic Visits
Alcott	8	1	Kashmere Gardens	9	1
Anderson	9	1	Kelso	15	1
Ashford	3	1	Kennedy	3	1
Askew	26	3	Ketelsen	22	1
Atherton	7	1	Law	29	2
Barrick	23	1	Lewis	34	2
Bell	15	1	Looscan	6	2
Berry	16	1	Lyons	53	1
Blackshear	23	1	Marshall	28	3
Bonner	42	1	Martinez, R.C.	7	1
Braeburn	20	1	McGowen	1	1
Brookline	9	1	McNamara	44	1
Bruce	13	1	Memorial	30	4
Burnet	16	3	Mitchell	4	1
Burrus	16	1	Moreno	21	1
Bush	13	4	Oak Forest	14	2
Cage	28	1	Osborne	16	1
Carrillo	13	2	Paige	14	1
Codwell	78	3	Patterson	132	3
Condit	8	1	Peck	34	1
Crespo	46	1	Petersen	26	3
Crockett	20	2	Poe	8	1
Davila	17	1	Pugh	26	1
De Zavala	7	1	Robinson	27	1
DeAnda	14	2	Roosevelt	12	1
Dechaumes	101	4	Rucker	26	1
Dogan	37	2	Sanchez	21	1
Durham	23	1	Scarborough	23	3
Durkee	32	1	Scroggins	91	1
Eliot	19	1	Seguin	11	1
Elmore	46	1	Shadydale	30	2
Elrod	13	1	Shearn	1	1
Emerson	4	1	Sherman	69	3
Field	40	3	Sinclair	18	1
Fondren	8	1	Smith	9	2
Frost	7	1	Southmayd	17	1
Gallegos	16	1	St. George Place	11	1
Garcia	26	1	Thompson	2	1
Garden Villas	55	2	Tijerina	10	2
Harris, J. R.	28	1	Tinsley	21	1
Hartsfield	51	2	Wainwright	13	1
Henderson, N.Q.	18	1	Walnut Bend	34	1
Highland Heights	13	1	Wesley	11	1
Horn	13	3	Whittier	10	1
Isaacs	7	2	Young	20	3
Jefferson	24	1			
Total	–	–		**2,134**	**136**

Table 1- continued: Vision Partnership Participants (n=2,999) by School, 2013–2014

Middle Schools (n=15)		
School	**Students**	**# Clinic Visits**
Black	11	2
Burbank	64	2
Clifton	7	1
Deady	89	2
Fleming	4	1
Fondren	21	2
Grady	9	1
Henry	47	3
Holland	11	1
Johnston	13	1
Key	1	1
Ortiz	103	3
Pershing	24	5
Stevenson	12	1
Thomas	31	1
Total	**447**	**27**

High Schools (n=4)		
School	**Students**	**# Clinic Visits**
Challenge Early College	38	1
East Early College	87	2
Kashmere	12	1
South Early College	29	2
Total	**166**	**6**

Combined Schools (n=7)		
Crossroads	3	1
Gregory-Lincoln Center	55	2
Jane Long Academy	78	3
Pilgrim Academy	69	1
Rusk School	8	1
Wilson Montessori	11	1
Woodson K-8	28	1
Total	**252**	**10**

Table 2. Vision Partnership Program Participation by Grade Level, 2013–2014

Grade Level	Number	Percent
Pre-kindergarten	20	0.7
Kindergarten	102	3.4
1	404	13.5
2	189	6.3
3	638	21.3
4	312	10.4
5	601	20.0
6	113	3.8
7	304	10.1
8	144	4.8
9	28	0.9
10	50	1.7
11	57	1.9
12	37	1.2
Total	**2,999**	**100.0**

Source: Chancery, August 19, 2014; PEIMS 2013–2014

Table 3. Characteristics of All Identified Vision Partnership Participants and All HISD Students, 2013–2014

	Vision Partnership (N=2,999)		All HISD (N=210,716)	
	N	**%**	**N**	**%**
Gender				
Male	1357	45.2	107,157	51.0
Female	1642	54.8	103,559	49.0
Total	**2,999**	**100.0**	**210,716**	**100.0**
Race/Ethnicity				
Asian/Pacific Islander	44	1.5	7,573	3.6
American Indian/Alaska Native	3	0.1	433	0.2
African American	743	24.8	53,121	25.2
Hispanic/Latino	2,144	71.5	130,625	62.0
White	47	1.6	17,122	8.1
Two or more	9	0.3	1,842	0.9
No data	9	0.3	—	—
Total	**2,999**	**100.0**	—	—
*Economically Disadvantaged	2,749	94.3	169,856	80.6
*At-Risk	2,196	75.3	144,594	68.6
*Special Education	275	9.4	15,906	7.5
*LEP	1,112	38.1	62,413	29.6
*Gifted/Talented	366	12.6	144,594	15.6

Source: Chancery, August 19, 2014; PEIMS 2013–2014
Note: *Percentages may not total 100 due to rounding. Data for economic disadvantage, at-risk, special education, LEP, and gifted/talented students were available for 2,916 Vision Partnership students; therefore, percentages were based on 2,916 students.

Table 4. 2013–2014 Nurse Survey Responses for Reasons Students Were Referred and Did Not Attend Vision Partnership Clinics

Students did not return consent form		Students absent on clinic day		Parent refused participation		Vision corrected prior to clinic date	
Response	**N**	**Response**	**N**	**Response**	**N**	**Response**	**N**
None	17	None	28	None	30	None	17
1-5	19	1-5	32	1-5	24	1-5	30
6-10	9	6-10	2	6-10	0	6-10	8
11-15	6	—	—	11-15	2	11-15	2
16-20	4	—	—	16-20	0	16-20	3
21-25	4	—	—	21-25	1	21-25	1
26-50	1	—	—	26-50	1	—	—
More than 50	2	—	—	More than 50	2	—	—
I don't know	5	I don't know	5	I don't know	7	I don't know	6
Null	53	Null	53	Null	53	Null	53
Total	**120**		**120**		**120**		**120**

Table 5. Characteristics of Campus-based Screening Participants Who Received Vision Correction and Vision Partnership Participants for Whom STAAR Data Were Available, 2013–2014

	All HISD	All Screened Students (N=912)	Vision Partnership Participants (N=319)
	%	%	%
Gender			
Male	51.0	53.1	47.6
Female	49.0	46.9	52.4
Total	**100.0**	**100.0**	**100.0**
Race/Ethnicity			
Asian/Pacific Islander	3.6	1.1	0.3
American Indian	0.2	–	–
African American	25.2	16.3	19.7
Hispanic/Latino	62.0	79.3	76.5
White	8.1	2.2	3.1
Two or more	0.9	0.4	0.3
No data	–	0.7	
Total	–	**100.0**	**100.0**
**Economically Disadvantaged	80.6	92.6	93.7
**At-Risk	68.6	84.9	79.3
**Special Education	7.5	8.6	6.9
**LEP	29.6	50.9	38.9
**Gifted/Talented	15.6	14.0	15.7

Note: Vision Partnership participants are a subset of All Screened Students. **Percentages may not total 100 due to rounding. All screened students and Vision Partnership participant data for economic disadvantage, at-risk, special education, LEP, and gifted/talented students were available for 903 screened students and all Vision Partnership participants.

Appendix C

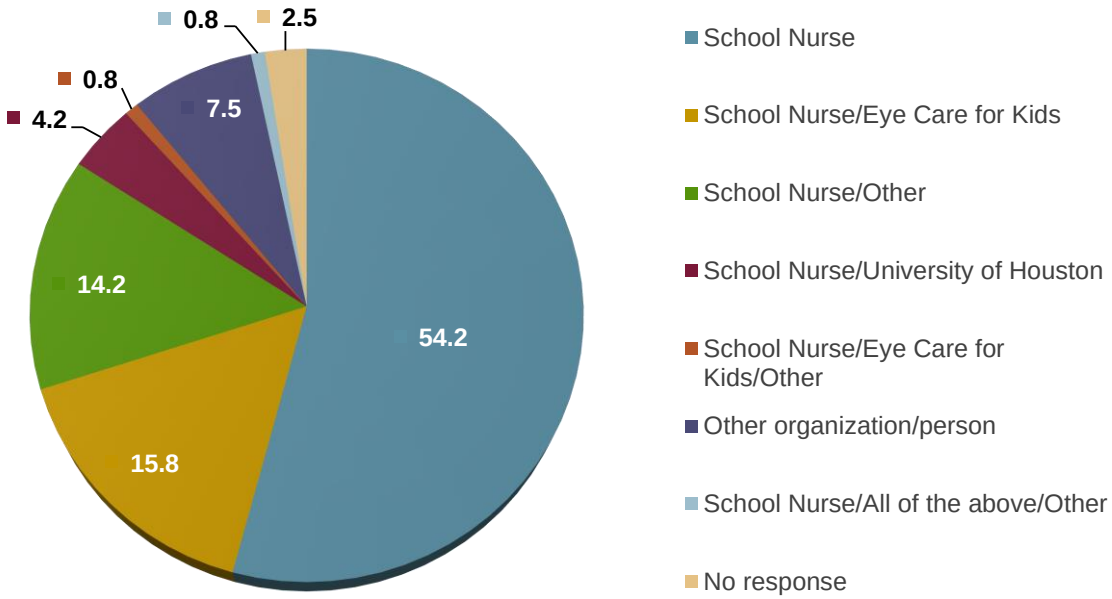
Additional Findings

The following data are provided to reflect information obtained from various accessible sources, but are inconsistent with the data presented in the body of the report. They are presented here to show variances found among the different data sources.

How many students participated in the HISD campus-based vision screenings in 2012–2013 and 2013–2014?

- All 120 of the 2013–2014 Nurse Survey respondents reported initial vision screenings for students were conducted on their campuses. **Figure 26** shows 90.0 percent of the school nurses were involved with conducting campus-based vision screenings in 2013–2014, including 54.2 percent of the nurses who reported they themselves conducted the screenings or helped other providers to conduct the screenings (35.8 percent). Unspecified service providers (7.5 percent) and non-respondents (2.5 percent) comprised the remaining 10 percent. A total of 16.6 percent of the nurse-respondents reported that Eye Care for Kids was involved with conducting initial screenings, while 22.5 percent of the nurses did not specify the service provider(s) involved (i.e., "School nurse/Other", "Other organization/person", "School Nurse/All of the above/other"). Another 4.2 percent of the respondents named the University of Houston in conjunction with themselves when asked who conducted the initial screenings on HISD campuses. When asked to specify other providers who conducted the screenings, the nurses named the following: Headstart, Alfreda Hicks, Diane Billings, and HDHHS/Harris County Health Department.

Figure 26. Percentage of HISD nurses and/or other persons or organizations that conducted campus-based vision screenings

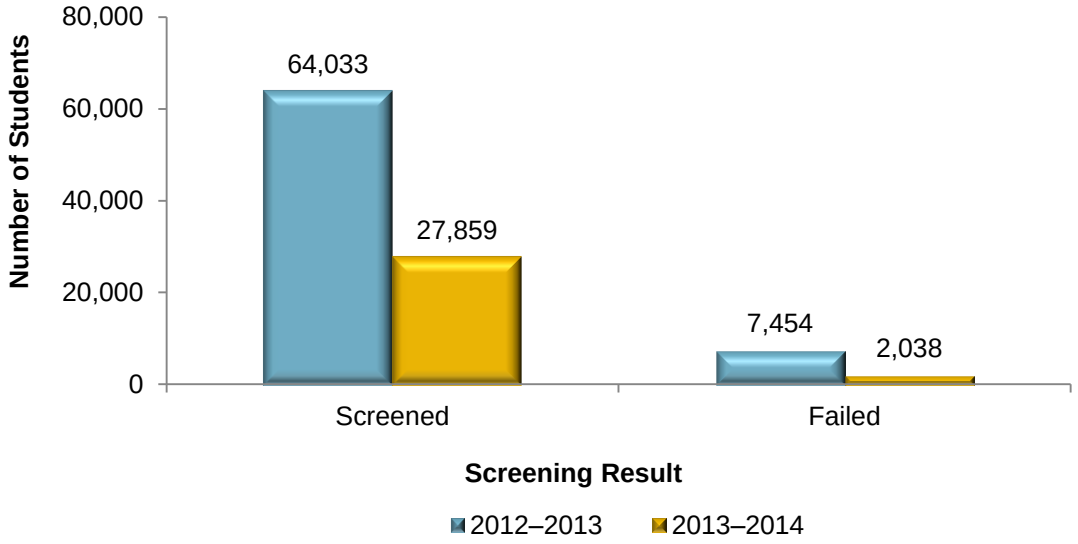


- Survey data for nurses at 120 schools in 2013–2014 (which represented 53.8 percent of the number of schools included in the 2013–2014 TDSHS data submitted by campus nurses, n=223) indicated an estimated 5,553 to 6,422 students on their campuses failed the initial vision

screenings. This represented 50.1 to 58.0 percent of the number of students designated as failing the screening in the 2012–2013 TDSHS report, fairly comparable to the proportion of TDSHS schools represented by survey data (50.1 to 58.0 percent versus 53.8 percent). Additional 2013–2014 Nurse Survey data indicated an estimated 2,428 to 2,972 students failed their initial vision screenings and still needed a follow-up vision examination in May 2014. This represented 80.6 to 98.6 percent of the number of students designated as "referred – not examined" in the TDSHS report, which is quite an over-representation considering the survey data included only 53.8 percent of the number of schools included in the TDSHS report.

- Student-level Chancery data submitted by campus nurses for 277 schools in 2012–2013 and 248 schools in 2013–2014 documented campus-based initial vision screenings for 64,033 students in 2012–2013 and 27,859 students in 2013–2014, a decrease of 10.5 percent in schools and 56.5 percent in students (**Figure 27**). Of the students screened in 2012–2013, 11.6 percent failed their initial vision screenings and 7.3 percent failed their initial screenings in 2013–2014. The large decrease in the number of records entered and retrieved for students who received campus-based initial screenings and in the number of students with records that indicate they failed their initial screenings from 2012–2013 to 2013–2014 may be artificial and result from missing data or inconsistent data entry by campus nurses from one year to the next.

Figure 27. Chancery results for the number students screened during campus-based vision screenings and the number of students who failed the screening, 2012–2013 and 2013–2014



- A comparison of TDSHS and Chancery results for the proportions of screened students who failed their vision screenings revealed that the Chancery results (11.6 percent in 2012–2013 and 7.3 percent in 2013–2014) were lower than the TDSHS results (12.3 percent in 2012–2013 and 11.9 percent in 2013–2014) by 0.7 percentage points and 4.6 percentage points in the respective years. In addition, Chancery results for the proportions of students who failed their vision screenings and were treated (40.6 percent in 2012–2013 and 49.1 percent in 2013–2014) showed proportions that were lower by 25.5 percentage points and 13.9 percentage points in the respective years than proportions found using TDSHS results (66.1 percent in 2012–2013 and 63.0 percent in 2013–2014). Finally, results for the proportions of students who failed their initial screenings, were examined, and did not need vision correction using TDSHS data (4.7 percent

students in 2012–2013 and 5.3 percent of them in 2013–2014) were higher by 2.3 percentage points in 2012–2013 and 0.9 percentage points in 2012–2013 than results using Chancery data (2.4 percent in 2012–2013 and 4.4 percent in 2013–2014).

- Survey data for nurses at 120 schools in 2013–2014 represented 48.4 percent of the 248 schools included in the 2013–2014 Chancery data. In comparison to survey respondents' estimations of (from 5,553 to 6,422) students on their campuses who failed the initial vision screenings, 2,038 students were designated as such in the Chancery report. The Chancery report represented only 31.7 to 36.7 percent of the estimated number of students reported through the Nurse Survey, indicating an under-representation of students who failed the initial vision screenings in the Chancery data.