



Lions Screen Kids Sight

Overview - Vision Screening Program

Introduction: This is a brief recap of the origination of the Lions Screen Kid Sight Program and briefly documents the program's highlights to-date. In 2018 several representatives from the Lions community in Yavapai County were approached by the Arizona Community Foundation (ACF) of Yavapai County to submit a grant request for a \$25,000 grant. They were Doug George and John Schmitt from the Prescott Noon Lions Club and Tom Kosel from the Prescott Sunrise Lions Club.

The objective of the grant was to support improvements in early student literacy through the fourth grade, by identifying student vision impairments. It was disclosed at that meeting, that there was currently a vision screening program in Yavapai County in a limited number of schools, administered by (YCESA). This program utilizes an advanced vision screener, also termed a photoscreener. After taking a survey of the elementary schools in Yavapai County that were not being screened by photoscreeners, we estimated that there were approximately 7,000 students in grades K-4 in 33 district, private and charter elementary schools.

We proposed to develop and set-up a pilot vision screening program in the county, for preK-4 school children using photoscreeners and to investigate various screening techniques. We selected 11 of the 33 schools in the pilot program that represented diversity in location, school size and school type. We planned to purchase 3 Welch Allyn Spot Vision Screeners at an estimated cost of \$21,000 with the funds from the grant. The balance of the grant funds were to be used for program expenses, including vision screening accessories and training expenses. The results of the pilot program would be used to set up an on-going vision screening program in subsequent years.

We proposed a vision screening program because the results of a local study revealed that a significant barrier to reading at grade level was unidentified vision impairment. This grade range was chosen by ACF because many studies show that third grade reading proficiency is a strong predictor of a child's future academic performance throughout high school and the likelihood of attending college. Our proposal specified vision screening using photoscreeners, because that is the most reliable vision screening method for grades preK-4. In addition, photoscreeners can identify the risk factors for Amblyopia. And, photoscreeners offer the additional advantage that they do not require the continued cooperation of the child being screened, because the test takes only a few seconds.

Program Development: Once we were notified that we were awarded the ACF Grant, we went to work to implement a pilot vision screening program. We attended numerous meetings to learn how vision screenings are run by Lions in AZ and how the advanced vision screeners work. We went to the AZ lions state convention and began talking to other clubs to see how they were running their vision screening programs. We generated a list of potential schools and met with the Superintendent of Yavapai Education Services Agency (YCESA), to learn how to access these schools and pick candidate schools for the pilot program. We began to investigate training options including the on-line training at the Lions Kid Sight USA website. We researched available advance vision screeners and purchased 3 Welch Allyn Spot Vision Screeners.

We also visited 9 Lions clubs in Yavapai County to recruit volunteers and recruited 23 volunteers who we named Lead Screeners. We set-up specific requirements to be a lead screener. These lead screeners were trained to both screen students with the Spot Vision Screener in 2018 and will lead teams of screeners that they train, to run screenings in the 2019 and beyond as the program expands. The 9 Lions clubs that participated were: – Bradshaw Mountain, Camp Verde, Chino Valley, Chino Valley Noon-Timers, Cottonwood, Prescott Evening, Prescott Noon and Prescott Sunrise, Prescott Noon Lioness

Program Results: By any measure this program was a big success. All the screening events ran without any major hitches and every school was very pleased with our program and wanted us to come back this year. Much of that can be attributed to thorough planning and to the efforts of our 23 Lead Screeners who worked together as Lions of Yavapai seamlessly.

Here are the numbers for that program: We trained 23 Lion Lead Screeners from 9 Lions and Lioness clubs from around the county. We ran 11 events county-wide, in district schools, charter schools and private schools of various sizes. We screened only elementary schools that were not being photoscreened by any other entity. We screened 1,258 students in grades preK through 4, out of an enrollment of 1,978 students, because we only screened those students who had signed parent/guardian consent forms, for a participation rate of 63.8%. We referred 104 students for diagnosis by a vision professional and had a program in place to follow-up with each school to help assure these students obtain eye care. We also had 5 students who were nonconforming in the color testing. Those students were not referred for professional diagnosis, but the schools were made aware and can follow their protocol to help those students with this challenge.

Below is a summary chart:

Number of schools screened: 11 Number of students screened 1258
Number of students referred 104 Percentage of Students Referred 8.3
No. of Inconclusives: 0 % Inconclusives: 0
Number of schools color tested: 7 Number of students color tested 91
Number of students Nonconforming 5 Percentage of Students Nonconforming 5.5
No. students enrolled: 1978 No. of students screened: 1258 Participation %: 63.6

Program Evaluation: There are many lessons learned and we had several major takeaways from this pilot program. First, none of the screenings conducted, resulted in an inconclusive result, of which we are proud. Second, we were in and out of these schools for screening events quicker than we imagined, with an average event time for the ten smallest schools of just over two hours, including set-up. At the largest school, we screened over 400 students in just over five hours, that included a long lunch break (3.7 hours of actual vision screening).

Third, we didn't know what impact requiring a signed consent form would have on the total number of students that would be available for screening. In this pilot program the impact was dramatic, as we screened an average of just 63.6% of the population of students in the selected grades for all eleven schools. That percentage varied from school to school. Fourth, all Lions Lead Screeners pitched in and did a great job for these events. Much of the success of this program can be directly attributed to their efforts. There appeared to be great comradery as Lions from various clubs worked together and every Lion was energized by the experience.

Vision Screening: In our pilot program, the calculated rates of students/hour for each Spot Screening station varied widely, with an adjusted average rate of 46.4 students/hour. For smaller schools this rate isn't as important, because the total screening time is relatively short. For larger schools,

however, we need to understand **what factors caused these fluctuations** in order to minimize the disruptions to the school day. The most significant factors we observed that adversely affected screening rates in order of decreasing impact were:

1. **Wait times between classes**;
2. **Class size**, where larger classes can have higher screening rates.
3. The learning curve for new Lead Screeners;
4. **Extra time spent screening** a small number of students that take longer than the average student, due wearing glasses or other challenging screening issues.
5. **Doing color testing during the vision screening event**, may have had a minor impact, because we only color tested first grade.

The **tripod with tripod platforms worked very well** and resulted in faster screening results and no inconclusive screenings. **Using two Lions for each screening station** also helped to quicken the screening process and both of these procedures should be considered as the standard format for screening, as it is much easier for the Lion doing the screening.

The Lions provided to the school the Pass or Refer results of each student's screening, without further detail. Lions gathered statistics to measure screening event performance, but took away no individual information. For students who pass, no further action was required. For those students that were Referred, the school agreed to communicate to parent or guardian that the screening indicated their child should be further examined by an eye care professional to investigate potential eye disorders. The Lions provided a sample referral notification letter. The school agreed to follow up in 6-8 weeks on such referrals for professional diagnosis to encourage attention to this potential learning challenge.

Color Testing: We added color testing to our screening events based on input from other programs. We purchased 6 of the Color Vision Testing Made Easy color test books, so that we would have two books for each vision screening kit. We did a limited amount of color testing during the pilot program using two Lions per color book in order to learn how best to implement this activity alongside of the vision screening activity. The rate for color testing for each color book was between 24 and 38 students/hour. Color testing was only done on first grade students.

School Interactions: The **agreements regarding tasks** the school and the Lions would perform to support the vision screening events **worked well in every school**. The Lions ran the vision screening events and the school staff managed the students during these events.

Planning & Communications: We believe that **thorough planning and good communications** are the guiding principles that will produce a successful outcome. The **planning** encompassed **defining an effective vision screening format, creating the documentation, recruiting Lions, effective training and developing productive interactions with the schools**. The **school interactions** included **providing documentation** and **meeting with the schools** to discuss the program and locations where the screenings would be held. Good communications included **contacting schools shortly before each event for final details** and sending those details to Lead Screeners including directions and maps. They further included sending thank you e-mails to schools and sending an event evaluation to the Lead Screeners and to the Schools.

Additional Program Details: We ran all events in the morning, which is the best time to screen younger students and the eleven screening events ran from mid-October to the end of November due to the fact that the program development started in mid-April. It is recommended that these screenings take place earlier in the school year, at each school's discretion. To accomplish this, schools were contacted in the spring before the summer break to set up the events for 2019.

The pilot program had a centralized format with all events being planned through a central committee (Vision Screening Coordinating Committee). Committee members were Doug George and John Schmitt from the Prescott Noon Lions Club and Tom Kosel from the Prescott Sunrise Lions Club. The scheduling was done by the Vision Screening Chairman Doug George who performed the duties of Vision Screening Coordinator. The reason we chose a centrally planned and scheduled format, was to strive for the best and most consistent outcome, due to the inexperience of the Lions involved. The results were that we achieved a consistent vision screening activity from school to school and the Lions involved gained valuable experience on how to run a program in the future

2019 Program: For 2019, the program was de-centralized, where five Lions visions screening teams set-up and ran most of the vision screening events. They were Chino Valley, Cottonwood, Prescott Evening, Prescott Noon and Prescott Sunrise. They were assisted by the Vision Screening Coordinator and three partial Lions visions screening teams, Camp Verde, Chino Valley Noontimers and Prescott Noon Lioness. These teams contacted the schools in the spring and we able to schedule vision screening events right at the beginning of the school year in late July - early August.

A complete set of documents was written with an attached Outline, giving instructions to the teams on how to execute each step required to set-up and run a vision screening event. The objective of the documentation was to provide uniformity of the program run by these teams. We expanded the program to 27 elementary schools and several grades above 4th grade were added at some schools.

Having individual teams running vision screening events required a mechanism to share program resources. These resources were 3 Spot Vision Screening Kits, each consisting of a Spot Vision Screener, tripod and platform, umbrella, roll of construction paper, 2 side tables, 2 color books, rolling crate with program accessories and plastic tote with documents and recording accessories. We used a sharing arrangement, where each of the three kits were signed out for a week at a time from the Vision Screening Coordinator. These kits were then returned to the Vision Screening Coordinator at the end that period for the next team to sign out.

To avoid scheduling conflicts, the kits were pre-reserved by each of the teams. In order to insure maximum coverage of these kits the following guidelines were used: Screen schools up to 200 students with a single Spot Screening Kit. Use two Spot Screening Kits for schools that fall in the range of 200 – 400 students and 3 Spot Screening Kits for schools over 400 students.

2019 Program Results: We vision screened 5869 students in 27 schools with a participation rate of 88.2%. Several of the schools had multiple events. The results were: 567 students had a result of Refer and 15 students had a result of Inconclusive, for a total of 582 students that were referred to see a vision professional. 41 students were identified as nonconforming in the color testing. The final results were recorded on a Final Tally Sheet for each event and send to Jeanette Russell, the Arizona Lions Kid Sight USA Coordinator. Grades above 4th grade were included in some schools as part of the vision screening program this year, due to the new vision screening legislation that went into effect in the middle of 2019. This included several middle schools. We also processed 36 applications for financial assistance and referred between 8 and 12 applicants to the Chino Valley and Prescott Valley clubs.

Below is a summary chart:

Number of schools screened: 27 Number of students screened 5869
Number of students referred 567 No. of Inconclusives: 15 Total 582

Percentage of Students Referred/inconclusive 9.9

Number of students Nonconforming 41

No. students enrolled: 6652_ No. of students screened: 5869_ Participation %: 88.2

The Vision Screening Coordinator stepped in and ran several events when Camp Verde vision screening teams was unable to do so. 38 Lions vision screeners from eight teams participated in 2019. The format for future years will follow the 2019 format.

Other Developments: There are several other related developments to announce. **First**, in 2019 the Jewish Community Foundation funded four PlusOptix vision screeners for use by Yavapai County district and charter schools, to run their own vision screening programs. Only one school on our list opted to go that route at that time. It is unclear what will happen in the future. **Second, new legislation was signed into law in June, 2019, mandating vision screening** in the State of Arizona. It had a modest impact on this program in 2019, but we waited for the rules to be written by ADHS to see what the full impact on this program would be. One **positive impact** was that vision screening was now **mandated in public and charter schools** eliminating the need for consent forms in those schools. As a result, the **participating rate jumped to 88.2%**. **Third**, Lion Bob Efros of the Cottonwood Lions joined the Coordinating Committee when his team purchased a Spot Vision Screener. **Fourth**, due to the **outbreak of the coronavirus pandemic in the winter of 2020**, ADHS rules governing vision screening were pushed back and there **were extra health procedures required for vision screening in the schools for 2020**. Note: The rules were pushed back further until 2023, when several revisions were released for public review and for stakeholders to comment live, at several on-line stakeholder sessions. The final rules were released in July 2024, to be in effect for the 2024-2025 school year. Fourth, Lion Bob Efros of the Cottonwood Lions joined the Coordinating Committee when his team purchased a Spot Vision Screener.

2020 Program Results:

COVID -19 virus had a dramatic impact on the number schools that participated in 2020 and the number of grades and students we were actually able to vision screen. This included vision screening several schools while they were in a hybrid learning format, which required screening over 2 days at each of those schools. Summary of results:

- a. **We vision screened 14 schools** in 15 separate events.
- b. 12 schools were from 2019 and two schools were new to this program.
- c. We did not screen 15 schools from 2019.
- d. **We vision screened 1739 students** which is 30% of the students we did in 2019.
- e. **We had 249 Refers (14.3%) and 47 Nonconforming**. Both of these categories were significantly higher percentages than 2019 for unknown reasons.
- f. Participation rates were not calculated this year because many students were not present due to COVID-19.
- g. **The effects of the 2019 AZ vision screening legislation also impacted the number of grades** that we were able to vision screen. Some schools opted to do the anticipated bare minimum.

2021 Program Results:

The effects of COVID – 19 had an impact on the number schools that participated and the number of grades and students we were actually able to vision screen, but to a lesser degree than in 2020.

Summary of results:

- a) We **vision screened 20 schools**
- b) We **vision screened 3360** students which is 57% of the students we did in 2019.
- c) We **had 447 Refers (13.3%) and 58 Nonconforming**

- d) Participation rates were not calculated this year because some students were not present for screenings.
- e) The effects of the 2019 AZ vision screening legislation continue to impact the number of grades that we were able to screen. Some schools opted to do the anticipated bare minimum.
- f) We surpassed a milestone of 10,000 students since the program's inception in 2018 by screening a total of 12,226 students.

2022 Program Results:

The effects of COVID – 19 had a minor impact on the number schools that participated and the number of grades and students we were actually able to vision screen,

Summary of results:

- a) We vision screened 25 schools
- b) We vision screened 4,269 students which is 73% of the students we did in 2019.
- c) We had 518 Refers (12.1%) and 53 Nonconforming
- d) Participation rates were again not calculated this year, as we had insufficient data on the current enrollments for many schools. However, in general participation rates, by grade, in most schools approached pre-pandemic levels. There are a few schools that did not participate again and we will need to determine their viability going forward. We will review whether to drop this calculation going forward without updated enrollment data. We did have a 97.3% participation rate for private schools.
- e) The effects of the 2019 AZ vision screening legislation continued to impact the number of grades that we were able to screen. Some schools opted to vision screen fewer grades.
- f) For 2023, there could be potential grade changes once ADHS vision screening rules are released.

2023 Program Results:

For 2023 - 2024, the program continued a regular vision screening schedule in most of the 22 schools that we screened, with a few exceptions. This is fewer schools than we screened the previous school year, as several of the schools were unavailable to screen. There were no known residual effects of COVID – 19 impacting the scheduling or vision screening operations this year as participation rates in most schools were at or near pre-pandemic levels

Summary of results:

- a) We vision screened 22 schools
- b) We vision screened 3,721 students
- c) We had 506 Refers (13.6%) and 15 Nonconforming
- d) Since 2018 we surpassed another milestone of 20,000 students. The total number screened since 2018 is 20,216 students.
- e) The effects of the pending release of ADHS rules had a modest impact on the number of grades that we were able to vision screen. Most schools agreed to vision screen our target range of preK-4 and several schools requested additional grades be screened.