NATIONAL ASSOCIATION OF
CHRONIC DISEASE DIRECTORS
Promoting Health. Preventing Disease.

EVALUATION REPORT
2023

NACDD Vision and Eye Health Program

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CHRONIC DISEASE DIRECTORS
Promoting Health. Preventing Disease.

The National Association of Chronic Disease Directors (NACDD) is a national association for public health practitioners that provides opportunities for peer-to-peer networking and information sharing, cross-jurisdictional collaboration, leadership development, and technical assistance. NACDD serves as a leading and influential voice for all those seeking to end the burden of chronic disease in all U.S. states, territories, and tribal communities.

Smith Research & Consulting LLC

Smith Research & Consulting LLC (SRC) is a research, evaluation, and strategy firm specializing in community health and health equity. SRC is committed to reducing and eliminating health disparities by providing clients with customized consulting services grounded in equity that aid in their journey to improve their organizations, communities, and society. SRC consultants have content expertise across various disciplines, including equitable evaluation, biostatistics, quality improvement, equity assessments, community engagement, program development, patient engagement, and research.

Acknowledgments

This report was made possible by the eight grantee organizations participating in this evaluation. We appreciate your candor and commitment to eye health in your community.

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EXECUTIVE SUMMARY

Since 2015, the CDC Vision Health Initiative (VHI) has funded the NACDD Vision and Eye Health Initiative. Its purpose is to help state, tribal, local, and territorial (STLT) public health agencies and their partners to build capacity to improve vision and eye health by assessing the level of vision impairment in their communities, building effective partnerships, and implementing practical and sustainable interventions. The NACDD Vision and Eye Health Initiative has provided financial support and technical assistance to eight STLT public health agencies and their partners, hosted an annual grantee meeting, and developed capacity-building resources for STLT agencies and their partners.

This evaluation aimed to assess the effectiveness of the NACDD Vision and Eye Health Initiative and identify program strengths and opportunities for improvement from the grantees' perspectives. A multiple-case study design utilizing qualitative methods was employed. The RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) conceptual framework was adopted for this evaluation to assess the impact of the NACDD Vision and Eye Health Initiative through a lens of sustainability, uptake, and capacity building. Eighteen people from eight grantee organizations were interviewed.

The findings detailed below reflect the grantees' experiences and perspectives on the NACDD Vision and Eye Health Initiative and its impact on their programs.

- Grantees use unique methods to enhance vision and eye health, but most focus on increasing access to care.

- The NACDD Vision and Eye Health Initiative funding opportunity attracted grantees because of its purpose, partners, and streamlined grant application process.

- The funding and resources provided through the NACDD Vision and Eye Health Initiative helped grantees to build and sustain their capacity to improve vision and eye health.

- Funding and resources provided through the NACDD Vision and Eye Health Initiative assisted grantees in building and expanding vision and eye health partnerships.

- The NACDD Vision and Eye Health Initiative funding helped grantees to increase their use of data to assess the burden of vision impairment and identify appropriate interventions.

- COVID-19 created significant challenges for grantees and their programs.

- Grantees are generally pleased with the NACDD Vision and Eye Health Initiative.

- Grantees recognize opportunities to expand their vision and eye health activities.

The distinctive blend of NACDD Vision and Eye Health Initiative funding, community partnerships, and public health leadership helped the grantees implement interventions that met members of their community where they were, shaped current and future public health strategies for vision and eye health, and created new partnerships. Grantees are performing vision and eye health training and services across more than 150 counties in the U.S., many of which are rural and economically depressed areas. Each intervention uniquely improved vision and eye health in a data-informed manner and responded to community needs. All the grantees were clear that the future of improving vision and eye health across all populations depends on integrating eye health across multiple systems (e.g., school, social services, public health, healthcare, and more) to improve overall health and well-being.

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INTRODUCTION

Visual impairment (VI) and blindness affect approximately 12 million persons over age 40[1]. Globally, at least 2.2 billion have VI.[2] Common vision and eye problems that adults experience include cataracts, glaucoma, amblyopia, refractive errors, age-related macular degeneration, and diabetic retinopathy. Undetected and uncorrected vision impairment has resounding effects on the lives of patients and their families. Unaddressed visual impairment can result in significant emotional (e.g., depression, anxiety), physical (e.g., risk of fall), and economic problems (e.g., job loss, disability). Researchers have estimated that the economic cost of significant vision problems is $134.2 billion annually ($98.7 billion in direct costs and $35.5 billion in indirect costs).[3] Vision problems are not specific to older adults; childhood vision problems are quite common.

Childhood and adolescent vision problems range from refractive errors to permanent VI and blindness. Vision problems can significantly impact learning and other sports and social development activities. Children's eye health can change quickly. It is a common practice for children to be screened by a family doctor, by a pediatrician, or at school for signs of vision problems. Vision screenings are designed to identify the need for additional eye care through a comprehensive eye exam. However, several barriers prevent children and adolescents from receiving comprehensive eye exams and treatment. These challenges include lack of access to eye care services, lack of insurance to cover eye care, economic instability, and their caregivers' low level of knowledge about the importance of eye care. Many VI issues among children, such as refractive errors, are preventable but often go uncorrected.

COMMON VISION PROBLEMS AMONG ADULTS

Refractive Errors: Eye conditions that include myopia (nearsightedness), hyperopia (farsightedness), and astigmatism (when the cornea or lens has an abnormal shape).

Amblyopia (lazy eye): An eye condition that occurs when one eye has reduced vision because of a communication error between the brain and the affected eye.

Strabismus (crossed eyes): An eye condition that can affect one or both eyes when the eyes do not focus on the same object at the same time.

Convergence insufficiency: An eye condition that affects how the eyes work together when looking at objects close up.

Integration of vision and eye health awareness and programming across health systems has the potential to influence other drivers of poor health, such as poverty, mental health problems (e.g., anxiety, worry, frustration, and social withdrawal), educational performance, avoidable mortality and morbidity, rising healthcare costs, and other health inequities.[4] [5] [6] [7] However, eye care is poorly integrated within health care systems, even though eye and vision health have significant connections to other public health issues such as diabetes and smoking. Too often, health or vision insurance does not fully cover eye care interventions, which can leave people with unaffordable deductibles and financial hardship.[8] [9] Federal, state, and local programs do not commonly fund eye and vision health interventions.[10] Models for effective integration of eye and vision health programs are scant. Moreover, researchers have not yet determined the impact of the COVID-19 pandemic on eye care and VI.

Despite poor integration, there are promising practices for integrating vision and eye health into public health. Nearly 20 years ago, the NACDD, the CDC, and Prevent Blindness America collaborated to create and execute a vision and eye health integration concept in state health departments.[11] These efforts resulted in several initiatives that address and promote vision preservation activities in state public systems. Among them is the NACDD Vision and Eye Health Initiative.

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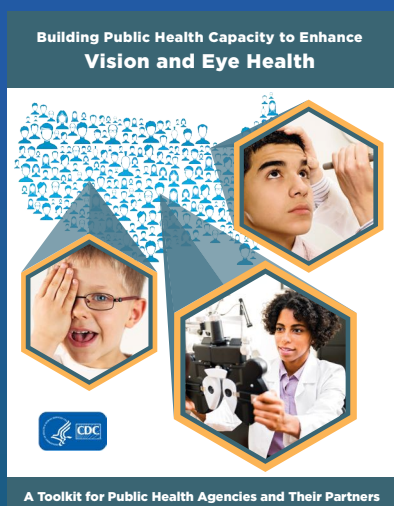
Building Public Health Capacity to Enhance Vision and Eye Health: A Toolkit for Public Health Agencies and Their Partners[12] is a toolkit that the NACDD and CDC published to aid public health agencies and their partners in improving vision and eye health in their communities through assessment, partnership, implementation of interventions, and the evaluation of their impact.

BACKGROUND

Since 2015, the CDC Vision Health Initiative (VHI) has funded the NACDD Vision and Eye Health Initiative. Its purpose is to help state, tribal, local, and territorial (STLT) public health agencies and their partners to build capacity to improve vision and eye health by assessing the burden of VI and eye diseases, building effective partnerships, and implementing practical and sustainable interventions. The NACDD Vision and Eye Health Initiative has provided financial support and technical assistance to eight STLT public health agencies and their partners, hosted an annual grantee meeting, and developed capacity-building resources for STLT agencies and their partners. These capacity-building resources are described in the text box below:

The overarching objectives of the VHI are to promote systems change to prevent vision impairment and promote eye health. A vital goal of this funding is to support the assessment of vision impairment in specific communities and the implementation of interventions that build the capacity of public health departments to enhance vision and eye health. Grantees are tasked with documenting the burden of vision impairment and implementing promising interventions to improve vision and eye health. In doing so, they must engage in capacity building with public health departments with attention to sustainability.

- A toolkit for public health agencies and their partners,

- Profiles describing the burden of vision impairment in each state,

- A series of fact sheets and issue briefs, and

- A national online resource center for vision and eye health.

EVALUATION OVERVIEW

This evaluation aimed to assess the effectiveness of the NACDD Vision and Eye Health Initiative and identify program strengths and opportunities for improvement. It is important to note that this evaluation did **not** assess grantee effectiveness; instead, it investigated grantee perspectives on and experiences with the NACDD Vision and Eye Health Initiative.

METHODOLOGY

APPROACH

This evaluation employed a multiple-case study design using qualitative methods. A multiple-case study design explores two or more cases to investigate the same phenomena. The eight grantees have undertaken different approaches to build their capacity to improve eye health. The evaluators documented grantees' approaches and experiences to understand differences and similarities across cases and draw cross-case conclusions.

CONCEPTUAL FRAMEWORK

The RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) conceptual framework was adopted for this evaluation. A common and valuable tool in research and evaluation, a conceptual framework helps align programs and research questions with existing theories and concepts to provide a basis for interpreting findings. RE-AIM is a framework used heavily to plan and evaluate public health interventions. It aids in assessing the impact of an intervention by evaluating the dimensions considered most relevant to real-world implementation with the end goal of understanding uptake and sustainability. RE-AIM addresses five dimensions of the individual- and setting-level outcomes that are important to program impact and sustainability:

Reach is the absolute number, proportion, and representativeness of individuals participating in each intervention or program.

Effectiveness refers to the impact of an intervention on important outcomes and includes adverse effects, quality of life, and economic outcomes.

Adoption is the absolute number, proportion, and representativeness of settings and intervention agents who initiate a program.

Implementation refers to the intervention agents' fidelity to and adaptations of the intervention and associated implementation strategies, including consistency of delivery as intended and the time and costs.

Maintenance is how a program or policy becomes institutionalized or part of routine organizational practices and policies.

The RE-AIM model provides a frame for viewing each grantee's uniqueness and commonalities individually and across all of the grantee organizations. It is a meaningful approach to assessing the NACDD Vision and Eye Health Initiative because it provides a valuable roadmap for assessing all components of program development. The model also helps to ensure consideration of sustainability and capacity building, which program evaluations often miss.

EVALUATION QUESTIONS

The evaluation sought to answer the following research questions.

Reach

*   What drove grantee interest in the NACDD Vision and Eye Health Initiative?

Effectiveness

*   What are grantees' and other key stakeholders' perceptions of the program's meaningfulness beyond financial support?

Adoption

*   How has the NACDD Vision and Eye Health Initiative helped build an ecosystem of vision and eye health improvement for the grantees and their partners?

Implementation

*   What are the strengths of the NACDD Vision and Eye Health Initiative?

*   What/Where are the opportunities to improve the NACDD Vision and Eye Health Initiative?

Maintenance

*   In what ways has the program meaningfully and effectively addressed capacity building for the grantee?

*   In what way(s) does the program complement or support the missions of the CDC VHI and NACDD?

DATA COLLECTION

The evaluators conducted semi-structured interviews with each of the eight grantees via Zoom® in January and February 2023. Semi-structured interviews allow respondents to respond to pre-determined questions and have the latitude and freedom to talk about what is of interest or importance to them. Semi-structured interviews are most appropriate when the interviewer must dig deeper for critical comments and insights. The same interview protocol (see **Appendix A**) was used with all grantees.

Evaluators often conducted interviews with multiple individuals from the grantee organizations to gain different perspectives. Eighteen people were interviewed. Two members of the evaluation team attended each interview.

DATA ANALYSIS

Following a thematic analysis approach, three coders trained in qualitative data analysis reviewed the transcripts. Thematic analysis is a method of analyzing qualitative data by reading through it to identify patterns of meaning and themes. The analysis team conducted a line-by-line review of each transcript and independently identified emerging themes for each question. After they completed independent coding, the analysis team compared coding schemes to identify agreements and resolve disagreements. They subsequently completed a review in which they refined the themes collectively.

The Alabama Lions Sight Conservation Association, Inc.: Traveling the Road to Comprehensive Eye Care in Rural Alabama

ORGANIZATIONAL OVERVIEW

Established in 1944, the Alabama Lions Sight Conservation Association, Inc. (ALSCA) has provided funds for diagnosing and treating eye diseases and defects in Alabama's underserved communities. In addition, the organization provides thousands of children and adults annually with preventative vision health services such as eye examinations, glasses, surgeries, anesthesia, medically necessary contact lenses, and prostheses. Since its inception, ALSCA has helped more than 300,000 people by honoring its mission to promote sight conservation through research, education, detection, and treatment.

PROGRAM DESCRIPTION

ALSCA's National Association of Chronic Disease Directors (NACDD)-funded project entails building the capacity of health departments to expand a comprehensive mobile vision program. A component of ALSCA's portfolio includes a Mobile Eye Clinic (MEC) outreach program that rotates across rural Alabama to provide comprehensive vision examinations, medical surgical eye care, glasses, and related health education. The MEC is a vehicle that supports ALSCA in achieving its mission to provide vision care to medically underserved and economically disadvantaged children and adults by enabling personnel to reach communities across the state, serving them where they live. Through the MEC, staff consisting of ophthalmologists, nurses, medical students, technicians, and volunteers examine clients for refractive error, diseases or anomalies of the eye and body, as well as any other condition affecting the eye or vision. Staff also refer patients for further treatment of any eye condition or disease and, when needed, offer free transportation to follow-up care through Kid One Transport, which is available to children and expectant mothers.

The Alabama Lions' first Mobile Eye and Vision clinic has hit the road to bring eye care to thousands of underserved Alabamians. Photo Credit: Michael Tomberlin/Alabama News Center

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

Building capacity for comprehensive vision care in rural and underserved communities

The MEC has effectively facilitated access to comprehensive vision care for Alabama's underserved communities. Instead of screening or triaging patients to care, ALSCA's innovative NACDD-funded program brings comprehensive eye care to rural areas across the state that generally have poor access to vision care. In addition, through a partnership with the University of Alabama, ALSCA connects patients to specialty care where they can receive surgery or treatment for vision conditions like diabetic retinopathy, severe glaucoma, and tertiary syphilis for little to no cost. Finally, in collaboration with the Alabama Department of Public Health (ADPH), ALSCA has expanded its MEC to serve more than 60 ADPH sites throughout the state.

Training public health staff to perform comprehensive eye examinations

Over multiple NACDD funding cycles, ALSCA has trained ADPH staff to provide vision screenings to patients and refer them for a comprehensive examination with the MEC. In 2022, the MEC visited over 60 ADPH clinics in 23 counties. To date, the MEC has served over 500 patients through referrals made by ADPH staff. Furthermore, ALSCA has collaborated with ADPH sites to market the MEC throughout the counties served and to manage clinic schedules during site visits. ADPH staff also educate patients about diabetes and allow MEC patients to receive diabetes education via telehealth technology.

ALSCA has helped more than 300,000 people by honoring its mission to promote sight conservation through research, education, detection, and treatment.

CHALLENGES

ALSCA has encountered financial challenges in keeping its vehicle and equipment maintained.

The MEC travels miles of roads in poor condition, resulting in vehicle wear and tear, costing more than $46,000 annually. Unfortunately, extramural funding does not cover these expenses. Another challenge that affects MEC operations is the need for more significant funding for vision care to reduce eye health disparities. The NACDD Vision and Eye Health Initiative is one of the few funding mechanisms that support this work.

SUCCESSES

By delivering the necessary vision services to rural communities without fees and complex paperwork, the MEC responds to unmet healthcare and social needs and serves individuals who would otherwise need more time, resources, and the ability to travel to traditional clinics. The MEC is equipped to provide accessible and affordable comprehensive vision care throughout rural Alabama, connecting patients to broader community resources and successfully building capacity into vision and eye care.

The MEC embodies a sense of visibility and accessibility that eliminates logistical barriers to accessing vision and eye care, such as transportation issues, difficulties making appointments, and complex administrative processes. Furthermore, because MEC personnel drive into rural communities across the state, they have gained their trust, inspiring them to take more charge of their vision and eye health and regularly follow up. Finally, MEC has completed plans to launch a second mobile truck to reach more individuals across the state.

NEXT STEPS / FUTURE DIRECTIONS

In the future, ALSCA would like to expand into all 67 counties statewide to serve over 3,000 patients annually. With expansion comes the need to train additional ADPH staff to 1) conduct vision screenings and risk assessments and 2) refer patients to the MEC. Lastly, ALSCA will continue to pursue funding to support future MEC expansion.
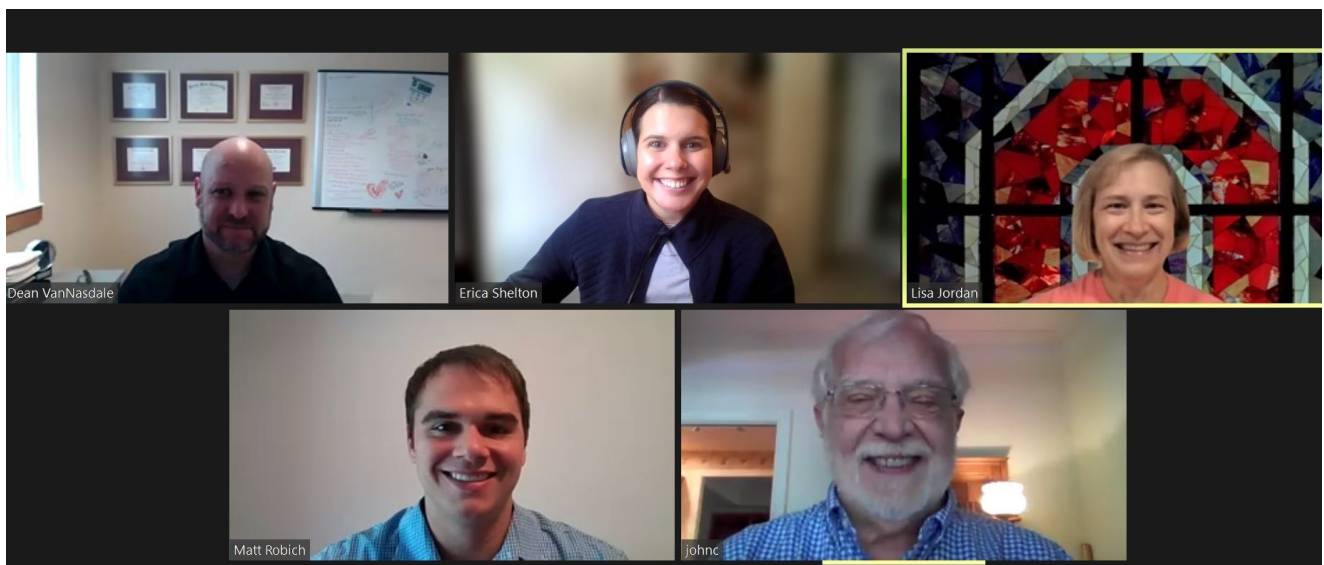
Ohio State University College of Optometry: Connecting Optometry and Public Health

ORGANIZATIONAL OVERVIEW

The Ohio State University (OSU) is home to seven science colleges where novel discoveries and innovation happen through interdisciplinary collaborations that seek to address the changing health needs of diverse communities throughout the state. Founded in 1914, the College of Optometry is a public health-oriented program that aims to conduct excellent research in vision and science and to provide state-of-the-art optometric care to patients and families throughout the state.

PROGRAM DESCRIPTION

In its National Association of Chronic Disease Directors (NACDD)-funded project, OSU partners with the Ohio Department of Aging (ODA) and uses national datasets, including the Centers for Disease Control and Prevention (CDC) Vision and Eye Health Surveillance System (VEHSS), to understand the distribution of vision impairment, unmet eye care needs, and eye care utilization for Ohioans and to streamline interventions to improve vision care access and utilization across the state. The NACDD-funded project goals are informed by Healthy People 2030 and include 1) analyzing national and state-specific data to assess determinants of vision impairment and disparities, 2) disseminating findings to stakeholders and broader audiences to increase uptake and use of research, and 3) developing and strengthening vision health surveillance capacity in the state of Ohio.

Team Photo. Dean VanNasdale (top left), Erica Shelton (top middle), Lisa Jones-Jordan (top right), Matt Robich (bottom left), and John Crews (bottom right).

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

Analyzing national and state-specific data to assess vision impairment and disparities

Given that vision impairment is commonly managed as an isolated condition, the OSU College of Optometry research utilizes a public health lens to investigate the associations between vision impairment and social determinants of health. OSU has helped quantify the impact of vision impairment, identify areas of research needed to reduce vision impairment, and inform policy development. National and state-specific data analysis has demonstrated higher rates of chronic conditions and higher rates of poor health outcomes in individuals who report vision impairment.[12] Furthermore, poor physical health impacted people across the life spectrum rather than disproportionately impacting older population cohorts (i.e., age 40 to 65; ≥ 65).[13] Additionally, research by an OSU graduate student found that the prevalence of vision impairment in Ohio adults was 2.8%, with women reporting higher rates than men.[14] Finally, locations with higher numbers of vision care providers also had lower vision impairment prevalence rates, although unmet vision care needs to persist.[15] These research findings indicate that barriers to vision care services and access remain an important issue. Individuals may need vision care services.[16] While individuals may be in close proximity to vision care providers, they may not be able to access or utilize those services due to upstream barriers.[17] OSU's future work will identify and quantify the magnitude of barriers to vision care and access and will be part of OSU's evidence-based approach to guide intervention strategies and align with Healthy People 2030.[18]

Disseminating findings to increase uptake and use of research

A second core goal of OSU's NACDD-funded project is to effectively disseminate research findings to diverse stakeholders and audiences, including public health agencies and their partners, to maximize uptake and use and to translate knowledge into action. OSU researchers utilized many strategies, including conference presentations, manuscripts, invited speaking engagements, and graduate coursework, to disseminate findings and increase awareness of the broader impact of vision impairment on health outcomes across Ohio and the nation. Findings from population health data analyses have been incorporated into educational materials and led to the development of state profiles, which present an overview of the impact of vision impairment and comorbid conditions in every US state. Findings were also included in a vision health toolkit developed by the CDC and NACDD.

> **OSU has helped quantify the impact of vision impairment, identify areas of research needed to reduce vision impairment, and inform policy development.**

Training and capacity building are essential to strengthening vision health surveillance and improving preparedness to detect, assess, and act on vision impairments across Ohio more effectively and efficiently.

Developing and strengthening vision health surveillance capacity in the state of Ohio

Finally, training and capacity building are essential to strengthening vision health surveillance and improving preparedness to detect, assess, and act on vision impairments across Ohio more effectively and efficiently. OSU's College of Optometry Vision Science graduate program has incorporated epidemiological surveillance principles into the program's coursework, providing students with unique experiences and skills related to vision health surveillance. This tailored training will allow current and future optometry students to serve as valuable resources to state health departments across the state and nation. Because vision impairment is associated with physical and mental comorbidities, addressing the growing problem of visual impairment requires a skilled, coordinated, inter-professional, and public health response. While championing efforts to improve access to eye care and identifying populations at risk for vision impairment, OSU's College of Optometry and College of Public Health are co-developing a vision-specific Master's in Public Health (MPH) concentration. The curriculum will provide students with the skills to 1) assess community needs for vision care services, 2) develop and evaluate vision health and education programs, and 3) foster public awareness of vision health.

CHALLENGES

Despite its successes, OSU has experienced challenges from both funding and capacity perspectives. Due to the nature and length of the funding period, researchers and partners can only plan project activities that can be completed in 12 months or less. As a result, outcomes are limited in scope due to the short funding period. Additional funding opportunities with longer funding periods (e.g., 3 to 5 years) would allow researchers to build and expand upon project goals and to more clearly communicate the relationship between project activities and their intended effects and outcomes. Another challenge is developing the capacity to educate and train students to help with the research. The aforementioned "MPH degree with a specialization in vision and eye health, a collaboration between OSU's College of Optometry and the College of Public Health, should help to mitigate this challenge. Incorporating a public health lens into optometry should assist optometrists with clinical decision-making, support optometrists' efforts to improve vision and eye healthcare in their communities, and inform the development of policies and interventions to support eye health.

SUCCESSES

OSU's College of Optometry has had phenomenal success, particularly in bridging the gap between optometry and public health across the institution and analyzing publicly available data to assess health needs in Ohio. OSU's work has identified locations where vision impairment is high and access to vision care is low. Ongoing research illuminates the variables contributing to vision impairment and poor health outcomes. Understanding how these variables interact and are linked to disparities in vision health across the state has been one of OSU's biggest successes. OSU's College of Optometry has also successfully built capacity for vision health by educating and training graduate students and working collaboratively with researchers in the College of Public Health. Research conducted by students and faculty has assessed the prevalence of vision impairment, identified unmet vision care needs, and described the geographic distribution of vision care providers. An additional area of success involves the push for interdisciplinary care and research collaboration. The OSU team published an article that gave optometrists and optometry students a better understanding of the importance of and need for improved interdisciplinary care. The article provides context and resources for those interested in advocating for better integration of vision into academic centers and healthcare more broadly. From an education standpoint, OSU's Health Equity Scholars Program provides interprofessional students with the resources to expand their knowledge and skills to improve health outcomes, including vision health outcomes, in diverse populations through equity and inclusion. The participation of optometry students in this unique program provides an educational opportunity to bridge optometry and public health and enhance the visibility of vision health across the university. OSU aims to continue participating in the program in the future, hopefully leading to new collaborations with other departments that result in meaningful and competitive student projects.

Health Equity Scholars Program provides interprofessional students with the resources to expand their knowledge and skills to improve health outcomes, including vision health outcomes, in diverse populations through equity and inclusion.

NEXT STEPS / FUTURE DIRECTIONS

OSU research findings call for including vision care in interdisciplinary approaches to chronic disease management. Future research is focused on building capacity and developing a sustainable program that integrates public health and epidemiology more fully into the optometry and vision science curricula. The aim is to expand the vision-specific work beyond the optometry department and into other disciplines such as public health. OSU would like to replicate their successful initiatives in other states and incorporate similar content into different optometry programs. With the assistance of NACDD funding, OSU has also made significant progress in demonstrating the importance of vision within an integrated care model that takes a holistic approach to addressing patient needs. To further enhance their research, OSU plans to utilize additional datasets and electronic health records to gain a better understanding of the underlying disease mechanisms related to comorbidity findings observed in health surveillance survey datasets.

Prevent Blindness Georgia:
Reaching Adults and Youth through Collaboration and Care Coordination

ORGANIZATIONAL OVERVIEW

Established in 1965, Prevent Blindness Georgia (PBGA) focuses on promoting a continuum of vision care, touching the lives of more than 35,000 people each year. PBGA's mission is fourfold: 1) train and certify adult and children's vision screeners and screening instructors, 2) provide screening to adults and children throughout the state, 3) disseminate educational materials and messages about the early detection of eye disease and prevention of accidents that can cause permanent loss of sight, and 4) work with stakeholders at the local, state, and national levels to build grassroots advocacy movements and institutional partnerships to improve our nation's public health policies.

PROGRAM DESCRIPTION

PBGA is increasingly concerned with and focused on the growing incidence of adult-onset blindness fueled by an aging population and the increasing prevalence of diabetes. PBGA's National Association of Chronic Disease Directors (NACDD)-funded project seeks to both build the capacity of the Georgia Department of Public Health and address social determinants of health by 1) providing parent education about child vision healthcare services available through the Department of Public Health and the Head Start network, 2) building capacity to provide a robust system for vision screening certification, and 3) enhancing PBGA's networking and referral system by building a database to track referral outcomes. In addition, NACDD funding for PBGA's project supports expanding their Vision Outreach (VO) Program to vision clinics in Macon-Bibb County through a partnership with the Macon-Bibb County Health Department. The VO program provides vision screenings, eye exams, digital retinal imaging, and glasses.

A young girl receiving an eye exam testing for eye health in the ophthalmologist office By Alexis S/peopleimages.com

PBGA has developed a customized database to track referral outcomes. This database has enabled PBGA to track not only patient outcomes but their services in a systematic manner.

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

Providing parent education about child vision and eye health

PBGA has partnered with public health departments, free clinics, re-entry programs, schools, and other social services organizations to provide coordinated preventative vision health services throughout Georgia. Through previous NACDD funding cycles, PBGA has provided free eye exams and glasses to children enrolled in Hall County Public Schools, based on the results of vision screenings that they provided. However, even when recommended based on the results of a vision screening, 50% of parents or caregivers did not schedule a free vision appointment for their child. Of those who scheduled an appointment, approximately 40% failed to show up for the child's appointment.

Through subsequent NACDD funding, PBGA identified several barriers to parent participation in the free clinics, including lack of transportation, lack of childcare, language barriers, mistrust of healthcare systems within immigrant populations, and misconceptions about the value of prescription eyeglasses. Based on feedback from caregivers and parents, PBGA is developing bilingual educational materials for public health offices, pediatric clinics, and schools that provide information for parents and caregivers on the importance of pediatric vision care and the importance of early detection of problems, dispelling vision and eye health myths, and where to seek assistance.

Building a database to track referral outcomes

PBGA has developed a customized database to track referral outcomes. This database has enabled PBGA to track not only patient outcomes but their services in a systematic manner. Additionally, data collected can now be used to assess service referral patterns, identify metrics to prompt referrals, and determine factors that influence vision and eye referrals, thereby understanding the vision needs of Georgia's constituents.

Building capacity to provide a robust system for vision screening certification

PBGA has also strengthened its capacity to offer training and certification to public health staff, school nurses, and other people working with young children by developing and launching a learning management system (LMS). The LMS connects screeners to PBGA for the most recent information on community resources available and to one another for sharing best practices. Additionally, it notifies vision screeners of upcoming certification expiration dates and serves as a portal to track training and referrals.

CHALLENGES

PBGA has encountered multiple challenges related to the COVID-19 pandemic, including working within the constraints of county regulations to screen clients and ensuring adequate access to vision care services. Once COVID-19 mandates were lifted, many optometrists, ophthalmologists, and eye care clinics found themselves working beyond capacity to follow up with their patients, which prevented some from taking on new patients.

PBGA also faces ongoing challenges related to connecting children to care. For example, once a child is diagnosed with a complex vision impairment like amblyopia, it can be challenging to access care because there are only 12 pediatric ophthalmology practices in Georgia. Another obstacle has been parent participation in free child vision clinics due to transportation problems, childcare issues, language barriers, mistrust of healthcare systems within immigrant populations, and misconceptions about the value of prescription eyeglasses. PBGA has already taken significant steps to address these challenges, described in Successes below.

More emergent challenges involve staffing and location. Because PBGA serves the entire state of Georgia, PBGA staff must be onsite at multiple locations across the state. It is only possible to hire staff part-time due to needing them approximately five days out of the month at specific locations. This has led PBGA to build a network to utilize medical students and trained volunteers.

SUCCESSES

With the support of NACDD funding, PBGA has built partnerships with organizations across the state to support long-term, sustainable infrastructure to provide coordinated preventative vision health services. For example, PBGA has developed educational materials to increase awareness of vision and eye health and provide information to parents about pediatric vision development and care. These educational materials have been launched in schools, clinics, and doctor's offices across the state. Increasing parental awareness and understanding of the eye and its role in child development can help increase parental follow-through with vision care for children who fail vision screenings. Another success is the expansion of vision outreach programs, which have certified significantly more vision screeners, including in remote, rural areas. Furthermore, PBGA is the only program that offers a three-year certification for school nurses or medical professionals in vision screening.

With NACDD funding, PBGA has extended its vision screening platform to be in-person and online. PBGA has been able to expand services to the nursing school community, who provide complimentary exams and glasses for as many children as possible in schools across the state. This ultimately leads to children being identified for vision care earlier, increasing early intervention and resulting in healthier vision, tremendous academic success, and fewer long-term, permanent vision problems. PBGA has also expanded and updated its internal database from paper to electronic, saving screeners time and allowing PBGA to collect comprehensive data on referrals, which will offer a greater understanding of the vision needs of Georgia's children. Additionally, funding from NACDD has given PBGA a powerful platform to launch an equipment campaign that will provide new equipment for the children's vision screening program and expand more thoroughly throughout the state. In addition, PBGA has launched a permanent clinic in the Macon area. Lastly, the organization is partnering with local optometrists to provide pro bono or low-cost services for children needing care.
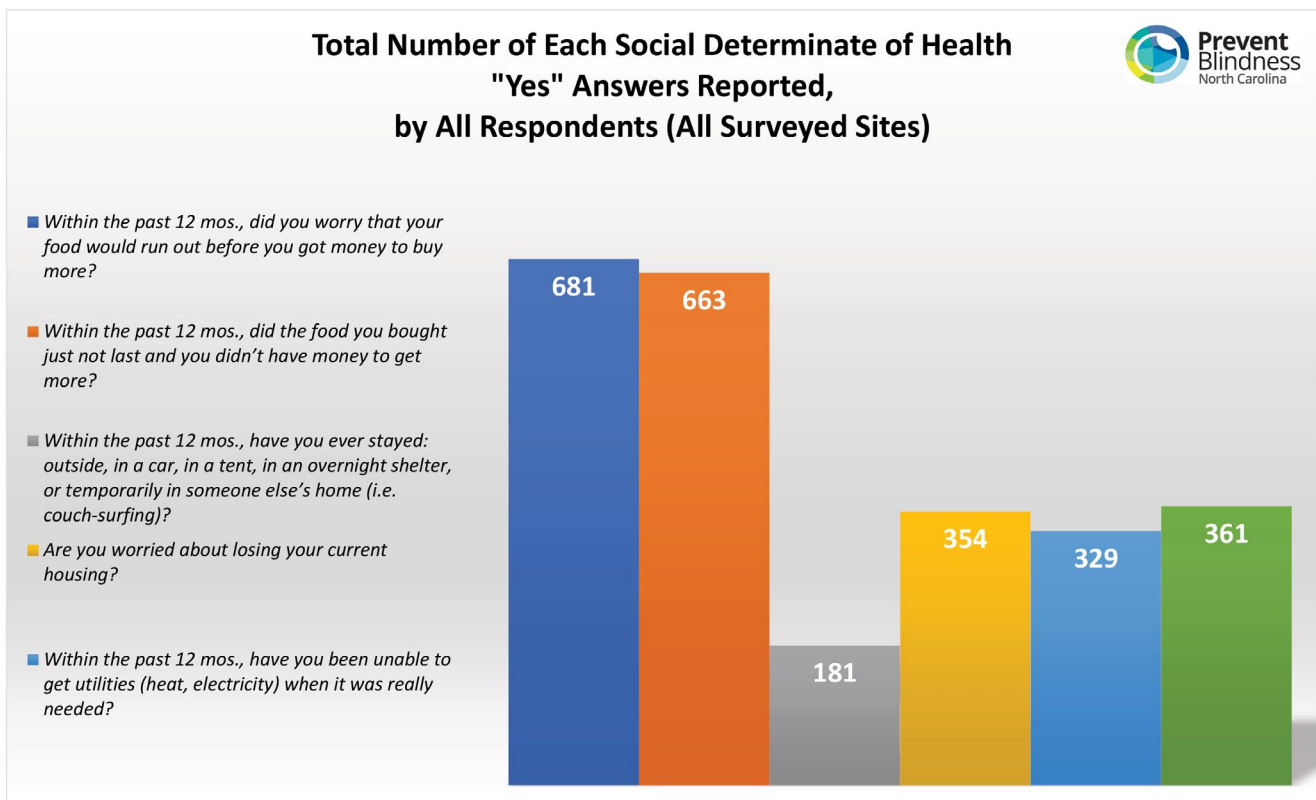
NEXT STEPS / FUTURE DIRECTIONS

PBGA would like to grow by providing clinical services to more school districts, not only for the pre-K population but also for school-aged children. This will entail engaging superintendents across Georgia. PBGA is on track to serve more than 40,000 pre-K students. In addition, PBGA would like to increase its screening rates to pre-COVID-19 levels.

ORGANIZATIONAL OVERVIEW

Prevent Blindness North Carolina (PBNC), also known as the National Society to Prevent Blindness – North Carolina Affiliate, Inc., delivers direct service programs designed to preserve sight through screening, publications, safety, education, information, and referral through volunteer efforts. The organization's mission is to reach people before blindness strikes. PBNC's key program areas include 1) preschool children's vision screening program, 2) school-age children's vision screening training and certification program, 3) adult vision screening program, and 4) PBNC financial resource (voucher) programs.

Total Number of Each Social Determinate of Health "Yes" Answers Reported, by All Respondents (All Surveyed Sites)

- Within the past 12 mos., did you worry that your food would run out before you got money to buy more?
- Within the past 12 mos., did the food you bought just not last and you didn't have money to get more?
- Within the past 12 mos., have you ever stayed: outside, in a car, in a tent, in an overnight shelter, or temporarily in someone else's home (i.e. couch-surfing)?
- Are you worried about losing your current housing?
- Within the past 12 mos., have you been unable to get utilities (heat, electricity) when it was really needed?

681 663 181 354 329 361

Example of PBNC's Vision-Risk Factors and Social Determinants of Health Dashboard.

PROGRAM DESCRIPTION

PBNC's National Association of Chronic Disease Directors (NACDD)-funded project entails building the capacity of health departments and community clinics to provide a comprehensive diabetic eye disease screening program. The program serves patients through the entire continuum of care: from early identification to referral, diagnosis, and treatment. The NACDD-funded project goals are threefold: 1) offer a state-of-the-art retinal imaging reading service that provides screening results at no cost to the clinic or the patient, allowing patients to have results faster and to access follow-up care more quickly; 2) recruit, train, and equip partner staff on acuity and retinal screenings; and 3) develop and maintain dashboards for clinics to highlight gaps in accessing quality care and risk factor trends, stratified by patient demographics and region.

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

Offer a state-of-the-art retinal imaging reading service
PBNC has partnered with EyePACS to implement a service to read and analyze retinal images efficiently, allowing patients to receive results faster and access high-quality follow-up care more quickly. EyePACS links primary care providers with eye care providers regardless of physical location, allowing for early detection of sight-threatening cases and efficient referrals to specialist providers. This retinal image reading service makes it easy for care providers to ensure their patients get their retinal exams and timely detection of sight-threatening eye disease. PBNC's partnership with EyePACS has expedited the receipt of screening results from 24 days to 24–48 hours.

Recruit, train, and equip partner staff on acuity and retinal screenings
PBNC partnered with community health centers and public health department clinics nationwide to implement a diabetic patient-focused retinal and vision screening program. PBNC staff recruit and train partner screening sites on acuity screening, retinal screening, and patient education messages at no cost to the organization or patient. PBNC staff also educate community partners and clinics on available patient resources to help patients access NC Medicaid vision services and PBNC voucher services for free eye exams and glasses. Currently, acuity and retinal screenings are conducted at over 26 different sites.

Develop and maintain dashboards for clinics to highlight gaps in access
In addition to screening, PBNC developed and distributed the Population Health Dashboard to partner sites. It offers interactive insights into clinical data and social determinants of health to highlight gaps in access to quality care in specific regions throughout the state and risk factor trends stratified by ethnicity, race, and sex. Most data centers on risk assessment and social determinants of health, including gaps in food, housing/utilities, transportation, and interpersonal safety. With the PBNC Population Health Dashboard, partner sites can leverage the power of data to improve patients' lives and strengthen communities.

CHALLENGES

PBNC encountered challenges throughout the COVID-19 pandemic, including needing help to conduct screenings from June 2020 until March 2022, which became an obstacle in meeting NACDD grant goals. However, once the state legislatures allowed clinics to reopen, the PBNC team worked closely with clinics to screen patients while following social distancing protocols. More recently, the PBNC team has encountered challenges with the EyePACS software, such as difficulty uploading retinal images, resulting in delayed image readings.

The biggest obstacle PBNC has faced is following up with patients screened and checking whether they not only scheduled an appointment with an eye doctor but attended the appointment. PBNC is also working to address barriers outside its control, such as transportation issues. In addition, the PBNC team is working toward establishing strategies and infrastructure to build capacity for clinics to become more self-sufficient and embed screenings within primary care (PCP) visits, during which PCP staff can help patients schedule their eye appointment. The PBNC team is also pursuing modern communication techniques to connect and follow up with patients after their screening.

SUCCESSES

PBNC has built partnerships with community health and free clinics across the state to support better infrastructure for the long-term sustainability of each site's vision screening program. For example, with its expanded partnership with EyePACS, PBNC has significantly reduced the waiting time for imaging results, which ultimately expedites the process of securing a formal diagnosis and treatment from an eye care provider. Funding from NACDD has also enabled PBNC to increase its program by 20%, adding 1,000 to 1,200 patients per year. NACDD funding has also supported efforts to train partner sites and offers tools for clinic staff to conduct vision acuity screenings and provide eye-health education for clinic patients. PBNC also continues to provide a direct pathway to vision screening programs for diabetic patients in clinics across North Carolina and access to vouchers for free eye exams and glasses. Finally, PBNC's adult and pediatric programs will touch about ½ million individuals this year with a relatively small footprint and scale.

NEXT STEPS / FUTURE DIRECTIONS

PBNC's next steps include moving partner sites to a self-sustaining vision screening program with retinal imaging and with supporting clinics to do the follow-up. This would allow PBNC team members to take a step back and serve in a trainer/educator role, allowing the organization to expand its reach across the state further. Another long-term goal with funding from NACDD is to assist sites in building long-term partnerships with local vision providers.

PBNC also continues to provide a direct pathway to vision screening programs for diabetic patients in clinics across North Carolina and access to vouchers for free eye exams and glasses.
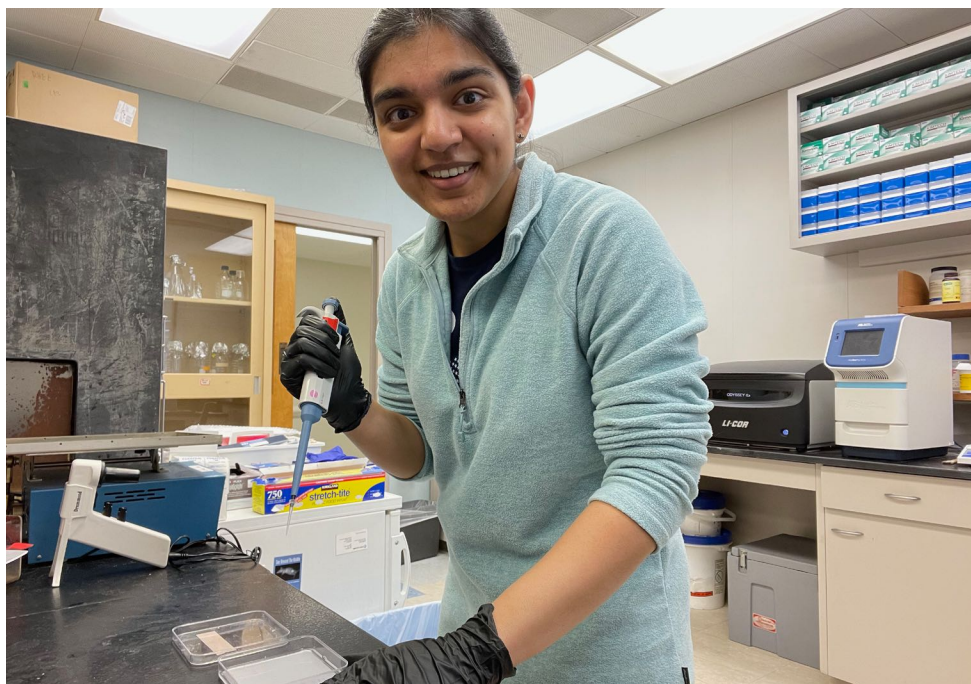
Prevent Blindness Ohio:
Building Capacity to Improve Vision and Eye Health

ORGANIZATIONAL OVERVIEW

Founded in 1957, Prevent Blindness Ohio (PBO) is dedicated to preventing blindness and preserving sight for Ohioans across 88 counties by investing in programs and services. PBO provides direct vision health services to more than one million Ohioans annually. In addition, it educates millions of consumers about what they can do to protect and preserve their precious gift of sight. PBO's vision is to prevent 50% of needless vision impairment and help all Ohioans enjoy excellent sight for life.

PROGRAM DESCRIPTION

PBO's National Association of Chronic Disease Directors (NACDD)-funded project entails building the capacity of statewide partners to promote health equity in access, delivery, utilization, and quality of vision health services. The NACDD-funded project goals include 1) ensuring the inclusion of the vision and eye health module in the Behavioral Risk Factor Surveillance System, 2) engaging and educating stakeholders about the importance of early detection and treatment of eye problems, and 3) developing an aging eye annual report and fact sheet to guide public policy recommendations to support healthy aging for older adults in the community.

Prevent Blindness Ohio

Archana Murali, Fellowship Awardee. NACDD provides funding to Prevent Blindness Ohio for the Young Investigator Student Fellowship Awards. Archana Murali received a fellowship award to conduct student research on immunoblot analysis of lymphatic marker expression in human ciliary body cells following prostaglandin analog treatment.

Prevent Blindness Ohio

Community workers, serving an aging population, attend the Prevent Blindness Ohio Diabetes Education Training Workshop at Clark State College supported by NACDD funding. Attendees were trained, certified, and equipped to be adult vision screeners.

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

PBO has partnered with academic institutions, public health departments, and advocacy groups to build capacity for vision health services, education, and research throughout Ohio. For example, PBO's partnership with the Ohio State University (OSU) College of Optometry has led to the development of evidence-based programming that focuses on making vision and eye health not only accessible but a public health priority. With the support of NACDD funding, PBO has also built partnerships and collaborations with Ohio's Aging Eye Public Private Partnership and the Ohio Department of Aging (ODA) to promote health equity in access to high-quality vision health services.

Ensuring inclusion of the Vision Module in the Behavioral Risk Factor Surveillance System

Previous cycles of NACDD funding allowed PBO to work closely with OSU's College of Optometry to include a vision module in the Behavioral Risk Factor Surveillance System. The analysis of vision module questions revealed a further need to identify barriers to access and utilization that can inform important policy work. With the current cycle of NACDD funding, PBO is partnering with the ODA to add additional questions to understand barriers to vision care better. This information will inform PBO's public health messaging, programming, and public health strategy aimed at removing barriers to vision care and increasing the use of vision care services by Ohioans at high risk of vision impairment.

PBO has created a Young Investigator Student Fellowship Award, with support from NACDD funding, that supports training for future generations of outstanding female scientists committed to pursuing biomedical, behavioral, or clinical research careers relevant to preventing blindness and preserving sight.

Engaging and educating stakeholders about vision and eye health

Through collaboration with partners, PBO has created a Vision Care Outreach program to reduce the incidence of unnecessary vision impairment and impairment by providing access to a donated system of comprehensive vision care services for uninsured or underinsured adults and children in Ohio. Over 50 doctors donate comprehensive eye exams each year, helping over 5,000 adults and children access eye care services. As part of the program, PBO provides vouchers for free eye exams and glasses and trains referring partner agencies to conduct vision risk assessments and vision screenings and to schedule eye exam appointments for clients. PBO also assists clients with more severe eye problems in navigating surgery and aftercare and monitors all clients through a database until each case is successfully closed. Furthermore, PBO has created a Young Investigator Student Fellowship Award, with support from NACDD funding, that supports training for future generations of outstanding female scientists committed to pursuing biomedical, behavioral, or clinical research careers relevant to preventing blindness and preserving sight. The fellowships partially support younger investigators, promoting the development of scientific skills that will lead to more substantial funding from other sources.

Finally, in collaboration with partners, PBO provides vision and eye health education to experts, educators, and the public, promoting eye health and raising awareness in communities across the state. For example, PBO holds a yearly Aging Eye Summit that brings together leading experts, such as researchers, healthcare providers, social workers, and students to promote understanding, early detection, and treatment of eye disease related to diabetes and other autoimmune disorders. With NACDD funding, PBO also provides diabetes education training workshops that equip health educators with important patient education messages about diabetes-related eye disease and strategies for maintaining healthy vision. Additionally, PBO training workshops are designed to educate individuals with diabetes and populations at the highest risk for developing diabetes.

Developing an aging eye annual report to guide public policy recommendations

NACDD funding supports the development and distribution of PBO's annual report. This report brings together information about the scope of the problem, national- and state-level policy changes, and efforts to build comprehensive systems to promote vision and eye health. PBO's annual report serves as an evidence-based resource for individuals and organizations to understand the scope and cost of vision problems in Ohio. It helps guide health policy development and evaluation, target high-risk populations, and assist in the planning and implementation of community-based health services.

Prevent Blindness Ohio

CHALLENGES

During the COVID-19 pandemic, PBO pivoted to provide their provisional services in a virtual format. PBO developed on-demand and live virtual education and training for diverse audiences. Moving to virtual opportunities proved to be fruitful. PBO expanded its reach through virtual webinars, increasing its availability for healthcare providers, vision and eye health educators, and medical students. In terms of vision screening, certified trainers could conduct risk assessments over the phone or virtually. Still, they could not utilize their in-person screening skills to perform near and distance visual acuity screening. PBO developed virtual vision screening refresher courses in response to screeners' concerns.

More recent challenges include re-establishing and maintaining meaningful partnerships with organizations across the state. Due to staff turnover, PBO has had to re-establish partnerships with individuals and organizations to build capacity for vision and eye health services in Ohio. In addition, PBO needs help maintaining a high level of engagement with partners. PBO has developed a strategic plan for partnership engagement and public policy priorities to address this challenge. This has led PBO to bring in a new pool of partners and build capacity within existing partner organizations to provide 1) preventative vision and eye health services and 2) educational messages to Ohioan communities.

A more pressing challenge PBO faces involves the rising cost of health and vision care. As healthcare becomes more expensive, individuals are forced to prioritize other healthcare needs over vision care. PBO is working to reduce barriers to vision care at multiple levels by connecting patients to resources and advocating for state and national policies that promote access, delivery, and utilization of vision health services. Furthermore, PBO works with legislators and policymakers, encouraging them to implement policies that protect and expand access to sight-saving care—including prevention, rehabilitation, and innovation—and ensure Ohioans can look forward to a lifetime of healthy vision.

PBO has built capacity through health departments and academic organizations, training them to be vision screeners and vision health advocates.

SUCCESSES

PBO serves over 1 million Ohioans annually, providing vision and acuity screening to approximately 400,000 adults and children. PBO's programming success would not be possible without NACDD's support and funding and PBO's partnerships established and maintained across Ohio. PBO has built capacity through health departments and academic organizations, training them to be vision screeners and vision health advocates. The capacity PBO built through a network of collaborations addresses social determinants of health by focusing on vision healthcare access and quality through leadership development, effective partnerships, and effective and sustainable interventions to improve vision and eye health.

NEXT STEPS / FUTURE DIRECTIONS

PBO has a strong track record of success on which to build future directions and actions. PBO will continue to build capacity for vision and eye health services for the state of Ohio. A primary goal is to prioritize vision and eye health and influence public health policy at the state and national levels.

Prevent Blindness Texas:
Connecting Vision to Overall Health

ORGANIZATIONAL OVERVIEW

Established in 1956, Prevent Blindness Texas (PBT) is an eye health and safety organization dedicated to preventing blindness and preserving sight. PBT's mission is to prevent blindness and preserve sight by enhancing community capacity through their core competencies of early detection, patient support, systems enhancement, public policy, public awareness, and health education. Focused on providing a continuum of vision care, PBT touches the lives of thousands of Texans through their sight-saving programs and services every day.

PROGRAM DESCRIPTION

To address social determinants of health addressed in Healthy People 2030, PBT's National Association of Chronic Disease Directors (NACDD)-funded project seeks to increase access to comprehensive eye healthcare services for medically underserved adults and children across the state. The project goals are to 1) increase the number of public health and community-based partners that provide access to eye health prevention services; 2) increase the number of individuals accessing recommended eye care services; 3) reduce barriers related to access and the availability of eye health services; and 4) increase access to telehealth eye health risk assessments to improve access to overall eye health.

A Prevent Blindness Texas volunteer conducts an adult vision screening.

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

Expanding public health and community-based partners

PBT has partnered with educational organizations, public health departments, and advocacy groups to support and strengthen coordinated preventative vision health services throughout

Dallas/Fort Worth, Houston, and San Antonio. Over two NACDD funding cycles, PBT has served more than 40,000 medically underserved individuals. In addition, with NACDD funding, PBT has supported the training, certification, and education of approximately 250 community volunteers statewide to conduct vision screening for both adults and children, deliver eye health information to clients and parents/caregivers, and assist clients and parents/caregivers in navigating the vision healthcare system.

Expanded screening via telehealth, retinal screening, and screening in schools

As a result of COVID-19, PBT transformed its adult vision screening platform to include telehealth risk assessment screenings. This has expanded their ability to serve a larger population across the state. Additionally, PBT has extended its adult vision program to include a retinal screening component that may help prevent and reduce the risk of chronic disease and improve quality outcomes. NACDD funding has also supported PBT efforts in identifying more than 12 schools to ensure children in 7th and 8th grade receive a state-certified vision screening, resulting in PBT staff and volunteers screening over 35,000 children.

Empowering clients via education, prevention, and financial resources

Given that many vision impairment cases can be prevented through early detection, PBT has developed and deployed culturally-tailored education materials and messages about vision health to raise awareness of eye and vision care and its link to chronic diseases. PBT education is delivered across multiple levels of care, with an increased focus on integrating simple and practical education at the community and client levels. It aims to strengthen public awareness of vision health and empower clients and caregivers/parents to increase control over their health by following up with recommended eye care. Furthermore, because the costs of eye care services pose a significant barrier to access, PBT provides financial resources and emergency funds to ensure clients obtain eye care services without financial hardship from unaffordable payments for exams, glasses, and subsequent care.

Using data to improve follow-up and identify unmet needs

Finally, gaps in data, particularly related to monitoring trends and evaluating progress, provide an incomplete picture of 1) follow-up access and 2) the unmet needs of vision and eye care for individuals across the state. To address this barrier, PBT launched a comprehensive tracking system and database to input children and adult vision screening results at the screening point, including the number screened, referred, educated, and navigated for follow-up services that followed prescribed treatment. In addition, PBT analyzes trends to provide clients with the next steps for comprehensive and equitable eye care services at primary, secondary, and tertiary levels.

CHALLENGES

During the COVID-19 pandemic, vision screenings for adults and children initially stopped. NACDD worked with PBT, allowing them to revamp and shift project goals toward education and building out their monitoring and evaluation database. Another challenge PBT encountered involved working within the constraints of public health departments due to limited capacity to engage fully in a vision screening program. While PBT continues to work with public health departments across the state, it has also built partnerships with educational organizations and advocacy groups to increase the reach and impact of preventative eye health services. Furthermore, to build capacity for vision and eye health, it's essential to bring together multiple stakeholders involved in the vision ecosystem to 1) improve patient access to vision and eye health services and 2) educate people about the connection between vision and chronic disease. Finally, balancing growth and capacity is another challenge PBT has encountered. There is a considerable need for vision screening across the state—requests for training and the provision of eye care services have grown exponentially.

SUCCESSES

PBT is working with partner sites to provide quality eye care services according to the needs of their clients and communities. PBT health education campaigns target the importance of regular eye examinations, and eye care services have reached many individuals statewide. For example, PBT's Back to School Campaign provides educational information about vision and eye health to children and their parents/caregivers. PBT has also developed a series of infographics to help parents, caregivers, nurses, educators, and community volunteers identify possible vision problems. In addition, PBT's adoption of telehealth solutions has improved access to a range of eye care services, particularly for those living in rural and remote areas of Texas. Moreover, PBT's pooled resources and services help bridge access to follow-up care, ensuring continuity of care for adults and children.

NEXT STEPS / FUTURE DIRECTIONS

PBT has a robust platform of success to build future steps and actions. The use of technology has opened a wide range of opportunities for PBT to 1) expand retinal screenings throughout the Houston area, 2) connect with clients to help them adhere to best eye health practice guidelines, and 3) increase the effectiveness of PBT's integrated eye care messaging and services that may improve health overall. Furthermore, PBT will expand early detection initiatives by expanding in-person eye health screenings and telehealth eye health risk assessments at coordinated community screening sessions for underserved adults and children. Finally, PBT will continue to develop partnerships throughout the state, mainly growing its reach in the El Paso area.

Prevent Blindness Wisconsin: Expanding Preventative Vision Health for Wisconsin Adults

ORGANIZATIONAL OVERVIEW

Founded in 1958, Prevent Blindness Wisconsin (PBW) improves the lives of children, adults, and families through early detection of eye conditions to prevent blindness and preserve sight. PBW provides free, direct sight-saving services throughout Wisconsin. PBW's programmatic work involves 1) children's vision screening and 2) adult vision health. In implementing these services, the organization prevents blindness by identifying early signs of vision disorders, facilitating early and effective treatment, and preventing eye injury.

CLIENT TESTIMONIALS
Meet Yolanda!

"The programs enabled me to receive needed eye care that I have not received in the past. The programs and their partners are in a sense angels among us. I received an eye exam, which I have never had in the past. I received glasses as well and I can see much better and they have relieved stress on my eyes. I can see things now that I was never able to see before. Thank you very much. I am very grateful!"

-Wisconsin Well Woman Client

Prevent Blindness Wisconsin

PROGRAM DESCRIPTION

PBW's National Association of Chronic Disease Directors (NACDD)-funded project entails building the capacity of community partners and health departments to provide preventative vision health services for Wisconsin adults. The project provides public health education programs, vision screenings and adult risk assessments, case management and care navigation, and training for community partners statewide as adult vision health advocates. Throughout four NACDD funding cycles, PBW has sought to 1) establish community partnerships with Wisconsin Well Woman Programs (WWWP) to incorporate the Adult Vision Health Program (AVHP) into existing partner programming; 2) conduct a needs assessment of AVHP clients to identify the unmet needs of at-risk adults and develop culturally competent, health-literate vision health education and care resources; and 3) implement PBW's Adult Follow-Up Toolkit, Adult Vision Screening Training Video, and Client Continuum to Care Video at partner sites and community clinics to expand AVHP's impact and raise awareness of preventative vision care services available.

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

Establishing community partnerships

PBW partnered with Wisconsin Well Woman Programs throughout the state to implement the Adult Vision Health Program, which seeks to provide preventative vision health services, close the vision care gap, and increase the accessibility of vision care. Through multiple funding cycles, PBW's AVHP has expanded to 21 counties throughout Western, South Central, and Northeast Wisconsin. As part of the AVHP, PBW has successfully trained and certified over 24 healthcare professionals, such as nurses and medical students from partner sites, as adult vision screeners to incorporate adult vision screening and follow-up strategies into current preventive care services. Adult vision screening includes an adult vision health risk assessment and near/distance acuity screenings. Over 1,507 individuals have been offered vision screening services and education. Of those who participated, 86% of program participants failed their vision screening test and required further vision care.

Conducting a needs assessment of AVHP clients

PBW has conducted ongoing needs assessments of AVHP clients to gather baseline data on vision health needs. These include vision health disparities, behavioral and lifestyle risk factors, attitudes and beliefs, and cultural viewpoints on vision health and accessing vision care. In addition, PBW is working with policy advocates, state legislatures, and partner sites to ensure that people enrolled in Medicaid or Medicare can access vision health services. Ensuring equitable vision healthcare access could reduce disparities in access to care and prevent more severe vision impairment and the need for invasive, costly care later in life. More specifically, PBW has worked to improve the accessibility and cultural competency of existing vision health tools and resources to reduce barriers to vision care, improve vision health system navigation, increase self-advocacy, and promote lifelong healthy habits.

Implementing education and training at partner sites and community clinics

PBW has also developed an Adult Vision Health Toolkit that educates public health departments and vision care stakeholders about the importance of prevention-based vision health programs. The toolkit seeks to promote the incorporation of adult vision health programs into existing public health department infrastructures and wellness programs that currently serve at-risk adults in Wisconsin communities. PBW works with partner sites to increase capacity to provide preventative vision health services and to utilize the developed resources, such as the toolkit, to implement sustainable vision health programs throughout WI. In addition, PBW has developed additional resources, such as the Adult Vision Screening Training Video and Client Continuum to Care Video, that partners have incorporated and utilized.

PBW works with partner sites to increase capacity to provide preventative vision health services and to utilize the developed resources, such as the toolkit, to implement sustainable vision health programs throughout WI.

CHALLENGES

During the COVID-19 pandemic, vision screening for adults initially stopped; however, partner sites could pivot and conduct vision screenings and risk assessments by phone. PBW also pushed out virtual public education training and events to communities served. Outside of the pandemic, PBW's biggest challenges involve clients' access to care due to many issues, such as a limited pool of providers accepting vision vouchers and Medicaid. While rates alone do not determine provider participation in Medicaid, they are vital to ensuring access. Therefore, accepting new patients on Medicaid sometimes might not make financial sense for the provider, which often means patients are delayed in accessing vision care services. To add a layer, navigating the vision healthcare system is often difficult for clients. For example, making an appointment and finding a location that uses the Wisconsin Medicaid vision health system takes, on average, about 30 minutes.

Another challenge is finding the right partner and investing upfront to incorporate AVHP into existing programming. In addition, it is essential to have partners that are committed to vision health and want to build a strong partnership with PBW. Lastly, another barrier is the visibility of PBW. Many health departments and community organizations must know their programming and resources. New partnerships can support preventative vision health services once community partners receive hands-on training, ongoing program consultation, and continued communication with existing partners.

SUCCESSES

PBW has encountered a wide array of successes due to NACDD funding. First, partners from the first funding cycle continue to offer clients vision screening and risk assessment services. In addition, partners are equipped and empowered to serve clients as vision health advocates by providing vision health education, advocacy, and individual-specific support. Second, PBW has increased its reach by expanding the number of new partners across the state who can provide preventative vision health services. Third, integrating client voices into the project has offered new insight into barriers to vision care. Specifically, client feedback and voices have brought to the foreground the negative impact that barriers to vision and eye care can have on an individual's quality of life. To reduce these barriers, PBW has developed processes and pathways of care to help clients successfully navigate the vision healthcare system, such as making an appointment with Medicaid optometry providers to improve accessibility. Finally, PBW's work has raised awareness of and engagement with preventative vision health services among Wisconsin county health departments and wellness programs.

Community workers, serving an aging population, attend the Prevent Blindness Ohio Diabetes Education Training Workshop at Walsh University supported by NACDD funding. Attendees were trained, certified, and equipped to be adult vision screeners.

PARTNER TESTIMONIALS

"This program has been such an incredible opportunity for our women. They are so excited and eager to participate. Many come in for mammograms and are set for a year until we see them again, or if treatment is needed—the process is longer and its harder to see the end result. However, with the vision screenings, we are able to assist them to navigate everyday life a little bit easier—by seeing clearly! The impact and the way it affects their mindset and perspective is just fantastic!"

–Well Woman Coordinator—Central Wisconsin

NEXT STEPS / FUTURE DIRECTIONS

PBW will continue to build vision health infrastructure and capacity in community partnerships, thereby 1) empowering partner sites to incorporate both primary and secondary prevention-based vision health into existing services and 2) increasing the number of clients accessing preventative vision health services (expanding programming into males). An additional step is creating a more accessible, culturally competent, and equitable vision care system in Wisconsin. This starts with using health literacy best practices to guide clients through the vision care system and identifying the unmet needs of at-risk adults regarding vision health. PBW will also utilize client baseline data to develop best practices and strategies for preventative vision health services based on targeted demographics to address vision and eye health disparities.

University of Virginia Department of Ophthalmology: Evidence-based, Affordable, Scalable, and Sustainable Smart Technological Solutions for Rural Healthcare Providers in Virginia

ORGANIZATION OVERVIEW

The University of Virginia (UVA) School of Medicine's Department of Ophthalmology prides itself on furthering eye care knowledge through medical training and research. The department aims to reduce vision-threatening eye diseases through clinical care, research, teaching, and community service. They aim to provide the most effective and advanced management of ocular diseases and complex vision problems for the local, state, regional, national, and international communities.

PROGRAM DESCRIPTION

Funded by the National Association of Chronic Disease Directors (NACDD), the Smart Technologies for the Assessment of Retinopathy (STAR) program is an evidence-based intervention that leverages innovative telehealth technologies. STAR is led by the University of Virginia's Department of Ophthalmology and the Karen S. Rheuban Center for Telehealth. STAR offers an affordable, scalable, and sustainable solution for rural healthcare providers in Virginia to offer diabetic retinopathy (DR) diagnosis and treatment by implementing a model to catch DR early via DR screening (DRS) before it leads to potentially irreversible vision impairment. STAR advances telehealth solutions to connect rural communities, making a profound impact on some of its most medically underserved populations. The program goals are twofold: 1) save patients with diabetes from preventable blindness through early detection and treatment of DR, and 2) increase the number of Virginia's adult diabetics who receive annual screening for DR by focusing efforts in medically underserved areas. To achieve these goals, STAR seeks to build capacity for DRS in rural communities that do not have access to ophthalmology clinical specialists.

The NACDD-funded STAR program places portable smart fundus (retinal) cameras in rural primary care sites throughout the state. The cameras take photos of patients' eyes, and cloud software is used to transmit, interpret, and store images and results. Furthermore, the cameras do not require patients to have dilated eyes, and photos can be taken in approximately five minutes, so the patient experience is quick, painless, and convenient. Due to their size, the portable cameras make integrating DRS into busy primary care workflows easier. STAR's integrated wireless and cloud technology allows the immediate automatic upload of images and enables UVA ophthalmologists to interpret the images remotely.

PROGRAM EXPERIENCE AND OUTCOMES TO DATE

The STAR program trains and educates staff to conduct screenings to build capacity across primary care clinics. With NACDD funding, the STAR program has developed a series of online education modules on DRS, screening best practices, and the importance of early detection and treatment of DR. Staff at partnered sites are eligible for CME credit and a screening certificate. Additionally, the clinical images taken are billable to patients' insurance for DRS. The camera and support cost approximately a third of the cost of the most comparable available tabletop imaging solutions, making STAR a far more sustainable and scalable solution for DRS.
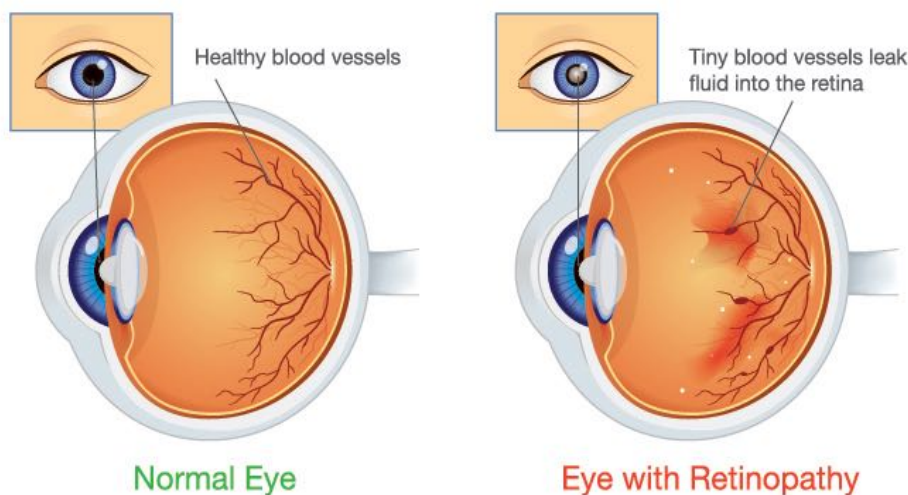
Anatomy of the normal eye compared to Diabetic Retinopathy in people who have diabetes By logo3in1

CHALLENGES

University of Virginia's Department of Ophthalmology and the Karen S. Rheuban Center for Telehealth have faced several challenges in implementing the STAR program for diabetic retinopathy screening in clinics, particularly in rural and underserved areas. First, many clinics are understaffed and chronically suffer from staff turnover. Because the STAR program is decentralized, this poses a challenge in training staff to conduct screenings. To address this, the STAR program identifies strong clinical champions at each site who can administer a comprehensive model of eye care and provide training to staff. STAR has also developed virtual training modules to make training more straightforward and accessible for partner sites across the state. Another challenge encountered is the financial burden for clinic sites to do training. However, NACDD funding has provided tokens to offset this cost. Lastly, the STAR program has faced challenges in building a robust network of partnered sites and providing the desired level of support due to the staffing turnover at sites. There is also a need for more personnel to provide vision care and screening, set up referral networks, and establish excellence at every step. This can be achieved by developing more sustainable follow-up and direct care models to strengthen the vision healthcare system.

SUCCESSES

In 2014, the STAR program began screening patients at non-UVA clinics statewide. With extramural funding, including NACDD, the program has gone from 6 partnered clinic sites to 29 sites throughout the Commonwealth of Virginia. The program has partnered with non-UVA Federally Qualified Health Centers, free clinics, and primary care practices to build capacity for comprehensive DRS in rural communities. Data from the STAR program was used to lobby Virginia Medicaid to pay for DRS using a camera that was a third of the cost of conventional cameras. Since its inception, STAR has screened over 3,000 patients at partnered sites. Despite challenges encountered due to the decentralized nature of the program, STAR has maintained active screening sites and continues to reassess and support its partners. The program has also shifted from quantity to quality, meaning that the program now prioritizes ensuring that patients who screen positive receive appropriate care rather than simply increasing the number of people screened.

NEXT STEPS / FUTURE DIRECTIONS

The STAR program's next steps include identifying where patients can receive care, especially those uninsured or with insurance not accepted by certain practices. The program is also trying to address the issue of follow-up care, which is often difficult to track at scale due to differences in electronic medical record systems and billing systems between different health systems. Additionally, the program would like to streamline and simplify contracts with partner clinic sites, such as specific site expectations, including site development of standard operating procedures and regular screening activities. Finally, the STAR program would like to deepen care coordination with partner sites, including regular DRS Research and Care Coordinator check-ins.

The program has also shifted from quantity to quality, meaning that the program now prioritizes ensuring that patients who screen positive receive appropriate care rather than simply increasing the number of people screened.

FINDINGS

FINDING 1: Grantees use unique methods to enhance vision and eye health, but most focus on increasing access to care.

NACDD Vision and Eye Health Initiative grantees had unique approaches to improving vision and eye health in their target populations. General areas of focus for the grantees include partnership, education, screening, training, research, and advocacy. For example, Prevent Blindness Wisconsin utilized NACDD funding to expand its adult vision program from just a few counties to 21 counties. They partnered with the Wisconsin Well Women Program across the state to incorporate vision screenings into their prevention models. The Wisconsin Well Women Program helps women with little or no health insurance to be screened for breast and cervical cancers, human papillomavirus (HPV), and multiple sclerosis, and to obtain Pap tests and pelvic exams.

Prevent Blindness Ohio focuses on helping older adults receive information about vision and eye health and receive screenings for eye diseases such as glaucoma, cataracts, and diabetic retinopathy. They also partnered with nursing homes, social service organizations, and local public health organizations to prepare them to train the communities they serve to enable faster identification and treatment of aging eye disease.

The University of Virginia utilized its grant funds to operate the Smart Technologies for the Assessment of Retinopathy (STAR) program, an evidence-based telehealth intervention targeted at rural communities for the early detection of diabetic retinopathy. STAR places portable retinal cameras with cloud technology in rural primary care sites throughout the state, which allows for the quick upload, transmission, storage, and interpretation of images.

A common thread among NACDD Vision and Eye Health Initiative grantees was the attention to screening and linking people to eye care services when needed. All grantees discussed how screening was not enough to prevent eye disease but was necessary to identify people at risk for eye disease that could be prevented. One grantee noted, "We are not doing our job well if we screen 500 children that need exams, only 100 receive an eye exam, and out of that 100, only 20 get into treatment, but this frequently happens without a consistent focus on follow-up and treatment." The grantees noted several reasons people do not receive vision and eye care services, including lack of appropriate insurance, lack of access to eye care, poor understanding of the importance of eye care, and cost concerns.

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FINDING 2: The NACDD Vision and Eye Health Initiative funding opportunity attracted grantees because of its purpose, partners, and streamlined grant application process.

Grantees learned about the NACDD Vision and Eye Health Initiative through similar channels, including their affiliates and colleagues in public health. Five of the eight grantees are Prevent Blindness (PB) affiliates. Each Prevent Blindness affiliate described learning of the NACDD Vision and Eye Health Initiative through an email from their parent organization: "…we learned about the grant funding through PB America, and another colleague encouraged us to apply." A non-PB grantee noted that they learned about the funding from colleagues in public health programs such as eye health and diabetes management.

The NACDD Vision and Eye Health Initiative funding interested grantees because it provided an opportunity to expand their capacity to serve their community and strengthen their existing operations. Most grantees discussed the NACDD grant funding as an opportunity to fill in a gap: they needed more capacity in terms of staff time to expand their reach and create partnerships. One grantee noted that the staff member funded by the grant to create and sustain partnerships had made incredible strides in building their capacity. She noted, "[staff member name] has been great in reaching out to the schools, service organizations, and public health departments to get our name out there, partner, and maintain those partnerships even when things like COVID happen, and everyone is overwhelmed. Through her work, we have kept eye health strong in people's minds. Even when our partners need to step back for a while, she always checks in and welcomes them back when they can keep going with us."

Furthermore, grantees described the application process as easy to navigate. One grantee described learning about the NACDD Vision and Eye Health Initiative funding opportunity and making a quick decision to apply: "…we received an email from PB and looked at the application requirements, and it was a no-brainer." Another grantee stated, "It just made sense for us to apply for this grant. It isn't a ton of money, but we knew it would allow us to be more thoughtful in approaching partnerships and the continuum of eye care across the state."

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FINDING 3: The funding and resources provided through the NACDD Vision and Eye Health Initiative helped grantees to build and sustain their capacity to improve vision and eye health.

Each grantee connected their grant-funded activities to how they were building capacity to address poor vision and eye health. They drew clear connections to the barriers to proper eye care and how their program sought to address them. The Alabama Lions Sight Conservation Association (ALSCA) noted the severe problem of poor eye health in Alabama, compounded by having few or no eye care professionals in rural parts of the state. Their grant-funded intervention involved exams in Alabama's most rural areas and training Alabama Department of Public Health staff to provide vision screenings and refer patients to clinics and ALSCA's Mobile Eye Clinic for comprehensive examinations. A member of the ALSCA stated, "It's important that we don't provide someone an examination and then leave them to figure out how to address glaucoma and cataracts. We build relationships with other partners to get them the care they need."

Moreover, some grantees purchased services and vision examination equipment and services to enable their work. Prevent Blindness North Carolina (PBNC) used grant funding to recruit and train partner screening sites on acuity screening, retinal screening, patient resources, and patient education at no cost to the organization or the patient. Sites then sent some images from screenings to PBNC for assessment through their state-of-the-art retinal imaging reading service, EyePACS. EyePACS software allows clinics to capture and upload patient retinal images quickly so that credentialed off-site clinicians can review them in 24 to 48 hours; the previous turnaround time for results of conventional imaging could be as long as 24 days. A staff member described the importance of this software: "This service is important because the time between screening and when results were delivered was sometimes 35 days, and that is a problem because the longer it takes someone to get their results,

the less likely they are to go for treatment." The software coupled with the more trained partner sites has boosted eye health across North Carolina.

All grantees discussed their appreciation for the technical assistance and resources provided to them by NACDD and CDC/VHI liaisons. The NACDD liaison aided with the grant application process, funding information, and facilitation of the bi-annual meetings. The CDC liaison supported the grantees with data and resources on the CDC Vision and Health Initiative webpages, such as up-to-date research, briefs, and a toolkit. One grantee noted, "Our project has always run smoothly, but getting information from the NACDD and CDC and knowing they support what we're doing has always been helpful." Another grantee said, "I find the connection to the CDC/VHI to be important for us. We don't always tap into them, but when we do, we always find resources and data that are helpful to what we are doing."

Finally, all grantees discussed their appreciation for the bi-annual meetings that NACDD hosted in Washington, D.C. for all grantees. During the COVID-19 pandemic, these meetings took place virtually. The grantees enjoyed hearing about their peers' work and creating connections. One grantee stated, "It's good to know I can pick up the phone and call someone in a similar position. We're not doing the same interventions but are all trying to address eye health equity and make strong connections across public health." Another grantee said, "My peers' projects are so impressive, and I've learned a lot just listening to them talk about the successes and challenges they have experienced."

FINDING 4: Funding and resources provided through the NACDD Vision and Eye Health Initiative assisted grantees in building and expanding vision and eye health partnerships.

All the grantees discussed how they built or grew a variety of solid partnerships across their service areas. Although the grantees differed in the types of services they offered, they were consistent in their perspectives about the need for sustained partnerships. The most prominent need for partnerships was the need to expand each grantee's reach. As one grantee stated, "We cannot be in every school and every community center, so we need to leverage the relationships our partners have in their community and make sure that we are offering valuable services and information in return." Another grantee noted, "What we do doesn't work unless we have committed partners, and it takes time to earn that commitment."

Most grantees described critical aspects of partnerships, including keeping partners involved in things relevant to their work and programmatic goals and ensuring that the relationship is mutually beneficial. Keeping partners involved included activities such as sharing information and data, training on conducting screenings, and providing on-site eye exams when requested. One grantee stated, "We're asking school nurses to conduct vision screenings on hundreds of kids. They're doing that because they care about the kids, not us. The least we can do is help them stay current on their training, not make it burdensome for them to do the screening, and help create pathways to get the eye exams when they fail the screening. That's how you make it mutually beneficial and show that their effort contributes to some good for the child."

Finally, the grantees discussed their success in partnership by recasting how they see partners. One change was to not see partners as competitors for funding or clients. One grantee noted, "We are all vying for the same grant funds, and that can make

us selfish, but we changed how we saw others who work in this field as partners and choose actually to be partners." Grantees also described their success in partnership by envisioning with their partners how they could go 'to the next level' together. The grantees described the NACDD funding as providing an opportunity to slow down and think with partners about addressing the core issues that cause vision impairment and poor eye health. One grantee stated, "We convened a large group of partners, some of which aren't focused on eye health, to talk about common issues keeping people from seeking care, and we identified many commonalities that we felt we could address together. That is what partnership is all about."

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FINDING 5: The NACDD Vision and Eye Health Initiative funding helped grantees to increase their use of data to assess the burden of vision impairment and identify appropriate interventions.

The NACDD Vision and Eye Health Initiative grantees described various data-based approaches to enhancing vision and eye health. The College of Optometry at the Ohio State University (OSU) partnered with the Ohio Department of Aging to use national datasets to understand the distribution of VI, eye care utilization, and unmet eye care needs across the state. Their goal was to help others become more informed about VI and disparities across the state and strengthen vision health surveillance capacity.

Prevent Blindness Texas also leveraged data to identify trends in unmet vision and eye care needs across Texas through a comprehensive tracking system. The tracking system contains child and adult screening results and details such as the number of people screened, whether they were referred for treatment or given educational resources, and whether the patient received assistance with follow-up services that resulted in treatment. According to the PB Texas dashboard, in fiscal year 2022, they screened over 41,000 children and adults, provided follow-up services to over 5,000 people, and educated 72,000 people on eye health and safety. They analyzed the trends to provide better services across the state.

FINDING 6: COVID-19 created significant challenges for grantees and their programs.

The COVID-19 pandemic brought severe challenges to grantees as they delivered on their NACDD-funded projects and daily work. They typically conduct much of their work outside their offices and face-to-face with the public. This all but ceased during the pandemic. Grantees experienced several challenges during this time, including an inability to provide screenings or see clients in person, a shift in community partners' focus, difficulty keeping partners engaged, and volunteers' loss of unused skills (e.g., screening, patient resources, and patient education). For many grantees, providing vision screenings and exams completely stopped, resulting in several hundred adults and children who did not have eye exams or screenings for nearly two years.

FINDING 7: Grantees are generally pleased with the NACDD Vision and Eye Health Initiative.

All grantees reported being pleased with the NACDD Vision and Eye Health Initiative and made only a few recommendations for changes to the program. Only one consistent recommendation emerged: bring back annual in-person meetings. Each year, NACDD hosted an in-person, two-day meeting in Washington, D.C., for all grantees to share information about their work and network with their peers. The meetings went online during the COVID-19 pandemic starting in 2021, and have yet to return to in-person meetings. One grantee said, "I'd like to return to the in-person meetings. It was a great opportunity to connect, and you miss the hallway or lunchtime conversations that you can only have in-person."

FINDING 8: Grantees recognize opportunities to expand their vision and eye health activities.

All the grantees were clear that vision and eye health are disconnected from health and well-being in healthcare and public health settings, directly impacting patients' ability to access eye care. Many discussed the need to improve and utilize the vision and eye care data in their service areas to identify the greatest needs and trends. Others spoke heavily about addressing the drivers of poor eye health (also referred to as the social determinants of health) that keep people from care, such as housing, access, understanding benefits, transportation, education, knowledge gaps, cultural barriers, and language. The grantees see their capacity building growing to enable them to engage in more upstream or preventative efforts to address VI and eye health.

DISCUSSION

The future of vision and eye health for all the grantees connects to public health and the healthcare system.

The NACDD Vision and Eye Health Initiative funded exemplary programs to build state capacity to address disparities in vision and eye health. The variation across activities reflects diverse approaches that can suit various budgets and community needs. The grantee collection shows that committed partnerships are critical to capacity building and increasing impact. Each grantee described their 'secret sauce' when it came to partnership, and, at the core, each reflected the importance of engagement, relevance, and mutual benefit.

The grantees' work was empowered by support from the NACDD and CDC. Both organizations provided resources, data, toolkits, and technical assistance for creating and executing interventions. The peer-learning events added to this support by giving each grantee an opportunity for connection, learning, and a network of like-minded people across the U.S. This support was especially invaluable as the COVID-19 pandemic spread in the middle of the grant cycle.

Although the grantees could use the NACDD Vision and Eye Health Initiative funding to purchase hardware and software to support their interventions, they each identified that the most valuable aspect of this program was their developed capacity to engage with partners and expand the impact of their interventions.

Similarly, the grantees spoke about the shift in focus from conducting screenings to connecting people to follow-up care. This reflects a paradigm shift that aligns with NACDD's established principles of state integration, including developing crosscutting epidemiology and surveillance programs, building state and local partnerships, and implementing integrated interventions.

The future of vision and eye health for all the grantees connects to public health and the healthcare system. Vision and eye health interventions that are not connected to the rest of a person's health and well-being can be detrimental. The grantees' collective focus on bringing vision health into schools, social services, public health organizations, healthcare, and grassroots initiatives reflects the ongoing commitment to prioritizing vision and eye health.

CONCLUSION

The NACDD Vision and Eye Health Initiative has assisted state, tribal, local, and territorial public health agencies, and their partners, to improve vision and eye health through various approaches and partnerships. Each grantee has assessed the levels of VI in their community by conducting screening services, training partners to screen, and capturing data on screenings and follow-ups. Grantees are performing vision and eye health training and services across more than 150 counties in the U.S., many of which are rural and economically depressed areas. The NACDD Vision and Eye Health Initiative grantees have shown a commitment to addressing the unmet needs in their service areas through innovative methods combined with multiple partnership models.

The partnerships that each funded program modeled reflect a basic understanding of the value and necessity of addressing eye health collaboratively. Although unique in their approaches, the grantees committed to consistent and equitable partnership despite hardships like the COVID-19 pandemic. Hallmarks of grantees' partnership building included being of mutual benefit to both partners, continuous engagement around important issues, giving partners space when they could not be fully engaged, and providing resources like training and education. In doing so, they sustained the partnerships and continued growing the interventions.

The interventions detailed in this report demonstrate an understanding of the need to create equitable approaches to address unmet needs. Data informed the interventions that each grantee implemented, and they took innovative and creative approaches to reaching multiple populations within communities. Each intervention uniquely improved vision and eye health in a way that responded to community needs. The distinctive blend of NACDD Vision and Eye Health Initiative funding, community partnerships, and public health leadership helped the grantees implement interventions that met members of their community where they were, shaped current and future public health strategies for vision and eye health, and created new partnerships.

APPENDIX A - INTERVIEW QUESTIONS

Reach

1. Tell me about your organization.
   a. How did you learn about the NACDD grant?
   b. What guided your organization's decision to apply for a grant with NACDD?

2. Tell me about your vision and eye health program that NACDD funded.
   a. What are your goals/objectives?
   b. Who is your target population?
   c. What key activities or strategies are used to meet your goals/objectives?
   d. Who are your partners in this endeavor?

Effectiveness

3. How do you define success?
4. What successes have you had?
   a. Would this success have been possible without the NACDD funding?

5. What challenges have you experienced?
   a. What challenges were specific to your organization?
   b. What challenges were specific to your vision and eye health program?

6. What type of impact has your program had on your community?

Adoption

7. Considering the funding and support (e.g., networking and partnership-building opportunities at grantee meetings, direct access to the CDC VHI team, and peer learning with other grantees) your program has received from NACDD, how has your organizational capacity to improve vision and eye health changed (increased or decreased)?
   a. What opportunities for support have you taken advantage of?
   b. In hindsight, is there anything you wish you or your organization would have engaged in more?
   c. How has this program supported your community partnerships?

Implementation

8. Did you deliver your program how you originally intended?
   a. If not, what modifications do you make and why?

9. Was there a time that you needed additional support to meet your program goals? If so, what type of support was or would've been helpful?
   a. How could NACDD have helped?

Maintenance

10. To what extent do you consider the activities funded through the NACDD grant sustainable? (In other words, can the activities be sustained beyond NACDD funding? What modifications, if any, would be required?)
11. How do you want to grow your program in the future?
    a. What challenges have you experienced or do you anticipate?

12. How can NACDD make the program more appealing to a broader group of organizations (e.g., state, and local health departments, PB affiliates, academic institutions, etc.)?
    a. Funding announcement
    b. RFP
    c. Application
    d. Program support

13. How can NACDD support your program in the future beyond additional funding?
14. Finally, The CDC VHI's mission is to promote vision health and quality of life for all populations, throughout all life stages, by preventing and controlling eye disease, eye injury, and vision impairment resulting in disability. How does your program align with that mission?
15. Is there anything else you want to mention that we did not discuss?

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