Building Public Health Capacity to Enhance Vision and Eye Health

A Toolkit for Public Health Agencies and Their Partners

All materials are available for download on the CDC website at https://www.cdc.gov/visionhealth/home/index.html

Suggested Citation

Centers for Disease Control and Prevention. Building Public Health Capacity to Enhance Vision and Eye Health: A Toolkit for Public Health Agencies and Their Partners. Atlanta, GA: Centers for Disease Control and Prevention, US Dept. of Health and Human Services: 2019.

Acknowlegements

LEAD WRITERS

This document was written by the following people, in collaboration with KDH Research & Communication:

Jinan B. Saaddine, MD, MPH
Centers for Disease Control and Prevention

Paramjit K. Sandu, MD, MPH
Centers for Disease Control and Prevention

Swathi Sekar, MPH
Formerly at the Centers for Disease Control and Prevention

Carol McPhillips-Tangum, MPH
National Association of Chronic Disease Directors

CONTRIBUTORS

The following people contributed their subject matter expertise to the development, editing, and/or review of this document:

Kira Baldonado
Prevent Blindness

Betsy Cagle
Alabama Department of Health

Clarice Conley
Centers for Disease Control and Prevention

Amanda Crowell
Centers for Disease Control and Prevention

Monica Guerrero
Prevent Blindness Texas

Susan Leonard
Centers for Disease Control and Prevention

Elizabeth Lundeen, PhD, MPH, MNSP
Centers for Disease Control and Prevention

Christopher Maylahn, MPH
Centers for Disease Control and Prevention

M. Isabel Mendez, MS
Centers for Disease Control and Prevention

Marcus J. Molea, AICP, MHA
Ohio Department of Aging (Retired)

Courtney Murphy
Prevent Blindness Wisconsin

Heather Patrick
Prevent Blindness Texas

Michael Smith
Alabama Department of Health

Dean A. VanNasdale, PhD
The Ohio State University

Christina Williams
Centers for Disease Control and Prevention

This publication was supported by the Grant or Cooperative Agreement Number 5NU38OT000286-01, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Contents

INTRODUCTION

Vision health is critically important for all aspects of a person's life, including physical health, social engagement, education, employment, and socioeconomic position. Reduced vision affects a person's ability to perform daily activities and increases a person's risk of other health problems and premature death.[1–5] It can also cause economic stress on individuals and society from direct medical expenses and indirect expenses related to loss of mobility and productivity. In the United States (US), direct and indirect expenses for eye disorders across all age groups were about $139 billion in 2013.[6]

Unfortunately, vision health is rarely included in public health programs designed to prevent or manage chronic diseases because of limited resources and competing priorities. As a result, most public health agencies lack the framework or guidelines they need to appropriately address vision and eye health as a public health issue.

Building Public Health Capacity to Enhance Vision and Eye Health: A Toolkit for Public Health Agencies and Their Partners, developed by the Centers for Disease Control and Prevention (CDC), can help state, tribal, local, and territorial public health agencies and their partners assess the level of vision impairment in their communities, build effective partnerships, and implement effective and sustainable interventions to improve vision and eye health.

VISION IMPAIRMENT IN THE UNITED STATES

In 2015, about 3 million people aged 40 or older in the United States had vision impairment and 1 million were blind. More than 8 million people had vision impairment caused by an uncorrected refractive error, such as nearsightedness or astigmatism. These numbers are expected to double by 2050 because of the aging US population and the projected increase in chronic diseases, such as diabetes.[7] An estimated 2.1 million children and adults younger than age 40 have an uncorrectable vision impairment or blindness.[8]

Studies have consistently shown that loss of vision is one of the greatest health fears that people have.[9] The leading causes of blindness and vision impairment are primarily age-related eye diseases, such as diabetic retinopathy, age-related macular degeneration, cataract, and glaucoma. More than 30 million adults aged 40 or older are affected by age-related eye diseases. More than 7 million adults are affected by diabetic retinopathy, which is the leading cause of new cases of blindness in working age adults.[10]

Early diagnosis and timely treatment can often correct vision impairment and slow the progression of some conditions. Many interventions exist to help people with vision impairment, but information about and access to these services are often limited.[11,12]

For information about common causes of vision impairment and eye disorders, visit the CDC's Vision Health Initiative (VHI) Common Eye Disorders website.

PUBLIC HEALTH AGENCIES CAN HELP

Vision impairment and blindness are a public health problem because they:

- Affect the lives of a large number of people.
- Cause a large amount of disease, disability, and economic burden and reduce quality of life.
- Are predicted to get worse in the next 30 years.
- Are perceived by the public to be a threat.
- Can be addressed through community or population-level interventions.[13]

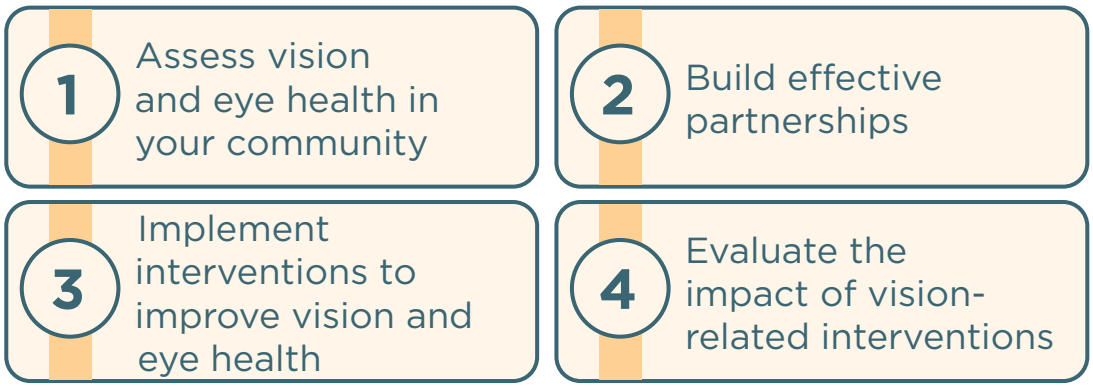
Coordinated efforts by public health agencies and partners are needed to encourage policies and programs that:

- Emphasize the importance of preserving vision and eye health.
- Reduce modifiable risk factors.
- Improve timely detection, treatment, and management of vision impairment and eye disorders.

Potential partners in these efforts include clinical care systems, government agencies, education agencies, communities, employers and businesses, state agencies on aging or disabilities, foundations, and nonprofit organizations.

HOW TO USE THIS TOOLKIT

Public health agencies and their partners can use the information in this toolkit to improve vision and eye health in their community. Four actions are recommended and described in the following sections.



Each section also contains a narrative, called "From the Field," that describes how public health practitioners are working to promote vision and eye health at state or local levels. These practitioners offer practical suggestions based on their experiences.

REFERENCES

1. Alberti CF, Peli E, Bowers AR. Driving with hemianopia: III. Detection of stationary and approaching pedestrians in a simulator. *Invest Ophthalmol Vis Sci*. 2014;55(1):368–374.

2. Sengupta S, van Landingham SW, Solomon SD, Do DV, Friedman DS, Ramulu PY. Driving habits in older patients with central vision loss. *Ophthalmol*. 2014;121(3):727–732.

3. Brown JC, Goldstein JE, Chan TL, Massof R, Ramulu P. Low Vision Research Network Study Group Characterizing functional complaints in patients seeking outpatient low-vision services in the United States. *Ophthalmol.* 2014;121(8):1655–1662, e1651.

4. Whitson HE, Cousins SW, Burchett BM, Hybels CF, Pieper CF, Cohen HJ. The combined effect of visual impairment and cognitive impairment on disability in older people. *J Am Geriatr Soc*. 2007;55(6):885–891.

5. Whitson HE, Malhotra R, Chan A, Matchar DB, Ostbye T. Comorbid visual and cognitive impairment: relationship with disability status and self-rated health among older Singaporeans. *Asia Pac J Public Health*. 2014;26(3):310–319.

6. Wittenborn J, Rein D. *Cost of Vision Problems: The Economic Burden of Vision Loss and Eye Disorders in the United States*. Chicago, IL: NORC at the University of Chicago; 2013.

7. Wittenborn J, Rein D. The preventable burden of untreated eye disorders. Paper prepared for the National Academy of Science, Engineering, and Medicine. https://www.nap.edu/resource/23471/UndiagnosedEyeDisordersCommissionedPaper.pdf. Accessed October 28, 2019.

8. Varma R, Vajaranant TS, Burkemper B, et al. Visual impairment and blindness in adults in the United States: demographic and geographic variations from 2015 to 2050. *JAMA Ophthalmol*. 2016;134(7):802–809.

9. Scott AW, Bressler NM, Folkes S, Wittenborn JS, Jorkasky J. Public attitudes about eye and vision health. *JAMA Ophthalmol*. 2016;134(10):1111–1118.

10. National Eye Institute. Prevalence of Adult Vision Impairment and Age-Related Eye Diseases in America website. https://nei.nih.gov/eyedata/adultvision_usa. Accessed October 28, 2019.

11. Overbury O, Wittich W. Barriers to low vision rehabilitation: the Montreal Barriers Study. 2011. *Invest Ophthalmol Vis Sci*. 2012;52(12):8933–8938.

12. Pollard TL, Simpson JA, Lamoureux EL, Keefe JE. Barriers to accessing low vision services. *Ophthalmic Physiol Opt*. 2003;23(4):321–327.

13. Centers for Disease Control and Prevention. Vision Health Initiative website. http://www.cdc.gov/visionhealth/about/index.htm. Accessed March 29, 2016.

SECTION 1:
ASSESS VISION AND EYE HEALTH IN YOUR COMMUNITY

Before you create a plan to implement and evaluate a public health intervention to improve vision and eye health, you must assess your community's needs. This assessment will help you understand:

- How many people in your community have vision impairment and eye disorders.
- The prevalence of risk factors, such as diabetes, that put people at higher risk of vision disorders.
- The characteristics of the people most affected by vision impairment and eye disorders.
- The extent to which people in your community have access to vision services and eye care providers and use these services.

Collecting this information will help you choose interventions, allocate resources, monitor vision impairment and eye disorders, and evaluate your progress in meeting the needs of your community.[1]

ASSESMENT DATA CAN ALSO HELP YOU:

- Identify people with vision impairment and those at risk of an eye disorder.
- Estimate the magnitude and scope of vision impairment and associated health problems.
- Measure trends and monitor changes in vision and eye health status.
- Identify disparities in access to eye care and the geographic distribution of populations at high-risk.
- Prioritize interventions to address gaps and issues related to vision and eye health.
- Plan, implement, and guide the evaluation of vision and eye health interventions.
- Develop hypotheses and stimulate research.
- Educate stakeholders about the importance of developing and implementing evidence-based and cost-effective vision and eye health interventions.
- Allocate resources to promote vision and eye health.

TIPS FOR COLLECTING AND USING ASSESSMENT DATA

1. Explore Existing Surveillance Systems

The federal government conducts several ongoing health-related surveys to collect vision and eye health information. For example, the Vision and Eye Health Surveillance System (VEHSS) collects data from national and state surveys, examination-based studies, electronic health records and registries, and administrative databases (e.g., Medicare, private medical insurance). This information helps health professionals, researchers, policymakers, and members of the public understand the scope of vision loss, eye disorders, and eye care services across the United States. The VEHSS was developed by CDC's Vision Health Initiative and the non-partisan and objective research organization NORC at the University of Chicago. More information about the system's data sources is available on the VEHSS website. The following are some of the national and state surveys included in the VEHSS:

Include data from the Vision and Eye Health Surveillance System when you assess the health needs of your community and create a community health improvement plan. This information will help you make vision and eye health a public health priority.

- The American Community Survey (ACS) is an annual, nationally representative survey conducted by the US Census Bureau. It collects and produces information on demographic, social, economic, and housing characteristics of the US population.
- The Behavioral Risk Factors Surveillance System (BRFSS) is an annual health-related telephone survey conducted by CDC's National Center for Chronic Disease Prevention and Health Promotion. It collects state-level data about US residents regarding their health-related risk behaviors, chronic health conditions, and preventive services use.
- The National Health Interview Survey (NHIS) is an annual household interview survey of the noninstitutionalized US population conducted by CDC's National Center for Health Statistics (NCHS). It collects data on a broad range of health topics.
- The National Health and Nutrition Examination Survey (NHANES) is an annual self-report and examination survey conducted by CDC's NCHS. It collects information on the health and nutritional status of US adults and children.
- The National Survey of Children's Health (NSCH) is an annual survey conducted by the Health Resources and Services Administration's Maternal and Child Health Bureau. It collects data on the physical and emotional health of US children from birth to age 17 years.

Many public health agencies use the BRFSS to monitor and assess the health status of the populations they serve. Since 2013, the BRFSS has included a core question about severe vision difficulty and blindness. During 2005–2011, the BRFSS also offered an optional 10-question module on vision and eye health. State-specific data from this module are on the VEHSS website. Both the BRFSS core vision question and the optional vision module have been tested to ensure that they provide data that can help public health agencies assess vision and eye health in their states. The core and optional BRFSS questions are provided in Appendix A of this toolkit.

2. Add Vision and Eye Health Assessment Questions to Other Health-Related Data Collection Activities

Several surveillance systems routinely collect data about other chronic conditions, such as diabetes, heart disease, and high blood pressure at federal, state, and local levels. Some of these systems could include key questions about vision and eye health. You can reach out to colleagues and potential partners who oversee these systems to look for opportunities to integrate vision and eye health assessment questions as appropriate.

3. Use Questions That Match the Overall Goals of Your Assessment

A vision and eye health assessment can be designed to collect a variety of data on a broad range of topics, or it can be designed to focus more narrowly on a specific topic, population, or condition. Although there is no single best way to structure your vision and eye health assessment, you should use assessment questions that are well-matched to the goals of your assessment.

You can use the questions on the National Center for Children's Vision and Eye Health website to assess vision and eye health among children.

TO ASSESS VISION IMPAIRMENT AND EYE DISORDERS IN YOUR COMMUNITY:

- How many people have vision impairment (corrected or uncorrected)?
- What specific types of eye disorders (e.g., glaucoma, macular degeneration, cataract, diabetic retinopathy) do people have?
- What are the demographic characteristics (e.g., age, race, ethnicity, sex, education level, income level) of those with or at risk of vision impairment?
- Where are people with vision impairment or eye disorders geographically located in your community?
- What is the financial impact of visual impairment and eye disorders on your population?
- How many people have vision impairment or eye disorders and another chronic condition, such as diabetes, heart disease, or arthritis?
- How many people have vision impairment or eye disorders and other health-related conditions, such as balance problems, fall-related injuries, depression, social isolation, or cognitive decline?

TO ASSESS VISION AND EYE HEALTH DISPARITIES IN YOUR COMMUNITY:

- How many people are:
  - Over the age of 40?
  - Female?
  - African American?
  - Hispanic?
  - Lower socioeconomic position?
  - Without health insurance that covers eye and vision health?
  - Engaging in health risk behaviors associated with vision impairment (e.g., smoking)?
  - From a family with a history of eye disease (e.g., glaucoma)?
  - Unaware of the risk factors for visual impairment and eye disorders?

TO IDENTIFY EXISTING RESOURCES AND INTERVENTIONS IN YOUR COMMUNITY:

- How many eye care providers are in your community? How are they distributed in rural versus urban areas?
- How many people who are at increased risk of vision impairment are using vision and eye care services?
- What types of interventions, strategies, and policies are already being used in your community to improve vision and eye health? How many people are using these interventions?
- What types of rehabilitation services for blindness or vision impairment are available in your community now? How many people who need these services are using them?

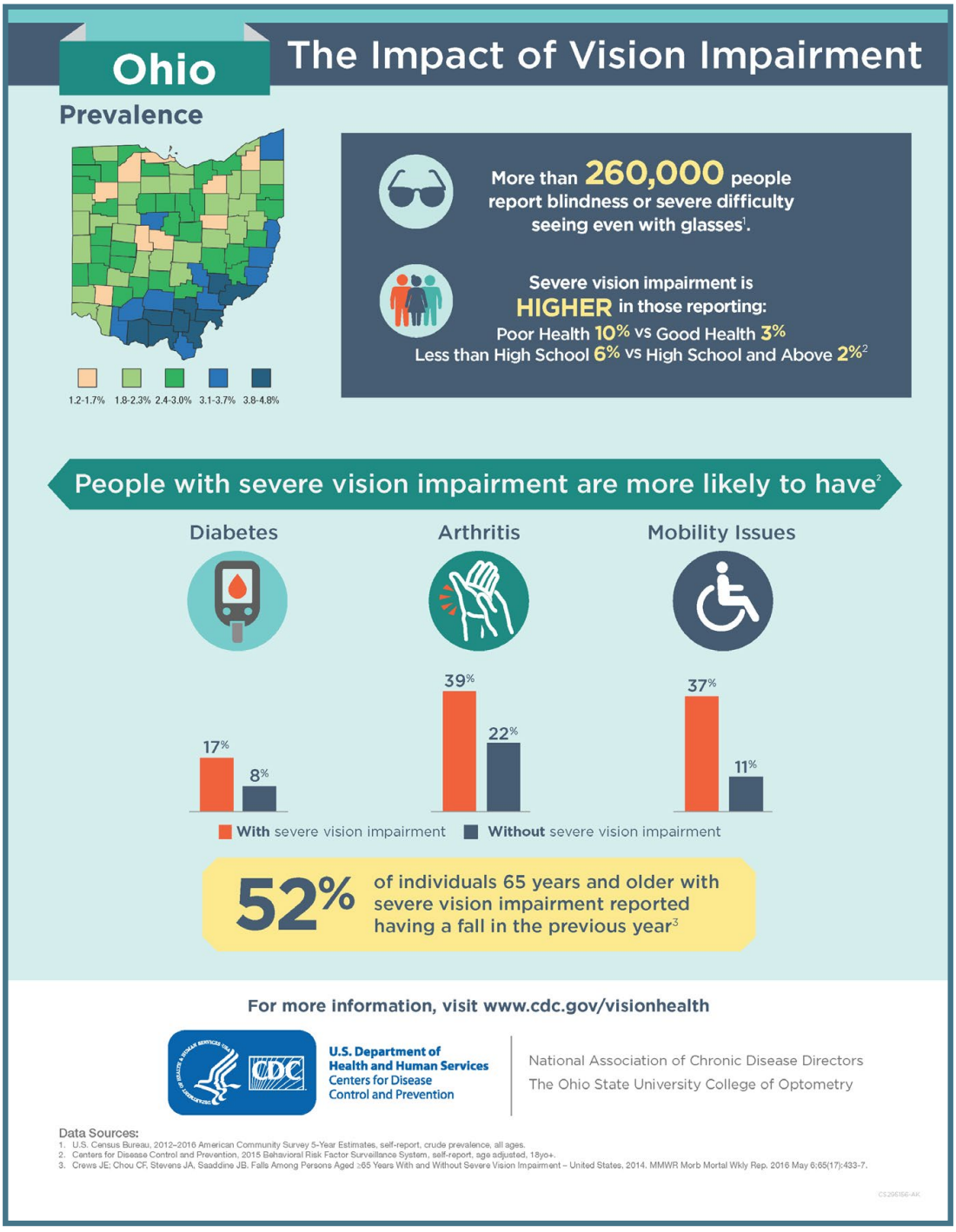
4. Translate and Share Your Assessment Data to Guide Public Health Action

Once you have analyzed the data, you should create a graphic representation of the information (i.e., data visualization). You can translate your data into charts, graphs, maps, or pictures. Choose the method that will best communicate your message to the audience you are trying to reach.

Once your data are ready to share, start with people in the community who helped you collect the data and those who could be affected by it. Set up group meetings or one-on-one appointments to share your results and get feedback before the data are released to the general public.

Figure 1 is an example of how state-specific data about vision impairment can be presented in a one-page fact sheet using graphics. Fact sheets are available for all US states on CDC's State Profiles on Vision and Eye Health website. See the "From the Field" at the end of this section of this toolkit for more information about how this fact sheet was developed.

Figure 1. Fact Sheet with Data on Vision Impairment in Ohio



ADDITIONAL RESOURCES

Other resources are available to help you conduct a community assessment. For example:

The Community Health Assessment and Group Evaluation (CHANGE) is a data-collection tool developed by CDC's National Center for Chronic Disease Prevention and Health Promotion.

The Community Needs Assessment: Participant Workbook is a document developed by CDC's Division of Community Health.

CONCLUSION

Assessing the status of vision and eye health is one of the first steps to determining how to monitor and improve vision and associated conditions in your community. Collecting and analyzing the most accurate and detailed data for your population will help you identify risk factors for vision impairment and improve accessibility to eye health services. This information will also help you determine the most appropriate partners to help you achieve your goals. See Section 2 for more information about how to identify and work with partners.

Using Data to Create Fact Sheets That Show a Picture of the Problem

When Dean VanNasdale of The Ohio State University (OSU) began working with Marc Molea of the Ohio Department of Aging (ODA) to assess vision impairment in Ohio, they quickly realized that they would need to use multiple data sources to find the information they wanted.

From the beginning of the project, Dean and Marc knew they wanted to describe the level of vision impairment at both the state and county level. They also wanted to understand how vision impairment is related to factors such as self-reported overall health status and education level. Their curiosity led them to seek data from the BRFSS and ACS. They then used the data they found to develop a state profile to educate key stakeholders, including the governor and state legislators, about vision impairment in Ohio.

The Ohio state profile was so well-received that officials in CDC's VHI and the National Association of Chronic Disease Directors (NACDD) wanted to create similar profiles for every US state. Dean worked with CDC and NACDD to expand the state profile to include information about injuries from falls and coexisting conditions such as diabetes and arthritis. Data were collected from the BRFSS and the ACS, including data on falls reported in CDC's Morbidity and Mortality Weekly Report.

The resulting state profiles are posted on CDC's State Profiles on Vision and Eye Health website. States can download and use these profiles to educate stakeholders about vision impairment.

Dean and Marc offered the following suggestions to other agencies interested in conducting a comprehensive assessment of vision and eye health in their state:

- Start by using the data in the existing state profile for your state, available at CDC's State Profiles on Vision and Eye Health website.
- Remember that the VEHSS is a great resource that uses data from multiple sources to help public health practitioners, health professionals, researchers, policymakers, and patients understand the scope of vision loss, eye disorders, and eye care services in the United States.
- More data are probably available than you realize. The resources described in this toolkit can provide a wealth of information.

About the Experts in the Field

Dean VanNasdale, PhD is a faculty member at OSU's College of Optometry and an NACDD vision grantee. Much of his research focuses on population health data analysis. He led the development of the state profiles on the CDC's website that describe the burden of vision impairment.

Marc Molea, AICP, MHA formerly served as the Chief of Strategic Partnerships for the ODA. His responsibilities included the development of elder-friendly, person-centered programs and services.

REFERENCES

1. West SK, Lee P. Vision surveillance in the United States: has the time come? *Am J Ophthalmol*. 2012;154(6):S1–S2, e2.

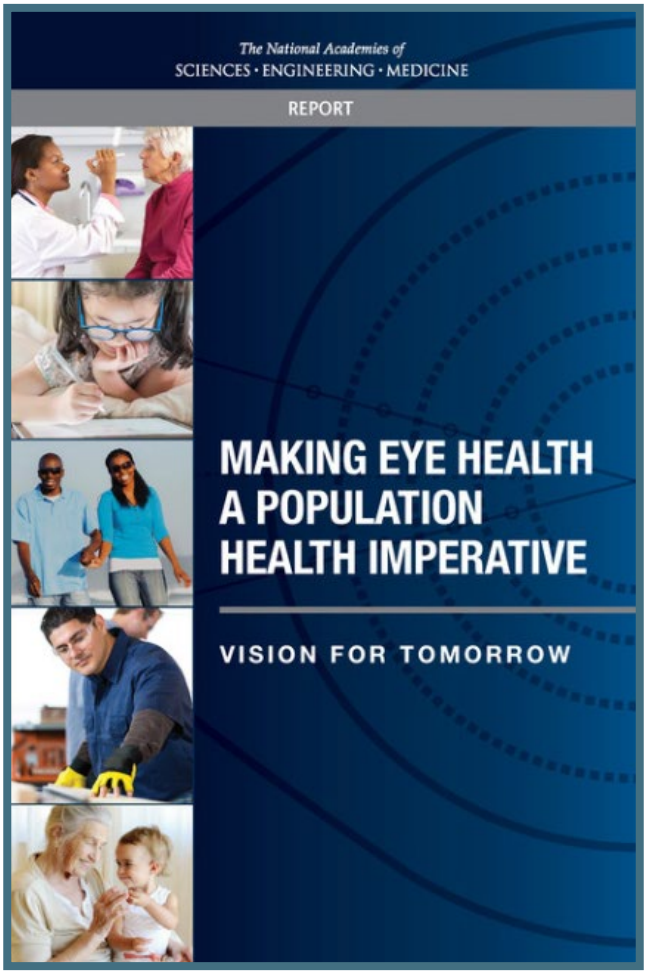
SECTION 2:
BUILD EFFECTIVE PARTNERSHIPS

A partnership can be a relationship between as few as two parties, or it can involve many individuals and organizations who come together to form a network, coalition, or consortium. Regardless of the size or form of the partnership, the basic assumption is that when individuals or organizations join together, they will be more successful in their collective efforts than they could be on their own. The strongest partnerships occur when both mutual and individual goals are served.[1]

PARTNERSHIPS CAN HELP YOU:

- Better understand the needs of your target population.
- Collect data about vision impairment and eye disorders.
- Identify gaps in vision and eye care services.
- Develop culturally appropriate strategies to promote vision and eye health.

Although the idea of forming partnerships to improve vision and eye health is not new, it has been recently promoted in two influential public health documents. In 2016, the National Academies of Science, Engineering, and Medicine convened a multidisciplinary expert committee to examine core principles and population health strategies to reduce vision impairment and promote eye health in the United States. The result was *Making Eye Health a Population Health Imperative: Vision for Tomorrow*, which notes that improvements in vision and eye health require coordinated efforts and partnerships that extend beyond the clinical setting.[2]



A report titled *Public Health 3.0: A Call to Action to Create a 21st Century Public Health Infrastructure* was also released in 2016 and echoes the important role that strategic partnerships play in improving and protecting public health.[3]

Although there is no single formula for creating the perfect partnership, this section discusses how to identify and reach out to potential partners and offers suggestions and tools to help build and sustain effective partnerships.

IDENTIFY POTENTIAL PARTNERS

The first step to creating an effective partnership is to identify partners you can collaborate with to meet your goals.

SUCCESSFUL PARTNERSHIPS:

- Have a clear purpose.
- Add value to the work of the partners.
- Are carefully developed to ensure that the partnership is valuable and sustainable.

Partnerships should include people with diverse skills who represent a range of perspectives and interests. For example, a partnership designed to improve vision and eye health might include people with vision impairment or loss, their caregivers, community members, representatives from the clinical care system, employers and businesses, media, nonprofit organizations, education, public health, aging services, and government organizations. When identifying potential partners, it can be helpful to think about those that are involved in program operations, those served or affected by the program, and those who are in a position to make decisions that could affect program sustainability. When looking for potential partners, consider the three major groups below.

1 PEOPLE INVOLVED IN PUBLIC HEALTH PROGRAM OPERATIONS, INCLUDING:

- Management, program staff, and public health officials.
- Ophthalmologists, optometrists, nurses, and other healthcare providers.
- Partners, funding agencies, and coalition members.

2 PEOPLE SERVED OR AFFECTED BY THE PROGRAM, INCLUDING:

- People affected by the problem (in this case, vision impairment or eye disorders).
- Advocacy groups.
- Community members.
- Elected officials.

3 PEOPLE IN A POSITION TO MAKE DECISIONS ABOUT THE PROGRAM, INCLUDING:

- Funding agencies.
- Elected officials or other legislators.
- Members of the general public or taxpayers.

Use the Checklist for Developing a Partnership in Appendix B to help you create effective partnerships.

CONSIDER THE FOLLOWING QUESTIONS AS YOU ASSESS POTENTIAL PARTNERS TO HELP PROMOTE VISION AND EYE HEALTH AMONG YOUR TARGET POPULATION:

- What is the expected outcome of the partnership?
- Which potential partners could best help you achieve your goals and objectives?
- Have you sought out new and nontraditional partners, such as organizations that serve people with disabilities or members of racial or ethnic minority groups?
- Do you have a history of good relations with the potential partner?
- Does the potential partner understand and support your priorities or have similar priorities?
- What specific resources will the potential partner contribute to the outcomes or products expected from the partnership?
- Could collaboration with the potential partner reduce costs or make the best use of resources?
- What are some potential drawbacks of working with the potential partner?
- Is there someone who will champion your cause and work to make sure the partnership happens?

Use the Partnership Assessment Tool in Appendix B to assess the "fit" between your organization and potential partners.

FORMALIZE THE PARTNERSHIP

After an individual or organization has agreed to partner with you, you will need to formalize the relationship. One option is a written document, such as a partnership action plan or project charter. Written documents can outline the goals and objectives of the partnership and the roles and responsibilities of each partner.

A PARTNERSHIP ACTION PLAN OR PROJECT CHARTER MAY ALSO INCLUDE:

- Agreed-upon decision-making procedures (who will decide what and how).
- Ground rules for effective ways of working together.
- Anticipated challenges and strategies for addressing them.
- Resources needed to accomplish the goals of the partnership.

Some organizations may be more comfortable formalizing the partnership through a memorandum of understanding, contract, or other form of written document. You can ask your organization's legal department to create a more formal document if needed.

SUSTAIN THE PARTNERSHIP

Use the Partnership Communication Worksheet in Appendix B to plan and document the ways you will communicate with partners and other stakeholders.

Partnerships must be actively maintained to help you meet your goals. To achieve this objective, you will need to:[4]

- Maintain regular communication with your partners. Decide when and how you will keep in touch (e.g., e-mail, phone).
- Respect your partner's boundaries, structures, procedures, and processes.
- Thank your partner for their work through verbal or written comments.
- With your partner's permission, give them credit and recognition in public forums, such as during meetings with key stakeholders or media outlets.
- Remain flexible and open to change throughout the partnership.
- Conduct a formal review of the partnership using an evaluation form that measures satisfaction with the partnership.
- Discuss and use the results of this evaluation to identify ways to strengthen the partnership.
- Review each partner's goals for the partnership and assess progress toward meeting these goals each year.
- Communicate the results of the evaluation with all partners to highlight successes and areas for improvement.

Examples of Successful Partnerships

- Ohio's Aging Eye Public Private Partnership is an initiative supported by the Ohio Department of Aging. It exists to develop a strategic plan of action to address issues related to vision care public policy, vision care services, vision education, and vision research that affect the quality of life of Ohio seniors.

- The Alabama Lions Sight Conservation Association has partnered with the Alabama Department of Public Health to use a mobile van to provide comprehensive eye exams, referrals, and follow-up services to residents of Alabama's most rural and poorest counties.

- Vision To Learn was launched in 2016 as a partnership between the Baltimore City Public School System, Baltimore City Health Department, and Wilmer Eye Institute at Johns Hopkins University. This citywide initiative provides vision screenings and free eyeglasses for students in prekindergarten through eighth grade in all 50 Baltimore City public schools.

- The New York State Vision Health Integration and Preservation Program is a collaboration between the New York State Department of Health and Prevent Blindness Tri-State. It integrated strategies designed to preserve vision health into existing programs and functions in the state health department as a way to promote public health strategies among community organizations and vision partners.

CONCLUSION

Building effective partnerships is vital to creating and sustaining a successful intervention to improve vision and eye health in your community or target population. Taking the time to identify the right partners and thoughtfully develop a partnership will help ensure that the partnerships can be sustained over time. Section 3 describes how you and your partners can identify and implement interventions to improve vision and eye health.

Building Partnerships to Enhance Vision and Eye Health

Building partnerships is not always easy, and Chris Maylahn of the New York State Department of Health knows this firsthand. Chris knew he would need partners to qualify for a grant from CDC and Prevent Blindness to integrate vision and eye health with other state public health programs.

Chris began by collecting epidemiologic information, convening vision and eye health workgroups, and reaching out to potential partners throughout New York to build a sustainable team of multidisciplinary leaders. With the help of his partners, Chris was able to get funding to integrate vision and eye health interventions into existing chronic disease programs, such as those for diabetes. He attributes his success to his strong team of partners. Chris offered the following suggestions to others trying to integrate vision and eye health interventions into their public health programs:

- Identify all public health programs that have a connection to vision and eye health. Examples include tobacco, diabetes, injury, and maternal and child health programs.
- Consider partnering with nonprofits that have an interest in vision and eye health and might be able to contribute resources to your intervention. Examples include Prevent Blindness, EyeCare America, Optometry Cares, and the American Foundation for the Blind.
- Seek partnerships with organizations that have a proven track record of successfully developing and sustaining effective partnerships with your community or target population.
- Identify a champion who can advocate for your project. The champion should be passionate about the problem and be willing to advocate for your project.

About the Expert in the Field

Chris Maylahn, MPH is a Program Research Specialist with the New York State Department of Health. He was a founding member of the department's Division of Chronic Disease Prevention.

REFERENCES

1. Centers for Disease Control and Prevention. *Engaging, Building, Expanding: An NBCCEDP Partnership Development Toolkit*. Atlanta, GA: Centers for Disease Control and Prevention, US Dept of Health and Human Services; 2011.

2. National Academies of Sciences, Engineering, and Medicine. *Making Eye Health a Population Health Imperative: Vision for Tomorrow*. Washington, DC: The National Academies Press; 2016.

3. Office of the Assistant Secretary for Health. Public Health 3.0: *A Call to Action to Create a 21st Century Public Health Infrastructure*. Washington, DC: Office of the Assistant Secretary for Health, US Dept of Health and Human Services; 2016.

4. National Business Coalition on Health and Community Coalitions Health Institute. *Community Health Partnerships: Tools and Information for Development and Support*. Washington, DC: National Business Coalition on Health; 2013

SECTION 3:
IMPLEMENT INTERVENTIONS TO IMPROVE VISION AND EYE HEALTH

Effective interventions have been developed to promote vision and eye health across states or local communities.[1–3] This section of the toolkit provides an overview of recommendations and guidelines related to vision and eye health. It also offers examples of evidence-based and promising interventions that can be used in a variety of settings to prevent vision impairment and promote eye health.

THINGS TO CONSIDER BEFORE IMPLEMENTING AN INTERVENTION

- **Understand the needs of your community or target population**. Before you implement any public health intervention, you will need to assess the status of vision and eye health in your community or target population. See Section 1 for information on how to conduct this assessment.
- **Identify existing assets and resources.** Interventions require resources. Before proposing a new intervention, take inventory of the existing assets in your community and determine whether some of them can be used to support your intervention. For example, try to use existing partnerships and relationships to obtain free or discounted vision screening services, eyeglasses, or transportation for your target population. Determine and assess the availability of resources (e.g., staff, funding) that will be needed for your intervention.
- **Integrate vision and eye health interventions into other chronic disease programs, as appropriate.** Vision health is a public health issue that is linked to other chronic conditions. To avoid duplicating efforts, collaborate with other public health and chronic disease programs, including those that address injury and fall prevention, diabetes, cardiovascular health, school health, and healthy aging. See Section 2 for information on how to form partnerships to support your efforts.

EXAMPLES OF VISION AND EYE HEALTH INTERVENTIONS

The 2016 report *Making Eye Health a Population Health Imperative: Vision for Tomorrow* notes that population health strategies can improve vision and eye health in the United States and globally.[4] Public health agencies can implement a range of strategies to promote vision and eye health. For example, strategies can be implemented to:

- Promote public awareness of the importance of vision and eye health.
- Expand access to appropriate clinical care.
- Build public health capacity to support vision-related activities.
- Promote community actions that enhance vision and eye health.

The remainder of this section of the toolkit describes interventions that have been used in the public health sector to promote vision and eye health.

Interventions to Promote Awareness of Vision and Eye Health Issues

Awareness of vision and eye health and associated health risks can help motivate people to take the necessary steps to protect their vision and eye health. Examples of interventions designed to promote awareness of vision and eye health issues include the following:

- The Stopping Elderly Accidents, Deaths, and Injuries (STEADI) Initiative is a CDC program that provides health care providers with strategies and tools to help them implement fall prevention interventions. Vision health is integrated into this intervention because vision plays an important role in fall prevention among older adults.
- Pharmacy, Podiatry, Optometry, and Dentistry (PPOD) was a program in CDC's National Diabetes Education Program. It was designed to engage providers from these four disciplines to work together to actively identify and treat patients with diabetes. This team-based approach can significantly reduce patients' risk of developing diabetes complications, including blindness.
- The Lions Eye Health Program is a community education program that helps Lions Clubs, community organizations, and individuals promote healthy vision and raise awareness of the causes of preventable vision loss. The program works to empower communities to save sight through early detection and timely treatment of diabetic eye disease, glaucoma, and age-related macular degeneration.
- The Oklahoma Healthy Aging Initiative offers a class for older adults called "Eye Ball 101" that provides a comprehensive overview of eye health and medical conditions that affect eyesight.
- The National Eye Health Education Program was established by the National Eye Institute. It provides a variety of resources to increase awareness of eye health. Program resources are designed to help reach populations at high-risk of eye disease and vision loss and to promote the use of vision rehabilitation services.

Interventions to Promote Access to Vision and Eye Care for Populations at Risk

Vision impairment and eye disorders can often be prevented if people have access to vision and eye care services. Access to preventive services is especially important for people at higher risk of vision impairment and those who have difficulty accessing health care services due to geographic or financial constraints.

Several reputable and accredited organizations have used evidence collected from scientific research to develop evidence-based recommendations and guidelines related to vision and eye health. Examples of these recommendations include the following:

- **Regular eye exams for adults aged 60 or older**, which is supported by the American Optometric Association (AOA), American Academy of Ophthalmology (AAO), American Academy of Family Physicians, and American College of Obstetricians and Gynecologists.
- **Annual comprehensive eye exams for people with diabetes to allow for early detection and management of diabetic eye diseases,** which is supported by the American Diabetes Association, AOA, and AAO.
- **Regular comprehensive medical eye evaluations for adults at risk of developing glaucoma,** which is supported by AOA and AAO.
- **Vision screening at least once for all children aged 3 to 5 years to detect amblyopia (also called lazy eye) or its risk factors,** which is supported by the US Preventive Services Task Force.

Examples of interventions designed to promote access to and use of vision and eye care services include the following:

Use of Mobile Eye Clinics

- The Kirby Puckett Eye Mobile is a mobile eye clinic that provides free vision screenings to people of all ages in communities across Minnesota. It also provides comprehensive eye exams, eye health information, and referrals to vision and eye care resources.
- Vision To Learn is a nonprofit organization that partners with school districts throughout the United States. It uses mobile eye clinics to provide free eye exams and glasses to children in low-income communities.
- Alabama Lions Sight is a mobile eye clinic that provides vision and eye care services, including vision screenings, at several sites in the most rural areas of Alabama.

Integration of Vision Screening Into Other Preventive Services

- Prevent Blindness North Carolina found that low-income, older, African American women were less likely than other population groups to receive vision and eye care services. They partnered with CDC's WISEWOMAN program to include vision screening as part of preventive health screenings offered to low-income women in rural parts of the state.

- Prevent Blindness Wisconsin conducts training throughout the state to ensure that public health practitioners can educate the public about the importance of vision and eye care and the eye conditions that can affect older adults. The program, called Healthy Eyes, teaches participants about age-related macular degeneration, cataract, glaucoma, and diabetic retinopathy.
- Prevent Blindness Ohio partners with the Ohio Department of Health on the Wise About Eyes Program. This program provides vision screening certification and equipment to primary medical clinics, school nurses, Head Start staff, and other providers to ensure that children aged 3 years or older receive evidence-based vision screenings.

Use of Telemedicine

- Enterprise-Wide Initiatives are telehealth interventions under the Office of Rural Health in the US Department of Veterans Affairs. They place ophthalmology technicians in rural Veterans Affairs (VA) clinics that lack vision and eye screening services. The technicians transmit patient eye information to VA ophthalmologists for diagnosis and follow-up.
- The University of Virginia Health System is expanding its use of telemedicine to help patients across Virginia better prevent or manage chronic conditions. Through its Center for Telehealth, the system is piloting an intervention to use telehealth technologies to screen patients for diabetic retinal disease.

Focus on High-Risk and Underserved Populations

- The Children's Vision Screening Initiative is offered through the Northern Plains Eye Foundation in South Dakota. It provides free annual vision screening to children in preschool and elementary school. It also provides sight-saving surgeries to help people regain their vision, mobility, and quality of life.
- Project BEST: Better Eye-Health Services and Treatment is provided through the Commission for the Blind and Visually Impaired in the New Jersey Department of Human Services. It offers vision screening services to children, adults, and migrant workers. It also focuses on helping historically underserved populations, including people who are low-income, elderly, are members of minority groups, or have diabetes.
- Friends for Sight is a nonprofit organization in Utah that provides vision screenings for children, glaucoma screenings for adults, free eye exams and glasses to low-income children, and education about eye safety and eye health.
- Helen Keller International ChildSight is a nonprofit organization that provides free in-school vision screenings, prescription eyeglasses, and referrals to local community vision and eye care providers to children in low-income communities. It currently operates in California, Minnesota, New Jersey, New York, Ohio, and Wisconsin.

Focus on Glaucoma

- The Wills Eye Glaucoma Research Center in Philadelphia developed and evaluated a community vision and eye care delivery model that provides eye exams and educational workshops in an urban area to detect, treat, and manage glaucoma in people at high-risk of developing this condition. The evaluation showed the value of using community strategies to reach people with glaucoma or suspected glaucoma in a metropolitan area.

- Eye Care Quality and Accessibility Improvement in the Community (EQUALITY) is a telemedicine program focused on glaucoma detection and management. It was established by the University of Alabama at Birmingham. The program is used in retail-based primary care practices that serve communities with a high percentage of people at risk of glaucoma. An evaluation of the project found that when people know more about glaucoma and plan to get vision and eye care services, it may result in early detection of disease and lower risk of vision loss.

Interventions to Promote Rehabilitation and Improve Quality of Life for People With Vision Impairment and Eye Disorders

Rehabilitation interventions seek to improve the quality of life for people with vision impairment by helping them make the most of their remaining vision. These interventions give rehabilitation professionals and organizations the tools they need to improve the functional abilities of people with vision impairment or eye disorders. These tools can help people with vision impairment by increasing their mobility, access to information, number of social contacts, and ability to get and keep a job.

Examples of interventions designed to promote rehabilitation and improve quality of life for people with vision impairment and eye disorders include the following:

- The Community Services for Vision Rehabilitation is a nonprofit community organization that uses a mobile eye clinic to provide accessible and comprehensive vision and eye care services to people with low vision and blindness.
- The Minnesota Aging Eyes Initiative was developed by the Minnesota State Services for the Blind. It helps older adults adjust to vision loss by providing low vision aids and devices at no charge. It also provides information about eye conditions common to older adults (e.g., macular degeneration, diabetic retinopathy) and referrals to other necessary health care services.
- The Ohio Department of Aging is a state agency responsible for coordinating programs and services under the federal Older Americans Act. It delivers practical, person-centered interventions and services in a variety of areas, including vision and eye health, to strengthen and support Ohio's older adults and their communities.
- A literature review to assess the effectiveness of providing reading aids to adults with low vision found insufficient evidence to support the use of a specific type of electronic or optical device. The review found some evidence that stand-mounted electronic devices may improve reading speed better than optical devices.[5]
- A randomized controlled trial of a low vision rehabilitation intervention that used home visits to improve visual function found preliminary evidence that such programs can have a positive influence on vision-related function.[6]

CONCLUSION

A comprehensive and thoughtful intervention can improve vision and eye health in your state or community. As you plan and implement your intervention, consider the extent to which your intervention is based on best practices or scientific evidence, can be used in different settings, and engages the community. You will also need to evaluate your efforts. Section 4 provides information and resources to help you evaluate your vision and eye health intervention.

Integrating Vision and Eye Health Into a Team-Based Care Approach for Diabetes

In Alabama, rates of blindness and other complications from diabetes are a great concern. To address this public health problem, staff in the Alabama Department of Public Health (ADPH) used CDC's PPOD program to bring together pharmacists, podiatrists, optometrists, and dentists in a team-based intervention.

A coalition was formed to oversee implementation of the intervention. Members included representatives from the Eyesight Foundation of Alabama, Sight Savers, the Alabama Institution of the Deaf and Blind, and the Department of Rehabilitation Services, as well as local optometrists and ophthalmologists.

The PPOD intervention helped to increase awareness of the role that vision and eye health care providers can play in identifying and treating patients with diabetes in Alabama. It also helped build capacity in the ADPH to address vision and eye health as a high-priority public health issue and integrate vision and eye health interventions into other public health programs.

Alabama's PPOD coordinator, Betsy Cagle, offered the following suggestions to organizations interested in integrating vision and eye health into other public health interventions:

- The most important first step is to identify at least one existing public health program, such as diabetes, healthy aging, tobacco control, or falls prevention, that is open to including vision and eye health interventions in their goals and activities.
- Because the success of PPOD depends on buy-in from pharmacists, podiatrists, optometrists, and dentists, reach out to these providers early. Listen to their feedback on how best to implement and sustain your intervention.
- Explore partnership opportunities with other agencies and organizations that have an interest in vision and eye health. Examples include state and local agencies focused on aging and disabilities, academic institutions, and nonprofits, such as Prevent Blindness.

About the Expert in the Field

Betsy Cagle works for the ADPH and was involved in implementing the PPOD intervention.

REFERENCES

1. Lake A, Browne JL, Abraham C, et al. A tailored intervention to promote uptake of retinal screening among young adults with type 2 diabetes - an intervention mapping approach. *BMC Health Serv Res*. 2018;18(396). doi:https://doi.org/10.1186/s12913-018-3188-5.

2. Sapru S, Berktold J, Crews JE, et al. Applying RE-AIM to evaluate two community-based programs designed to improve access to eye care for those at high-risk for glaucoma. *Eval Program Plann.* 2017;65:40–46.

3. Weiss D, Casten RJ, Leiby BE, et al. Effect of behavioral intervention on dilated fundus examination rates in older African American individuals with diabetes mellitus: a randomized clinical trial. *JAMA Ophthalmol.* 2015;133(9):1005–1012.

4. National Academies of Sciences Engineering and Medicine. *Making Eye Health a Population Health Imperative: Vision for Tomorrow*. Washington, DC: The National Academies Press; 2016.

5. Virgili G, Acosta R, Bentley SA, Giacomelli G, Allcock C, Evans JR. Reading aids for adults with low vision. *Cochrane Database Syst Rev*. 2018;4:Cd003303. doi:https://doi.org/10.1186/s12913-018-3188-5.

6. Acton JH, Molik B, Court H, Margrain TH. Effect of a home visit-based low vision rehabilitation intervention on visual function outcomes: an exploratory randomized controlled trial. *Invest Ophthalmol Vis Sci.* 2016;57(15):6662–6667.

SECTION 4:
EVALUATE THE IMPACT OF VISION-RELATED INTERVENTIONS

Evaluation is a powerful assessment process that can help determine whether an intervention is achieving its intended effect. It helps you assess whether your intervention strategies are producing measurable outcomes related to vision and eye health, such as improving access to and appropriate use of eye care services. The results will provide data to show what interventions are working and can help justify the need for additional resources and support.

This section of the toolkit provides information to help public health agencies and their partners plan, implement, and use comprehensive evaluation methods to monitor the outcomes associated with vision and eye health interventions. It is not intended to be a complete resource for program evaluation. Instead, it should be used in conjunction with other evaluation resources, some of which are discussed in this section.

THE IMPORTANCE OF AN EVALUATION PLAN

An effective evaluation starts with a thoughtful and thorough evaluation plan. The evaluation plan can serve as a road map that describes the direction your evaluation will take based on your evaluation questions and available resources. Having a written plan will promote transparency and ensure that stakeholders have the same expectations about the purpose of the evaluation, how the data will be used, and with whom the results will be shared.

AN EVALUATION PLAN WILL HELP YOU:

- Document each step of the evaluation process.
- Identify the activities needed to achieve the desired outcomes.
- Establish measures and indicators.
- Decide the types of data to be collected during the intervention.
- Identify data collection methods and who will take responsibility for each step during data collection.
- Identify the resources needed to conduct the evaluation.
- Establish a reasonable and realistic timeline for the evaluation.

THINGS TO CONSIDER BEFORE STARTING AN EVALUATION

- **Explore available evaluation resources.** Many resources are available to help you plan and conduct an evaluation that will meet your needs without consuming a disproportionate amount of your time or resources. See the end of this section of the toolkit for a list of suggested resources.
- **Develop an evaluation plan early in the process.** The earlier you develop your evaluation plan, the more time you have to monitor and evaluate the effect of your intervention. Start thinking about your evaluation plan while you are designing your intervention so it can be done before you implement your intervention.
- **Consider the resources needed for the evaluation.** Before making key decisions about the scope of the evaluation and the methods you will use to conduct it, identify the resources you will need and determine which resources are currently available.

PROGRAM EVALUATION IN SIX STEPS

CDC's Framework for Program Evaluation in Public Health has six connected steps that can be used as a starting point to tailor an evaluation for a particular public health effort at a particular point in time (Figure 2).[1] It also has a set of standards that can be used to assess the overall quality of evaluation activities. The first three steps can be done in any order and repeated multiple times. They often provide the foundation for the later three steps. You can tailor each step to meet your needs.

1. Engage Stakeholders

Stakeholders are people or organizations that are invested in your program, are interested in the results of the evaluation, or have an interest in what will be done with the results. When selecting stakeholders, identify people or organizations that are:

- Affected by the intervention (e.g., the target population).
- Involved in implementing or conducting the evaluation.
- Potential users of the evaluation results (e.g., program staff, partners, program participants, community groups, elected officials).

The CDC Program Evaluation Framework Checklist for Step 1 can guide you through this process.

Figure 2. Framework for Program Evaluation in Public Health

2. Describe the Program

Before you can evaluate your program or intervention, you must be able to clearly describe its purpose, activities, and components, as well as the outcomes it is intended to achieve in the short-, medium-, and long-term. One way to describe your program is to develop a logic model. A logic model is a graphic depiction that presents the relationships between your intervention's activities and its intended effects. Developing a logic model before you start your evaluation will help you define your goals and outcomes and measure the impact of the intervention correctly.

Use the Logic Model Template in Appendix B to create a logic model to describe your program or intervention.

The CDC Program Evaluation Framework Checklist for Step 2 can guide you through this process.

3. Focus the Evaluation Design

Focusing on your evaluation design will help you identify the ultimate goal of your evaluation and the steps needed to achieve it. Your plan should anticipate the intended uses of your findings and create a strategy that ensures that your evaluation will be useful, feasible, ethical, and accurate.

STANDARD COMPONENTS OF AN EVALUATION PLAN INCLUDE THE FOLLOWING:

- Key evaluation questions.
- Description of the target population.
- Description of the program or intervention.
- Description of the evaluation methodology.
- Description of how the evaluation findings will be used.

The following resources can guide you through this process: CDC Program Evaluation Framework Checklist for Step 3, Association for Community Health Assessment Toolkit, and Developing Evaluation Questions.

4. Gather Credible Evidence

You will need to collect accurate and adequate evidence to support your evaluation results and the recommendations that follow. Conclusions and recommendations that are based on credible evidence will be viewed as trustworthy by the evaluation's primary users and as believable and relevant by stakeholders. A stakeholder's determination of the credibility of the evidence will depend on factors such as the questions asked, the information sources used, the conditions of data collection, the reliability of the measurement, the validity of the interpretations, and the quality control procedures.

When stakeholders help develop the data collection and analysis methods, they may be more likely to accept the evaluation's conclusions and act on its recommendations.[2,3] You can strengthen your evidence by using multiple procedures for collecting, analyzing, and interpreting data and by encouraging stakeholders to help you define questions and collect data.

The following resources can guide you through this process: CDC Program Evaluation Framework: Gathering Credible Evidence, CDC's Evaluating Your Programs website, the University of Washington's Data Collection for Program Evaluation online course, and the Agency for Healthcare Research and Quality's Improving Data Collection across the Health Care System report.

5. Justify Conclusions

Stakeholders must believe that your conclusions are trustworthy before they will use your evaluation results with confidence. To reach conclusions that are well-substantiated and justified, review your evaluation results from the perspectives of many different stakeholders.

TO JUSTIFY CONCLUSIONS BASED ON EVIDENCE CONSIDER THE FOLLOWING:

- **Standards:** Stakeholders' perspectives and values about the program are considered while developing conclusions.
- **Analysis and Synthesis:** Credible methods are used to analyze and summarize the evaluation findings.
- **Interpretation:** Efforts are made to discover what the findings mean and to understand what their practical significance is to stakeholders.
- **Judgment:** Stakeholders use the available evidence, including the results of the evaluation, to make statements about the merit, worth, or significance of an intervention.
- **Recommendations:** All recommendations that result from the evaluation should keep the stakeholders' values in mind and be backed by sufficient evidence.

The CDC Program Evaluation Framework: Justifying Conclusions can guide you through this process.

6. Ensure Use and Share Lessons Learned

Share the key findings from your evaluation with a wide range of stakeholders to ensure that the evaluation achieves its purpose to enhance your intervention and improve vision and eye health.

Recommendations for ways to ensure the use of your results and share lessons learned include the following:

- Design your evaluation to specifically meet the needs of your stakeholders.
- Provide continuous feedback to stakeholders on your findings, interpretations, and decisions that might affect the likelihood of use.
- Schedule follow-up meetings with intended users to promote the transfer of evaluation conclusions into actions or decisions.
- Share the procedures used and lessons learned from your evaluation with your stakeholders through tailored communication strategies that will meet their needs.

COMMON DISSEMINATION TOOLS:

- Peer-reviewed publications.
- Presentations at national conferences and meetings.
- Reports.
- Issue or policy briefs.
- Press releases.
- Infographics.
- Dashboards.
- Success stories.

The following resources can guide you through this process: CDC Program Evaluation Framework Checklist for Step 6, the Agency for Healthcare Research and Quality's Dissemination Planning Tool, and the University of Nebraska's How to Create an Effective Brochure guide.

APPLYING THE SIX STEPS TO VISION AND EYE HEALTH INTERVENTIONS

This section provides two examples of how the evaluation framework could be applied to a vision and eye health intervention.

EXAMPLE 1. USE OF TELEMEDICINE TO IMPROVE ACCESS TO EYE CARE FOR PEOPLE AT HIGH-RISK OF GLAUCOMA

Evaluation Step	Activities
1. Engage Stakeholders	Identified and engaged glaucoma specialists at the University of Alabama at Birmingham and optometrists at two Walmart Vision Centers.
2. Describe the Program	Implemented a community eye health education and screening program that used telemedicine to screen people at high-risk of glaucoma.
3. Focus the Evaluation Design	Primary evaluation question: Is the intervention effective in screening people at high-risk of glaucoma? Primary evaluation metric: Number of people at high-risk who are screened for glaucoma.
4. Gather Credible Evidence	Collected data from participant surveys, site visit interviews, and patient medical records.
5. Justify Conclusions	Used credible analysis methods to turn collected data into meaningful, useful, and accessible information.
6. Ensure Use and Share Lessons Learned	Shared evaluation results in a peer-reviewed publication.[4]

EXAMPLE 2. USE OF SMART TECHNOLOGIES AND TELEMEDICINE TO IMPROVE SCREENING RATES AMONG PEOPLE AT HIGH-RISK OF DIABETIC RETINOPATHY

Evaluation Step	Activities
1. Engage Stakeholders	Identified and engaged primary care providers at community health centers across Virginia.
2. Describe the Program	Implemented a primary care screening program that used smart technology and telemedicine to screen people at high-risk of diabetic retinopathy.
3. Focus the Evaluation Design	Primary evaluation question: Is the intervention effective in increasing screening rates among people at high-risk of diabetic retinopathy? Primary evaluation metric: Number of people at high-risk who are screened for diabetic retinopathy.
4. Gather Credible Evidence	Collected data from participant surveys, site visit interviews, and patient records.
5. Justify Conclusions	Used credible analysis methods to turn collected data into meaningful, useful, and accessible information.
6. Ensure Use and Share Lessons Learned	Shared evaluation results with stakeholders and used the results to enhance the intervention.

CONCLUSION

CDC's Framework for Program Evaluation in Public Health provides a practical approach for conducting evaluations. Use the information and resources in this section of the toolkit to better understand the steps and standards used in the framework, then apply the framework to your vision and eye health interventions.

Using Evaluation Results to Answer the "So What?" Question

At Prevent Blindness Texas, Heather Patrick and Monica Guerrero manage a wide range of programs and services that are designed to prevent blindness and preserve sight among Texans. When managing such a large number of programs and services, it can be tempting to take the same approach for all of them.

Fortunately, Heather and Monica understand the value of evaluating programs to ensure that they are achieving their goals. They routinely conduct surveys before and after programs to assess their programs and make improvements as needed.

Heather and Monica also share their evaluation results with external stakeholders, partners, and funders. The data help answer questions from stakeholders about why Prevent Blindness Texas offers certain programs and how these programs are helping the target population. Heather and Monica refer to these questions as "so what?" questions, and they note that evaluation data are key to answering them.

Although Heather and Monica could not imagine operating Prevent Blindness Texas without evaluation data, they recognized early on that they had limited time and expertise to conduct evaluations. They hired an external evaluator with expertise in public health, which allowed them to focus on program and service delivery. The evaluator brought a fresh perspective, and even some new programming ideas.

Heather and Monica offered the following suggestions to other organizations that are ready to incorporate evaluation into their vision and eye health activities:

- Do not wait too long before thinking about the evaluation component of your intervention. Ideally, evaluation planning should be done at the beginning.
- Hire an external evaluator, if possible. Using an external evaluator can sometimes be more efficient and cost-effective than maintaining internal evaluation staff. It might also be more appropriate to work with an external evaluator who does not have a vested interest in the evaluation findings. Their findings might be perceived as more credible than those of an internal evaluator who is associated with the intervention being evaluated.
- Include your partners in the evaluation planning process. They can offer insights about how the evaluation can be developed to best meet the needs of all stakeholders.

About the Expert in the Field

Heather Patrick is President and Chief Executive Officer of Prevent Blindness Texas. **Monica Guerrero** is Vice President of Programs and Community Outreach. Prevent Blindness Texas is a nonprofit organization with a mission to prevent blindness and preserve sight in the state.

ADDITIONAL ONLINE RESOURCES

The following online resources provide additional information, evaluation tools, and advice on how to conduct practical, feasible, and useful evaluations:

- CDC Evaluation Resources provides an extensive list of resources for evaluation, as well as links to key professional associations and key journals.
- RE-AIM provides a framework designed to enhance the quality, speed, and public health impact of efforts to translate research into practice in five areas: reach, efficacy, adoption, implementation, and maintenance.
- CDC's *Developing an Effective Evaluation Plan* provides worksheets and a step-by-step guide to developing an evaluation plan.
- The Evaluation Resource Center is maintained by the Healthcare Georgia Foundation. It offers online evaluation tools and services tailored to public health and nonprofit health organizations.
- The W.K. Kellogg Foundation offers a variety of evaluation resources, including a step-by-step guide, a handbook, and a logic model development guide.
- *Designing Evaluations* is a handbook from the US Government Accountability Office that provides information on evaluation designs, approaches, and standards.
- *Selecting and Working with an External Evaluator* was developed by the Healthcare Georgia Foundation. It provides practical and useful information about finding, hiring, and working with an external evaluator.
- *The Magenta Book: Guidance for Evaluation* provides an in-depth look at evaluation. Part A is for policymakers and explains the benefits and requirements of a good evaluation and outlines steps that policymakers can follow to make a good evaluation of their intervention more feasible. Part B is more technical and is for analysts (or interested policymakers) and it describes the key steps to follow when planning and conducting an evaluation in more detail.
- The Community Tool Box: Chapter 36. Section 1. A Framework for Program Evaluation: A Gateway to Tools describes why evaluations are important. It also describes a framework for program evaluation and standards for developing a strong program evaluation.
- The *Non-Researcher's Guide to Evidence-Based Program Evaluation* provides an overview of program evaluation, including goals, types, and designs.
- *The Step-By-Step Guide to Evaluation: How to Become Savvy Evaluation Consumers* provides a framework, detailed information, and tips for conducting an evaluation to guide and track program strategies.
- *Selecting an Appropriate Evaluation Design* provides background information on how to design project evaluations. It describes different approaches, as well as factors to consider when choosing an evaluation design.

REFERENCES

1. Centers for Disease Control and Prevention. Framework for program evaluation in public health. *MMWR Recomm Rep*. 1999;48(RR-11):1–58.

2. Fetterman DM, Kaftarian SJ, Wandersman A, eds. *Empowerment Evaluation: Knowledge and Tools for Self-Assessment, Evaluation Capacity Building, and Accountability*. 2nd ed. Thousand Oaks, CA: Sage Publications; 2015.

3. Patton MQ. Utilization-Focused Evaluation: The New Century Text. 3rd ed. Thousand Oaks, CA: Sage Publications; 1997.

4. Sapru S, Berktold J, Crews J E, et al. Applying RE-AIM to evaluate two community-based programs designed to improve access to eye care for those at high-risk for glaucoma. *Eval Program Plann*. 2017;65:40–46.

APPENDIX A.

Behavioral Risk Factor Surveillance System Vision Health Questions

Core Question (since 2013)

Are you blind or do you have serious difficulty seeing, even when wearing glasses?

Optional Vision Module Questions

1. How much difficulty, if any, do you have in recognizing a friend across the street even when you have your glasses or contact lenses on?
2. How much difficulty, if any, do you have reading print in newspapers, magazines, recipes, menus, or numbers on the telephone?
3. When was the last time you had your eyes examined by any doctor or eye care provider?
4. When was the last time you had an eye exam in which the pupils were dilated?
5. What is the main reason you have not visited an eye care professional in the past twelve months?
6. Do you have any kind of health insurance coverage for eye care?
7. Have you been told by an eye doctor or another healthcare professional that you NOW have cataracts?
8. Have you EVER been told by an eye doctor or another healthcare professional that you had glaucoma?
9. Have you EVER been told by an eye doctor or another healthcare professional that you had age-related macular degeneration?
10. Have you EVER had an eye injury that occurred at your workplace while you were doing your work?

APPENDIX B.

Tools

Checklist for Developing a Partnership

Partnership Assessment Tool

Partnership Communication Worksheet

Evaluation Plan Checklist

Logic Model Template

CHECKLIST FOR DEVELOPING A PARTNERSHIP

The following steps are offered as a suggestion for developing partnerships, but each public health agency or other organization will need to assess its situation to determine which of these steps will be most useful for their situation and partnership goals.

	Task
☐	**Research potential partners and organizations**. Familiarize yourself with each organization's mission, interests, and assets so that you can identify the benefits of the partnership to both your program and that of your potential partner.
☐	**Determine what resources, if any, your program can contribute to the partnership.** Shared resources can include a variety of human, financial, or technical contributions, such as staffing, access to funding, and knowledge about the community or program.
☐	**Know your program and be able to describe it succinctly.** Partners want to associate with those that can clearly articulate their goals, challenges, and successes.
☐	**Meet the potential partner in person, if possible.** Since a critical component of partnerships is relationship building and trust, in-person meetings are always preferable.
☐	**Take the time to establish rapport and build trust.** Recognize that a strong partnership takes time to develop.
☐	**Be ready to explain the specific needs of your program and why the partnership would be helpful.** It can be helpful to write down key talking points so that you can communicate clearly and efficiently with potential partners.
☐	**Ask potential partners about their own needs and organizational challenges.** As you listen to their needs and challenges, identify ways that a partnership can help them to meet their needs or minimize their challenges.
☐	**Ask about the resources that the potential partner can contribute to the partnership**. Be prepared to offer some ideas based on your initial research and understanding of your program's needs.
☐	**Learn about the culture of the potential partner organization.** Partnering with organizations that have values, beliefs, and missions that are similar to your organization can make the partnership easier and more successful.
☐	**Make a clear "ask" of the partner. If possible, your "ask" should be task-oriented with a beginning and an end.** Don't expect potential partners to know what is needed from them; make it as easy for them to partner with you as possible.

PARTNERSHIP ASSESSMENT TOOL

Use this tool to assess the appropriateness of partnerships you are considering.

Your Organization's Name: _____

Potential Partner's Name: _____

Question	Inadequate	Partially Adequate	Fully Adequate	Don't Know	Notes
Is our partnership appropriate for the proposed project? (Do we both bring experience and knowledge on the topic?)	☐	☐	☐	☐	
Do we have shared values (e.g., desire to improve vision and eye health, privacy, confidentiality)?	☐	☐	☐	☐	
Do we have a compatible environment (e.g., similar workflow, office culture)?	☐	☐	☐	☐	
Will both partners benefit from this partnership?	☐	☐	☐	☐	
Will the partnership have effective leadership from both partners?	☐	☐	☐	☐	
Does the partnership have adequate resources (e.g., funding, staff) to succeed?	☐	☐	☐	☐	
Are our skills complementary?	☐	☐	☐	☐	
Do we have a clear communication plan?	☐	☐	☐	☐	
Do we have stated and shared partnership goals?	☐	☐	☐	☐	
Do we have a strategy for conflict resolution?	☐	☐	☐	☐	
Do both partners have equal power (e.g., equal managerial and staff representation)?	☐	☐	☐	☐	

PARTNERSHIP COMMUNICATION WORKSHEET

Use this worksheet to identify and document the communication strategies you plan to use with partners and other stakeholders.

Partner's Name: _____ Phone: _____ E-mail: _____

Other Contact Info: _____

Communication Channel	Communication Time	Communication Style	Deliverables	Notes
Phone calls, e-mail	*Monday 8am-5pm EST*	*Casual; friendly*	*Weekly phone calls and reports*	

EVALUATION PLAN CHECKLIST

Use this checklist to create your evaluation plan.

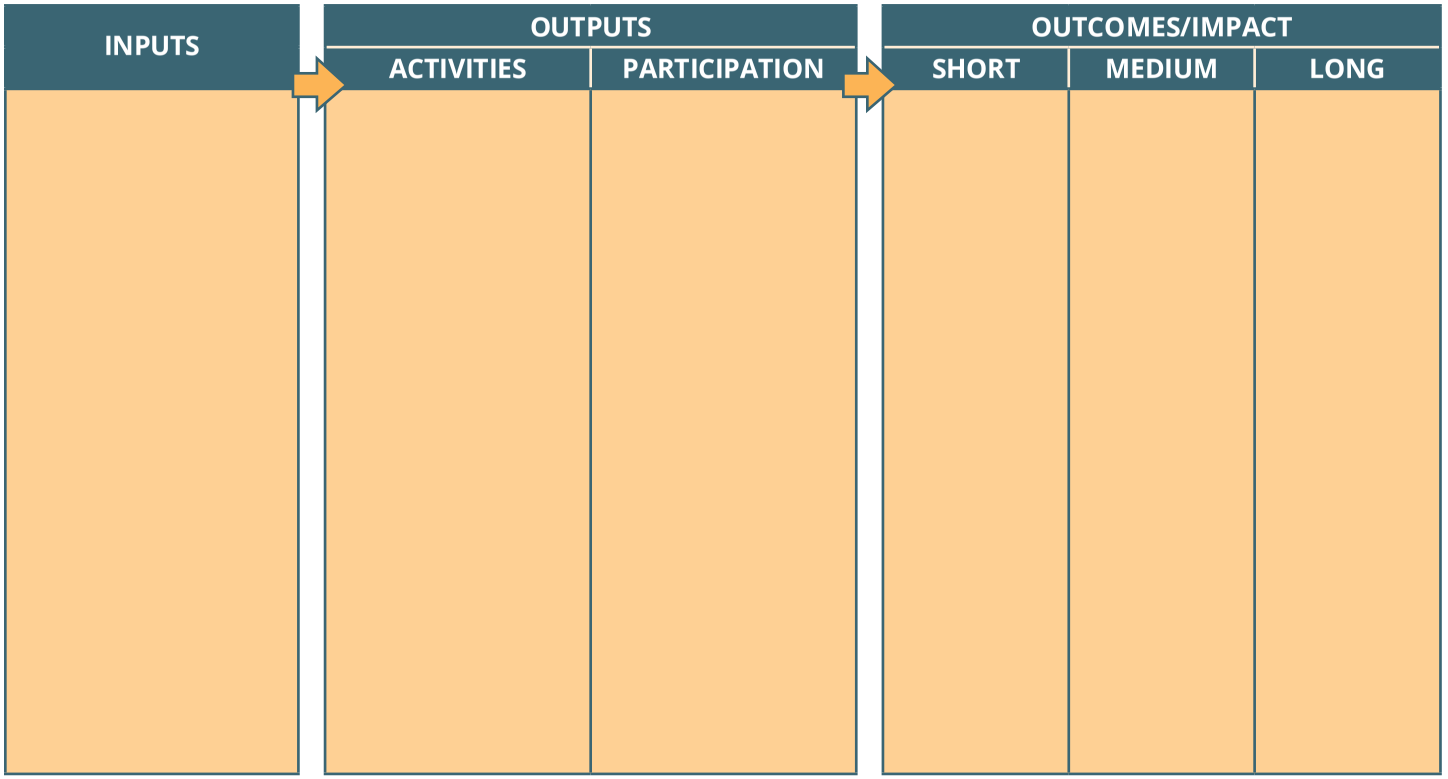
Program: _____

	Task	Notes
☐	Define your evaluation goal(s).	
☐	Identify type(s) of data to collect.	
☐	Decide when to collect data.	
☐	Determine if you need specific technical support from an evaluation vendor.	
☐	Identify who is responsible for data collection.	
☐	Determine if and when you need to seek institutional Review Board Approval for research with human subjects.	
☐	Specify how you will ensure accurate and confidential data collection.	
☐	Identify who is responsible for analyzing the data and what method they will use.	
☐	Determine how you will report and share findings.	
☐	Determine how and when you will use findings to revise the intervention or your method of evaluation.	

LOGIC MODEL TEMPLATE

Use this template to create a logic model to describe your program or intervention.

Program Name: _____ Evaluation Date: ____/_____/_____



EXTERNAL FACTORS:

- **Inputs:** resources needed for the activities (e.g., meeting space, facilities, staff, materials, screening equipment)
- **Outputs:** tangible products, capacities, or deliverables that result from the activities (e.g., providing eye glasses to children who are identified as visually impaired from screenings).
- **Outcomes:** changes that occur in people or conditions because of the activities and outputs (e.g., increase the likelihood that program participants receive follow-up care for vision impairments and eye disorders)
- **External Factors:** contextual factors not in the program's control that might affect outcomes (e.g., funding limitations).