

The Invisible Shield

**Public health saved your life today
and you don't even know it**



Educating for Global Understanding

www.journeysinfilm.org

JOURNEYS IN FILM STAFF

Jennifer Fischer, Executive Director
Hershawna Frison, Director of Education and Strategic Initiatives
Amy Bowers, Instructional Designer

JOURNEYS IN FILM BOARD OF DIRECTORS

Joanne Strahl Ashe, President and Founder
Jennica Carmona
Jamor Gaffney-Logan
Kayla Johnson
Elana Luppino

EDITOR

Jonathan Freeman-Coppadge

LAYOUT

Tiffany McCormick

NATIONAL ADVISORY BOARD

Liam Neeson, Founding Spokesperson
Kristin Wiig, Spokesperson
Brooke Adams
Sharon Bialy
Ted Danson
Sara Jo Fischer
Gary Foster
Scott Frank
Professor Henry Louis Gates, Jr.
Daniel Goleman
Tara Bennett-Goleman
Piper Hendricks
Jill Iscol, Ed.D., *In Memoriam*
Professor Rosabeth Moss Kanter
Alexi Ashe Meyers
William Nix
Harold Ramis, *In Memoriam*
Emily Shagley
Tony Shalhoub
Professor Richard A. Shweder
Mary Steenburgen
Walter Teller
Randy Michael Testa
Loung Ung
Elizabeth Clark Zoia



TABLE OF CONTENTS

4	FACILITATION GUIDELINES
5	HOW TO USE THE LEARNING GUIDE
6	ABOUT <i>The Invisible Shield</i>
7	EPISODE 1: The Old Playbook: Public Health in Context
9	EPISODE 2: Follow the Data
11	EPISODE 3: Inoculation, Inequity, and Public Trust
13	EPISODE 4: The New Playbook: Holistic Answers
15	CONCLUSION: The Players and the Future of Public Health
17	FILM CREDITS
18	Appendix: EXAMPLES OF CAREERS IN PUBLIC HEALTH

DISCUSSION GUIDE PARTNERS





FACILITATION GUIDELINES



Filmmakers use immersive storytelling to produce intense thoughts and emotions in the viewer. Journeys in Film uses this powerful medium as a springboard for meaningful dialogue around humanity's most pressing issues. In this guide, you will find suggestions for leading productive conversations that broaden perspectives, encourage empathy, and build new paradigms for education.

- When watching a film or having a powerful discussion, normalize taking breaks and exercising bodily autonomy. Acknowledge that conversations around complex topics can be vulnerable, complicated, and challenging. **Encourage members to voice and do what is right for them without needing to explain or apologize.**
- People do their best when they know what to expect. **Start and end your meetings on time.**
- **Share or co-create your intentions for the meeting.**
- **Create your space.** If possible, share snacks or find other ways to create an inviting, comfortable atmosphere.
- **Create a trustworthy space.** Maintain confidentiality and only speak to your own experience.
- **Minimize distractions** while you are together. Silence cell phones and devices so you can give your full attention to the conversation.
- **Practice whole-body listening.** Listen to words, tone, body language, and the feeling in the atmosphere.
- **Acknowledge voices that may be absent.** Is there a lived experience that isn't represented in your group? Who are the bridge people who might be able to connect you with other people in your community who might bring new perspectives to the table?
- **Adopt an attitude of positive intent.** If someone says something that bothers you, assume positive intent and ask for more information.
- Ignite your curiosity around other people's views and opinions. **Listen to understand, not to respond.** You don't need to agree with others in your group or make it known that you are "right" to have a worthwhile conversation.
- **Words matter.** Be open to learning and practicing new ways to communicate with others.
- **Be clear, direct, and kind** in your communication. Nobody benefits when you bottle your opinions.
- Everyone has blindspots and biases; **cultivate a space of grace** as you enter into new territory together.
- If a conversation gets heated, practice acknowledging the tension, pausing as a group, and **taking a collective breath together** before diving back in or taking a longer break to reset.
- Privilege your relationships with others over the content or agenda of the meeting. **Show each other kindness.**
- **Create a closing ritual** that celebrates the time you've spent together and either gives closure or gives members something to think about before your next meeting.



HOW TO USE THE LEARNING GUIDE

Whether you're in a classroom, community setting, homeschooling, or exploring independently, this learning guide pulls out powerful quotes and messages from *The Invisible Shield* and offers added context or reminders of key context from the episodes while also presenting questions that encourage critical thinking, powerful discussion, and expanded understanding regarding public health.

It is a useful tool for extended learning with this important docuseries.

The guide includes five sections, one section for each of the four episodes of the docuseries, as well as a short conclusion section. Each section can be used on its own or in coordination with the others.

Here is an overview of key focus areas for each section:

- **The Old Playbook: Public Health in Context** centers on defining and understanding public health.
- **Follow the Data** offers opportunities to discuss the role of data/vital statistics.
- **Inoculation, Inequity, and Public Trust** explores historical factors leading to the erosion of trust in public health, particularly regarding vaccines, and looks at the importance of community outreach to improve trust.
- **The New Playbook: Holistic Answers** highlights the power and importance of collaboration and community in strengthening public health, especially regarding "diseases of despair."
- **Conclusion: The Players and the Future of Public Health** explores various roles and jobs that exist in public health and considers the future of public health.

For each section, you will find the following relevant content:

- **Overview and background info:** Framing language and helpful insights about the topic
- **Driving question:** A primary question to ground discussion
- **Useful terms:** Key words and definitions meant to build further understanding
- **Discussion questions:** To facilitate conversation (NOTE: To meet the needs of readers with various levels of familiarity to public health subject matter, discussion prompts are listed in order of complexity, beginning with foundational prompts that gradually become more nuanced.)
- **Additional resources:** Resources that may be of interest for expanded learning

This guide was put together by a small, dedicated team of individuals who are passionate about making learning enjoyable for viewers worldwide. We encourage you to approach it with an open and curious mind, ready to discover new ideas and concepts that may inspire you in your own community.



ABOUT THE FILM



The Invisible Shield is now streaming on [PBS.org](https://www.pbs.org) and the PBS app.

Made Possible By:

Produced By:

Presented By:

**Bloomberg
Philanthropies**

RadicalMedia®



The Invisible Shield explores public health as an under-recognized invisible shield keeping us safe. Joshua Sharfstein, MD, Distinguished Professor of the Practice at the Johns Hopkins Bloomberg School of Public Health, explains this concept through a phrase that has circulated across the field: “Public health saved your life today, but you didn’t even know it.”

The work of public health is made visible by public health emergencies (pandemics, outbreaks, etc.), when society depends on the expertise of people who previously were working in the background. This docuseries also highlights the role of public health professionals as the first line of defense during public health crises through their use of outbreak science, health patterns, and forecasting data. It surfaces the challenges in educating the public about the public health system. It hopes to encourage viewers to learn more about the various roles and jobs that exist in public health and to be a part of the invisible shield in the future.

Episode 1, “The Old Playbook,” explores how public health has doubled life expectancy and the ways in which the system is now in jeopardy. When the world has to cope with the COVID-19 pandemic, the public health sector revisits the past to create solutions.

Episode 2, “Follow the Data,” looks at how data collection has been an essential public health tool for centuries. By increasing understanding and mitigating the spread of disease, data collection has helped make sense of the threats to collective health.

Episode 3, “Inoculation and Inequity,” explores how disinformation, science skepticism, and government distrust impacted COVID vaccination efforts. It highlights how historical injustices and inequities lead to apprehension, forcing public health to refine its approach.

Episode 4, “The New Playbook,” highlights ways in which experts are rethinking the public health system in the face of declining life expectancy, inequality, and deaths of despair.

Each episode builds upon the others to encourage viewers to think about how the next generation of committed public health workers and advocates will utilize the historical context to approach future obstacles in public health.



EPISODE 1: THE OLD PLAYBOOK: PUBLIC HEALTH IN CONTEXT



Emergency hospitals at Camp Funston, National Museum of Health and Medicine; Image Source: National Museum of Health and Medicine

“I’ve come to think of the role of public health as a kind of invisible shield that has been quietly protecting us, extending our lives, keeping our children safe, and the work that it does is almost always underappreciated almost by definition... because when it is working well, you don’t get sick...in fact, you live longer lives.”

— Steven Johnson, Author,
Extra Life and *The Ghost Map*

Sandro Galea, MD, DrPH, Boston University School of Public Health, and Dr. Sharfstein both emphasize the collective nature of public health in this episode. By exploring the history of public health, we come to understand the umbrella that is public health, and we can see the way that responses to health catastrophes in the recent past have led to positive social changes and extended life expectancy.

Useful Terms

Disease prevention — actions that reduce exposure or other risks, keep people from getting sick, or keep disease from getting worse

Epidemic — a group of cases of a specific disease or illness clearly in excess of what one would normally expect in a particular geographic area.

Outbreak science — the study of the frequency and response of an occurrence of more cases of disease than would normally be expected in a specific place or group of people over a given period of time.¹

Pandemic — an epidemic, usually caused by an infectious pathogen, that transcends national boundaries and extends over much or all of the world, attacking people in all affected regions.

Pathogen — a bacterium, virus, or other microorganism that can cause disease.

Virus — small organisms, consisting mainly of DNA and RNA, that infect host cells in animals (including humans), plants, and bacteria.²



DRIVING QUESTION

How does public health affect positive social change and sustain civilization?

Discussion Prompts

1. How do YOU define public health? Did this episode change your understanding of public health?
2. How did this episode make more visible the role that public health organizations, jobs, and individuals play in society?
3. What individuals and approaches stood out for you? Who inspired you?
4. Dr. Sharfstein highlights that public health asks the question “How can we prevent tragedy?” Why is it important in public health for a society to work collectively in disease prevention? How does that help prevent tragedy?
5. Amy Acton, MD (Ohio State Department of Health) makes the point that we have gained 30 years of life expectancy over the last century due to things that we can only solve collectively. Can you think of examples in which collective action in public health has saved lives?
6. What challenges do public health professionals face in educating the public about the public health system?
7. Steven Mitchell, MD (Harborview Medical Center), in this episode stresses, “The public health professionals in our communities are truly the first line of defense.” As such, how do public health professionals balance the urgency of crisis response with the need for accurate information and thoughtful decision-making?

¹ Definitions for *disease prevention*, *epidemic*, and *outbreak science* from Oregon Health Authority: <https://www.oregon.gov/oha/ph/About/TaskForce/Documents/public-health-terminology.pdf>

² Definitions for *pandemic*, *pathogen*, and *virus* from Porta, Miquel and John M. Last. A Dictionary of Public Health. Oxford University Press, 2018.

According to the Institute of Medicine’s landmark 1988 report, “Public health is what society does collectively to assure the conditions for people to be healthy.”

The terms “society,” “collectively,” and “people” emphasize the difference between public health and medical care.

Additional Resources

What is Public Health? American Public Health Association <https://www.apha.org/what-is-public-health#:~:text=Public%20health%20promotes%20and%20protects,%2C%20learn%2C%20work%20and%20play>. Accessed 12 February 2024

E-learning course — Introduction to Public Health. <https://www.cdc.gov/training/publichealth101/e-learning/public-health/>. Accessed 29 January 2024

Public Health 101 (Introduction to Public Health Slides), created by the Centers for Disease Control and Prevention. <https://www.cdc.gov/training/publichealth101/documents/introduction-to-public-health.pdf>. Accessed 29 January 2024

Public Health Overview, ExploreHealthCareers.org. <https://explorehealthcareers.org/field/public-health/>. Accessed 29 January 2024.

Winny, Annalies. “Life Expectancy is Declining in the U.S. It Doesn’t Have to Be.” Johns Hopkins Bloomberg School of Public Health: <https://publichealth.jhu.edu/2022/life-expectancy-is-declining-in-the-us>. Accessed 29 January 2024.

“Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century.” National Library of Medicine <https://www.ncbi.nlm.nih.gov/books/NBK221192/>. Accessed 16 February 2024.



EPISODE 2: FOLLOW THE DATA



Johns Hopkins COVID-19 Tracking Dashboard— Provided by Johns Hopkins Coronavirus Resource Center

“If we can’t measure it, we really can’t manage it. We need better health surveillance data in this country.”

— Lauren Gardner, PhD, Creator of Johns Hopkins COVID-19 Dashboard, Johns Hopkins University

Once a health crisis is identified, epidemiologists investigate the source, transmission, and risk factors associated with the disease. Statistical methods involving data collection and analysis are essential for understanding effective points of intervention. Data is also important for disease prevention. Epidemiologists often use mathematical models to simulate the spread of disease, and that information informs public health strategies and action.

In this episode, Kelly Henning, MD, Public Health Program Lead at Bloomberg Philanthropies, notes that noncommunicable diseases (NCDs) are often thought of as non-preventable diseases. Examples of NCDs include heart disease, cancer, diabetes, respiratory diseases, etc. Dr. Henning stresses that *deaths* from these diseases are often preventable. A key example of the powerful and important role of data and data tracking regarding improved life expectancy and quality of life is visible in regards to tobacco use. As a broader understanding of the connection between tobacco use and many leading causes of death became available through data, powerful changes were possible. Indoor smoking bans, tobacco taxation, and shifts in societal attitudes regarding tobacco use have all been part of a public health strategy that saves lives and improves life expectancy.

“In the early days of a public health crisis, one of the most important resources we have at our disposal protecting us is data.” — Steven Johnson

“If you’re missing data, then you miss whether or not there are pockets of illness and suffering that need special attention. It is absolutely essential to understand the distribution of health problems and where they are the greatest in order to fix problems. We are only as strong as a society as our weakest link.”

— Dr. Sharfstein



DRIVING QUESTION

Why do you think data is important for shaping public health policies and health interventions that save lives?

Useful Terms

Data — a collection or set of facts or items of information

Disease transmission — a way germs and infections are acquired by a susceptible person through contact (e.g., touching, sprays and splashes, inhalation, and sharps injuries)³

Disease tracking (or case surveillance) — the systematic collection and analysis of data that allows public health departments to understand diseases and their spread and to determine appropriate actions to control outbreaks⁴

Disparities in health (inequities) — differing levels of health indicators, such as life expectancy, that are observed among segments of a population, often correlating with economic indicators, ethnicity, gender, educational level, employment, and housing conditions

Epidemiology — the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems. It is concerned with the frequencies and types of illnesses and injuries in groups of people, and with the factors that influence their distribution.⁵

Noncommunicable disease (NCD) — 1) chronic conditions that do not result from an (acute) infectious process and hence are “not communicable.” 2) a disease that has a prolonged course, that does not resolve spontaneously, and for which a complete cure is rarely achieved⁶

Vital statistics — data derived from certificates and reports of birth, death, fetal death, induced termination of pregnancy, marriage (divorce, dissolution of marriage, or annulment), and related reports⁷

³ CDC. Infection Control. <https://www.cdc.gov/infectioncontrol/spread/index.html>

⁴ Porta, Miquel and John M. Last. A Dictionary of Public Health. Oxford University Press, 2018.

⁵ Oregon Health Authority: <https://www.oregon.gov/oha/ph/About/TaskForce/Documents/public-health-terminology.pdf>

⁶ CDC. https://www.cdc.gov/globalhealth/healthprotection/fetp/training_modules/new-8/overview-of-ncds_ppt_qa-revcom_09112013.pdf

⁷ Missouri Department of Health and Senior Services: <https://health.mo.gov/data/vitalstatistics/>

Discussion Questions

1. Why is it important for epidemiologists (those who investigate the source, transmission, and risk of a disease) to work together with medical professionals and policymakers to understand and prevent disease?
2. Besides tobacco use, are there other examples you can think of in which data helped shift public understanding of a key health issue?
3. What disparities in data collection and/or reporting exist? (Consider race, socioeconomic status, and geographic locations.) Why does complete or accurate data matter?
4. What are some techniques and methods for addressing disparities in data collection?

Additional Resources

Dicker, Richard C. et al. “Principles of epidemiology in public health practice; an introduction to applied epidemiology and biostatistics. 3rd ed” , 2006. <https://stacks.cdc.gov/view/cdc/6914>. Accessed 29 January 2024.

Fine, Annie. “To Address Health Disparities, Race and Ethnicity Data is Key.” Pew Trust, December 13, 2023. <https://www.pewtrusts.org/en/research-and-analysis/articles/2023/12/18/to-address-health-disparities-race-and-ethnicity-data-is-key>

Introduction to Epidemiology. Center for Disease Control. <https://www.cdc.gov/training/publichealth101/epidemiology.html>. Accessed 12 February 2024.

Public Health and Data Authority. Center for Disease Control. <https://www.cdc.gov/surveillance/policy-standards/data-authority.html>. Accessed 12 February 2024.

What is Epidemiology? National Institute of Health. <https://www.nidcd.nih.gov/health/statistics/what-epidemiology>. Accessed 12 February 2024.



EPISODE 3: INOCULATION, INEQUALITY, AND PUBLIC TRUST



Pastor Gregory Christopher, left, senior pastor at Shiloh Baptist Church, sits with Anthony Chen, MD, right, Director of Health Emeritus, Tacoma-Pierce County Health Department

*“Developing a vaccine is the first challenge;
getting people to accept the vaccine can be even more challenging.”*

— Rupali Limaye, PhD, Associate Professor,
Johns Hopkins Bloomberg School of Public Health

Throughout history, vaccines have played a fundamental role in improving public health. Besides offering personal immunity, vaccines contribute significantly to reducing the overall burden of disease and preventing the spread of infections within communities. Their historical impact includes the elimination of deadly viruses like smallpox and the containment of bacterial infections.

Vaccines play a critical role in safeguarding global well-being and have contributed significantly to longer life expectancies around the world. However, historical injustices have contributed to reluctance from many regarding vaccines, especially when combined with a growing lack of public trust in government. In this episode, Dr. Limaye and others explore this “erosion in trust” and its role in reference to COVID-19 vaccines.

The episode also points to solutions. Dr. Chen and Pastor Gregory Christopher (pictured above) realized that by working together they could improve public health and vaccination rates among the African American community in Tacoma, Washington. Both understood the role of historical injustices, such as the Tuskegee Institute Study in the 1930s.

“We feel that government officials, they should serve us, and they should allow us to have a voice, and Dr. Chen did that.”

— Pastor Christopher

The Tuskegee Institute Study took place in 1932. The U.S. Public Health Service enrolled 600 Black men in a study and told them they were being treated for “bad blood,” but in reality the study was only observing the natural course of untreated syphilis. Those in charge withheld the accepted treatment of penicillin from infected patients. In 1974, the Tuskegee Health Benefit Program was created for participants and their families, and in 1997, President Clinton issued a formal presidential apology.



DRIVING QUESTION

What is the connection between public trust and public health?

Useful Terms

Inequities in health (health disparities gap) — the differences in levels of health indicators associated with and often correlated with inequities of socioeconomic levels, gender, and ethnicity. These inequities are related to the effects of educational, housing, environmental, occupational, and behavioral factors, such as differences in exposure to environmental pollutants and other health risk factors.

Inoculation (vaccination) — all forms of immunization against infections pathogens, including oral, as well as injected, vaccines

Vaccine — the biologically active antigen that is injected or taken orally to immunize (vaccinate) individuals against communicable diseases⁸

Vaccine access — easy, equitable availability of vaccines, particularly within communities that are made most vulnerable due to systemic inequities⁹

Additional Resources

Centers for Disease Control and Prevention: History of Smallpox. <https://www.cdc.gov/smallpox/history/history.html>. Accessed 30 January 2024.

Centers for Disease Control and Prevention: The U.S. Public Health Service Untreated Syphilis Study at Tuskegee. <https://www.cdc.gov/tuskegee/timeline.htm>. Accessed 30 January 2024.

Global Dashboard for Vaccine Equity, United Nations Development Programme. <https://data.undp.org/insights/vaccine-equity>. April 18, 2021.

Tuskegee Syphilis Experiment. Equal Justice Initiative. <https://eji.org/news/history-racial-injustice-tuskegee-syphilis-experiment/>. October 31, 2020.

World Health Organization: Vaccine Equity. <https://www.who.int/campaigns/vaccine-equity>. Accessed 12 February 2024.

Discussion Prompts

1. Consider Dr. Limaye's words from this episode (quoted on page 11). What challenges do public health officials face when communicating the importance of vaccinations to the general public?
2. Reflect on the successful eradication of smallpox as a major public health milestone. How did this success influence global attitudes toward vaccinations?
3. How have other past events, such as the Tuskegee Institute Study, influenced public trust in health initiatives, including vaccinations?
4. William Foege, MD, former director of the CDC, argues that culture always wins. He stresses the importance of working directly with communities to find out what people want so that public health can focus on meeting community interests and needs. What approaches might promote a more inclusive public health landscape?
5. How can public health officials ensure that vulnerable populations have needed access to vaccinations and information?
6. Can you recall an example of effective communication that you've seen regarding public health? (Perhaps on social media or in a PSA or something similar.) What made the messaging so effective to you?
7. What role might storytelling play in bridging the gap between public health initiatives and community understanding? What is the importance of a trusted messenger being involved in the storytelling process?

⁸ Definitions for inequities in *health*, *inoculation*, and *vaccine*: Porta, Miquel and John M. Last. *A Dictionary of Public Health*. Oxford University Press, 2018.

⁹ Public Health Institute <https://www.phi.org/our-work/strategic-initiative/vaccine-access-equity/>



EPISODE 4: THE NEW PLAYBOOK: HOLISTIC ANSWERS



Anthony Chen, MD, Director of Health Emeritus, Tacoma-Pierce County Health Department

“If anything has shown us that we are all interconnected, it’s a highly contagious virus.”

— Mary T. Bassett, MD, former health commissioner, New York State Department of Health

Public health is about the well-being of people and communities. This episode delves into the intersectionality of social epidemics and medical epidemics and pandemics. Many contemporary challenges influence individual and communal well-being. Mental health, social fracturing, substance use, harsh economic realities, and unemployment can all undermine overall well-being. In the U.S. today, the intersection of social challenges and physical health factors have reduced the overall life expectancy and increased the gaps of race, ethnicity, and rurality across the country.

In this episode, Dr. Sharfstein states, “The solutions [for positive health outcomes] are often outside of healthcare.” He points to positive schooling experiences for youth, good job opportunities, as well as other societal shifts that improve public health. A holistic public health approach supports mental health as well as physical health, creates opportunities for renewed hope, and involves social connection as well as access to health services.

Useful Terms

Diseases of despair (deaths of despair) — Princeton economists Anne Case and Angus Deaton coined the term “deaths of despair” to refer to fatal drug overdoses, alcohol-related diseases, and suicides.

Interdisciplinary work in public health — work across different disciplines (from microbiology to epidemiology to sociology to urban planning) intended to address complex problems, gather different perspectives, develop testable hypotheses in research, create definitions and guidelines, and provide comprehensive health services and education¹¹

Medical epidemic — an unexpected increase in the number of medical disease cases in a specific geographical area (e.g., COVID-19, West Nile, yellow fever, smallpox, measles, etc.)¹²

Social epidemic — an unexpected increase in the number of behaviorally based noncommunicable diseases (e.g., obesity, tobacco use, alcoholism, etc.)¹³

Social fracturing — an increase in disease and societal harm that comes from economic insecurity and social insecurity (e.g., mass job loss, poor economic functioning, a health pandemic, etc.)



DRIVING QUESTION

What role can each of us play in a more holistic approach to health?

Discussion Prompts

1. In this episode, Brian Castrucci, DrPH, president and CEO at the de Beaumont Foundation, states, "You simply cannot practice public health in an individualistic society. You have to have some sense of community for effective public health." How can improved communication between community members and public health officials facilitate a sense of community around health outcomes?
2. In public health education, what contributions can related fields (e.g., microbiology, sociology, urban planning, and epidemiology) make to the field of public health challenges?
3. What role can community organizations play in shaping and promoting public health initiatives?
4. What effective approaches to "diseases of despair" were presented in this episode? What effective approaches have you seen in your own community?
5. During the COVID-19 pandemic, what did you notice about the intersection between physical health and mental health?
6. What can be done to foster a sense of belonging, support, and hope within communities affected by diseases of despair? Have you been involved in an initiative that did any of these things? If so, please share with others.

¹⁰ Gold MS. "The Role of Alcohol, Drugs, and Deaths of Despair in the U.S.'s Falling Life Expectancy." *Mo Med*. 2020 Mar-Apr;117(2):99-101. PMID: 32308224; PMCID: PMC7144704.

¹¹ Sell K, Hommes F, Fischer F, Arnold L. "Multi-, Inter-, and Transdisciplinarity within the Public Health Workforce: A Scoping Review to Assess Definitions and Applications of Concepts." *Int J Environ Res Public Health*. 2022 Sep 1;19(17):10902. doi: 10.3390/ijerph191710902. PMID: 36078616; PMCID: PMC9517885.

¹² CDC. Lesson 1: Introduction to Epidemiology <https://archive.cdc.gov/#/de-tails?url=https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html>

¹³ Egger G, Swinburn B, Rossner S (2003) "Dusting off the epidemiological triad: Could it work with obesity?" *Obes Rev* 4(2):115–119. <https://doi.org/10.1046/j.1467-789X.2003.00100.x>

Additional Resources

Bassett, Mary. "Why Your Doctor Should Care About Social Justice." TEDMED, November 2015.

https://www.ted.com/talks/mary_bassett_why_your_doctor_should_care_about_social_justice.

Centers for Disease Control and Prevention: Social Determinants of Health at CDC. <https://www.cdc.gov/about/sdoh/index.html>. Accessed 20 February 2024.

Khan Academy: Health and Healthcare Disparities in the US course. <https://www.khanacademy.org/test-prep/mcat/social-inequality/social-class/v/health-and-healthcare-disparities-in-the-us>. Accessed 20 February 2024.

Maestriperi, Lara. "The Covid-19 Pandemics: Why Intersectionality Matters." *Frontiers in Sociology* vol. 6 642662. 26 Mar. 2021, <https://doi.org/10.3389/fsoc.2021.642662>.

Moreno-Juste, Aida et al. "Multimorbidity, social determinants and intersectionality in chronic patients. Results from the EpiChron Cohort." *Journal of Global Health* Vol. 13, no. 04014. (February 3, 2023). <https://doi.org/10.7189/13.04014>.

Szasz, George. "Epidemics, pandemics, syndemics, and intersectionality." *BC Medical Journal*, November 24, 2020. <https://bcmj.org/blog/epidemics-pandemics-syndemics-and-intersectionality>.

Williams, David R. "How Racism Makes Us Sick." TEDMED, November 2016, https://www.ted.com/talks/david_r_williams_how_racism_makes_us_sick.

World Health Organization: Social Determinants of Health. <https://www.who.int/health-topics/social-determinants-of-health>. Accessed 20 February 2024.

Zhai, Y., Du, X. Disparities and intersectionality in social support networks: addressing social inequalities during the COVID-19 pandemic and beyond. *Humanit Soc Sci Commun* 9, 143 (2022). <https://doi.org/10.1057/s41599-022-01163-y>.



CONCLUSION: THE PLAYERS AND THE FUTURE OF PUBLIC HEALTH



Nana Adofo-Ansong, student, Johns Hopkins Bloomberg School of Public Health

*“Public health should be one of humanity’s crowning achievements.
And not just because of the clean air and water that we enjoy,
or the defeat of specific diseases.
It’s about acting for the collective interest and
rising above our base individualistic tendencies.”*

— Ed Yong, journalist and author

From epidemiologists and health educators to policymakers, community health workers, and religious leaders, public health works best when a diverse group of individuals come together with the aim of safeguarding and enhancing community well-being.

In the series, Dr. Foege speaks to the “great hope” he gets from his students, especially when “they break down the silos.” He notes that students of public health also have degrees in other fields, and this strengthens public health. His observations underscore a message threaded throughout the four episodes regarding the communal nature of public health and the need for individuals from a wide array of backgrounds to come together and work in this powerful and essential field.

“It’s easy for people to throw their hands up at a big problem and say, it’s bigger than me, I can’t do anything about it. And then you throw your whole life into it, and maybe you can chip away at it. That’s been my mentality. I’m now fully invested in working in the humanitarian world because I see so many problems that can be fixed.”

— Ashu Mishra, student,
Johns Hopkins Bloomberg School of Public Health



DRIVING QUESTION

What role can you play within the field or as an advocate to help impact future public health initiatives?

Discussion Prompts

1. How has your understanding of public health and of public health workers changed through the viewing of this series?
2. What are some public health jobs that involve direct interaction with communities? How do these roles contribute to community well-being?
3. What is the role of epidemiologists for positive public health outcomes?
4. What is the role of policymakers in relation to public health outcomes?
5. What is the role of community members and community organizations in supporting public health?
6. Discuss the diversity of professions in public health. How do different roles collaborate to strengthen community health?
7. What public health roles surprised you or were unexpected or perhaps overlooked before you watched this series?
8. Have you gained a different understanding or perspective of the average individual's role when it comes to public health?
9. Are there ways you do, or can, contribute to improved overall health (mental, physical, or both) in your community?

Additional Resources

Centers for Disease Control and Prevention: See Yourself in a Public Health Career. <https://www.cdc.gov/stem/careers/index.html>. Accessed 30 January 2024.

Institute of Medicine (US) Committee for the Study of the Future of Public Health. *The Future of Public Health*. Washington (DC): National Academies Press (US); 1988. <https://www.ncbi.nlm.nih.gov/books/NBK218218/>.

Institute of Medicine. 2003. *The Future of the Public's Health in the 21st Century*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10548>. Accessed 30 January 2024.

Public Health Overview, ExploreHealthCareers.org. <https://explorehealthcareers.org/field/public-health/>. Accessed 29 January 2024.



FILM CREDITS

Directed by: **Jason Klot and Taimi Arvidson**

Executive Producers: **Jason Klot, Jon Kamen, Meredith Bennett**

Producers: **Torrey Paquette, Devin Tanchum, Taimi Arvidson**

Supervising Producers: **Adam Rivera, Cora Atkinson, Peter Bobrow**

Series Producers: **Nosa Garrick, Jude Parker**

Segment Director: **Alex Browne**

Original Music by: **Michael Amacio**

Edited by: **Devin Tanchum**

Additional Editing: **Anais Blondet, Matt Cascella, Sean Frechette, James Lester, Adriana Pacheco**

Story Producers: **William Acks, Dani Dabney, Courtney Hutchens, Christen Marquez, Dearl Nelson**

Co-Producer: **José Blanco Blasini**

Associate Producer: **Isabelle Tavares**

Archival Producers: **Alessandra Bellizia, Alexander Grace, Jane Tucker**

Associate Archival Producer: **Ganeesh Genus**

Consulting Archival Producer: **Hilary McHone**

Director of Photography: **Nick Midwig**

Support for *The Invisible Shield* was made possible by Bloomberg Philanthropies.

Examples of Careers in Public Health



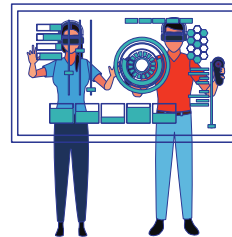
Communication Specialists, Health Education Specialists, Writers and Editors, Global Health Educators



Web Developers and Administrators, Health Informatics Specialists



Health Scientists, Medical Doctors, Nurses, and Physician Assistants



AV Production Specialists, Computer and Information Technology Specialists



Veterinarians, Behavioral Scientists, Emergency Responders



Biologists, Microbiologists, and Epidemiologists



Contracts and Grant Managers, Finance/Budget Administrators



Statisticians, Public Health Advisors, and Accountants



Public Affairs and Public Relations Officers, Health Policy and Management



Safety and Occupational Specialists, and Environmental Health Scientists

Become part of The Invisible Shield!

Source: <https://www.cdc.gov/stem/careers/index.html>



JOURNEYS IN FILM
educating for global understanding



JOURNEYS IN FILM™
educating for global understanding

PO Box 65357
Albuquerque, NM 87193