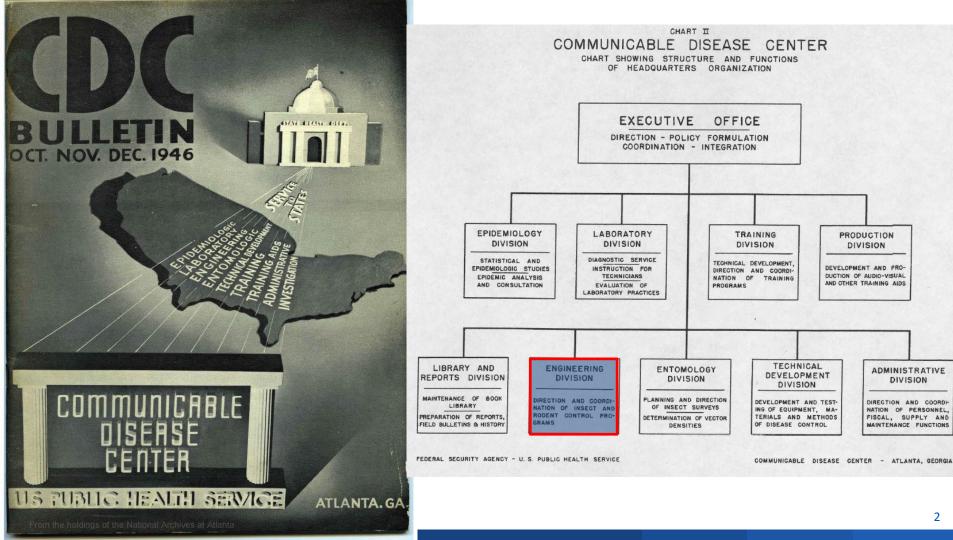
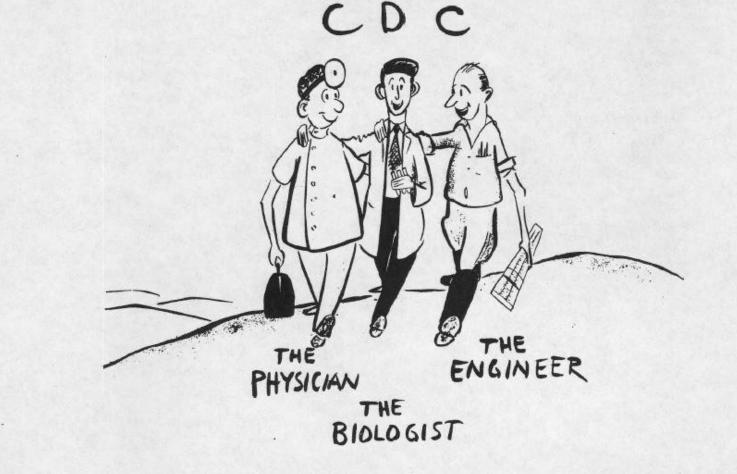


# **Treating traffic deaths like an epidemic**

David J. Ederer, Ph.D., M.P.H. Epidemiologist Physical Activity and Health Branch Division of Nutrition, Physical Activity, and Obesity

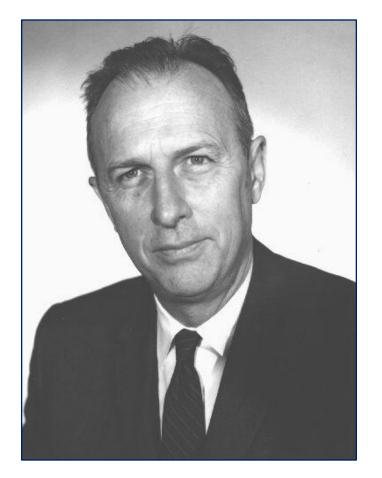
America Walks October 15, 2024





From the holdings of the National Archives at Atlanta

Communicable Disease Center (U.S.) (1946). The structure and scope of the Communicable Disease Center. 1946(4).

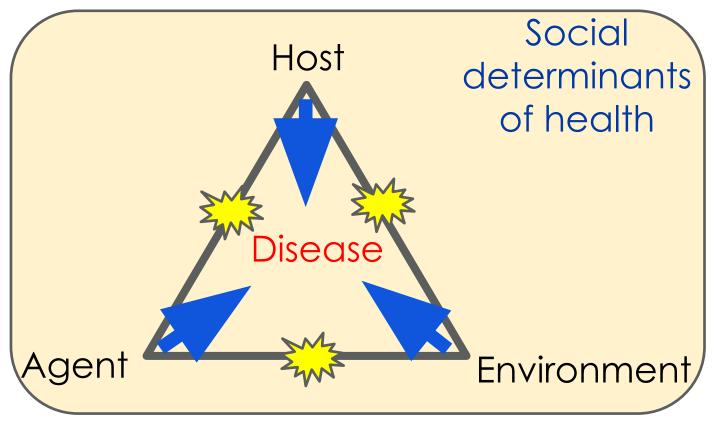




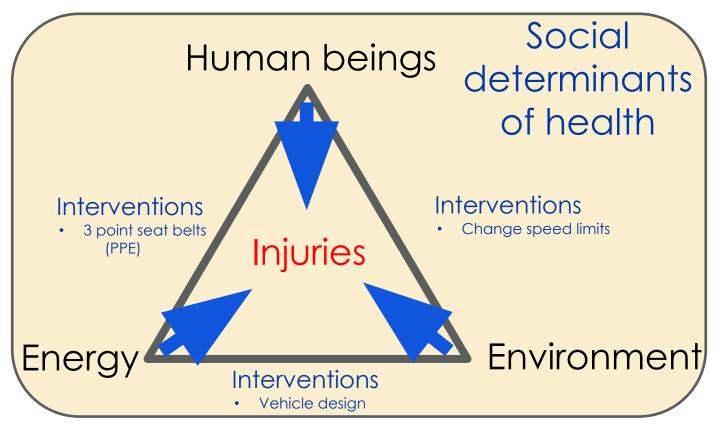
"In this diversity of specialized pursuits which has thus been made possible, we now recognize public health engineering as an essential calling, the prime object of which is to control the factors of the physical environment as they especially affect the health and welfare of aggregates of people, whether in small groups, or in cities, states or special areas, or in the nation as a whole."

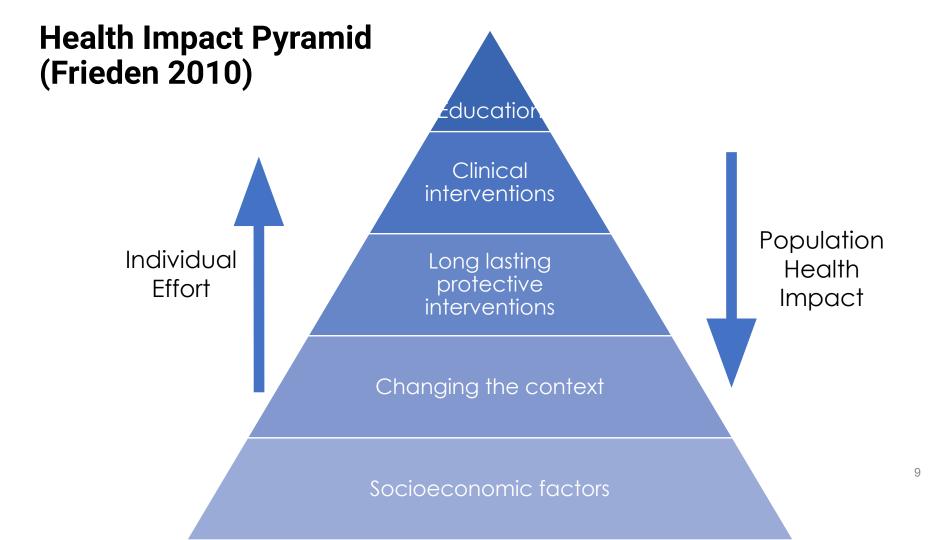
American Journal of Public Health and THE NATION'S HEALTH VALXIIIN. TO			
Volume XXI	October, 1931		
Training for the Public Health GICAL Engineer*			
S. C. PRESCOTT, F. A. P. H. A.			
Massachusetts Institute of Technology, Cambridge, Mass.   1098 American Journal of Public Health			
Third Year			
Railway & Highway Eng. Applied Mechanics Organic Chemistry Personal Hygiene & Nutr. Bacteriology Political Economy General Study	Hours per Week 1-3 3-6 4-3 2-2 6-4 3-3 4-4 23-25	Railway & Highway Eng. Structures Hydraulics Chem. of Water & Sewage Bacteriology Municipal Sanitation Political Economy	Hours per Week 2-2 3-5 3-5 4-1 6-3 4-4 3-3 25-23

## **Epidemiologic Triad**



## **Epidemiologic Triad-Injury**





## **Safe Systems Pyramid**



Ederer, D. J., Panik, R. T., Botchwey, N., & Watkins, K. (2023). The Safe Systems Pyramid: A new framework for traffic safety. *Transportation Research Interdisciplinary Perspectives*, *21*, 100905. doi:10.1016/j.trip.2023.100905



## • The public health approach

- Prioritizes systemic change
- Focuses on causes and effect

### • The Safe Systems Pyramid

- Emphasizes that multisectoral interventions are important but some have a larger influence on population health
- Prioritizes intervention efforts based on:
  - Population health effect
  - Reduction in kinetic energy transfer

#### PUBLIC HEALTH ENGINEERING

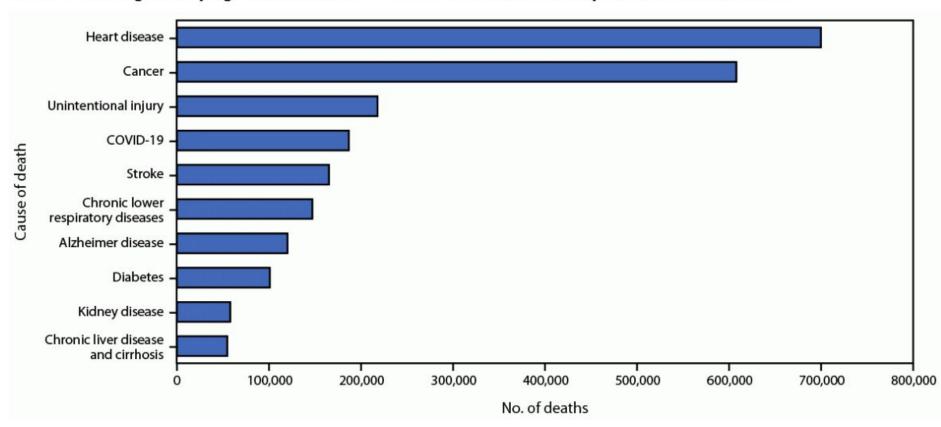
TRAINING FOR THE PUBLIC HEALTH ENGINEER\*

DISCUSSION

EARLE B. PHELPS

Professor of Sanitary Science, College of Physicians and Surgeons, Columbia University, New York, N. Y. phasis. The sanitary engineer is primarily a designer or a builder. He is, in fact, a civil and hydraulic engineer specializing in a rather restricted field, confined for the most part to works relating to municipal water supply and sewerage.

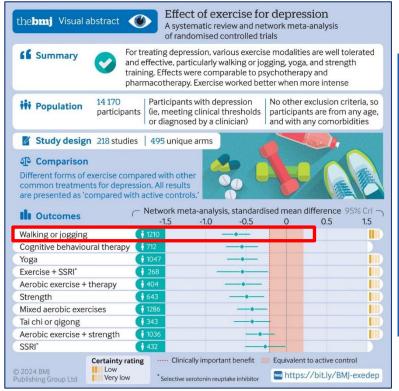
The public health engineer on the other hand is primarily a student and worker in the field of public health. The range of his activities is wider, and his training and knowledge are of essentially different character. It is not so important that he know how to build a sewer as that he know why sewers are necessary and what results may be anticipated from the discharge of their contents without treatment into a body of water. Trained to think with the



### FIGURE 2. Leading underlying causes of death\*<sup>,†</sup>– National Vital Statistics System, United States, 2022



### Transportation can <u>improve</u> people's lives

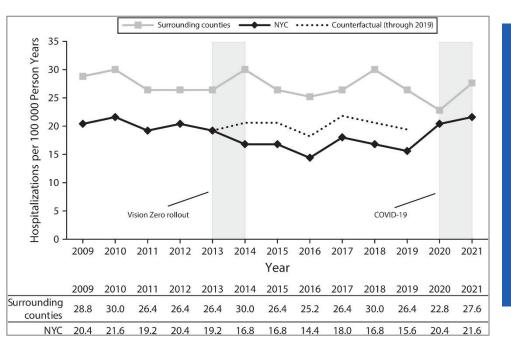


## The effect of walking is comparable to that of pharmaceuticals in treating depression.

Michael Noetel et al. BMJ 2024;384:bmj-2023-075847



### Transportation policy is health policy



Medicaid spending was **\$90 million** less than expected after Vision Zero was implemented in New York.

Kacie L. Dragan Sherry A. Glied "Major Traffic Safety Reform and Road Traffic Injuries Among Low-Income New York Residents, 2009–2021", American Journal of Public Health 114, no. 6 (June 1, 2024): pp. 633-641.https://doi.org/10.2105/AJPH.2024.307617

## Thank you.

For more information, contact CDC 1-800-CDC-INFO (232-4636) TTY: 1-888-232-6348 cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the U.S. Centers for Disease Control and Prevention.

