



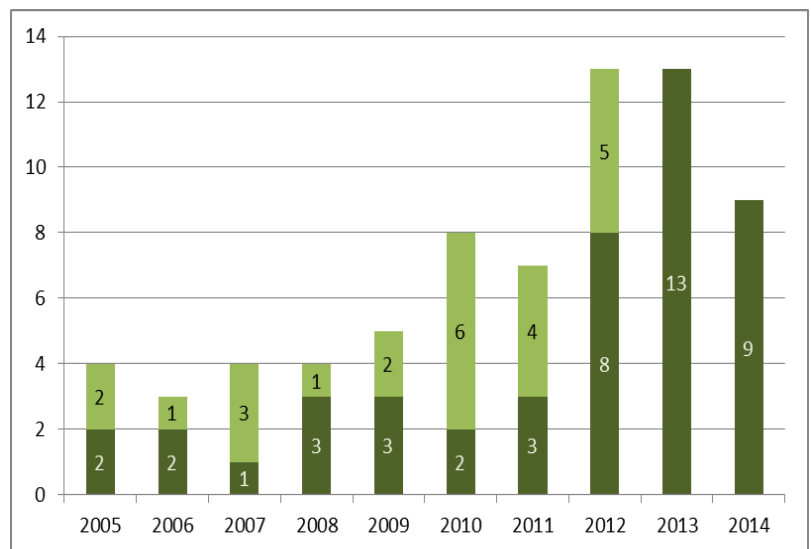
The CDC Steven M. Teutsch Prevention Effectiveness Fellowship

A Two-Year Post-Doctoral Fellowship in Public Health Economics and Decision Analysis

The Steven M. Teutsch Prevention Effectiveness (PE) Fellowship is a two-year postdoctoral research fellowship focusing on the application of quantitative methods to the science of health protection, health promotion, and disease prevention. The PE fellowship addresses an on-going demand in the field of public health for quantitative policy analysis, health economics-based inquiry, and integrative health services research. At CDC, prevention effectiveness research includes the use of econometric, decision, simulation, and operations analysis and modeling to understand; determinants of health, morbidity, mortality, and health inequalities; the cost of health care and preventive interventions; the burden of illnesses; the impact of regulations on population health; and ways to optimize expenditures for health services.

Fellow Characteristics

The PE Fellowship was established in 1995 and since then has graduated 120 individuals. Most PE Fellows hold doctoral degrees in: economics or applied economics, public policy analysis, operations research or industrial engineering, health services research, mathematics, or a related quantitatively-oriented field. The PE Fellowship is extremely competitive. In 2014 60 complete, qualified, competitive applications were received for 8 positions. Fellows enter the fellowship with varying levels of experience. For most PE Fellows, the CDC is their first real “job,” while some fellows have significant experience. Most PE Fellows accept full time jobs at the CDC at the conclusion of their fellowships. The PE Fellowship has experienced exceptional growth over the past few years. The Table at the right shows Fellows by Class since 2005. Dark green indicates the number who remained with the CDC at the conclusion of their Fellowship. Classes of 2013 and 2014 are currently at CDC.



Impact of the PE Fellowship

In a recent article by CDC Director, Dr. Tom Frieden, MD, on the role of government in public health (Frieden, T, *New England Journal of Medicine*, 368(20), 2013) economics was featured prominently. Dr. Frieden wrote; “The dissemination of accurate information on costs and benefits may be the best way to reduce opposition and implement effective public health actions.” In his All-Hands address on May 16, 2011, Dr. Frieden emphasized the importance of the economic evaluation of public health programs and problems and cited the results of work performed by alumni of the PE Fellowship; “increasing use of a set of core preventive services to 90% of recommended levels could save \$3.7 billion annually in medical costs” [Maciosek MV et al., *Health Affairs*, 29, 2010]. He also spoke about the health return on investment (ROI) for a range of interventions such as folic acid fortification, HIV screening, circumcision, teen pregnancy prevention, motor vehicle accident prevention, childhood vaccines, and asthma. The PE Fellowship is the primary manner in which economists, policy analysts, and decision scientists are recruited into the CDC to focus on research to help maximize the health return on investment. The CDC now employs more health economists than any Federal Agency. Their work has generated more than 700 publications and has established CDC as a leader in economics and quantitative policy analysis of public health intervention programs.

Fellowship Research, Training, and Service Activities

Professional support and career development are provided through advanced methods training, workshops, research seminars, and peer discussion groups. Fellows are expected to spend approximately 5% of their time on these learning and professional development activities. The curriculum includes the following didactic courses (this is not an exhaustive list);

- History and Introduction to the CDC
- Methods in Economic Evaluation
- Systematic Reviews of the Economics Literature
- Public Health Science & Practice

- Introduction to Epidemiology Methods
- Applied Policy Analysis & Communications
- Disease Transmission Modeling
- Translating PE Science to Policy
- Methods in Regulatory Impact Analysis
- Methods in Budget Impact Analysis
- Foundations of Leadership
- Interpersonal & Scientific Communications
- Introduction to MedStat & MarketScan
- Introduction to Modeling Using TreeAge Software
- XL for Economic Modeling and Visual Basic for XL
- PE Research Project Management

CDC National Centers or Program Offices who agree to host a PE Fellow select Fellows and place them with a qualified technical supervisor and mentor. Fellows take a lead role in designing and conducting studies, work closely with national and international experts in public health, present and publish results, and provide technical assistance and service throughout the CDC and with CDC partners on specific projects. Fellows have the opportunity to work with leading researchers on issues of critical importance. Past Fellows have worked in such diverse areas as HIV/AIDS, tuberculosis, reproductive health, influenza and respiratory diseases, cancer, injury prevention, diabetes, and food safety. The CDC also sponsors a vibrant Seminar Series that has welcomed a range of eminent economists and policy analysts to the CDC.

PE Fellowship Outputs

The following is a short list of recent publications of recent Fellows:

- Influenza Illness and Hospitalizations Averted by Influenza Vaccination in the United States, 2005-2011, *PLoS One*, 2013
- A Nationwide Community-Based Lifestyle Program Could Delay or Prevent Type 2 Diabetes Cases and Save \$5.7 Billion in 25 Years *Health Affairs*, 31(1), 2012
- Cigarette Price-Minimization Strategies by US Smokers, *American Journal of Preventive Medicine*, 44(5), 2013
- Modeling the Effect of Water, Sanitation, and Hygiene and Oral Cholera Vaccine Implementation in Haiti, *American Journal of Tropical Medicine and Hygiene*, 89(4), 2013
- Cost-Effectiveness of Using 2 vs 3 Primary Doses of 13-valent Pneumococcal Conjugate Vaccine, *Pediatrics*, 132(2), 2013
- The Economic Burden of Child Maltreatment in the US and Implications for Prevention, *Child Abuse & Neglect*, 36(2), 2012

Fellows have recently produced the following policy briefs;

- The National HIV/AIDS Strategy Goal on 'Linkage to Care' is Cost Effective
- The Elimination of Almost \$16 Million in California State HIV Prevention Funds in FY 2009/10 Resulted in an Estimated 57 New Infections and \$21 Million in Additional Lifetime Treatment Costs
- Vaccinating Against Influenza in August/September instead of November/December Will Increase the Total Number of Averted Influenza Cases for the Season, Significantly Reducing the Burden of Influenza
- Routine Newborn Screening for Critical Congenital Heart Disease can be Cost Effective
- Eliminating One of the Three Boosters in the Pneumococcal Conjugate Vaccine Series Would Save \$500M annually with Minimal Adverse Health Impacts
- Vaccinating Refugees Before Their Arrival in the US Would Be Potentially Cost Saving Due to Lower Vaccine Prices Overseas and Reduction of Vaccine Preventable Diseases in the US

Medical Examination of Aliens - Removal of Human Immunodeficiency Virus (HIV) Infection from Definition of Communicable Disease of Public Health Significance.

As a direct result of research performed by a PE Fellow in 2009, HHS and the CDC proposed the removal of HIV infection from the list of *communicable diseases of public health significance*. An economic model was developed to help assess the costs and benefits of the proposed rule change. The research resulted in a set of recommendations published in the Federal Register: 1) HIV infection would no longer be included on the list of "communicable disease of public health significance," 2) testing for HIV infection would no longer be required as part of the US immigration medical screening process, and 3) HIV infection would no longer require a waiver for entry into the US. This rule can be accessed at; <http://edocket.access.gpo.gov/2009/pdf/E9-15814.pdf>.

Eligibility

Applicants to the PE Fellowship must meet the following criteria:

- Possess a doctoral degree in economics or applied economics, decision sciences, health services research or related health sciences, industrial engineering or operations research, public policy or policy analysis, or a related quantitatively-oriented field
- Be eligible to work in the US (citizen of the US, legal permanent resident, or eligible for a work authorization or visa that is valid for the duration of the program). The CDC will sponsor the Fellow's H1B visa.
- Be willing to relocate to Atlanta, GA

How to Apply

Applications are accepted online at <http://www.cdc.gov/pef> between September, 2014 and January, 2015.

For More Information

Adam G. Skelton, PhD, MPH

Lead, CDC Steven M. Teutsch Prevention Effectiveness Fellowship Program

US Centers for Disease Control and Prevention

Atlanta, GA 30333

Phone: (404) 498-6786

Email: afz6@cdc.gov

Web: www.cdc.gov/pef