

BIOGRAPHICAL SKETCH

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NAME: Arthur L. Reingold, MD

eRA COMMONS USER NAME (credential, e.g., agency login): Reingold

POSITION TITLE: Professor and Head, Division of Epidemiology, School of Public Health

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Chicago, Chicago, Illinois	AB	06/1970	Biology
University of Chicago, Chicago, Illinois	MD	06/1976	Medicine

A. Personal Statement

I have been conducting epidemiologic studies of various infectious diseases in the U.S. and in multiple developing countries, including Uganda, Zimbabwe, and other sub-Saharan African countries, for 30+ years, including studies of healthcare associated infections; bacterial meningitis and pneumonia; tuberculosis, malaria, and HIV/AIDS; influenza; and various vaccine preventable diseases in children and adults. As the director of NIH-funded UCB/UCSF AIDS International Training and Research Programs since 1988, I have provided degree (masters and doctoral) and non-degree training to numerous young investigators from multiple developing countries, including Brazil, Peru, India, Vietnam, Uganda, Zimbabwe, Ivory Coast, and Kenya. I currently co-direct NIH-funded AIDS research training programs that provide training to trainees enrolled in various degree programs at Makerere University in Uganda and trainees enrolled in PhD programs at the University of Zimbabwe. In my role as co-director of the NIH-funded Infectious Diseases Training Program at UCSF and through my work with pre- and post-doctoral trainees at UC Berkeley, I have also mentored numerous U.S. physicians, veterinarians, dentists, and PhD researchers conducting infectious disease research in the U.S. and internationally.

B. Positions and Honors

- Professor and Head, Division of Epidemiology, School of Public Health, University of California, Berkeley.
- Professor of Epidemiology & Biostatistics/Clinical Professor of Medicine, University of California, San Francisco
- Edward Penhoet Distinguished Chair of Global Health and Infectious Diseases, 2008-2013
- Member, Institute of Medicine, 2003

1979-1980 Epidemic Intelligence Service Officer - Connecticut State Department of Health Services, Hartford, Connecticut

1980-1981 Epidemic Intelligence Service Officer - Special Pathogens Branch, Centers for Disease Control, Atlanta, Georgia

1981-1985 Assistant Chief, Respiratory and Special Pathogens Epidemiology Branch, Division of Bacterial Diseases, Center for Infectious Diseases, Centers for Disease Control - Atlanta, Georgia

1985-1987 Centers for Disease Control (CDC) Liaison Officer, Office of the Director, CDC - Atlanta, Georgia

C. Contributions to Science

- HIV/AIDS

In the area of HIV/AIDS, my research has focused on the role of HIV in predisposing individuals to various opportunistic infections, including vaccine preventable infections (e.g. S. pneumoniae, TB, malaria, and fungal infections). Most of this research has been done in conjunction with my provision of research training to trainees from diverse developing countries, including Zimbabwe, Uganda, Ivory Coast, Kenya, Dominican Republic, Peru, Brazil, and India. As illustrated by various publications, this research has contributed to an understanding of the impact of diverse opportunistic infections in HIV-infected individuals and the role of HIV-induced immunosuppression in predisposing such individuals to TB, malaria, and other infectious diseases.

1. Bakayita N, Dorsey G, Yeka A, Banek K, Staedke SG, Kanya MR, Talisuna A, Kironde F, Nsobya S, Kilian A, Reingold A, Rosenthal PJ, Wabwire-Mangen F. Sulfadoxine-pyrimethamine plus chloroquine or amodiaquine for uncomplicated falciparum malaria: A randomized, multisite trial to guide national policy in Uganda. *Am J Trop Med Hyg* 2005;72:573-580.
2. Malamba SS, Mermin J, Reingold A, et al. Effect of cotrimoxazole prophylaxis taken by human immunodeficiency virus (HIV)-infected persons on the selection of sulfadoxine-pyrimethamine-resistant malaria parasites among HIV-uninfected household members. *Am. J. Trop. Med. Hyg.* 2006;75(3):375-380.
3. Lippman SA, Pulerwitz J, Chinaglia M, Hubbard A, Reingold AL, Diaz J. Mobility and its liminal context: Exploring sexual partnering among truck drivers crossing the Southern Brazilian border. *Soc Sci & Med* 2007;doi:10.1016.
4. Pant Pai N, Joshi R, Dogra S, Taksande B, Kalantri SP, Pai M, Narang P, Tulsy JP, Reingold AL. Evaluation of diagnostic accuracy, feasibility, and client preference for rapid oral fluid-based diagnosis of HIV infection in rural India. *PLoS One* 2007;2(4): e367.doi.10.1371/journal.pone.0000367.

- Vaccine Preventable Diseases

I have been studying the effectiveness, safety, and impact of diverse vaccines for over 30 years, including vaccines against influenza, N. meningitidis, S. pneumoniae, and H. influenzae b, among others. These studies, conducted in the US, Brazil, Burkina Faso, and elsewhere, have been instrumental in demonstrating both the direct and indirect protection provided by these vaccines; assessing the population level impact of vaccination programs; and targeting vaccines to populations at highest risk.

1. Whitney CG, Pilishvili T, Farley MM, Schaffner W, Craig AS, Lynfield R, Nyquist A-C, Gershman K, Vazquez M, Bennett NM, Reingold A, Thomas A, et al. Effectiveness of seven-valent pneumococcal conjugate vaccine against invasive pneumococcal disease: a matched case-control study. *Lancet* 2006; 368:1495-1502.
2. Dawood FS, Chaves SS, Perez A, Reingold A, Meek J, Farley MM, et al. Complications and associated bacterial coinfections among children hospitalized with seasonal or pandemic influenza, United States, 2003-2010. *J Inf Dis* 2013; Epub DOI: 10.1093/infdis/jit473.
3. Livorsi DJ, MacNeil JR, Cohn AC, Bareta J, Zansky S, Petit S, Gershman K, Harrison LH, Lynfield R, Reingold A, et al. Invasive Haemophilus influenzae in the United States, 1999-2008: *Epidemiology and Outcomes*. *J Inf Dis* 2012; 65:496-504.
4. Hsu HE, Shutt KA, Moore MR, Beall BW, Bennett NM, Craig AS, Farley MM, Jorgensen JH, Lexau CA, Petit S, Reingold A, Schaffner W, Thomas A, Whitney CG, Harrison LH. Effect of pneumococcal conjugate vaccine on pneumococcal meningitis. *NEJM* 2009;360:244-256.

- Tuberculosis

Through my work with trainees from various countries, I have contributed to our understanding of the inter-relationship between tuberculosis(TB) and HIV/AIDS. These studies have included evaluations of the effect of HIV infection on the infectiousness of patients with pulmonary TB; comparisons of PPD skin testing and whole blood interferon assays to detect latent M. tuberculosis infection; and the burden of pulmonary and other forms of TB in diverse populations.

1. Espinal MA, Pérez EN, Báez J, Henriquez L, Fernandez K, Lopez M, Olivo P, Reingold AL. Infectiousness of Mycobacterium tuberculosis in HIV-1-infected subjects with tuberculosis: A prospective study. *Lancet* 355:275-280, 2000.

2. Pai M, Gokhale K, Joshi R, Dogra S, Kalantri SP, Mendiratta DK, Narang P, Daley CL, Granich RM, Mazurek GH, Reingold AL, Riley LW, Colford Jr, JM. Mycobacterium tuberculosis infection in health care worker in rural India: Comparison of whole-blood interferon γ assay with tuberculin skin testing. *JAMA* 2005;293:2746-2755.
 3. Dogra S, Narang P, Mendiratta DK, Chaturvedi P, Reingold AL, Colford JM, Riley LW, Pai M. Comparison of a whole blood interferon- γ assay with tuberculin skin testing for the detection of tuberculosis infection in hospitalized children in rural India. *J Inf* 2007;54:267-276.
 4. Chideya S, Winston CA, Peloquin CA, Bradford WZ, Hopewell PC, Wells CD, Reingold AL, Kenyon TA, MOeti TL, Tappero JW. Isoniazid, Rifampin, Ethambutol, and Pyrazinamide, pharmacokinetics and treatment outcomes among a predominantly HIV-infected cohort of adults with tuberculosis from Botswana. *Clin Inf Dis* 2009;48:1685-1694.
- **Healthcare Associated Infections**
I have conducted surveillance for and studies of risk factors for various healthcare associated infections, including methicillin resistant Staphylococcus aureus and Clostridium difficile, among others, helping define the frequency of and trends in these infections and the impact of control measures designed to prevent their transmission.
 1. Kallen AJ, Mu Y, Bulens S, Reingold A, Petit S, Gershman K, Ray SM, Harrison LH, et al. Health care-associated invasive MRSA infections, 2005-2008. *JAMA* 2010;304:641-648.
 2. Klevens RM, Morrison MA, Fridkin SK, et al. Community-associated methicillin-resistant Staphylococcus aureus and healthcare risk factors. *Emerging Infect. Dis.* 2006;12(12):1991-1993.
 3. Passaro DJ, Waring L, Armstrong R, Bolding F, Bouvier B, Rosenberg J, Reingold AL, et al. Beauty and the beast: Postoperative Serratia marcescens wound infections traced to an out-of-hospital source. *J Inf Dis* 1997;175:992-995.
 4. Rees JR, Pinner RW, Hajjeh RA, Brandt ME, Reingold AL. The epidemiological features of invasive mycotic infections in the San Francisco Bay Area 1992-1993: Results of population-based laboratory active surveillance. *Clin Inf Dis*, 27:1138-1147, 1998.
 - **Disease Surveillance**
I have conducted high quality infectious disease surveillance in various settings and used the resulting data to help determine disease burden; monitor trends over time; plan and assess the impact of various intervention strategies; and detect and respond to outbreaks.
 1. Thigpen MC, Whitney CG, Messonnier NE, Zell ER, Lynfield R, Hadler JL, Harrison LH, Farley MM, Reingold AL, et al. Bacterial meningitis in the United States, 1998-2007. *New Engl J Med* 2011; 364:2016-2025.
 2. Schrag SJ, Zell ER, Lynfield R, Roome A, Arnold KE, Craig A, Harrison L, Reingold A, Stefonek K, Smith G, Gamble M, Schuchat A for the Active Bacterial Core Surveillance team. A population-based comparison of strategies to prevent early-onset group B streptococcal disease in neonates. *New Engl J Med* 2002;347:233-239.
 3. Lexau CA, Lynfield R, Danila R, Pilishvili T, Facklam R, Farley MM, Harrison LH, Schaffner W, Reingold AL, Bennett NM, Hadler J, Cieslak PR, Whitney CG (for the Active Bacterial Core Surveillance Team). Changing epidemiology of invasive pneumococcal disease among older adults in the era of pediatric pneumococcal conjugate vaccine. *JAMA* 2005;294:2043-2051.
 4. Whitney CG, Farley MM, Hadler J, Harrison LH, Bennett NM, Lynfield R, Reingold A, Cieslak PR, Pilishvili T, et al. Decline in invasive pneumococcal disease after the introduction of protein-polysaccharide conjugate vaccine. *N Engl J Med* 2003;348:1737-1746.

Complete List of Published Work in Google Scholar

https://scholar.google.com/citations?hl=en&user=WNys930AAAAJ&view_op=list_works

D. Research Support

2T37MD003406-06 (A. Reingold) 03/28/09 – 11/30/18

NCMHD Minority Health & Health Disparities

International Research Training

Berkeley Minority Health/Global Health (MH/GH) Training Program

The goal of the program is to provide infectious disease research training in developing country settings for U.S. undergraduate and graduate students who are committed to reducing domestic and international health disparities, and who are from groups that are under-represented in the health sciences.

235.006.901 (A. Reingold) 01/01/17 - 12/31/21

Centers for Disease Control and Prevention (CDC)

California Emerging Infections Program

The goal of this cooperative agreement is to study a variety of emerging/re-emerging infectious diseases in California.

1D43TW009539-01 (A. Reingold) 08/01/13 – 01/31/18

NIH-Fogarty International Center

HIV Implementation Science Research Training Program

The goal of the UCB-UCSF-UZ Fogarty HIV Implementation Science Research Training Program will provide multi-disciplinary training in support of implementation science research to physicians, nurses, dentists, pharmacists, and scientists at the University of Zimbabwe, College of Health Sciences (UZCHS), in order to strengthen the capacity of UZCHS to conduct high quality, innovative, and locally relevant HIV/AIDS research.

1D43TW009607-01 (A. Reingold) 08/01/13 – 01/31/18

NIH/Fogarty International Center

UCB-UCSF-MU Research Training on TB and Other Pulmonary Complications of HIV

The goal of this grant will be to provide training in support of translational research on the pulmonary complications of HIV to medical doctors, laboratory and other allied health personnel, and scientists at the Makerere University College of Health Sciences (MAKCHS), in order to strengthen the capacity of MAKCHS to conduct high quality, innovative, and locally relevant HIV/AIDS research