Anesthesia Exposure Increases Risk for Neurodevelopmental Disorders in Young Children

Drs. Charles DiMaggio and Guohua Li are first and senior authors, respectively, of research showing that anesthesia exposure in a child under the age of three increases the risk of later being diagnosed with developmental and behavioral disorders. The findings were presented in October at the annual conference of the American Society of Anesthesiologists in San Diego.

The incidence of developmental and behavioral disorders was 341 per 1,000 exposed children and 167 per 1,000 unexposed children in this multicenter study, known as the Pediatric Anesthesia NeuroDevelopmental Assessment (PANDA). The investigators reviewed the medical records of 5,824 twin pairs born between 1999 and 2005 and enrolled in the New York State Medicaid program. Developmental and behavioral outcomes were determined by screening diagnoses coded according to the International Classification of Diseases.

The association of exposure to anesthesia with subsequent developmental and behavioral disorders was assessed through both matched and unmatched analyses with relative risk estimates. The researchers found that 5.7% of the 11,648 children were exposed to anesthesia at least once before they were 3 years of age. A total of 18.6% were subsequently diagnosed with developmental and behavioral disorders, with 84% of the disorders being described as unspecified developmental delays. Birth factors, gender, or medical utilization did not explain the increased neurodevelopmental risk for young children who are exposed to anesthesia during surgery.

First author Dr. Charles DiMaggio notes that, "While we suspect factors unrelated to anesthesia and surgery play a role in the increased risk for developmental and behavioral disorders, it is important to determine the role of anesthetic agents. This is clearly an area of concern for both parents and providers. We are fortunate to have a multidisciplinary team of anesthesiologists, epidemiologists, pediatricians and neuropsychologists to give this the kind of rigorous attention it deserves."

This work will continue in the Departments of Anesthesiology and Epidemiology. Dr. Li explains, "The FDA created a public-private partnership to finance this line of research and has given us over half a million dollars of seed money. We received a R34 grant from NIH for a pilot study and have just submitted a large R01 application for a multicenter study to NIH. In the past three years, we also organized two international symposia at CUMC to discuss the state of the art in this research area. Dr. Lena Sun is our pediatric anesthesia chief and the PI for these initiatives." In addition to Dr. Maggio and Dr. Li, LifeCourse Cluster leader Dr. Ezra Susser is also involved in this project as an advisor.

Presentation title: Exposure to Anesthesia and Risk of Developmental and Behavioral Disorders in a Twin Cohort. Abstract A786
MESSAGE FROM THE CHAIR

Dear colleagues,

Welcome to the November Issue of Two by Two, the Epidemiology Department newsletter. In keeping with our fall semester theme of highlighting the four core elements of our strategic plan, in this issue we focus on Engaged, Productive Faculty. We highlight some of the great strengths of our faculty: innovative research; outstanding teaching; dedicated mentoring; service to the field of epidemiology; and active engagement in public health. As always, we are limited to a very small selection to represent these achievements. Research is featured through a review of the past year or so of publications from our clusters. The professors of two popular courses talk about how they approach teaching, and the colossus that is the core course merits its own full article. Mentoring is spotlighted via three faculty-student dyads, in which both faculty member and student describe the mentoring experience. And we polled a few faculty members to learn about their contributions to epidemiology and public health—even this limited subset is most impressive.

A department of epidemiology is its faculty. It is my great pleasure to devote this issue to celebrating the work of our own exceptional faculty.

Warm regards,

[Signature]

CLUSTER SEMINARS

NOVEMBER — DECEMBER

SOCIAL EPIDEMIOLOGY
THURSDAY, NOVEMBER 4  10:00-11:30 AM
THURSDAY, NOVEMBER 11  12:30-2:00 PM
THURSDAY, DECEMBER 02  10:00-11:30 AM
THURSDAY, DECEMBER 09  10:00-11:30 AM

PSYCH / NEURO EPIDEMIOLOGY
THURSDAY, NOVEMBER 11  12:30-2:00 PM
THURSDAY, DECEMBER 2  12:30-2:00 PM

LIFECOURSE EPIDEMIOLOGY
TUESDAY, NOVEMBER 23  1:00-2:00 PM
FRIDAY, DECEMBER 3  10:00-11:30 AM

EPIDEMIOLOGY INNOVATION
TUESDAY, NOVEMBER 16  3:30-5:00 PM

CHRONIC DISEASE EPIDEMIOLOGY
FRIDAY, NOVEMBER 19  12:00-1:00 PM
FRIDAY, DECEMBER 10  12:00-1:00 PM

INFECTIOUS DISEASE EPIDEMIOLOGY
FRIDAY, NOVEMBER 19  3:00-4:30 PM
FRIDAY, DECEMBER 10  3:00-4:30 PM

UPCOMING NOVEMBER — DECEMBER

FRIDAY, NOVEMBER 12, 2010  DEPARTMENT SEMINAR
WEDNESDAY, NOVEMBER 17, 2010  CUEGR: HOWE LECTURE
FRIDAY, NOVEMBER 19, 2010  FACULTY MEETING
MONDAY, DECEMBER 13, 2010  EPIDEMIOLOGY HOLIDAY PARTY
WEDNESDAY, DECEMBER 15, 2010  CUEGR
FRIDAY, DECEMBER 17, 2010  FACULTY MEETING
The Epi Practicum

The Department of Epidemiology Practicum Program places masters’ level students in public health settings where they apply and extend their classroom didactic training. The ideal practicum is at least 280 hours (8-10 weeks) and can be completed part- or full-time. A challenging practicum provides the opportunity for students to gain familiarity with many of the core epidemiologic and/or cross disciplinary competencies.

The incoming class of 2012 expressed an interest in practica in a wide range of areas. The plurality of students, consistent with previous cohorts, was interested in infectious disease epidemiology but notable areas of newly emerging or increasing practicum interest are molecular epidemiology, disease and injury surveillance, climate and health, and chronic diseases, particularly cancer and cardiovascular health.

The Practicum Program Director Dr. Joyce Pressley is always working to identify new opportunities that match with students expressed short- and long-term career interests. If you would like to explore becoming a mentor or if you have a practicum opportunity you would like to make available for an epidemiology student, please contact Dr. Pressley at 212-342-0421 or jp376@columbia.edu.

Dr. Victoria Nankabirwa is a third year DrPH student at the Mailman School and a fourth year PhD student at the University of Bergen in Norway. She graduated with an MBchB [Bachelor of Medicine and Bachelor of Surgery degree equivalent to MD] from Makerere University and received her MPH from the James P. Grant School of Public Health, Brac University. She currently works with ICAP’s monitoring and evaluation research unit as an analyst and is also the main instructor for ICAP’s long distance HIV/AIDS epidemiologic surveillance course. In September this year, Victoria’s MPH thesis, which focused on the determinants of delivery care in Dhaka, Bangladesh, was published in its entirety as a book.

ISBN 978-3-8433-5337-3
Published by Lambert Academic Publishing. lap-publishing.com
Associate Director for Faculty Affairs and Human Resources, Brian Van Buren, got his start in academic affairs at Teachers College, where he learned the nuts, bolts, and other mechanics of faculty tenure and promotion.

Since then his career has transported him to NYU, Columbia’s Provost’s Office, and the Department of Medicine. Along the way he’s picked up a few other tools that help him do his job today, namely staff affairs and human resources, and faculty development. Brian joined the Department last spring, and his performance is emblematic of the new model of administrative support coming from the chair’s office. “Brian brings so much to this job,” says his supervisor, Administrative Director Barbara Aaron. “He’s got a very impressive skill set and has worked with some of the most senior people in the University. But it’s his native intelligence, common sense, and finely tuned interpersonal sensitivity that make him exceptional, and a great pleasure to work with. I know that both I and the Department are extremely fortunate to have him here.”

A few years ago Brian decided to pursue a long-held goal of becoming a clinical psychologist. He’s presently at the tail end of a master’s program, with sights set on taking the plunge into a PhD program in the next few years. He augments this academic work by volunteering on a suicide hotline and as a peer group counselor. A hectic schedule? Yes, but Brian feels privileged to have found so much fulfillment in each of the roles he plays.

“The faculty and staff of this department are smart, insightful people,” he explains. “I’m surrounded by good role models here. In a job like this one I’m able to become conversant with the work of the department, but also intimately engaged with the people behind that work. It’s a daily reminder of just how satisfying an endeavor it is to be employed by a university.”

The administrators who work with Brian every day know that Brian’s effectiveness makes their work much easier. “Brian is one of the most hard-working people I know, buzzing hither and thither making his daily rounds among faculty and staff,” says Senior Cluster Administrator Emily Alexandrino. “Usually people in human resources say, ‘I need X, Y, Z, and don’t forget A, B, & C.’ But Brian just does it...and seemingly with a snap of the fingers. He is intelligent and intuitively navigates the labyrinth that we all dread when thinking of human resources at Columbia. In my opinion, he has been one of the most important additions to the department and removed a great burden of bureaucratic undertakings from the list of responsibilities of other administrators.”
New Chronic SCA

Erica Peña will join the Department on November 8 as the Senior Cluster Administrator of the Chronic Disease Epidemiology cluster. She brings a wealth of grant knowledge and experience to the position. A warm welcome to Erica!

Master’s Students Present

At the October 22 Department Seminar, Lucy Atmers, Natalie Levy, and Hae Young Kim (pictured left to right) presented their master’s practicum work, inaugurating what will be an annual seminar event in the Department, selected students present their work to faculty.

DREAM Award

Dr. Debbie Barrington is the recipient of the prestigious NCMHD Disparities Research and Education Advancing Mission (DREAM) Career Transition Award (K22). She will spend the next two years at NIH after which she will return to the department.

Pathway to Independence

Newly minted Associate Research Scientist Dr. Megan Hall commences work this month on her K99 Pathway to Independence Award, addressing arsenic exposure in cancer risk.

2010 Calderone Prize

Assistant Professor Ryan Demmer is one of three recipients of the 2010 Calderone Prize for his project Investigation of Novel Bacterial Species as a Risk Factor for Insulin Resistance. The Calderone Prizes support research efforts initiated by full-time junior faculty members (assistant professors and associate research scientists) holding appointments in one of the departments of the school.

Federal Service Student Ambassador

The nonprofit Partnership for Public Service has selected doctoral student Jorge Luna to serve as a Federal Service Student Ambassador for the 2010-11 academic year. The prestigious Ambassadors program enlists students to promote public service on college and university campuses, nation-wide.
ENGAGED, PRODUCTIVE FACULTY

The following pages feature a brief look at some of our Department faculty’s outstanding work in several critical domains over the past year.

- p. 7 FACULTY RESEARCH
  - Cluster Publication Highlights

- p. 13 FACULTY TEACHING
  - Courses and award-winning faculty

- p. 16 FACULTY STUDENT MENTORING
  - Faculty-student dyads

- p. 20 FACULTY LEADERSHIP
  - Contributions to the field of epidemiology and public health
Percent emphysema, airflow obstruction, and impaired left ventricular filling


New England Journal of Medicine, 2010;362(3):217-227

Very severe chronic obstructive pulmonary disease (COPD) causes cor pulmonale with elevated pulmonary vascular resistance and secondary reductions in left ventricular filling, stroke volume, and cardiac output. The authors of the paper hypothesized that emphysema, as detected on computed tomography (CT), and airflow obstruction are inversely related to left ventricular end-diastolic volume, stroke volume, and cardiac output among persons without very severe lung disease. The study found that in this population-based study of subjects without very severe COPD, percent emphysema and the severity of airflow obstruction were associated with significant decrements in left ventricular filling and cardiac output. The magnitude of these associations was greater among participants with a history of smoking, but the associations with percent emphysema were also present among participants who had never smoked.

Periodontal bacteria and hypertension: the oral infections and vascular disease epidemiology study (INVEST)

Desvarieux M, Demmer RT, Jacobs DR Jr, Rundek T, Boden-Albala B, Sacco RL, Papapanou PN

Journal of Hypertension, 2010;28(7):1413-1421

Chronic infections, including periodontal infections, may predispose to cardiovascular disease (CVD). Researchers investigated the relationship between periodontal microbiota and hypertension. The study findings provide the first direct microbiological evidence of a possible contributory role for periodontal infections in hypertension etiology, and thus strengthen the hypothesis that periodontal infections may contribute to clinical CVD and provide insights into a mediating mechanism that might explain why periodontal infections have been reported to be a stronger risk factor for stroke than for coronary heart disease (CHD). Although these results require confirmation in prospective settings, they could be of public health importance as both periodontal infections and hypertension are common and hypertension etiology is not completely understood.

Prevalence and predictors of antioxidant supplement use during breast cancer treatment: the Long Island Breast Cancer Study Project


Cancer, 2009;115(14):3271-3282

Although many patients take antioxidant dietary supplements during breast cancer treatment, the benefits of such supplementation are unproven. The authors of this report analyzed the prevalence of and factors associated with antioxidant supplement use during breast cancer (BC) treatment among women who participated in the Long Island Breast Cancer Study Project. The study found that the majority of breast cancer patients in Long Island, many of whom were of high socioeconomic status, used antioxidants during treatment. The authors believe that oncologists should discuss supplement use and dosing with their patients. More specifically, oncologists could inform patients that antioxidant supplements may dampen the effects of chemotherapy and radiation therapy but that clear evidence of benefit or harm is not yet available.
Effectiveness and safety of tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women


Science, 2010; 329(5996):1168-1174

The Centre for the AIDS Program of Research in South Africa (CAPRISA) 004 trial assessed the effectiveness and safety of a 1% vaginal gel formulation of tenofovir for the prevention of HIV acquisition in women. A double-blind, randomized controlled trial was conducted comparing tenofovir gel (n = 445 women) with placebo gel (n = 444 women) in sexually active, HIV-uninfected 18- to 40-year-old women in urban and rural KwaZulu-Natal, South Africa. In high adherers (gel adherence > 80%), HIV incidence was 54% lower (P = 0.025) in the tenofovir gel arm. In intermediate adherers (gel adherence 50 to 80%) and low adherers (gel adherence < 50%), the HIV incidence reduction was 38 and 28%, respectively. Tenofovir gel reduced HIV acquisition by an estimated 39% overall, and by 54% in women with high gel adherence. No increase in the overall adverse event rates was observed. There were no changes in viral load and no tenofovir resistance in HIV seroconverters. Tenofovir gel appears safe and effective in preventing HIV infection. Once these promising findings have been corroborated, this antiretroviral microbicide could potentially fill an important HIV prevention gap, especially for women unable to successfully negotiate mutual monogamy or condom use.

Integration of tuberculosis and HIV services in sub-Saharan Africa: lessons learned

Howard AA, El-Sadr WM

Clinical Infectious Disease, 2010; 50(Suppl3): S238-244

Promoting linkages between tuberculosis (TB) and human immunodeficiency virus (HIV) treatment and prevention programs in resource-constrained environments where both diseases are prevalent is essential to improve the diagnosis, treatment, and outcomes for patients affected by both diseases. In this article, the authors share insights based on our experiences supporting integrated TB and HIV service delivery programs, including intensified TB case finding, isoniazid preventive therapy, infection control, and initiation of anti-retroviral therapy. Their experience indicates that successful integration of TB and HIV services in resource-constrained environments is feasible, although programmatic, infrastructural, and staffing challenges remain. Successful implementation of TB and HIV collaborative activities requires consideration of the realities that exist on the ground and the importance of tailoring interventions in a manner that enables their seamless introduction into existing programs that are often overwhelmed with large numbers of patients and a paucity of human and other resources.

AIDS in America—Forgotten but Not Gone

El-Sadr WM, Mayer KH, Hodder SL

New England Journal of Medicine 2010; 362:967-970

In this commentary, Dr. Wafaa El-Sadr and her co-authors Drs. Kenneth H. Mayer and Sally Hodder point out the waning attention paid to the HIV/AIDS epidemic in the United States. They discuss the complexities of the HIV epidemic in the U.S. and its disproportionate impact on disenfranchised groups. Noting the urgent need to refocus attention to the epidemic in our midst, the authors recommend the development of a relevant research agenda that can help gain ground in the fight against the disease.
Overreporting of deaths from coronary heart disease in New York City hospitals, 2003


Preventing Chronic Disease, 2010; 7(3):A47

New York City has one of the highest reported death rates from coronary heart disease in the United States. The authors sought to measure the accuracy of this rate by examining death certificates. They conducted a cross-sectional validation study by using a random sample of 491 death certificates that recorded in-hospital deaths in New York City from January through June 2003, stratified by neighborhoods with low, medium, and high coronary heart disease death rates. They abstracted data from hospital records, and an independent, blinded medical team reviewed these data to validate cause of death. They computed a comparability ratio (coronary heart disease deaths recorded on death certificates divided by validated coronary heart disease deaths) to quantify agreement between death certificate determination and clinical judgment. They found that death certificates overestimated coronary heart disease deaths by 51% among decedents 355-74 years old, by 9% among those 75-84 years, and by 137% among those 85 years or older. Based on these findings, coronary heart disease appears to be substantially over reported as a cause of death in New York City among in-hospital deaths.

Millennium Global Village-Net: bringing together Millennium Villages throughout sub-Saharan Africa

- Kanter AS, Negin J, Olayo B, Bukachi F, Johnson E, Sachs SE

International Journal of Medical Informatics, 2009;78(12):802-807

The Millennium Villages Project (MVP), based at The Earth Institute at Columbia University, is a bottom-up, community led approach to show how villages in developing countries can get out of the poverty trap that afflicts more than a billion people worldwide. With well-targeted, practical inputs can help the community invest in a path leading to self-sustaining development. There are 80 Millennium Villages clustered in 10 countries throughout sub-Saharan Africa. MVP is an important development process for empowering communities to invest in a package of integrated interventions aiming to increase food production, improve access to safe water, health care, education and infrastructure. MVP is committed to a science-based approach to assess and monitor the progress of the communities towards clear objectives; the Millennium Development Goals (MDGs) and to do so with mechanisms that are scalable and sustainable. Solutions found in one community are transferable to similar communities in other MVP villages. To achieve this goal, the MVP requires an information and communication system which can provide both necessary infrastructure for monitoring and evaluation, and tools for communicating among the villages, cities and countries. This system is called the Millenium Global Village-Net (MGV-Net.) MGV-Net represents one of the first attempts at a multilingual, multinational coordinated health information system with a bottom-up, scalable design. It would provide a system not only for collecting data, but would connect providers and the community to each other and the rest of the world. For the Millennium Villages Project, MGV-Net is mission-critical to the delivery of quality health care and the achievement of the Millennium Development Goals.

A multiphase method for estimating cohort effects in age-period contingency table data

- Keyes KM, Li G

Annals of Epidemiology, 2010;20(10):779-785

Understanding the effects of age, period, and cohort on disease morbidity and mortality may help identify etiological factors and inform prevention programs. The authors illustrate a three-phase method that conceptualizes the cohort effect as a partial interaction between age and period. As an example of application, they analyze homicide mortality data for males in the United States from 1935 through 2004. The three-phased method begins with graphical inspection; second, a median polish is used to remove the log-additive components of age and period effects; third, a linear regression of residuals from the median polish is modeled to quantify the relative magnitude of the cohort effect. The authors found that individuals born after 1960 have a significantly increased rate of homicide relative to those born between 1920 and 1924. After removal of the log-additive effects of age and period, the estimated homicide rate for men born between 1980 and 1984 is more than twice the rate for men born between 1920 and 1924 (rate ratio, 2.11; 95% confidence interval, 1.98-2.25). The three-phase method presented herein offers several advantages, the foremost being an alternative conceptualization of the cohort effect not as an independent component of age and period effects, but as a partial interaction. In addition, the strengths of the method include computational simplicity, interpretability, and reliability.

(Dr. Keyes received the 2008 Abraham Lilienfeld Student Prize for her work on this study)
Dietary n-3 and n-6 fatty acids: are there 'bad' polyunsaturated fatty acids?

- Deckelbaum, RJ

Current Opinion in Clinical Nutrition and Metabolic Care, 2010; 13(2):123-124


In this opinion piece, the author questions the current recommendations for intake of polyunsaturated fatty acids, in particular, the emphasis on ratios rather than absolute amounts. Considerations regarding an optimal n-6: n-3 fatty acid ratio are losing ground in relation to considerations about adequate intakes for both n-3 and n-6 fatty acids. The meaning and usefulness of ratios has been questioned recently, with the obvious recognition that the use of a ratio can disguise extremely low or very high intakes of n-6 and/or n-3 fatty acids. The bulk of current evidence suggests that it is the absolute intakes of specific n-6 and n-3 PUFA that are associated with many different endpoints. What is often overlooked is whether different intakes of fatty acids are required for different health and disease states. We do not yet know whether beneficial intakes of n-6 and n-3 PUFA with regard to coronary heart disease also elicit benefits in terms of mental health or immune/inflammatory disorders. However, at this point in time, even in the absence of recommendations for optimal intakes of n-6 and n-3 PUFA for each health and disease parameter, we can conclude that extremely low intakes of either might be harmful. We should encourage adequate intakes of both n-6 and n-3 fatty acids. Evidence related to intake amounts for n-6 and n-3 PUFA are best defined for coronary artery disease, but with increasing interest in the beneficial roles of both n-6 and n-3 PUFA in other health and disease areas, we might expect better definition of the required amounts for each biological sphere in the not too distant future.

Two plus two equals three? Do we need to rethink lifetime prevalence?

- Susser E, and Shrout P

Psychological Medicine, 2010; 40(6): 895-897


In this commentary, Drs. Susser and Shrout express concern about widely quoted “lifetime prevalences” of mental disorders derived from cross-sectional population surveys in the United States and across the globe. The findings of the Moffitt et al. report show [not for the first time] that the lifetime prevalences derived from such studies seriously underestimate the true lifetime prevalence due to incomplete recollection of past disorders. In addition, Susser and Shrout point out that lifetime prevalence (i.e. ever having had a disorder) is a measure which poses many methodological problems for estimation of odds ratios and relative risks. They argue that we need to place more priority on sustaining prospective studies, and foster the development of new methodologies to track persons over their lives. Longitudinal work is needed to gain new understanding of development, social contexts, and also coping and prevention strategies related to onset and course of mental disorder.
Sudden Death and Use of Stimulant Medications in Youths

Gould MS, Walsh BT, Munfakh JL, Kleinman M, Duan N, Olfson M, Greenhill L, Cooper T

American Journal of Psychiatry, 2009; 166(9):992-1001

The authors sought to determine whether a significant association exists between the use of stimulants and the rare event of sudden unexplained death in children and adolescents. A matched case-control design was performed. Mortality data from 1985–1996 state vital statistics were used to identify 564 cases of sudden death occurring at ages 7 through 19 years across the United States along with a matched group of 564 young people who died as passengers in motor vehicle traffic accidents. A significant association of stimulant use with sudden unexplained death emerged from the primary analysis, and a comprehensive series of sensitivity analyses yielded qualitatively similar findings. This case-control study provides support for an association between the use of stimulants and sudden unexplained death among children and adolescents. Although sudden unexplained death is a rare event, this finding should be considered in the context of other data about the risk and benefit of stimulants in medical treatment.

Cortical thinning in persons at increased familial risk for major depression


PNAS, 2009; 106(15):6273-6278

The brain disturbances that place a person at risk for developing depression are unknown. The authors imaged the brains of 131 individuals, ages 6 to 54 years, who were biological descendants (children or grandchildren) of individuals identified as having either moderate to severe, recurrent, and functionally debilitating depression or as having no lifetime history of depression. They compared cortical thickness across high- and low-risk groups, detecting large expanses of cortical thinning across the lateral surface of the right cerebral hemisphere in persons at high risk. Thinning correlated with measures of current symptom severity, inattention, and visual memory for social and emotional stimuli. Mediator analyses indicated that cortical thickness mediated the associations of familial risk with inattention, visual memory, and clinical symptoms. These findings suggest that cortical thinning in the right hemisphere produces disturbances in arousal, attention, and memory for social stimuli, which in turn may increase the risk of developing depressive illness.

Long-term functional recovery after first ischemic stroke: the Northern Manhattan Study

Dhamoon MS, Moon YP, Paik MC, Boden-Albala B, Rundek T, Sacco RL, Elkind MS

Stroke, 2009; 40(8):2805-11

Several factors predict functional status after stroke, but most studies have included hospitalized patients with limited follow-up. The authors hypothesized that patients with ischemic stroke experience functional decline over 5 years independent of recurrent stroke and other risk factors. In the population-based Northern Manhattan Study, patients 40 years of age with incident ischemic stroke were prospectively followed using the Barthel Index at 6 months and annually to 5 years. The proportion of patients with functional independence after stroke declines annually for up to 5 years, and these effects are greatest for those with Medicaid or no health insurance. This decline is independent of age, stroke severity, and other predictors of functional decline and occurs even among those without recurrent stroke or myocardial infarction.

Epigenetic and immune function profiles associated with posttraumatic stress disorder

Uddin M, Aiello AE, Wildman DE, Koenen KC, Pawelec G, de Los Santos R, Goldmann E, Galea S

PNAS, 2010; 107(20):9470-5

The biologic underpinnings of posttraumatic stress disorder (PTSD) have not been fully elucidated. Previous work suggests that alterations in the immune system are characteristic of the disorder. Identifying the biologic mechanisms by which such alterations occur could provide fundamental insights into the etiology and treatment of PTSD. Here the authors identified specific epigenetic profiles underlying immune system changes associated with PTSD. They further demonstrated that genes whose methylation levels are significantly and negatively correlated with traumatic burden show a similar strong signal of immune function among the PTSD affected. This report of peripheral epigenomic and immune profiles associated with mental illness suggests a biologic model of PTSD etiology in which an externally experienced traumatic event induces downstream alterations in immune function by reducing methylation levels of immune-related genes.
**Association of Environmental Tobacco Smoke Exposure in Childhood with Early Emphysema in Adulthood among Nonsmokers**

Lovasi GS, Diez Roux AV, Hoffman EA, Kawut SM, Jacobs DR Jr, Barr RG


Mechanical stress to alveolar walls may cause progressive damage after an early-life insult such as exposure to environmental tobacco smoke (ETS). This hypothesis was examined by using data from the Multi-Ethnic Study of Atherosclerosis (MESA), a population-based cohort aged 45–84 years, free of clinical cardiovascular disease, recruited from 6 US sites in 2000–2002. The MESA-Lung Study assessed a fractal, structural measure of early emphysema ("alpha," lower values indicate more emphysema) and a standard quantitative measure ("percent emphysema") from cardiac computed tomography scans. Childhood ETS exposure was assessed retrospectively as a report of living with one or more regular indoor smokers. Childhood ETS exposure was associated with detectable differences on computed tomography scans of adult lungs of nonsmokers.

**"A Disease Like Any Other"? A Decade of Change in Public Reactions to Schizophrenia, Depression, and Alcohol Dependence**

Pescosolido BA, Martin JK, Long JS, Medina TR, Phelan JC, Link BG

*American Journal of Psychiatry*, 2010; Sep 15. [Epub ahead of print]

Clinicians, advocates, and policy makers have presented mental illnesses as medical diseases in efforts to overcome low service use, poor adherence rates, and stigma. The authors examined the impact of this approach with a 10-year comparison of public endorsement of treatment and prejudice. The authors analyzed responses to vignettes in the mental health modules of the 1996 and 2006 General Social Survey describing individuals meeting DSM-IV criteria for schizophrenia, major depression, and alcohol dependence to explore whether more of the public 1) embraces neurobiological understandings of mental illness; 2) endorses treatment from providers, including psychiatrists; and 3) reports community acceptance or rejection of people with these disorders. Multivariate analyses examined whether acceptance of neurobiological causes increased treatment support and lessened stigma. Results: In 2006, 67% of the public attributed major depression to neurobiological causes, compared with 54% in 1996. High proportions of respondents endorsed treatment, with general increases in the proportion endorsing treatment from doctors and specific increases in the proportions endorsing psychiatrists for treatment of alcohol dependence (from 61% in 1996 to 79% in 2006) and major depression (from 75% in 1996 to 85% in 2006). Social distance and perceived danger associated with people with these disorders did not decrease significantly. Holding a neurobiological conception of these disorders increased the likelihood of support for treatment but was generally unrelated to stigma. Where associated, the effect was to increase, not decrease, community rejection. More of the public embraces a neurobiological understanding of mental illness. This view translates into support for services but not into a decrease in stigma. Reconfiguring stigma reduction strategies may require providers and advocates to shift to an emphasis on competence and inclusion.

**Another Mexican birthweight paradox? The role of residential enclaves and neighborhood poverty in the birthweight of Mexican-origin infants**

Osypuk TL, Bates LM, Acevedo-Garcia D

*Social Science and Medicine*, 2010;70(4):550-60

Examining whether contextual factors influence the birth outcomes of Mexican-origin infants in the US may contribute to assessing rival explanations for the so-called Mexican health paradox. The authors examined whether birthweight among infants born to Mexican-origin women in the US was associated with Mexican residential enclaves and exposure to neighborhood poverty, and whether these associations were modified by nativity (i.e. mother’s place of birth). The findings highlight a differential effect of context by nativity, and the potential health effects of ethnic enclaves, which are possibly a marker of downward assimilation, among US-born Mexican-origin women. This paper provides a novel test of the putative “Mexican birthweight paradox” by looking at the role of social context in shaping birth outcomes among Mexican-origin women and demonstrating that ethnic enclave and neighborhood poverty effects operate differentially by maternal nativity.
Mapping the Course: Keeping P6400 on Target

The Epidemiology core course has been the largest single class offering at the Mailman School for the last several years and second largest in the University after the Columbia Undergraduate Core Curriculum. Course Director Dr. Debbie Barrington and Course Co-Director Dr. Katherine Keyes conduct what amounts to an orchestra of lecturers, seminar leaders, administrators, a classroom coordinator, and IT, A/V, media, and education technologists to teach the Principles of Epidemiology to an ever-growing student body.

To get a sense of the magnitude of the task of running P6400, consider a few data points: there are 449 students enrolled in the class. 19 seminar leaders and 2 senior seminar leaders conduct a total of 25 seminar sections (19 on Thursday; 6 on Friday). Administrative support comes from Elizabeth Ferrari, with backup from Liliane Zaretzky. Each semester begins with two training sessions for seminar leaders, supported by Dr. Ian Lapp and Ms. Leah Hooper, with presentations by Deans Martyn Delva and Jim Glover of the Office of Student Affairs.

There is an administrative meeting each Wednesday throughout the semester, and on Thursdays the course directors, seminar leaders, and administrative support meet before the class over an early dinner to discuss relevant issues both didactic and administrative.

Dr. Barrington characterizes it thusly, “The progression of the Epi I core course of such an enormous size requires consistent, thoughtful and patient coordination with multiple stakeholders throughout Mailman and CUMC. Most important to the recipe for a successful Epi I each year, however, are engaged students with a passion to learn and a commitment to the creation and maintenance of healthy societies across the world.”

The course exposes students to a diverse array of epidemiologic concepts, including:

- Infectious disease epidemiology taught by Dr. Denis Nash, based on his experience investigating the West Nile virus in NYC;
- Dr. Alfredo Morabia’s bracing walk through the key milestones in epidemiologic history;
- Dr. Sandro Galea’s fast-paced, rigorous orientation to causal inference and effect-measure modification;
- Dr. Bill Friedewald’s popular lectures on screening and randomized control trials;
- And lectures from Drs. Barrington and Keyes addressing disease measures, bias, and confounding

Epiville, the interactive, self-guided learning tool developed by past Course Directors Drs. Dan Herman and Lydia Zablotska and updated each year, provides students with a fun and engaging way to acquire the basic concepts of epidemiology. This virtual small town with an inordinate burden of disease outbreaks and a beleaguered public health department has proven to be so effective a learning tool that other schools of public health have adopted it—not just the model, but the actual modules developed here.

Students apply the concepts they’ve learned to real-world epidemiologic problems by writing a critique paper of an actual epidemiologic study. Course Co-Director Dr. Katherine Keyes says, “The key to the success of the course is the amazing work of the seminar leaders. Each week they come fully prepared to translate the dense lecture material into relevant examples and easier-to-digest bites of information. They are passionate advocates for their students, liaising between course directors, lecturers and administrators to assure that everything comes together consistently, from course materials, to textbook, to Epiville, and lecture slides to create the best possible learning experience.”
Great Teaching in Epidemiology

Dr. Al Neugut and Cancer Epidemiology

As both a practicing medical oncologist and cancer epidemiologist, Dr. Neugut’s major interests have been on GI tract cancers, notably the epidemiology of colorectal adenomas and cancer, as well as colonscopic screening. He serves as co-principal investigator of the Long Island Breast Cancer Study Project, a large multi-center effort to explore environmental causes of breast cancer on Long Island. Most recently, his efforts have focused on more clinical topics, such as the epidemiology of second malignancies and the quality of care in the use of chemotherapy and radiation therapy among cancer patients. His interest has focused on reasons for variations in quality, such as race or financial resources for the individual. A major focus has been on adherence to the use of oncology drugs. He leads two large training grants in cancer-related population sciences that together fund 15 pre and postdoctoral trainees in cancer epidemiology, biostatistics, and environmental health sciences, and serves as a mentor to a number of junior faculty.

Year in and year out, Dr. Neugut’s Cancer Epidemiology course gets consistently high marks from students. His course emphasizes an understanding of the disease and how that affects the epidemiologist’s approach to its study, as well as exploring in depth the methods used to study cancer epidemiology. Biases associated with each exposure are explored in depth.

Dr. Neugut sums up his approach to the course this way, “Teaching Cancer Epi every year allows me to rethink the basics of the field. There is nothing that can be accepted at face value; everything in the course can be questioned by a student or me and subjected to reasonable amount of skepticism.”

Dr. Andrew Rundle and Environmental Epidemiology

Since he began teaching it in 2000, Dr. Rundle’s Environmental Epidemiology class has garnered numerous outstanding student reviews. Adjectives like “incredible” and, “superb” pop up regularly in a review of student comments over the years. Says Dr. Rundle (who is profiled with his student mentee Catherine Richards on page 16), “I think of Environmental Epidemiology as a methods class that uses environmental epidemiology as a lens through which to discuss epi methods. I cover several areas that are fairly unique to environmental epidemiology such a cancer clusters and occupational cohorts, and overall I hope to sharpen the student’s critical thinking regarding the application of epidemiologic methods. I also try to explain to my students how epidemiology is conducted in real life, before a 2×2 table can be created, and to show them the ways in which logistical and practical considerations can force compromises on a study and what the implications are study validity of those compromises. And finally, I try to bring a multi-level epidemiologic perspective into my class by including lectures on biomarkers, gene-environment interactions, spatial epidemiology, ecological studies and neighborhood effects studies.”
The CUMC Glenda Garvey Teaching Academy was established to recognize excellence and innovation in education, enhance the status of faculty educators, and have a transformative effect on education across the medical center campus. The health sciences-wide interdisciplinary model is designed to increase knowledge of and excellence in teaching in the health professions. Members of the Academy are selected for their achievements in education, and it is abundantly clear why two of our own faculty are Garvey Fellows.

Sharon Schwartz, PhD
Professor of Clinical Epidemiology

A recipient of the Columbia University Presidential Award for Outstanding Teaching in 2000, Dr. Schwartz is also a two-time recipient of the Mailman School Teaching Excellence Award, selected each year by the graduating class. Known for her versatility and ability to excel in all teaching situations, Dr. Schwartz teaches Epidemiology II and Advanced Topics in Epidemiological Methods. Excellent as her teaching is, her contributions to the academic life of the Department extend well beyond her role in these two courses. She is the training coordinator for two major training programs: the Psychiatric Epidemiology Training Program (PET), and the Fogarty AIDS International Training and Research Program. She chairs and sits on many dissertation committees. Dr. Schwartz also chairs the Department’s Curriculum Committee and plays a central role in training and curricular initiatives throughout the School.

Mary Beth Terry, PhD
Associate Professor of Epidemiology

Dr. Terry has taught both introductory and advanced epidemiologic methods for over 10 years at Columbia. She directs the Epidemiology III course, which is the third and final methods course required of all of our master’s students. Her teaching focuses on quantitative methods in epidemiology and covers more conceptual, methodological issues as well as applied regression modeling important to population sciences. In addition to her teaching, Dr. Terry maintains an active grant portfolio and serves on numerous NIH and foundation grant review panels. Dr. Terry integrates her formal classroom teaching with her applied research background and believes that the experience gained through teaching has been vital to improving her research, both through a greater clarity on methods but also through greater communication skills that come from the teaching experience. Research, in turn, has enhanced her teaching by providing both real world data and study protocol examples, as well as a greater understanding of when methodological assumptions matter to overall inference. In addition to teaching in a more formal classroom setting, Dr. Terry mentors pre and postdoctoral fellows and MPH students in cancer and lifecourse epidemiology. Across the medical center, Dr. Terry also serves as an advisor and collaborator to many junior faculty and teaches grant writing workshops to junior faculty.
Dr. Rundle’s research focuses on the epidemiology of obesity and sedentary lifestyles, how neighborhood social and built environments influence these conditions and how, in turn, obesity and sedentary lifestyles influence cancer risk. He leads the Built Environment and Health (BEH) Research Group which focuses on how neighborhood socio-demographic, economic, social and built environmental characteristics predict the health of residents. The group is engaged in several large studies of how neighborhood conditions influence obesity in children and adults in New York City.

Of late this work has been evolving to link the ideas of social epidemiology and molecular epidemiology and to conduct studies that consider risk factors for disease at the social/neighborhood level, individual behavioral level and at the molecular level. This effort to conduct studies that consider risk factors across these levels of organization is coming together in two areas; in a study of prostate cancer risk factors being conducted in Detroit and in birth cohort study of childhood obesity being conducted as part of the Columbia Center for Children’s Environmental Health. In both of these studies Dr. Rundle and colleagues will be able to study causes of disease at multiple levels of organization.

Dr. Rundle has worked with Catherine Richards for about 4 years now and considers her one of the top students he has worked with. They are co-authors on eight papers either published or accepted for publication and she has had a hand in almost every project he has developed in her time at Mailman. For the past two years, her abstracts for the American Society of Preventive Oncology conference have been selected for publication in Cancer Epidemiology Biomarkers and Prevention and in addition, last year she won the student poster award. “She has a tremendous ability to shift gears and work with multiple ideas and projects at once and on top of the work she has done with me, she has pursued her own research on colon cancer screening with collaborators at the Department of Health and Mental Hygiene,” Dr. Rundle says. “I can sometimes get caught up in day-to-day of running my projects and publishing results, but seeing Catherine’s skills and passion for epidemiology blossom reminds me that part of what we do to improve public health is train the future leaders, and Catherine is sure to be one of those leaders. It has been professionally and personally very gratifying to have played a role in training and mentoring Catherine.”

Catherine Richards received her BA in the History and Sociology of Science from the University of Pennsylvania in 2006. While at Penn she worked part time under the mentorship of Dr. Peter Kanetsky in the Center for Clinical Epidemiology and Biostatistics. Her undergraduate research experience led her to pursue an MPH in Epidemiology at Mailman, which she started in the fall of 2006. Shortly thereafter she began working for Dr. Rundle as a member of his Built Environment and Health group, based on the recommendation of her former mentor Dr. Kanetsky. Catherine is now a third year doctoral student in the Cancer Epidemiology Training program and Dr. Rundle continues to serve as her primary mentor.

“Dr. Rundle is an exceptional mentor, not only because he is an innovative and cutting-edge environmental epidemiologist, but also because he is never too busy to sit down with me to share the lessons he has learned from his career to help me achieve my own professional goals. Dr. Rundle encourages me to pursue my intellectual interests, even if they aren’t a priority of his own research goals, and pushes me to work out of my comfort zone, thereby continually helping me to build my epidemiology skill set. His support over the past four years has been invaluable and I consider it an honor and a privilege to work with such a strong scientist and mentor. I look forward to working with him for years to come.”
Dr. Elaine L. Larson is the Associate Dean for Research and Professor of Pharmaceutical and Therapeutic Research, Columbia University School of Nursing and Professor of Epidemiology at MSPH. She is a Fellow of the American Academy of Nursing, Infectious Disease Society of America, New York Academy of Medicine, Institute of Medicine, and The National Academies of Practice. Dr. Larson has been editor of the American Journal of Infection Control since 1996, and has published more than 200 journal articles and four books and has served as a consultant in infection control and nursing in international settings such as Kuwait, Jordan, Singapore, Japan, Australia, Ghana, Peru, Brazil, Spain, Portugal, France, Hong Kong and Egypt.

“What I enjoy most about working with Monika is her ability to articulate her thinking, even about those things she doesn’t yet understand. Verbal and written communication skills are so important to the functioning of the mentoring relationship—it’s the only way we teachers can sort out whether there are problems in a student’s thinking and identify areas of need. Monika is exceptionally articulate and this has created the foundation of a truly productive mentoring relationship. Such a relationship opens the doors to new ways of looking at a research question, or at data, and thus the mentor stands to learn as much as the student... or more!”

Monika Pogorzelska is a fourth-year doctoral candidate in the Epidemiology Department. Monika received her MPH from Mailman in 2007 and her master’s thesis examined the attitudes of ICU staff toward general practice guidelines. Monika’s thesis advisor was Dr. Elaine Larson and their mentor-mentee relationship continued when Monika entered the PhD program. Monika works as a Project Director at the School of Nursing where her work focuses on infection control policies aimed at reducing healthcare-associated infections. Monika presented part of this work at the 2009 Annual Meeting of the Association of Professionals in Infection Control & Epidemiology where she received the New Investigator Award.

Under the guidance of Dr. Larson, Monika’s dissertation research examines institutional and patient level predictors of multi-drug resistant healthcare-associated infections. One of the things that Monika values most highly in her journey through the PhD program is the opportunity to work with Dr. Larson. “It is a privilege to be advised by someone who is truly passionate about her work and so highly regarded within her field. As a mentor, Dr. Larson has been extremely giving of her time and expertise. Her work ethic is truly inspiring and I have learned an immense amount from her, both in terms of my research interests and also about what it takes to be a researcher.”
Guohua Li — Joanne Brady

Dr. Guohua Li is a medical epidemiologist specializing in the epidemiology and prevention of injuries. The subject domain of his research ranges from aircraft crashes to anesthesia safety. Dr. Li concentrates on population-based, injury-related, and policy-oriented studies that encompass innovative methodology, novel epidemiologic and biostatistical techniques, and complex data systems. He has published extensively on the role of alcohol in injury causation and trauma outcomes and is a renowned epidemiological methodist.

A Guggenheim Fellow, Dr. Li received the 1999 Kenneth Rothman Epidemiology Prize for developing the decomposition method and the 2009 John Paul Stapp Award for “outstanding contributions in aerospace biomechanics and progressive research in mechanical forces injury protection.” As the M. Finster professor, Dr. Li directs the Center for Health Policy and Outcomes in Anesthesia and Critical Care and teaches the Clinical Epidemiology course (P8450). Dr. Li regards teaching and mentoring as a privilege. “Working with brilliant and motivated students to make a positive impact on their careers and lives is the most important and most rewarding responsibility for me as a professor at Columbia.” Dr. Li says, “Joanne has shown tremendous growth in every aspect in the past two years. The most profound change is probably in her communication skills. She has improved her writing tremendously and has transformed herself from a shy, nervous speaker into a confident classroom teacher. During the process I did nothing other than encourage her to publish a few manuscripts each year and to ask at least one question whenever she goes to a seminar or attend a conference. It is a joy to watch her continue to grow and excel.”

Joanne Brady is a second year doctoral student. Since 2008, she has worked in the Department of Anesthesiology, conducting statistical analyses on large data sets. Joanne worked in epidemiology and research for 10 years prior to coming to Columbia. She received her master’s degree in epidemiology from the Harvard School of Public Health in 2003. Joanne characterizes her mentoring relationship with Dr. Li thusly: “No matter how busy Dr. Li is, he takes the time to inquire about his mentees’ work, schooling, and lives and to offer a kind ear and words of encouragement. This encouragement has taken many forms in my relationship with him: he urged me to apply to the doctoral program, helped me publish in high impact journals, and gave me the opportunity to present our research at professional conferences. I am extraordinarily fortunate to work with Dr. Li, as he is an inspiration both personally and professionally. He makes you strive to do more, achieve more, and be more. One day he will ask you to give a lecture and the next he will ask you to perform a new innovative analysis method. My relationship with Dr. Li has been of incalculable importance to my experience at Mailman and will be an invaluable part of my life to come.”
Ruth Ottman, PhD, Professor of Epidemiology (in Neurology and the Sergievsky Center), is a genetic epidemiologist whose research focuses on elucidating the genetic influences on neurologic disorders.

Dr. Ottman received a BA in zoology and a PhD in genetics from University of California at Berkeley, and was then invited to do a postdoctoral fellowship at the recently-established Sergievsky Center, Columbia University. When she arrived in New York on December 1, 1980 to begin her postdoc, the first thing she had to do was purchase a winter coat—having lived in California most of her life, she had never owned one! She joined the faculty in Epidemiology in 1981.

Much of Dr. Ottman’s work is aimed at unraveling the genetic and phenotypic heterogeneity of epilepsy, a disorder so clinically heterogeneous (with many different seizure types, clinical trajectories, and associated conditions) that it is viewed as a collection of different diseases with distinct etiologies (the “epilepsies”). This heterogeneity is an enormous problem for molecular studies aimed at identifying specific genes that influence risk. To address this problem, Ottman has used two approaches that combine genetic and epidemiologic methods: familial aggregation studies and family concordance analysis. In two large familial aggregation studies, she sampled probands with specific clinical epilepsy types and examined the risk for epilepsy in their relatives. These studies addressed several important issues for epilepsy genetics: estimation of familial risks for genetic counseling, identification of clinical characteristics that signal increased genetic susceptibility, evaluation of shared and distinct genetic influences on different clinically-defined subgroups, testing of consistency with different modes of inheritance, analysis of fertility deficits, and evaluation of comorbidity with migraine.

Dr. Ottman’s group was the first to recognize the syndrome autosomal dominant partial epilepsy with auditory features (ADPEAF), a genetic form of temporal lobe epilepsy with auditory symptoms and receptive aphasia as major seizure manifestations. After identifying a single large family with the syndrome, they used positional cloning to identify mutations in the LGI1 gene on chromosome 10. Study of the mechanism by which LGI1 influences susceptibility is an extremely active area of basic neuroscience research, leading to new concepts about epileptogenesis. To identify other genes that raise risk for epilepsy, Dr. Ottman has assembled a database of about 100 families containing multiple individuals with various forms of epilepsy. They have carried out genetic linkage analysis in these families and are collaborating with David Goldstein, PhD, at Duke University, in studies using next generation sequencing to identify the causative genes.

She devotes significant effort to mentoring predoctoral and postdoctoral trainees, and has for many years taught the course “Genetics in Epidemiology” in the Department. She co-founded the Columbia University Seminar in Genetic Epidemiology, and is the Pre-doctoral Training Director of the Genetics of Complex Diseases Training Program and the Biological Sciences Core leader for the Robert Wood Johnson Health & Society Scholars Program, both at the Mailman School of Public Health. She is a member the Clinical Research Task Force of the American Epilepsy Society and the Genetics Commission of the International League Against Epilepsy, which she chaired from 2005-2009. In 2005, she served on the Institute of Medicine Committee on Assessing Interactions Among Social, Behavioral, and Genetic Factors in Health.
Contributions to the Field

Our faculty is actively engaged in the world of epidemiology and public health. The following is a selection of the contributions five Epidemiology faculty members are making locally, nationally, and globally.

**Madelyn Gould, PhD, MPH**  
Professor of Clinical Epidemiology and Clinical Psychiatry
- Consultant and Founding member, New York State Suicide Prevention Planning Council
- Consultant, Department of Veterans Affairs, Canandaigua Center of Excellence, Canandaigua New York
- Consultant, Suicide and New Media Initiative, Substance Abuse and Mental Health Services Administration (SAMHSA)
- Steering Committee, Suicide Prevention Resource Center (SPRC)
- Steering Committee, Executive Team Leader, and member of Standards, Training and Practices Subcommittee, National Suicide Prevention Lifeline (NSPL)
- Scientific Advisory Committee and Media Consultant, American Foundation for Suicide Prevention
- Expert Panel, American Foundation for Suicide Prevention/Suicide Prevention Resources Center School Suicide Postvention Committee
- External Workgroup, Education Development Center, Inc. and Substance Abuse and Mental Health Services Administration (SAMHSA), Toolkit for Suicide Prevention in High Schools
- Speaker, NYS Office of Mental Health Speakers List
- Expert Panel, Suicide Prevention PSA Campaign, Ad Council/Substance Abuse and Mental Health Services Administration (SAMHSA)
- Screening Advisory Committee, TeenScreen National Center
- External Advisory Committee, the Center for the Study and Prevention of Suicide, University of Rochester Medical Center

**Ezra Susser, MD, DrPH**  
Professor of Epidemiology and Psychiatry
- Scientific Advisory Board, Autism Speaks
- Advisor, Global Autism Public Health Initiative (GAPHII)
- Scientific Advisory Board, FDA Safety of Key Inhaled and Intravenous Drugs in Pediatric Anesthesia [SAFEKIDS] Initiative
- Associate editor, International Journal of Epidemiology
- President-elect, American Psychopathological Association
- International advisor to University of Manchester, UK, Department of Psychiatry and Community Medicine
- International advisor to Austral Institute for Psychiatric Rehabilitation in Neuquen, Argentina
- IDM Committee on Health Effects of Exposure to the Persian Gulf War
- NIH College of Scientific Review
- Scientific Advisory Board, Doctoral program, École des hautes études en santé publique (EHESP)
- International Advisory Board, Centre for Global Mental Health, Kings College Institute of Psychiatry and London School of Tropical Hygiene and Medicine

**Steve Morse, PhD**  
Professor of Clinical Epidemiology
- Advisory Committee, International Congress on Emerging Zoonoses
- ProMED-mail Policy Committee, International Society for Infectious Diseases
- Temporary Voting Member, Food and Drug Administration, Advisory Committee on Biological Response Modifiers
- Review Panel, NSF/NIH “Ecology of Infectious Disease” program
- Steering Committee, Forum on Emerging Infections/Forum on Microbial Threats, National Academy of Sciences-Institute of Medicine (reappointed)
- WMD Advisory Committee (and Bioterrorism Subgroup), NYC Department of Health & Mental Hygiene
- Public Health Laboratories Advisory Committee on Bioterrorism and Emerging Pathogens, NYC Department of Health & Mental Hygiene
- Director, USAID Emerging Pandemic Threats program, PREDICT Project
- Standing Committee on Biodefense Analysis and Countermeasures, National Research Council-National Academy of Sciences
- Committee on Animal Models for Assessing Countermeasures to Bioterrorism Agents, National Academy of Sciences
- Session Chair, Invited Speaker and Organizing Committee, “Emerging Infectious Diseases in Response To Climate Change”, New York Academy of Sciences Symposium
- Organizer and faculty mentor, Student Volunteer Program with NYCDOHMH Bureau of Communicable Diseases (through National Center for Disaster Preparedness)
Mary Beth Terry, PhD
Associate Professor of Epidemiology

- Executive Board, Program Committee Head, and Screening Interest Group Chair, American Society for Preventive Oncology
- Chair, Scientific Review Panel, National Cancer Institute of Canada
- Scientific Review Panel, National Cancer Institute of Canada
- Standing Member, Scientific Review Group (NCI-F) Committee to Review Training Grant Applications and Career Development Awards
- Elected Member, ASPO Executive Board, American Society for Preventive Oncology
- Elected Member, Alumni Executive Board, Mailman School of Public Health
- Advisory Board, The Arkansas Women’s Health Cohort (Spit for the Cure), University of Arkansas Medical Center
- Advisory Board for the Patient-Oriented Research Master’s Program (MS/POR) of the Mailman School of Public Health
- Scientific Advisory Council, City University of New York, School of Public Health

Awash Teklehaimanot, PhD
Professor of Clinical Epidemiology and Director of Malaria and Neglected Tropical Diseases (NTDs) at the Earth Institute

- Director, Center for National Health Development in Ethiopia, Columbia University (CNHDE,CUI, the Earth Institute
- Technical Advisor, the Global Fund against AIDS, TB and Malaria
- Technical Advisor, The Earth Institute and the Millennium Promise and the United Nations Development Program (UNDP)
- Board member and collaborator, Global Fund to Fight AIDS, TB, and Malaria
- Board member and collaborator, Role Back Malaria Partnership, World Health Organization/Global Fund
- International Advisory Panel, National Rural Health Mission (NRHM), Ministry of Health and Family Welfare, Government of India
- International Advisory Panel, Ministerial Working Group from China, Ethiopia, Kenya, India and Nigeria

Save the Date

EPIDEMIOLOGY
HOLIDAY PARTY!

December 13th, 1:00 PM
Riverview Lounge
Hammer Health Sciences Building
4th Floor
FACULTY ARTICLE BIBLIOGRAPHY
OCTOBER 2010

LISTED ALPHABETICALLY BY FIRST AUTHOR


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