New evidence links oral infections with type 2 diabetes

A new study adds to growing evidence that periodontal infection, a bacterial infection affecting the gums and the bone supporting teeth, is associated with increased risk of developing type 2 diabetes.

In a study published in the journal Diabetes Care, Drs. Ryan Demmer, Moïse Desvarieux, Bill Friedewald, and colleagues examined the association between periodontal disease and insulin resistance in non-diabetic individuals.

Insulin resistance occurs when cells do not use the hormone insulin effectively. If sustained, it can result in chronically elevated blood sugar levels. It is associated with type 2 diabetes, which is twice as likely to develop in individuals with periodontal disease as those without it, according to a study published in 2008 by Drs. Desvarieux and Demmer.

The present study analyzed health information from over 3,600 non-diabetic participants in the National Health and Nutrition Examination Survey.

The researchers were specifically interested in exploring whether or not evidence of the adverse microbes that cause periodontal disease were also associated with insulin resistance and what role, if any, is played by systemic inflammation. Unlike localized inflammation, which is a beneficial immune reaction to an illness or infection, systemic inflammation affects multiple bodily systems and is related to a host of chronic diseases.

The study found a 30 percent increase in the risk of insulin resistance among individuals with elevated levels of periodontal disease. The association was markedly stronger among those with elevated systemic inflammation.

"These findings are important because they demonstrate an association between oral infections and insulin resistance among individuals who do not have diabetes," says Dr. Demmer. "The apparent synergy with systemic inflammatory activity is also noteworthy as it might provide more nuanced insights into disease mechanisms."

The results, if confirmed in future studies, could have broad public health implications as the authors estimate that over 20 million diabetes-free US adults have both periodontal disease and elevated systemic inflammation.

The authors estimate that over 20 million diabetes-free US adults have both periodontal disease and elevated systemic inflammation.

MESSAGE FROM THE CHAIR

Dear colleagues,

Welcome to the October 2012 issue of Two by Two, the Epidemiology Department newsletter. The academic year has begun on an exciting note, with our first year MPH class diving into the new integrated master’s curriculum, and a very impressive inaugural cohort of Executive MS in Epidemiology trainees well under way after a full weekend of classes in September and ongoing virtual seminars each week thereafter. We have a number of exciting events on tap in October and November. On October 12 we will hold our second annual Master’s Student Day, in which our master’s students deliver presentations on their practicum research experiences. The day will wind up with a poster session and faculty-student mixer in the Bard Hall Ballroom. It was a huge success last year, and this year’s lineup is looking very interesting indeed. Our first Columbia University Epidemiology Scientific Symposium [CUESS] of the academic year, Charting the next 25 years in social epidemiology, will take place on October 26. In keeping with the ethos of mapping the future of the field, the speakers will be outstanding junior faculty members from Columbia and other institutions around the US, with senior social epidemiologists serving as discussants. Our next CUESS, Eradicating pediatric HIV: Hype vs. hope on November 29 will bring together physicians, policy makers, and researchers on the front lines of the epidemic.

This issue of Two by Two includes some terrific features. The cover of this issue features some of the most cutting edge research in the field: the work of chronic disease epidemiology cluster faculty members Drs. Ryan Demmer, Moise Desvarieux, and William Friedewald on links between periodontal disease and type 2 diabetes. Coinciding with the wind-down of military operations in Iraq and Afghanistan, as well as the approach of Veteran’s Day, our Line of Inquiry article, “Treating the mental wounds of war” focuses on the needs of soldiers returning home with PTSD.

I hope you find the rest of the October 2012 Two by Two informative and interesting, and look forward to our work together over the course of the academic year. As always, special thanks go to all who have contributed to this issue.

Warm regards,

[Signature]

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CLUSTER SEMINARS

OCTOBER—NOVEMBER

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<td>FACULTY MEETING</td>
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<td>FRIDAY, NOVEMBER 9</td>
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<td>THURSDAY, NOVEMBER 29</td>
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SOCIAL EPIDEMIOLOGY

THURSDAY, NOVEMBER 8 12:30-2:00 PM

PSYCH / NEURO EPIDEMIOLOGY

THURSDAY, OCTOBER 25 1:00-2:30 PM
THURSDAY, NOVEMBER 29 1:00-2:30 PM

LIFECOURSE EPIDEMIOLOGY

TUESDAY, OCTOBER 16 1:00-2:30 PM
TUESDAY, NOVEMBER 20 1:00-2:30 PM

EPIDEMIOLOGY INNOVATION

THURSDAY, OCTOBER 18 11:30-1:00 PM
THURSDAY, NOVEMBER 15 11:30-1:00 PM

CHRONIC DISEASE EPIDEMIOLOGY

TBA

INFECTIOUS DISEASE EPIDEMIOLOGY

TBA
PUBLICATION HIGHLIGHTS

In Brazil, upper income teens most likely to binge drink

Teens in Brazil's highest socio-economic strata were twice as likely to engage in binge drinking as those in other classes, according to a new study by senior author and associate professor of epidemiology Dr. Silvia Martins. The study surveyed over 17,000 14-18-year-old urban teens about their drinking habits. While underage binge drinking among all teens was high—nearly 32 percent reported it over the past year—it was most prevalent among older boys, those in private schools, and those in a high socio-economic class. The trend is contrary to what has been observed in richer countries in North America and Europe, where poorer teens tend to binge drink more.

"Richer adolescents in a very economically stratified population like Brazil have greater access to pocket money to spend on alcohol in night-clubs than their poorer counterparts. They also feel omnipotent against the risk of alcohol intoxication due to the emotional experience of being rich in a mostly low to middle income country," says Dr. Martins, who adds that she and her colleagues need to further examine whether parental supervision differs by socio-economic status.


Epilepsy and the risk of psychiatric disorders and attempted suicide

Epilepsy is associated with increased onset of depression, anxiety, psychosis, and attempted suicide before and after one is diagnosed with the seizure disorder, according to a new study by Dr. Dale Hesdorffer, associate professor of clinical epidemiology (in the Gertrude H. Sergievsky Center), Dr. Willard A. Hauser, professor emeritus of epidemiology and neurology, and colleagues. This "two-way relationship" means that "the psychiatric disorders are both associated with increased risk for developing epilepsy, and following a diagnosis of epilepsy, the risk for developing the psychiatric disorders is increased," the authors say. "These relations suggest common underlying pathophysiological mechanisms that both lower seizure threshold and increase risk for psychiatric disorders and suicide."

Respiratory symptoms and PTSD closely linked in survivors of 9/11

Respiratory and mental illness are closely linked in those who were living or working near the World Trade Center during the attacks of September 11, 2001, according to a new study by Dr. Steven Stellman, professor of clinical epidemiology, and colleagues. Among individuals with either post-traumatic stress disorder or lower respiratory symptoms, 24.6 percent had both. The study "highlights the importance of addressing mental illness when conducting outreach or treatment of respiratory illness, and vice versa," say the authors.


Risk-taking in teens linked to suicide attempts or thoughts of suicide

Teens who have the tendency to seek out risky situations may be more likely than those who do not to attempt suicide or think about suicide, according to a study by Dr. Madelyn Gould, professor of clinical epidemiology (in Psychiatry), and colleagues. The study found an association between "sensation seeking," depressive symptoms, and suicidal behavior which the authors say "may be compatible with the presence of an underlying temperamental dysregulation." The results suggest that screening for sensation seeking tendencies could reduce teen suicide risk, the authors say.

IN THE NEWS

**Dr. Barth-Jones on balancing epidemiologic research with data privacy**

The government should consider the huge benefit “de-identified health data” has for public health research, says assistant professor of clinical epidemiology Dr. Daniel Barth-Jones, in an article about the Department of Health and Human Services’ present review of whether this type of data should be subject to increased privacy safeguards. Epidemiologists often use de-identified health data, which is data that has been stripped of information that specifically identifies a patient. The fear is that such information could still be “re-identified.”

“The reality is that, while one can point to very few, if any, cases of persons who have been harmed by attacks with verified re-identifications, virtually every member of our society has routinely benefited from the use of de-identified health information,” says Dr. Barth-Jones, who uses de-identified health data frequently in his work as an HIV epidemiologist. [healthaffairs.org/blog/2012/08/10/the-debate-over-re-identification-of-health-information-what-do-we-risk]

**Dr. Sederer on diagnosing psychiatric illnesses**

“Diagnosing disorders of the mind is a difficult business,” says Dr. Lloyd Sederer, a faculty member and the medical director of the New York State Office of Mental Health, and Dr. Matthew Erlich, a post-doctoral National Institutes of Mental Health research fellow in the department of psychiatry at the College of Physicians and Surgeons and the New York State Psychiatric Institute. The two are sometimes asked if the battery of medical technologies available today can identify psychiatric disorders the way they can most other illnesses.

“Psychiatry currently lacks blood, imaging and genetic tests that can validly establish a diagnosis for its vast predominance of major illnesses,” they say. “Ironically, this knowledge gap exists alongside a legion of effective treatments in behavioral health. The field of psychiatry knows what works, but not exactly why.” [theatlantic.com/health/archive/2012/07/how-thoughts-become-a-psychiatric-diagnosis/260012]

**Dr. Morse on Ebola outbreak in Uganda**

When a deadly infectious disease breaks out somewhere in the developing world, samples of the virus often have to be sent to a state-of-the-art laboratory overseas. Not so in Uganda, where a lab supported for several years by the Centers for Disease Control in the capital city, Kampala, has “passed its first major test” monitoring and tracking a recent outbreak of Ebola.

“You want to build capacity in the country,” says Dr. Stephen Morse, professor of clinical epidemiology, “and not wait until they ask for help to send people parachuting in.” [nature.com/news/ebola-outbreak-tests-local-surveillance-1.11171]

**Dr. El-Sadr says PEPFAR-style strategy could work in U.S.**

Programs funded by the President’s Emergency Plan for AIDS Relief (PEPFAR) has been credited with slowing the spread of HIV/AIDS in Africa. A similar commitment could also work in high-impacted communities in the U.S., says Dr. Wafaa El-Sadr, professor of epidemiology and medicine and director of ICAP, a long-standing PEPFAR implementing partner. “I realize, sometimes, when we say that the epidemic in parts of the United States is similar to epidemics in parts of Africa that this is a quite alarming statement and maybe disturbing statement to many. But it’s true. And there are lessons that we can learn from the response in some African countries,” says Dr. El-Sadr. [pbs.org/newshour/bb/health/july-dec12/dc_07-19.html]

**Dr. Koenen on mapping sexualized violence in Syria**

A crowdmapping project from the group Women Under Siege shows that rape and other forms of sexualized violence are being used by the Syrian government’s military forces as a tool of war “although possibly haphazardly and not necessarily as an organized strategy,” said Dr. Karestan Koenen, associate professor of epidemiology and the lead epidemiologist on the mapping project. “These reports indicate that post-conflict intervention will need to address the consequences of sexualized violence for victims.” The mapping project has been covered widely in the media and was the source for testimony in front of the United Nations this past summer. See page 12 for a profile of Syria crowdmap researcher and Epidemiology MPH student Ms. Jackie Blachman-Forshay. [womenundersiegesyria.crowdmap.com]

[theatlantic.com/international/archive/2012/07/the-ultimate-assault-charting-syrias-use-of-rape-to-terrorize-its-people/259669]
IN THE NEWS

Surveillance of new ‘seal flu’ virus needed, says Dr. Lipkin

A new virus responsible for the death of 162 seals in New England last fall was identified recently by the Center for Infection and Immunity (CII) as an evolved form of avian or bird flu. The virus, which falls under a flu subtype known has H3N8, has been transmitted from birds to dogs and horses several times in the last 50 years. The fear is that it could at some point cross to humans.

“Seventy percent of emerging diseases move from animals to people—there’s a long list of those: Ebola, hepatitis C, other flus, HIV, etc,” said Dr. Lipkin, the director of CII and the John Snow Professor of Epidemiology. “This is clearly a virus for which we need some surveillance.”

Dr. Lipkin was also featured in several news outlets for heading a study initiated by the National Institutes of Health showing that the mouse virus XMRV is not associated with chronic fatigue syndrome, as once speculated. Dr. Lipkin says chronic fatigue syndrome is a serious illness and plans to use blood samples to investigate possible causes.

nytimes.com/2012/07/31/science/flu-that-leapt-from-birds-to-seals-is-studied-for-human-threat.html?_r=1


Dr. Neria on the psychological effects of mass shooting trials

As trials of mass shooters have become an all too regular fact of American life, one story that goes less noticed is the psychological ramifications these public events may have on victims’ families. Although the trial of such figures as James Holmes, the man who opened fire in a movie theater in Colorado this past summer, may provide closure to some, it could also significantly prolong the healing process, according to Dr. Yuval Neria, professor of clinical psychology (in Psychiatry and in Epidemiology) and director of the Trauma and PTSD Program at Columbia and New York State Psychiatric Institute. Effective treatment of psychological trauma is “an individual process in which the person reviews his or her trauma—a personal experience of fear, confusion and helplessness—in a gradual manner until the essence of the fear and pain is processed,” he says. “A trial, on the other hand is a public event, which, while it emphasizes justice in a societal context, is usually a painful process, lengthy, and may delay effective and rapid processing of the trauma and loss.”

scientificamerican.com/article.cfm?id=do-criminal-trials-help-us-heal-from-mass-shootings

Soda ban approved with vote of Dr. Galea

Dr. Sandro Galea voted with his colleagues on the New York City Board of Health in September to approve Mayor Michael Bloomberg’s proposal to ban large soda sizes from city theaters and restaurants.

Dr. Galea was appointed by Mayor Bloomberg to chair the Community Services Board of the New York City Department of Health and Mental Hygiene through the end of 2015. The board advises the department’s Division of Mental Hygiene on issues concerning mental health, mental retardation and developmental disabilities, and alcoholism. As chair of the board, Dr. Galea also serves as one of the 11 members of the city Board of Health.

“The evidence is very clear that sugary drinks are contributing to the obesity epidemic,” said Dr. Galea. nytimes.com/2012/09/14/nyregion/health-board-approves-bloomberg-s-soda-ban.html
Dr. Westhoff named journal editor

Dr. Carolyn Westhoff has been named editor of the journal Contraception: An International Reproductive Health Journal. Dr. Westhoff’s work focuses on improving access to and quality of contraceptive and abortion services through education and research. She has published more than 250 scientific articles and has served as an associate editor of Contraception for 19 years.

Doctoral candidate Katherine Sapra celebrates marriage

PhD candidate Ms. Katherine Sapra, formerly Katherine Hensel, who also received her MPH in the Department, was married in May of this year to Dr. Eshnajit Sapra. They were married in Rockford, Michigan, and celebrated a vow renewal and reception in New York City this past September. They plan a wedding and reception in New Delhi, India, for the end of December. The couple has a one-year-old dog named Van Morrison.

Dr. Koenen named lead epidemiologist for national PTSD consortium

Dr. Karestan Koenen was named as lead epidemiologist to a consortium formed by Draper Laboratory to improve diagnostic tools and treatment outcomes for post-traumatic stress disorder. The team “plans to develop solutions based on objective, clinical decision making by using sophisticated algorithms to integrate data from a spectrum of biomarkers including neuroimaging, psychophysiology, chemical assays, and gene expression.”

AWARDS

Student receives travel award for maternal and child health conference

MPH ’13 student Ms. Nicolia Eldred-Skemp received a travel award to attend the 18th Annual Maternal and Child Health Epidemiology Conference this December in San Antonio, Tex. The award recognizes her abstract on the influence of social context and prenatal exposure to certain pollutants on cognitive functioning in children.

Dr. Abdool Karim honored for medical sciences in the developing world

Dr. Quarraisha Abdool Karim, associate professor of clinical epidemiology, was awarded the 2012 Prize in Medical Sciences by the Academy of Sciences for the Developing World (TWAS) “for her significant scientific contributions spanning two decades of the HIV epidemic in southern Africa, especially her ground-breaking research on tenofovir gel as the first HIV prevention technology for women.” TWAS is an international organization that promotes science-based sustainable development in the Global South.
The Department of Epidemiology is deeply committed to fostering an environment in which every member of our department has the opportunity to maximize her or his potential. Our position is clear: discrimination and harassment of any kind have no place in our department. Our goals are twofold: first, we seek to create an environment of inclusiveness and respect where discrimination and harassment do not occur; second, we seek to empower those who might witness or experience discrimination or harassment and let them know what recourse is available to them.

A two-hour interactive workshop on discrimination and harassment developed together with the Office of Equal Opportunity and Affirmative Action will be conducted on October 3 and 4 for all members of the Department. Epidemiology community members will be grouped into six workshop sections in order to a) provide for manageably sized discussions and b) to create the safest and most relaxed environment for addressing these sensitive issues. All students, faculty, and staff are encouraged to attend these workshops.

**WORKSHOP SCHEDULE**

**Wednesday, October 3, 2012**

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<tr>
<th>Group</th>
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<th>Location</th>
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<tr>
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<td>12:00–2:00pm</td>
<td>HHSC 305</td>
</tr>
<tr>
<td>Students</td>
<td>2:00–4:00pm</td>
<td>Hess Commons</td>
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<tr>
<td>First year students*</td>
<td>4:00–6:00pm</td>
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**Thursday, October 4, 2012**

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<tbody>
<tr>
<td>Project based staff</td>
<td>10:00–12:00pm</td>
<td>HHSC 404</td>
</tr>
<tr>
<td>Senior faculty</td>
<td>12:00–2:00pm</td>
<td>HHSC 404</td>
</tr>
<tr>
<td>Central administrative staff</td>
<td>2:00–4:00pm</td>
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*Students have two different sessions solely to manage group size. It is suggested that first year master’s students attend the 4pm time slot workshop since this is the time when all first-years are free from regularly scheduled classes, but students are free to attend either session.
Dr. Daniel J. Pilowsky is a psychiatric epidemiologist and physician who researches how mental health intersects with physical health, focusing on depression across generations, substance abuse, and HIV and global mental health.

Originally from Valparaíso, Dr. Pilowsky began medical school in Santiago, Chile. An active supporter of President Salvador Allende, he fled the country, fearing persecution, after the 1973 coup that brought dictator Augusto Pinochet to power. He finished his medical degree in 1976 at the University of Buenos Aires Medical School in Argentina. His exile inspired him to return later to do work in Latin America.

In 1977, he began an internship in internal medicine and psychiatry at Albert Einstein College of Medicine (Bronx Psychiatric Center), going on to practice clinical psychiatry for nearly 20 years before receiving an MPH from Johns Hopkins University’s Bloomberg School of Public Health in 1998.

As a psychiatric clinician Dr. Pilowsky counseled children and adolescents. He observed the ways in which mental health influenced his patients’ physical health—an observation that would inspire his future studies.

He decided to pursue a research track because he “thought that what researchers do looked very interesting.” He was later appointed assistant professor of clinical epidemiology and psychiatry at Columbia University in 1999 and has served here ever since.

Initially, he focused on the impact of HIV infections on families and children. With Dr. Ezra Susser and other colleagues, Dr. Pilowsky studied the reliability of interviews of mothers who choose to disclose their HIV status to their child and about the characteristics of parents who choose, despite their use of injection drugs, to keep their children instead of giving them to the foster system.

Dr. Pilowsky later partnered with Dr. Li-Tzy Wu at Duke University to explore HIV risk reduction in various substance abusing populations, including adolescents who abuse inhalants and individuals with depressive symptoms who have an opioid-dependency.

He has also collaborated with Dr. Deborah Hasin on research that looks at adverse childhood events and lifetime alcohol dependence.

He was the principal investigator of the ACTION study, which sought to test role-playing strategies to increase condom use in young adult non-injection drug users in New York City and study the social networks influencing HIV risk behavior.

His collaborations with colleagues Dr. Myrna Weissman and Dr. Priya Wickramaratne have contributed to a decade of research on depression across generations and helped provide a greater understanding of psychiatric disorders in children of parents with depression.

In a longitudinal retrospective cohort family study of three generations, they along with colleagues found that offspring of depressed parents are at higher risk of developing anxiety disorders, major depressive disorder, and alcohol dependence than those whose parents are not depressed. The study indicated the importance of early treatment in parents with depression and detection of psychiatric disorders in their offspring.

Dr. Pilowsky has expanded his interests in recent years to include global mental health. He has returned to Latin America through collaborations with researchers who study the effects of depression on the psychopathology and social functioning of offspring in Chile and prevalence and risk factors of depression during pregnancy in Brazil.

Ultimately, he hopes that his work will contribute to a better understanding of the interplay between mental and physical health.

“Across the lifespan, mental health is like building blocks,” he says, “If you’re exposed to a lot of adversities in childhood, then you’re vulnerable, the same way you can have a genetic vulnerability. The old thinking was that either genetics determined your future forever or childhood adversity determined your future forever.”
As an instructor at the Mount Sinai School of Medicine’s department of geriatrics and palliative medicine and Institute for Translational Epidemiology, Katherine Ornstein, PhD ’11, is working in one of the fastest-changing areas of public health.

A researcher of the behavioral symptoms of dementia, aging, psychiatric illness and innovative care for the homebound, her current work focuses on developing improved models for end-of-life care and looking at caregiving trajectories in new populations.

Dr. Ornstein became interested in psychiatric and geriatric care while majoring in psychology and women’s studies as an undergraduate at Duke University. There, she began working with elderly patients with depression and conducting neuropsychological tests.

“As I started working with the elderly, I felt that this was a very important population and that a lot of research was needed to understand them,” she says.

Dr. Ornstein stayed in North Carolina after graduation, assisting with research at Duke’s department of psychiatry and going on to earn a master of public health at University of North Carolina-Chapel Hill.

It was after she returned to her hometown of New York City and began working in research and data analysis at the Mount Sinai Visiting Doctors Program that she decided she wanted to pursue a PhD.

“I was interested in conducting studies. I wanted to do more and ask bigger questions,” she says. “It really became apparent that I needed a degree to have the skills and opportunity to do things more independently.”

She came to Columbia in 2005 as a Psychiatric Epidemiology Training (PET) fellow, studying with Drs. Sharon Schwartz and Bruce Link and doing joint research with Dr. Yaakov Stern in the Gertrude H. Sergievsky Center and Dean Linda Fried at the Mailman School.

Dr. Ornstein believes it is important to seek out several people as mentors during one’s doctoral work, as she did when she was a trainee. This allowed her to combine her interest in psychiatric epidemiology with aging and geriatrics.

She also derived a lot of value out of a writing group she formed with fellow doctoral trainees to provide feedback on one another’s dissertation proposals and papers.

“It made a difficult process more fun, and we still keep in touch especially when we publish one of our dissertation papers,” she says.

Dr. Ornstein’s dissertation homed in on one aspect of the growing area of research in geriatrics: how caring for patients with dementia influences depression in caregivers.

Her time at Columbia was spent not only as a student but as a mother. She and her husband—who works at the New York City Department of Health and Mental Hygiene—had their first child, Elijah, in June of 2008. Their daughter Sylvia, who is 1, was born just one week after Dr. Ornstein received her PhD, in May 2011.

Following maternity leave and working part-time over the last year, Dr. Ornstein says she is looking forward to the opportunity in her new faculty position to influence changing models for geriatric care, which will be a significant area of study in the coming years, especially given exciting new changes in the healthcare law.

She advises those who want to pursue a doctorate in epidemiology to first think hard about what interests them. “Don’t just jump on a bandwagon of something. Really think about what moves you, because you’re going to spend a lot of time thinking about it, writing about it, and talking about it.”
As department administrator Christina McCarthy is responsible for updating and submitting the department’s multi-million dollar budget and overseeing general department operations, including managing senior cluster administrators and financial coordinator staff.

When she graduated in 2006 from Johns Hopkins University with a BA in literature, she did not have specific plans to go into financial administration.

“The only thing I wanted to do after living in Baltimore for four years was move to New York,” says Christina.

The ticket to New York was a job she landed at ICAP in support services, which she got in part because of experience she had in college working for her school’s student financial office.

At the time, the organization was setting up AIDS treatment and prevention offices in various countries in Africa. Christina’s job was to push through and monitor transactions that were essential to building those offices and keeping them running.

Completing transactions for basic items, such as a refrigerator for blood samples, was often difficult because it required transferring money from a federal grant going through ICAP and then across borders.

“It was frustrating, it was crazy, but those moments when things went through were very gratifying,” she says.

After moving to a job in Cornell Medical Center’s central financial office, she realized that she missed working in a more stimulating environment.

In one year’s time Christina was back at Mailman, this time working on budgetary reconciliation for Dr. Pam Factor-Litvak.

Seven months later, the Department of Epidemiology officially rolled out the cluster structure, and Christina was asked to take the newly-created position of senior cluster administrator for the lifecourse and infectious disease epidemiology clusters.

“Christina was a wiz at reconciling my budgets and she is an absolute pleasure to work with,” says Dr. Factor-Litvak. “I was very sorry to lose her as my personal budget go-to person (and really a go-to person for other issues as well) but am very happy that she has progressed to this level.”

As with Christina’s time at ICAP, her early experience in the department had a frenetic, experimental feel.

“The first six months were trial runs for everything,” she says. “Then people realized after about a year, ‘this is great, we have someone who is supporting us.’

When the department administrator position became available, Christina was a clear choice. She had been exposed to many of the responsibilities of the job, and to those who work with her, she stood out.

“As department administrator, you need to take increasing leadership roles as an administrative officer,” says Dr. Factor-Litvak.

During her time so far, Christina has overseen many transitions, including bringing on several new senior cluster administrators and guiding the department as the university transitions to an integrated financial system.

On top of all of this, in May, Christina, earned an executive master of public policy and administration degree from Columbia’s School of International and Public Affairs (SIPA), completing the program on a fulltime student basis.

Much of what she learned has informed her approach toward her job and her aspirations for the department in the coming year. She is particularly guided by the teachings of one professor, Dr. William B. Eimicke, New York State’s former housing “czar,” who has written about the characteristics of a successful organization.

“Her success here and in her master’s program at SIPA uniquely situates her to take increasing leadership roles as an administrative officer,” says Dr. Factor-Litvak.

Those who know Christina may marvel at her unruffled demeanor and wonder how she seems never to project stress, but she says she likes working in a fast-paced environment.

“If I’m not over-stimulated, I get bored pretty quickly,” she says. “And there’s no time to be bored here. The energy of this place is motivation.”

She appreciates the commitment and work ethic of everyone in the department. Faculty and staff have been working harder than ever to submit more grants.

“This is a very supportive unit. I’ve not had a dynamic like this at anywhere else I have worked,” she says.
As a trained social worker with experience counseling individuals who have lived through trauma, Jackie Blachman-Forshay, MPH ’13, knew when she arrived at the Mailman School that she wanted to research traumatic events.

Today she is doing exactly that as an integral part of the Syria crowdmap project, an unprecedented crowd-sourcing effort that tracks and publicizes incidents of rape and other forms of sexualized violence in the war-torn nation.

The opportunity unexpectedly presented itself earlier this year. While scrolling through the Department of Epidemiology’s Twitter feed, Jackie came across an article about trauma authored by associate professor of epidemiology Dr. Karestan Koenen for Women Under Siege, a human rights group that sponsors the Syria crowdmap.

The project was widely covered by outlets such as The Atlantic, Reuters, and the BBC and was the subject of testimony in front of the United Nations Security Council by Women Under Siege director Lauren Wolfe.

Although Jackie says she knew very little about Syria when she started working on the project, she has long been interested in the issues that underlie the conflict, like trauma and sexualized violence.

Growing up in the East Bay Area as the daughter of parents who also studied social work, she became aware at a young age of the issues surrounding sexual politics. At 14 she volunteered in San Francisco at a syringe exchange programs for sex workers.

“I loved working with that population and wanted to continue it,” she says. As an undergraduate at New York University’s School of Social Work, she interned at an AIDS service organization in Harlem that dealt with clients with substance problems and severe and persistent mental illnesses.

The job was as satisfying as it was stressful, requiring Jackie to work three full days a week on a client caseload while balancing coursework.

She began to take an interest in the "why" behind what she encountered and started considering public health. Not long after, she was diagnosed with cancer, which put a very real perspective on her future area of study.

“I was thrown into a medical system that I hadn’t been personally involved in,” she says. Around this time, Jackie began working as a research assistant at NYU’s Center for Health, Identity, Behavior, and Prevention Studies (CHIBPS) on a qualitative study of HIV-positive men over age 50 and an investigation into the cognitive functioning of methamphetamine users.

Currently she is working for CHIBPS on a longitudinal study into the interplay between sexual risk taking, substance use, and the mental health of young men who have sex with men.

Jackie chose to concentrate in epidemiology at Mailman because she believed it would teach her practical research tools that she had not been exposed to as an undergraduate.

Her experience with the Syria crowdmap represents real world epidemiologic data gathering and analysis. For the project, she identifies, edits, and codes hundreds of brutal accounts of sexualized violence using various social media such as YouTube, Twitter, and running Google searches.

This method has been used in the past to track infectious disease epidemics—such as the recent cholera outbreak in Haiti, but Women Under Siege believes it is the first to use these tools to track sexualized violence.

“The Syria project is epidemiology but not in a traditional sense,” says Jackie.

Women Under Siege cannot independently confirm the hundreds of reports they have gathered, such as a video on YouTube of a woman describing her rape, but based on geographic patterns, they have established that sexualized violence is being used as a “common tactic” by Syrian forces against rebels.

Crowd sourcing does have some advantages over other methods of gathering data.

“We can reach out to people at their level. I may not go to the police and report what happened to me. I may be more comfortable sending an anonymous text message saying this happened,” she says.

According to Dr. Koenen, “Jackie’s commitment and dedication to the Syria project has been extraordinary. Her background in both epidemiology and social work enables her to make a unique contribution to the project in both analyzing and presenting the data and proposing how the data can be used to inform interventions. We could not have done it without her.”

Inspired by the experience, Jackie hopes to eventually use a Geographic Information System program to map locations of sexualized violence overlaid with locations of killings to identify regions of Syria affected by wartime trauma, and she plans eventually to apply to a PhD in epidemiology with a focus on trauma research.

“What I hope I can keep in mind is that epidemiology is about populations and that’s still people with individual stories,” she says.
Treating the mental wounds of war

As troops come home from the Middle East, can the U.S. handle their psychological health?

With the end of the American War in Iraq and the wind-down of the War in Afghanistan, an influx of troops will return home over the next few years, and the U.S. government is prepared as never before to deal with the psychiatric fallout of combat.

It will be the first time in the nation’s history that there has been a psychiatric diagnosis called post-traumatic stress disorder (PTSD) in place for troops returning from sustained ground combat.

“PTSD is a diagnosis that came to being in the Vietnam War,” says Dr. Bruce Dohrenwend, professor of social science in Psychiatry and in Epidemiology, who published the most rigorous study to date of the prevalence of the disorder among veterans of that war.

During that period, returning veterans felt their government and society had turned a blind eye to the mental anguish they were experiencing, which was then known as “combat fatigue.”

Although psychiatrists and others have identified symptoms of PTSD throughout time, such as in the Iliad and Shakespeare, the condition’s constellation of symptoms were not officially recognized as a diagnosis until 1980, in the third edition of the Diagnostic Statistics Manual of Mental Disorders, often referred to as “the bible of psychiatry.”

“From an historical perspective, the significant change ushered in by the PTSD concept was the stipulation that the etiological agent was outside the individual (i.e., a traumatic event) rather than an inherent individual weakness (i.e., a traumatic neurosis),” says Dr. Matthew J. Friedman, executive director of the National Center for PTSD and a professor at Dartmouth Medical School.


2 National Center for PTSD. 31 January 2007. PTSD History and Overview. ptsd.va.gov/professional/pages/ptsd-overview.asp
However, the recognition of the disorder may not be enough. While there is now a system in place to diagnose veterans and active duty soldiers and to offer them care, another barrier toward dealing with the illness has become clear: will members of the military seek care, and will it be effective?

PTSD is a set of mental and physical symptoms including nightmares and emotional numbness that develop because of exposure to a traumatic event like war or a natural disaster.

Of the over 2.6 million active-duty, National Guard, and reserve members who have been deployed to combat in the wars in Iraq and Afghanistan, an estimated 13 percent to 20 percent have or might develop PTSD.

If left untreated, PTSD can take a significant toll on the lives of those with the disorder, their families, and their communities. In its worst forms, it can lead to alcoholism, marital strife, problems holding a job, and long-term physical problems, including erectile dysfunction, unprovoked seizures, dementia, and decline in neurocognitive function.

Recognizing this, the U.S. military and the Veterans Administration have been making an unprecedented effort toward addressing PTSD.

The U.S. Congress has appropriated significant resources to improve mental health services for Iraq and Afghanistan troops, including increasing staff, instituting training programs, developing clinical practice guidelines, and increasing screening throughout a soldier’s career.

Additionally, Congress has sought to learn more about the medical nature of PTSD and the efficacy of treatment by commissioning the Institute of Medicine (IOM) to study the adequacy of treatment programs in the military and for veterans.

According to the first of two reports that will be published by the IOM on the subject, both the patient side and the treatment side present significant barriers.

That report, which came out in June, noted the role of stigma in discouraging veterans and active duty troops from seeking treatment.

While fear of how others perceive a diagnosis of a mental illness is not unique to those the military, it is especially pronounced in that culture.

"Because of concerns about stigma and appearing weak, service members often ignore or self-manage their pain until their condition impairs their ability to function and puts others at risk," says the IOM report. ¹

Part of this fear includes anxiety about repercussions for taking time off to get treated, worries about what peers will think, and, for veterans, eagerness to return home.³

As one veteran put it: "I lied on my post-deployment forms. Whatever got me back to my family quicker."¹

"Although at the highest military level, the officers say, ‘we’re all for it, we’re supportive,’ at the NCO level, which is the commander level, it’s difficult because you’re losing one of your men or women to this treatment," says Dr. Sandro Galea, chair of the department of epidemiology and of the committee that published the IOM report.

Veterans and active duty members are especially wary of being

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¹ Hoge, Charles MD. 2010. Once a Warrior, Always a Warrior: Navigating the Transition from Combat to Home—Including Combat Stress, PTSD, and mTBI. Globe Pequot Press. onceawarrior.com

³ Hoge, Charles MD. 2010. Once a Warrior, Always a Warrior: Navigating the Transition from Combat to Home—Including Combat Stress, PTSD, and mTBI. Globe Pequot Press. onceawarrior.com
MANY EMERGING TREATMENTS, SUCH AS COUPLE AND FAMILY THERAPY, ANIMAL-ASSISTED THERAPY, AND COMPLEMENTARY AND ALTERNATIVE MEDICINE PROGRAMS LIKE YOGA AND ACUPUNCTURE, DO NOT HAVE A “SUBSTANTIAL EVIDENCE BASE BY WHICH TO JUDGE THEIR EFFICACY”

perceived as sick, disordered, and unstable. Some believe that referring to the experience of PTSD as disordered is stigmatizing for veterans. Dr. Charles Hoge—a retired army colonel and former director of the Walter Reed Army Institute of Research’s program on the psychological and neurological consequences of the Iraq and Afghanistan wars—thinks society needs to re-think the way the disorder is perceived.

“Virtually every reaction that mental health professionals label a ‘symptom,’ and which indeed can cause havoc in your life after returning home from combat, is an essential survival skill in the war zone. I don’t think that paradox has been sufficiently grappled with,” he says. He has written a book on the subject called Once a Warrior, Always a Warrior: Navigating the Transition from Combat to Home, which was published in 2012.

New models of care and treatment for PTSD have emerged to respond to the unique experience of soldiers.

Dr. Charles Engel, an army colonel and psychiatric epidemiologist, has since 2004 directed the U.S. Department of Defense’s Re-Engineering Systems of Primary Care Treatment in the Military in response to research showing that veterans were not seeking out psychological care the way they might seek care for a broken ankle or chronic aches and pains.

The program is intended to train primary care providers to be on the look-out for signs of PTSD and then refer the individual to psychiatric care.

“We take away the stigma of soldiers having to go and see a psychologist or a behavioral health person,” Engel has said about the program.4

The Veterans Administration has tried to make care more available by mandating that all veterans treated for PTSD have access to either prolonged exposure therapy or cognitive processing therapy.

However, there are still questions about efficacy of various treatments.

“The most effective treatment for PTSD—prolonged exposure—which is really effective, can help no more than half the population with PTSD. The problem with drugs like [selective serotonin reuptake inhibitors] is even worse. There are reports suggesting medications are not effective at all when taken by themselves,” says Dr. Yuval Neria, professor of clinical psychiatry and director of Columbia’s Trauma and PTSD program.

A combination of drug and therapy is more effective, he adds.

Many emerging treatments, such as couple and family therapy, animal-assisted therapy, and complementary and alternative medicine programs like yoga and acupuncture, do not have a “substantial evidence base by which to judge their efficacy,” according to the IOM report.1

Yet the even more fundamental problem of getting veterans to seek help and stick with it remains. Of the 40 percent of those who screen positive for PTSD symptoms and have been referred to care, only 65 percent from that group get help.1

They are hindered by a variety of internal and external issues, such as beliefs that discourage mental health treatments, wait lists, and difficulty fitting a treatment schedule around one’s job or other obligations.

“I think that the number one problem with treatment is not that we don’t have effective techniques. We have effective techniques,” says Dr. Hoge. “The number one problem is people not staying in treatment.”


PHOTO: BBC WORLD SERVICE

OCTOBER 2012
Atlantic alliance
A Franco-American public health collaboration takes shape

A brand new health initiative that helps economically disadvantaged, at-risk patients obtain necessary cancer screening is a direct import to France from the U.S. The program is the brainchild of an alumna of the department, Sophie Rousseau who drew directly from her internship experience through the Atlantic Alliance for Public Health (atlanticalliance.org), a partnership between France’s premiere school of public health, the Ecole des Hautes Etudes en Sante Publique (EHESP) and the Mailman School.

Ms. Rousseau, who is French, conceived the idea for a patient navigator system in her home country after working under Department of Epidemiology faculty member Dr. Al Neugut.

It is exactly the kind of initiative that the Atlantic Alliance hopes to promote through its commitment to a free-flowing exchange of public health ideas between France and the U.S.

Despite the contrasts between the health care systems of the two nations, the partnership has shown a great desire in both countries for collaboration on common health challenges, such as the burden of chronic disease, aging, and the rising cost of healthcare.

Begun in 2009, the alliance was set up to allow students to study public health across both institutions and to encourage faculty to partner with their peers abroad.

“This partnership illustrates the essential, not optional, globality of public health,” says Dr. Moïse Desvarieux, associate professor of epidemiology, who played a key role in spearheading the Atlantic Alliance.

“There is a French saying: ‘From the shock of ideas, light surges.’ This is the shock we want to provoke in accordance with the vision of the departments, school, and university as a whole.”

Trainees from Mailman can complete a practicum or take courses at EHESP as part of their MPH, and faculty can lecture, teach, or take sabbatical there. The alliance plans to develop a joint MPH between the two schools.

Since the program began, five graduate students from EHESP including Ms. Rousseau have completed an internship or practicum at Mailman, working on topics such as suicide attempts in sexual minorities, the association between pediatric diabetes and obesity, and post-traumatic stress disorder in the wake of the earthquake in Haiti.

For the first time this past summer, students from Mailman could work on a practicum or internship at EHESP’s Paris or Rennes campus. In the inaugural year, twelve students traveled to France to take advantage of opportunities conducting research at hospitals, labs, and clinics, often in French.

The partnership has also led to joint research between faculty on topics such as a comparison of the two nations’ health systems, an examination of environmental factors and depression, and a working group on chronic disease. Collaboration has also extended to the editing of the journal Public Health Review, which EHESP publishes, and a lecture series.

Recent talks included “The U.S. healthcare system after Obama’s Affordable Care Act: Still exceptionalist?” and “What does and should count in evidence-based policy?”

When Ms. Rousseau came to Columbia to compare healthcare in France and the U.S. she took an immediate interest in health navigation systems, based on readings she was assigned by Dr. Neugut.
and Dr. Benjamin Lebwohl. Health navigation programs began in New York City in the early 1990s as a way to increase the number of people screened for some cancers.

“Health navigators are the gateway for underprivileged people to have access to the health care system,” says Ms. Rousseau. “They are educators and trouble-shooters for the material and emotional barriers that patients face,” says Ms. Rousseau.

For her thesis, Ms. Rousseau evaluated the success of the programs in New York and their feasibility in her home country.

“I was very surprised that those programs—which aimed to tackle colorectal cancer and breast cancer screening disparities—were not in place in France,” she says.

This changed in 2011, when she and Dr. Franck Chauvin were awarded 670,000 Euros to carry out a patient navigation program that will encourage screening and treatment for colorectal cancer.

This fall, Ms. Rousseau began implementing the program as part of her new job as a project coordinator at Institut de cancérologie Gustave-Roussy, a leading European cancer center outside of Paris.

“In order to implement this research project, people helped me find the good contacts and answer quickly to my inquiries,” says Ms. Rousseau. “It was a breathtaking experience that led to the start of a new project in France to tackle health disparities.”

For more information about the Atlantic Alliance, including how to apply for a summer practicum, visit the program’s website at atlanticalliance.org.

For additional information about the practicum, visit mailman.columbia.edu/students/student-travel/summer-2012-practicum-program-france.
Join the conversation

As part of our efforts to encourage professional collaboration and networking opportunities among students and alumni, the department has established a LinkedIn page. To connect with us on LinkedIn, visit our page and click “Follow.”

Students and alumni can also keep up with the latest events, faculty research, and epidemiology news by following and interacting with our regularly-updated Twitter and Facebook pages. We want to make a special push this year to encourage students and alumni to share news—recent studies, awards, grants—on our Facebook wall or to @tweet us on Twitter.

Work/Life events this fall

The department encourages faculty, staff, and students to take advantage of the range of workshops and programs offered by Columbia’s Office of Work/Life, from child care and elder care to housing, schooling, managing work, and general wellness.

Here is just a sampling of events offered this fall:

- Introduction to Medicare
- Child Care Choices
- How Do I Obtain a Mortgage... And Can I Afford It?
- Breastfeeding Matters
- Forming a Family: Legal Planning for LGBT New Yorkers
- Family Safety in New York City
- The Strategies and Tools for Applying to Kindergarten in NYC
- Ergonomic Computer Workstation Set-Up
- Weight Watchers at Work
- Mindfulness-Based Stress Reduction Training

All workshops are no charge, with the exception of Mindfulness-Based Stress Reduction and Weight Watchers at Work. It is recommended that you register in advance; however, walk-ins are welcome if space permits. Individual consultation is also available on these topics. Learn more by visiting worklife.columbia.edu.
Charting the next 25 years in Social Epidemiology

OCTOBER 26, 2012

8:30 AM – 5:30 PM
Alumni Auditorium, Black Building | 650 West 168th Street

RSVP CUESS.ORG
Eckel SP, Louis TA, Chaves PH, Fried LP, Margolis HS. Modification of the Association Between Ambient Air Pollution and Lung Function by Frailty Status Among Older Adults in the Cardiovascular Health Study: Am J Epidemiol. 2012 Jul 18. [Epub ahead of print]


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