



CCEB experts on violence briefly discuss the spate of illegal gun use and the related rise in the homicide rate during the past year in Philadelphia.

A Quarterly Newsletter

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A Q&A on the factors related to the rising gun violence and murder rate in Philadelphia

The spike in gun violence in Philadelphia and the related homicide rate (as most of murders have been committed with handguns) have been well publicized for several months. As of December 3rd, 370 people had been killed in the city since the beginning of the year, as compared to 344 at the same time last year, outpacing 2005's homicide rate by 7%. A total of 380 homicides were committed in Philadelphia in 2005. That figure represents a 15% increase in the number of people murdered in the City of Brotherly Love in 2004. Most of the gun violence has occurred in North Philadelphia, Southwest Philadelphia, and parts of South

Philadelphia, but many other sections and neighborhoods have been affected.

In our feature article, we have asked Charles Branas, PhD, Assistant Professor of Epidemiology and Senior Scholar in the CCEB and Lead Epidemiologist in the Firearm and Injury Center at Penn (FICAP), Division of Trauma and Surgical Critical Care, and Douglas Wiebe, PhD, Assistant Professor of Epidemiology and Senior Scholar in the CCEB, Epidemiologist/Social Ecologist with FICAP, to provide some insight on this very troubling trend in Philadelphia.

Q: *What factors have contributed to the escalation of gun violence and homicide in the city during the last couple of years?*

CB: It's always difficult to pinpoint specific factors that carry the lion's share of the blame for gun violence in Philadelphia, but a few generally seem

to rise to the top. These include open-air, illicit drug markets, alcohol outlets, and availability of illegal firearms. Illegal drugs likely relate to violence brought about by trafficking and, to some degree, actual usage of illegal drugs. Trafficking of "Philly heroin," a very potent brand of heroin that is also an unfortunate source of pride for some in the city, has seen a recent resurgence and may be part of the trend in gun violence. Alcohol is also possibly related to the trend in gun violence and some think that "stop-and-go" outlets where alcohol is purchased but consumed illegally off premises, like in a nearby park or vacant lot, may be important. Illegal guns and the way these guns get into criminal hands is also likely important. Although the vast majority of owners of legally purchased guns are law abiding, a small but

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Faculty Profile:

Phyllis Gimotty, PhD, focuses on projects that are relevant to patient care



Phyllis Gimotty, PhD, Associate Professor of Biostatistics in the CCEB

Phyllis Gimotty, PhD, is an Associate Professor of Biostatistics at HUP and the Penn SOM, Senior Scholar in Biostatistics in the CCEB, and an Adjunct Associate Professor in The Wistar Institute. With a promotion just recently announced, Dr. Gimotty will be a Professor of Biostatistics at HUP effective July 1, 2007. She is also a member in the Melanoma Program and the Cancer Epidemiology & Risk Reduction Program of the Abramson Cancer Center, as well as the Biomedical Graduate Studies (BGS) program in the Penn SOM.

While in high school in Michigan, Phyllis showed an aptitude for math and was asked by her math teacher about her future plans. She had been thinking about learning more about chemistry because she wasn't really clear on how math might be applied in the real world, much to the dismay of her math teacher. During her undergraduate career at the University of Michigan in Ann Arbor, after three years of chemistry, she decided that she wasn't sufficiently interested in the field. Phyllis ultimately majored in sociology and graduated with a BA in 1970. Her experiences in sociology at Michigan influenced her career choices including her decision to learn more about statistics at the University of Michigan with the desire to focus on real-world problems. Phyllis joined the Department of Biostatistics at the University of Michigan, where she earned a PhD in biostatistics in 1984.

Particularly keen on projects that are directly relevant to patient care, Dr. Gimotty co-directed a randomized controlled trial to evaluate the effectiveness of physician reminders to promote doctors to refer African-American women for mammograms and PAP smears, contributing her expertise in bioinformatics and biostatistics. During a seven-year period, mammography rates for these women increased from 13% to 65-70%. Dr. Gimotty now co-directs a translational research project to develop new biomarkers that can be used in prognosis. The very nature of such translational research, which emphasizes taking research ideas developed in the laboratory into clinical practice or taking experiences from clinical practice back into the laboratory, is at the crux of Dr. Gimotty's continuing passion for her field.

In addition to her interest in cancer translational research, her clinical research interests include cancer prevention and control, risk assessment, and health services research. Currently, Dr. Gimotty serves as the Biostatistics Core Director for a SPORE on Melanoma, which is a multidisciplinary collaborative project, as well as a Core Director for a program project on melanoma etiology, progression and treatment. She is also a co-PI on a project using novel biostatistical methods to identify new immunohistochemical biomarkers in melanoma. In addition, Dr. Gimotty, as principal investigator of the Cancer Biostatistics Training Grant, plays a significant role in developing the graduate student training program that focuses on biostatistics and its application to cancer-related problems as well as research issues in the different areas of cancer research. In terms of biostatistical methods, her primary research interests include categorical and survival analysis, model assessment, classification trees, longitudinal data, evaluating diagnostic tests, and methods for incomplete data.

Dr. Gimotty has been published as a contributing author in a broad array of peer-reviewed journals, including *Academy Medicine*, *American Journal of Clinical Nutrition*, *American Journal of Clinical Pathology*, *American Journal of Pathology*, *American Journal of Perinatology*, *American Journal of Physiology*, *Annals of Surgical Oncology*, *Archives of Dermatology*, *Archives of Otolaryngology - Head & Neck Surgery*, *Blood*, *Bone Marrow Transplant*, *Breast Cancer Research & Treatment*, *British Journal of Cancer*, *Calcified Tissue International*, *Cancer*, *Cancer Biology and Therapy*, *Cancer Detection & Prevention*, *Cancer Research*, *Clinical Cancer Research*, *Controlled Clinical Trials*, *Critical Care Medicine*, *Medical Care*, *Communications in Statistics, Part A - Theory and Methods*, *Communications in Statistics, Part B - Simulation and Computation*, *Computational Statistics and Data Analysis*, *Development*, *European Journal of Immunology*, *FASEB Journal*, *Health Services Research*, *Human Pathology*, *International Journal of Oncology*, *Journal of Clinical Oncology*, *Journal of Cutaneous Pathology*, *Journal of General Internal Medicine*, *Journal of Immunology*, *Journal of Nurse-Midwifery*, *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, *Journal of Reproductive Medicine*, *Journal of Virology*, *Leukemia Research*, *Modern Pathology*, *New England Journal of Medicine*, *Nursing Research*, *Pediatric Cardiology*, *Pediatric Gastroenterology and Nutrition*, *Pediatric*

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Faculty Profile:

Ebbing Lautenbach, MD, MPH, MSCE, studies antibiotic-resistant infections, how to prevent infections and resistance, and why such resistance occurs

Born in Hamburg Germany, Ebbing Lautenbach, MD, MPH, MSCE, Assistant Professor of Medicine and Epidemiology in the CCEB, moved to the US at the age of 3 and was raised in Portland, Oregon. He came to Penn in 1993 as an intern in medicine at HUP. Four years earlier, he had received a BS in psychology and chemistry from Calvin College in Grand Rapids, Michigan.

Intrigued by human behavior, Ebbing had considered becoming a psychologist while at Calvin College, but eventually decided to go to medical school at Columbia University, where he concurrently enrolled in the Master of Public Health program. The son of an internist, Ebbing had an early sense of what a career in medicine might be like, but during the first couple of years of medical school, he did not have a particular interest in infectious diseases. It was not until a rotation in infectious diseases as a medical student at Mary Imogene Bassett Hospital, in Cooperstown, New York, did he really come to appreciate the significance of the study of infectious diseases. Working in rural Cooperstown, Dr. Lautenbach became more aware of the breadth of infectious diseases that affects every community.

Dr. Lautenbach graduated with his MD and MPH from Columbia University in 1993. Later that year, he began his one-year internship at HUP, where he also completed his residency, from 1994-1996. In 1997, Dr. Lautenbach became a fellow in infectious diseases at HUP. One year later, he became a Fellow in Clinical Epidemiology in the CCEB. In 2001,

Dr. Lautenbach received an MSCE from the University of Pennsylvania School of Medicine.

Dr. Lautenbach's research focuses on antibiotic-resistant infections, how to prevent infections and resistance, and why such resistance occurs. In particular, his research focuses on infections that occur in healthcare settings. He is currently the PI of an NIH R01 grant that focuses on prolonged gastrointestinal tract



Ebbing Lautenbach, MD, MPH, MSCE, Assistant Professor of Medicine and Epidemiology in the CCEB

colonization with fluoroquinolone (FQ)-resistant *E. coli* in patients recently discharged from the hospital. He is also the PI of an NIH-funded R01 that investigates the clinical epidemiology and transmission of FQ-resistant *E. coli* in the long-term care setting. Finally, Dr. Lautenbach is a PI of a CDC-funded R01 that investigates the impact of infection control interventions to limit emergence of multidrug-resistant gram-negative organisms in the hospital setting.

Currently, Dr. Lautenbach has teamed up with colleagues at the University of Pennsylvania's School of Veterinary Medicine to determine if there are similarities between the epidemiology of antibiotic-resistant organisms in companion animals and their owners, particularly the prevalence and impact of spread of resistant organisms within households.

In addition to teaching, conducting research, and practicing medicine, Dr. Lautenbach serves as an editor for the Practical Handbook of Healthcare Epidemiology, 2nd Edition, Associate Editor for *Pharmacoepidemiology and Drug Safety*, and serves on the editorial boards of *Clinical Microbiology Reviews*, *Infection Control and Hospital Epidemiology*, *BMC Public Health*, and *Antimicrobial Agents and Chemotherapy*. He previously served as the Hospital Epidemiologist for Penn Presbyterian Medical Center and currently serves as Associate Hospital Epidemiologist and Co-Director of the Antimicrobial Stewardship Program, both at the Hospital of the University of Pennsylvania. He also serves as Director of the Epidemiology Track in the MSCE program, Chair of the Curriculum Committee at the CCEB, on the Seminar Committee in the CCEB, the Pharmacy and Therapeutics Committee at HUP, Drug Use and Effects Committee at HUP, Epidemiology Graduate Teaching Curriculum Committee in the CCEB at Penn, and the Master of Science in Clinical Epidemiology Comprehensive Examination Committee in the CCEB.

Dr. Lautenbach's other titles are husband to his wife Gillian, who is an internist at Penn, and father to 4 children. Although his wife is considered the family expert for nearly all of the kids' illnesses, Dr. Lautenbach's experience in infectious diseases has proved extremely valuable as he is considered the "go-to" parent for applying antibiotic "boo-boo cream" following various cut and scrapes.

From the Director:



Brian L. Strom, MD, MPH

Welcome to this issue of the Center for Clinical Epidemiology and Biostatistics (CCEB) Newsletter, which serves as a forum for us to keep you informed of activities within the CCEB. Each issue highlights a few members of our faculty, some of the services we provide to those external to the CCEB, and current activities and events likely to be of interest.

In this issue of the newsletter, we include articles on two members of our faculty: Phyllis Gimotty and Ebbing Lautenbach. Phyllis is a senior member of our biostatistics faculty. Her research interests include cancer translational research, cancer prevention and control, risk assessment, and health services research. Ebb is an Assistant Professor of Medicine, Infectious Diseases Division, and an epidemiologist. His research focuses on antibiotic use and antimicrobial resistance.

Our feature article for this issue is a Q&A with Charlie Branas and Doug Wiebe, two epidemiologists and members of the CCEB faculty, on gun violence and

the murder rate in Philadelphia. They provide insight as to some of the factors related to gun violence in our city and hints as to what their research findings may reveal.

The newsletter also includes an article about the Center for Genetics and Complex Traits, a Type I center within the CCEB. An additional segment on CCEB services covers our Clinical Research Certificate Program, available and designed for those interested in careers as collaborative researchers. The program is suited ideally for clinician-educator track faculty, medical residents and fellows, and research assistants.

Finally, I want to take advantage of the opportunity to remind you to check our website for announcements and other newsworthy events. (<http://www.cceb.upenn.edu/>), find potential faculty collaborators (<http://www.cceb.med.upenn.edu/faculty/>), review the research services available to you (<http://www.cceb.med.upenn.edu/services/>), and examine our education training program opportunities, either for yourself or for others (<http://www.cceb.upenn.edu/education/>).

Thank you for reading our newsletter!

(Gimotty, continued from page 2)

Research, Preventive Medicine, Proceedings of the National Academy of Sciences USA, and Public Health Reports.

She is also statistical editor for JNCI and an ad hoc reviewer for *Annals of Internal Medicine, Cancer Research, Cancer Epidemiology, Biomarkers & Prevention, Clinical Cancer Research, Expert Review of Dermatology, and Medical Care*. She is a member of the Statistical Committee of the American Joint Commission on Cancer (AJCC) and works with the Skin Cancer and Gynecologic Cancers subcommittees of the AJCC.

The ways in which Dr. Gimotty practices and applies biostatistics provide her with the opportunities to apply her math skills. Beginning with a real problem evolves into a discussion of methods. Tailored biostatistical methodology can help highlight aspects of data that might not be apparent with more standard techniques. Such tailoring is inherently collaborative, she says, requiring dialogue that leads to practical applications. Statistics is the language of science, Dr. Gimotty avows. "A patchwork of statistical output yields a picture that people can talk about."

Happy and Healthy Holidays from the CCEB and the CCEB Newsletter staff!

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not insignificant percentage of “straw purchasers” redistribute legally obtained firearms, sometimes in large numbers, to otherwise proscribed individuals who then may go on to commit crimes with these guns.

Q: Will your current research shed some light on the recent spate of gun violence in Philadelphia?

CB: It will and, in fact, is specifically designed to test the competing effects of many of the environmental factors I just mentioned: illicit drugs, alcohol outlets, and gun availability. Stay tuned for our first research papers and reports to the City of Philadelphia in the next several months.

Q: Can you elaborate on the “open air” drug market concept?

CB: The idea of illicit drug markets being “open air,” that is, outside, is key to the violence they may generate. Being illegal, drug markets don’t function in buildings with store fronts and signs the way legitimate businesses do. Marketing and sales are forced largely out of doors. They also don’t benefit from legal mechanisms (i.e., courts and police) to settle disputes so businessmen in these illegal markets are forced to deal with things on their own, arm themselves with guns and, hence, it is thought contribute to more shootings in their vicinity. It is interesting to note that they are, nonetheless, businesses like any other and, as such, deal in profit margins, employee management, and, have business leaders who are not, for the most part, the users of their product. In this way, we hypothesize that it’s the existence of the markets themselves that largely generates the violence and not the personal use and abuse of illicit drugs – a hypothesis that our current research intends to directly address.

DW: You asked about a gun violence increase, but in fact our studies are designed to learn why gun violence happens at all. If we do find that drug markets are a risk factor for gun violence, this does help us learn about the increase after all. This is because we can take that finding and assess whether the number of drug markets operating in Philadelphia has increased during recent times. If that number has in fact increased, I would say that is reason to suspect that the drug markets had something to do with the increase.

Q: Do you think organizations such as Men United can have a significant impact in stemming the flow of guns in the city and reducing gun violence?

CB: A great many efforts are now underway in Philadelphia to reduce gun violence. We are overdue for these and, truth be told, we are far behind other cities in having such programs in place. Some of the larger violence reduction efforts that are currently underway include the Blueprint for a Safer Philadelphia, a state-funded program, and the Philadelphia Collaborative Violence Prevention Center, a federally-funded program whose partners include members of the Philadelphia community, and individuals from Children’s Hospital, Penn, Temple, and Drexel.

Q: What other actions, e.g., legislative, governmental, civic, do you think might lower the level of gun usage and reduce the murder rate?

CB: First, I would rephrase your question to say “illegal gun usage” – our work is not intended to take guns out of the hands of legal owners and I wouldn’t want to give that impression. With that said, I’ll wait to give an answer until we have completed our first analyses from the current NIH studies of gun violence in Philadelphia. Thanks for the opportunity to comment.

DW: With those analyses and the focus on environmental factors, the hope is to identify locations or characteristics of locations, possibly those mentioned above, that in some way “allow for” shootings to occur. What could follow are opportunities to make changes (e.g., to streets, structures, or business practices) that could have a preventive effect, and in this way the potential does exist for legislative action to play a role in curbing gun violence. We shall see. But our approach — identifying locations that are conducive to shootings — can be seen as one of many strategies that can contribute to a larger public health effort, which ultimately may be what is required to reconcile root problems that lead to these situations that prompt people to resort to gun violence.

References

http://www.philly.com/mld/inquirer/news/special_packages/violence/16005462.htm

http://www.philly.com/mld/inquirer/news/special_packages/violence/13524288.htm

<http://www.philly.com/mld/philly/16211234.htm>

[Editor’s note: As of December 18th, the homicide total had risen to 393, eclipsing last year’s murder total.]

Faculty News and Notes

Several CCEB faculty have appeared in the news recently. A brief summary dating from September follows in alphabetical order.

Kurt Barnhart, MD, MSCE, Associate Professor of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, University of Pennsylvania SOM, Associate Professor of Epidemiology, and Senior Scholar, CCEB, was quoted in “Donating Eggs Poses Risks in Name of Science,” an article published on September 29th in the *Contra-CostaTimes.com*. Dr. Barnhart noted that while the risk to women who donate eggs is small or rare, the problem is defining “small” or “rare.”

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Susan Ellenberg, PhD, Professor of Biostatistics at HUP, University of Pennsylvania SOM, Associate Dean for Clinical Research, University of Pennsylvania SOM, and Senior Scholar, CCEB, was quoted on the topic of post-market drug surveillance in the Sunday, September 24th edition of the *Philadelphia Inquirer* in the article entitled “New Drugs Need More Follow-up by FDA, Independent Panel Says” (<http://www.philly.com/mld/philly/living/health/15592477.htm>).

Dr. Ellenberg was also quoted in the December 15th article in *The New York Times* entitled “Reversing Trend, Big Drop Is Seen in Breast Cancer,” in which a 15% drop in the rate of breast cancer was noted between August 2002 and December 2003.

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Joel M. Gelfand, MD, MSCE, Assistant Professor of Dermatology and Epidemiology, University of Pennsylvania SOM, Associate Scholar, Clinical Epidemiology Unit of the CCEB, University of Pennsylvania, was quoted extensively on the 10th of October after the publication of an article that he co-authored, “Risk of Myocardial Infarction in Patients with Psoriasis,” in a recent issue of *JAMA* (*JAMA*, 2006 Oct 11;296(14):1735-41). Dr. Gelfand noted that severe, but not mild, cases of psoriasis should be considered a risk factor for heart attack. The list of media outlets covering the story included: the Associated Press (<http://msnbc.msn.com/id/15209007/>); MSNBC (<http://msnbc.msn.com/id/15209007/>); NPR; CBS (http://cbs3.com/health/local_story_283153812.html); http://cbs3.com/health/local_story_283153812.html); HealthDay; WebMD; New Scientist ([http://](http://www.newscientist.com/article/dn10270-psoriasis-linked-to-tripled-risk-of-heart-attack.html)

www.newscientist.com/article/dn10270-psoriasis-linked-to-tripled-risk-of-heart-attack.html); Bloomberg News; *Chicago Sun Times*; United Press International (UPI); Dow Jones; NBC News Channel; Voice of America; *Newsday* (<http://www.newsday.com/news/health/ny-hsskin114927673oct11.0.7937840.story>); *The Wall Street Journal*; as well as local ABC affiliate channel 6 and CW11 News at 10. *USA Today* published a report on the 13th of November that also quoted Dr. Gelfand and cited his research (http://www.usatoday.com/news/health/yourhealth/2006-11-12-psoriasis_x.htm).

§

Kathryn Schmitz, PhD, MPH, Assistant Professor of Epidemiology, Department of Biostatistics and Epidemiology, University of Pennsylvania SOM, was quoted on the 12th of December in an Associated Press article in *The New York Times* (http://www.nytimes.com/aponline/us/AP-Fitness-Exercising-Smokers.html?_r=1&oref=slogin) as well as Cancer Research UK (<http://info.cancerresearchuk.org/news/newsarchive/2006/december/>) and News-Medical.Net (<http://www.news-medical.net/?id=21228>) in reference to a recently published study that she co-authored entitled, “The Association of Physical Activity with Lung Cancer Incidence in a Cohort of Older Women: The Iowa Women’s Health Study” (*Cancer Epidemiol Biomarkers Prev* 2006;15(12):2359-63). While quitting smoking is the best way for smokers to reduce the risk of developing lung cancer, she said that exercise can confer a marginal decrease in risk, with smokers who exercise shown to have a 35% lower risk of developing lung cancer than non-exercising smokers. The full article can be read here: <http://cebp.aacrjournals.org/cgi/content/full/15/12/2359>.

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Brian Strom, MD, MPH, Director of the CCEB, Associate Vice Dean, University of Pennsylvania SOM, was interviewed on October 9th on the National Public Radio (NPR) program “All Things Considered” regarding recommended changes to the FDA’s drug-approval process. The radio segment, entitled “Experts Call for Changes to FDA Drug Approval,” can be heard at

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<http://www.npr.org/templates/story/story.php?storyId=6226295>.

Dr. Strom was also quoted in the *Wall Street Journal* on December 6th in the Numbers Guy column by Carl Bialik entitled “Relatively Small Number of Deaths Have Big Impact in Pfizer Drug Trial.” In the article, which assesses Pfizer’s decision to abandon a potential blockbuster cholesterol drug following the deaths, during a clinical trial with 15,003 participants, of 82 people taking the new drug torcetrapib along with Lipitor and 51 people in the control group who took only Lipitor. In discussing the risk analysis and Pfizer’s decision, Dr. Strom offered, “If you’re talking about a drug to cure cancer when there is no other treatment, you would tolerate an enormous risk before pulling the plug. Where you’re talking about a drug to treat allergies, where there are other drugs available and they are safe, you would tolerate much less risk.” The article can be accessed here: http://online.wsj.com/public/article/SB116535192161641418-3B4PG_HQwyA73qzZaetkmaA8RvU_20070105.html?mod=tff_article.

Notes

John H. Holmes, PhD, Assistant Professor of Medical Informatics in Epidemiology at the HUP, has been elected as Fellow of the American College of Medical Informatics, which honors individuals from the US and abroad who have made significant and sustained contributions to the field of medical informatics. Dr. Holmes’ election recognizes his interdisciplinary work, spanning over 20 years, which unites informatics and epidemiology. His research interests focus on developing new algorithms for data analysis and signal detection in epidemiologic surveillance and computerized patient behavioral interventions. Dr. Holmes was inducted into the College at a formal ceremony during the Fall Symposium of the American Medical Informatics Association in November 2006.

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Shiriki Kumanyika, PhD, MPH, Associate Dean for Health Promotion and Disease Prevention, University of Pennsylvania SOM, Director, Graduate Program in Public Health Studies, University of Pennsylvania, Professor of Epidemiology, University of Pennsylvania SOM, and Senior Scholar in the CCEB, was invited to deliver the “Dr. John H. Hollister Distinguished Lecture” at Northwestern University, Feinberg School of Medicine,

in Chicago, IL on September 27th. A lecture by a prominent expert on any phase of ameliorating public health is the focus of The John H. Hollister Lecture Funds.

§

Shahrazad Mavandadi, PhD, won the 2006 Clinical Medicine Research Award at the 59th Annual Gerontological Society of America Meeting held in Dallas, TX from the 16th to the 20th of November for her paper “The Effect of Depression Treatment on Depressive Symptoms in Older Adulthood: the Moderating Role of Pain” (Mavandadi S, Ten Have TR, Katz IR, Nalla U, Durai B, Krahn DD, Llorente MD, Kirchner JE, Olsen EJ, Van Stone WW, Cooley SL, Oslin DW. The effect of depression treatment on depressive symptoms in older adulthood: the moderating role of pain. *Journal of the American Geriatrics Society*, in press). There were 11 finalists for the award.

Dr. Mavandadi, who is a Postdoctoral Fellow on the NIMH Biostatistics in Mental Health Training Grant, under the mentorship of Tom Ten Have, PhD, is studying complex biostatistical methods in order to more comprehensively explore the role that psychosocial factors play in moderating and/or mediating the associations among physical comorbidity and depressive outcomes and treatment response. She received her PhD in Health Psychology from the Department of Psychology and Social Behavior at the University of California, Irvine.

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Nicolas Stettler, MD, MSCE, Senior Scholar, Center for Clinical Epidemiology and Biostatistics, Assistant Professor of Pediatrics, Division of Gastroenterology, Hepatology, and Nutrition, University of Pennsylvania SOM/CHOP was selected as the winner of this year’s “Best Paper Award” for the journal *Circulation*. As determined by the journal’s editors, the award is based on the paper’s importance in the field. The editors assess usage statistics to identify papers that deliver the greatest impact. All original articles published in *Circulation* in 2005 were eligible for the award. Dr. Stettler’s paper, entitled “Weight Gain in the First Week of Life and Overweight in Adulthood: A Cohort Study of European American Subjects Fed Infant Formula,” was published in the April 19, 2005 edition of *Circulation* and can be read here: <http://circ.ahajournals.org/cgi/content/full/111/15/1897>.

CCEB's Clinical Research Services: The Clinical Research Certificate Program

The CCEB serves as an interdisciplinary resource for clinical research throughout the School of Medicine. It offers a range of services and training programs, primarily for faculty, residents, and fellows within the University of Pennsylvania Health System, but also for clinicians and scientists in other schools at Penn and throughout the Delaware Valley. These programs and services are identified and described as a regular feature of this newsletter. The Clinical Research Certificate Program is highlighted in this issue.

A Clinical Research Certificate Program, managed by the CCEB, is available for those interested in careers in which collaborative clinical research would play an important role. This program includes the completion of introductory courses that provide training in clinical research methods, biostatistics, scientific and ethical conduct, and practical applications in clinical research. This program is suited ideally for clinician-educator track faculty, medical residents and fellows, and research assistants. The amount of coursework required for this Certificate Program is much less than what is required for the Master of Science in Clinical Epidemiology (MSCE) and Master of Science in Translational Research (MTR) degree programs and does not include the completion of a research project. Individuals seeking clinical research training at the level that would develop them into NIH-funded principal investigators should consider instead applying to one of the [graduate training programs in epidemiology](#) or translational research.

The Clinical Research Certificate Program's requirements are described in detail on the program's web pages: <http://www.cceb.upenn.edu/education/non-degree/certificate.php>. The program is designed for those who have full-time commitments during the day. It is anticipated that the program will take between one and two years to complete.

Semester-long courses taught for the Clinical Research Certificate Program are offered during the fall (September through December) and spring (January through May) semesters and as short courses during the summer (generally, the middle two weeks in July). During the spring 2007 term, two introductory courses are offered in biostatistics (a lecture-only course is taught on Monday evenings from 6:00 to 8:00 pm; a lecture plus laboratory experience providing instruction in the use of SPSS is taught on Monday evenings from 6:00 to 9:00 pm) and a third course is offered in critical appraisal of the medical literature (4:00 to 5:30 pm on Mondays). Descriptions of these and other courses are provided on the following web page: <http://www.cceb.upenn.edu/education/non-degree/courses.php>.

Registration for these courses occurs during the month preceding the start of classes each term. Registration for spring 2007 courses is ongoing. Those interested in further information about course registration should see the following web page: http://www.med.upenn.edu/apps/my/epi_course.

Fellowships for the Clinical Research Certificate Program, sponsored by the Mary E. Groff Surgical Medical Research and Educational Charitable Trust, are available to support residents and fellows based at UPHS-affiliated hospitals, including HUP, CHOP, VAMC, Presbyterian Medical Center, and Pennsylvania Hospital. All UPHS-affiliated residents and fellows are encouraged to apply for support for spring and summer 2007 courses. The application deadline is Friday, January 5. Application instructions and additional information is available at: <http://www.cceb.upenn.edu/education/non-degree/GroffAppProcess.pdf>. For others, including faculty and research staff, faculty/staff tuition benefits are available to cover tuition costs.

Those interested in additional information about the Clinical Research Certificate Program, specific courses, the application process, the Mary E. Groff Fellowship in Clinical Research, and/or related issues, should contact Tom Kelly (tkelly@cceb.med.upenn.edu, 215-898-0861).

The CCEB Introduces a New Center

The Center for Genetics and Complex Traits (CGACT) is a Type I Center within the Center for Clinical Epidemiology and Biostatistics created to assess high dimensionality genetic and environmental data to better understand complex traits, and to provide the resources needed at Penn to initiate multidisciplinary, collaborative research on complex traits.

The theme of CGACT is to develop and apply epidemiological and statistical approaches that integrate knowledge from human genome initiatives, basic molecular and cellular biology, biomedical informatics, behavioral science, bioethics and the clinical sciences to understand complex human disease traits, which result from interactions of genes at multiple loci as well as environmental exposures.

Various methods will be applied to study the etiology and outcomes associated with cancer, sleep disorders, psychiatric disorders including addiction, obesity, diabetes, autoimmune disorders, asthma, cardiovascular disease, and other conditions. These methods include

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efficient family-based designs, and methods built on traditional epidemiological designs; evaluation of sources of bias in epidemiological association studies; methods for evaluating complex interactions of genetic and environmental data; evaluation of population genetics structure, including linkage disequilibrium and haplotype occurrence; and methods for genomic and proteomic analysis, including those used for analysis of array-based expression data.

The mission of the CGACT is to be a leading center for statistical genetics and molecular epidemiology research. Specifically, the CGACT will: 1) develop epidemiological and statistical methods for the study of complex genetic traits, 2) develop applications of these methods in multidisciplinary collaborative research, and 3) support educational opportunities related to molecular epidemiology and statistical genetics. A partial list of the areas of research in which collaborative methodological research can be applied includes the following:

- ✦ **Biobehavioral Basis of Addiction**
- ✦ **Cancer Etiology and Prevention**
- ✦ **Cardiac and Cardiovascular Disease**
- ✦ **Obesity**
- ✦ **Pediatric Diseases**
- ✦ **Pharmacogenetics and Pharmacogenetic Epidemiology**
- ✦ **Psychiatric Disorders**
- ✦ **Pulmonary Diseases, Lung Injury, and Critical Illness**
- ✦ **Renal Diseases and Transplantation**
- ✦ **Reproduction**
- ✦ **Sleep Disorders**
- ✦ **Statistical Genetics**

As a result of the collaborative environment at Penn, a wide variety of research opportunities are available here to researchers and trainees, and to which the methodological advances generated by the CGACT will be implemented. Timothy Rebbeck, PhD, is the Director of the Center and also Program Leader for Molecular Epidemiology. Hongzhe Lee, PhD, is Program Leader for Statistical Genetics and Genomics.

Congratulations and best wishes to the following students for completing their degrees in December 2006!

Master of Science in Biostatistics Degree

Recipient

Angelo Elmi, MS

Doctorate in Biostatistics Degree Recipient

Tao Liu, PhD

Master of Science in Clinical Epidemiology Degree Recipients

Gregory Thomas Armstrong, MD

Megan H. Bair-Merritt, MD

Brigitte M. Baumann, MD

Gregory P. Bisson, MD

Linda L. Brown, MD

Rose C. Graham-Maar, MD

Anna Maria Hibbs, MD

Sheela Natesh Magge, MD

Andrea L. Neimann, MD

Giora Netzer, MD

Anthony Omavuaye Odibo, MBBS

Beata Eva Seeber, MD

Michael W. Sims, MD

Melissa Teitelman, MD

Craig Alfred Umscheid, MD

Yu-Ning Wong, MD

CCEB Holiday Party Photo Gallery



Left, Gregory Bisson, MD, MSCE, and, right, Jessica Fishman, PhD



From left to right, Janet Conway, Deb Dole, and Denise Tremblay



Left, Kevin Haynes, PharmD, and, right, John Farrar, MD, PhD, MSCE



Left, Rhonda Minyard, and, right, Jonas Ellenberg, PhD



Left, Scarlett Bellamy, ScD, and, right, Deidre Ashton



Left to right, Harold I. Feldman, MD, MSCE, Joshua P. Metlay, MD, PhD, and Brian L. Strom, MD, MPH



Left to right, Timothy Rebbeck, PhD, Lani Strom, Warren B. Bilker, PhD, Brian L. Strom, MD, MPH, and Jordi Strom