## University of Johannesburg Philosopher Seeking To Develop Philosophy of Epidemiology As A New Sub-Discipline

Is philosophy just a lot of hot air, or is there more to it than that? Are philosophers just good at creating problems, but not at solving them? Can philosophers be useful to epidemiologists? Put another way, should epidemiologists care about philosophy?

Alex Broadbent, a young Britishtrained philosopher of science with a faculty appointment at the University of Johannesburg, clearly believes in the potential value of philosophy for epidemiology, and has set out to prove it.

His forays into the field are now evident from the work he has published as guest editor of a themed-section of peer-reviewed essays in Preventive Medicine on Philosophy and Epidemiology, to which eminent figures from epidemiology and statistics as well as philosophy contributed, and as principal author of a new report from the PHG foundation entitled "Epidemiology, risk, and causation—Conceptual and methodological issues in public health science".

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# Measles Outbreaks In Europe Threaten Regional Elimination Goal By 2015

## **Worldwide Program Also Facing Setbacks On Impressive Mortality Declines To Date**

A new report by the World Health Organization in the Weekly Epidemiologic Record has documented more than 30,000 cases of measles in the European Region in 2010 and more than 26,000 thru October in 2011. These numbers of cases come after three years of record low levels in 2007-2009.

#### **Outbreaks**

Measles outbreaks were reported from 36 countries in the region in 2011 and about one

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November 2011

Volume Thirty Two

> Number Eleven

"Doubt is often expressed when philosophers purport to contribute to the scientific enterprise,"

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These publications are not solo contributions but rather the products of a series of workshops which Broadbent helped to organize in 2009-10 on Epidemiology, Risk, and Genomics hosted at the University of Cambridge, Department of History and Philosophy of Science and sponsored by the PHG Foundation. He has also organized an international conference on the topic in December 2011, with funds from the South African government.

#### **Doubts About Philosophy**

In the introduction to his PHG report, Broadbent is candid about the skepticism which he believes may confront his endeavors in the epidemiology community. He states, "Doubt is often expressed when philosophers purport to contribute to the scientific enterprise...Epidemiology is a useful activity, and there is ample evidence in epidemiological journals and text books that philosophical problems arise in the course of doing it. The motivation of this project was to identify some of these problems, and to begin the process of solving them."

### **Philosophical Problems**

Before enumerating the problems of interest in epidemiology, Broadbent was asked to clarify what constitutes a philosophical problem. He told the Epidemiology Monitor that such problems are those which people disagree about, where the

disagreements are persistent yet reasonable, and for which further empirical evidence will not get you an answer. He stated that ethical problems are a type of philosophical problem easier to recognize than other types because we have preexisting ideas about right and wrong.

According to Broadbent, where concepts such as causation, risk, uncertainty, and causal inference have seemed too vague to use, epidemiologists have developed well-defined substitutes. However, it is not always clear how to relate these well-defined concepts back to the vague ones in which we think when deciding on courses of action or making evaluative judgments. Moreover, inconsistencies in our innate, "Stone Age" thinking are often brought out when epidemiologists seek to apply and extend the Stone Age concepts. Evidence cannot be brought to bear to resolve the difficulties, which are conceptual. It is in these areas where a philosophical approach could be helpful.

#### **Philosophers Training**

If philosophical problems have no definite solutions, why should philosophers be expected to be more helpful than epidemiologists? According to Broadbent, philosophers are trained in tackling such questions and have skills which better enable them to identify the problems to begin with, make distinctions, and clarify them. Given

-Philosophy continues on page 4

# Six Striking Features Which Differentiate Epidemiology From Other Sciences

The Epidemiology Monitor obtained a preview of a chapter in a new book being written under contract by <u>Alex Broadbent</u> on the Philosophy of Epidemiology. According to Broadbent, there are six striking features of epidemiology as a science which differentiate it from other sciences. Here they are:

- **1.** Epidemiology is centrally concerned with finding out about causation, either for its own sake or to make a prediction. It is not at all concerned with discovering "laws of nature", developing grand theoretical frameworks, measuring constants, or anything else.
- **2.** Theory does not feature prominently in epidemiology. Epidemiology does not have a proper domain of theory, where theory is understood as making claims about the nature of the world. Instead, epidemiology develops *methods*. The expertise of an epidemiologist is methodological.
- **3.** Experiment does not feature prominently.
- **4.** The methods of epidemiology are domain insensitive. Epidemiologists count things, and then draw conclusions by comparing the results of different counting exercises. The

limits of what we can count and compare are well outside the limits of what is medically significant.

- **5.** The centrality of population thinking. Populations (and not just the individuals making up those populations) are thought of as bearing health-related properties.
- **6.** The stakes are high. The cost of failing to make a correct inference may be as high as the cost of making an incorrect inference. This is in contrast to many other sciences where the cost of failing to make a correct inference is merely slow progress.

"The expertise of an epidemiologist is methodological."

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"Epidemiologists count things, and then draw conclusions by comparing the results of different counting exercises."

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these skills, philosophers may not settle issues definitively, however, their approach can help "to close down some options and avoid inconsistencies," says Broadbent.

**Epidemiologists Not Trained** 

Broadbent told the Epidemiology Monitor that he has observed epidemiologists struggling with thorny philosophical issues in epidemiology. In one case, he observed an epidemiologist author taking a very authoritarian approach to explaining causation, asserting "this is how it is". Philosophers would take a completely different approach, said Broadbent, a nonauthoritarian, more exploratory one in which coherent options or alternatives are identified and discussed. For these types of questions which may not have a final answer, this is "a better approach" according to Broadbent.

**Hitting Too Hard** 

Broadbent contrasts the philosophical approach with the one taken by scientists in yet another way. "Scientists tend to hit these problems too hard," according to Broadbent, "closing off options and moving on when it is too soon to close options down without really understanding the position you are taking." He added that, in contrast to scientists, philosophers are not typically trying "to get on with something". Philosophy can pay off for epidemiology in a number of ways: by reducing methodological inconsistencies, raising awareness of

methodological error, making epidemiological concepts more useful, and making epidemiological evidence and arguments more compelling to a non-epidemiological audience, such as health policy makers or courts of law.

#### An Example

As an example of how philosophical thinking can be useful to epidemiology, Broadbent cited the topic of prediction. He said that philosophers have not given a lot of thought to what makes a good prediction as they have for what makes for a good causal inference. How to assess a predictive claim is a philosophical problem, but one which would have practical value for epidemiologists, according to Broadbent.

His paper published in Preventive Medicine creates a heuristic—having to explain "what could possibly go wrong"—to achieve a robust prediction about the outcomes of a health intervention in the real world (as opposed to in a study population). Just as <u>Bradford Hill's</u> heuristic for causal inference is helpful for that function, so Broadbent is hoping his heuristic for prediction will have practical value.

As another example, he has also recently published an article making detailed recommendations on the use of epidemiological evidence to prove causation in law.

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"Scientists tend to hit these problems too hard"

"philosophers are not typically trying 'to get on with something'"

## Philosopher Offers A Different Perspective in Thinking About Epidemiologic Topics

In writing the article on the Philosophy of Epidemiology, we spoke with <u>Alex Broadbent</u>, philosopher at the University of Johannesburg. In that conversation and in some of Broadbent's writing, we were struck by the unexpected ways in which he formulated and expressed familiar ideas in epidemiology or articulated new ones. Below are some excerpts from our readings and conversations with him.

#### On Epi

"Epidemiology employs the methods of natural sciences, but it is so closely tied with human concerns that in some forms it might also be seen as a social science."

#### On Dangers

"...epidemiologists cannot be simply technicians. They must also have some appreciation of the conceptual foundations of the discipline, and in particular of the issues arising in the [philosophical] areas. If they do not, then they are likely to commit errors, such as exhibiting an unwarranted bias towards the null hypothesis, failing to properly balance the risk of different kinds of errors, making bad causal inferences, of failing to make good ones."

#### On Causality

"It is important to continue to stress that there is no formal or algorithmic method of causal inference, and that causation itself is not well-conceptualized or understood. Any claims to the contrary are false, and, in the context of epidemiology, dangerous."

#### On Concepts

"...appreciation of the conceptual foundations of the discipline, and of the persistently informal, unalgorithmic nature of key components of its methodology, is essential to its success."

"If working epidemiologists and policy makers possess some understanding of the live conceptual debates in epidemiology then they will be better able to avoid erroneous certainty."

#### On Risk

"The epidemiological use of the word "risk" often does not correspond to risk as it is commonly understood, or as it is understood by philosophers studying risk."

"As epidemiologists use the term, "risk" has no application to the individual."

#### More On Epi

"Epidemiology is a particularly uncertain activity, because epidemiologists are often studying associations about which little is known."

"...epidemiology has elements in common with both natural and social sciences. Its methods may be scientific, but is objectives are often thoroughly human."

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" causation itself is not wellconceptualized or understood"

"Its methods may be scientific, but is objectives are often thoroughly human." -Measles continued from pg 1

quarter of the reported cases (28%) in 2011 were hospitalized and 9 children died.

Large outbreaks in Bulgaria in 2010 and in France in 2011 accounted for a large percentage of the new cases. The outbreak in France was the largest in the region with more than 14,000 cases accounting for 54% of all the cases in 2011. Six of the nine deaths were from that country. France's Health Director told the press "France can simply not afford to have deaths, painful and costly hospitalizations, disruptions to work and school from a completely vaccine-preventable disease."

Vaccination

Approximately three quarters of the European cases have been school age children 5 years of age or older, and most have either been unvaccinated or have had an unknown vaccination history. According to WHO, successful control will required achieving and sustaining high vaccination coverage with not just one but two doses of measles vaccine. Vaccine coverage rates with one dose of vaccine are already estimated to be over 90% in the European Region, however, two dose coverage appears to be much lower.

**Benchmark** 

While an extremely challenging public health goal, measles elimination has been achieved and sustained in the US and the entire WHO region of the Americas since 2002, thereby creating an attainable

benchmark which other regions could also achieve.

#### **Decline in Deaths**

In an article entitled "A World Without Measles" in a special supplement to the Journal of Infectious Diseases published earlier this year, Peter Strebel from WHO and colleagues [J Infect Dis. (2011) 204 (suppl 1) | reported that measles deaths declined by "an impressive 78% from an estimated 733,000 deaths in 2000 to 164,000 in 2008." This progress was ahead of the 2010 target date for reducing measles mortality by 90% and encouraged global authorities to conclude that measles could be eradicated by 2020 if progress continued through 2015.

#### Setbacks

According to the same article, "this steady march toward a measles-free world is now facing a setback.

Starting in mid-2009, there has been a widespread resurgence of measles with over 200,000 cases and 1,400 deaths with the true number thought to be 10-20 fold higher at 2-4 million cases and 14-28,000 deaths.

Following publication of this article, large outbreaks in 2011 have been seen not only in France but in the Democratic Republic of the Congo (100,000 cases), and Nigeria and Somalia (15,000 cases each) according to global authorities. High numbers of deaths are also continuing to occur in India.

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#### Challenges

The serious challenge in 2011 to measles elimination in the European region by 2015 is caused by numerous factors according to WHO. These are 1) lack of knowledge about the potential seriousness of the disease, 2) skepticism about the benefits of vaccination, 3) increased fear of adverse events after vaccination, 4) limited access to health care for some populations, and 5) religious or philosophical objections to vaccination in some areas.

According to Mark Muscat from the Department of Epidemiology at the Statens Serum Institute in Denmark writing in the same issue of the Journal of Infectious Diseases, "...one of the main obstacles is the false perception of parents that believe Measles, Mumps, Rubella (MMR) vaccination to be more dangerous than the disease itself."

#### **Doctors As Problems**

Doctors and health care providers are key to providing reliable information for parents making vaccination decisions and there is evidence that not all are enthusiastic MMR vaccination proponents. In surveys in France, Germany and elsewhere in Europe according to Muscat, substantial percentages of health care providers are not strongly in favor of vaccination.

#### At A Crossroads

On a worldwide basis, the setbacks in measles elimination are being attributed to decreases in financial

support and political commitment to the elimination goal. According to the Strebel article, WHO has calculated a worst case scenario for lowered financial and political commitment which could translate into more than 500,000 measlesrelated deaths worldwide in 2013. They add, "Thus, the world is at a crossroads regarding whether it has the will and the means to make the sociopolitical and financial commitment to reverse the resurgence, achieve the 2015 mortality reduction target, and reap the tremendous long-term humanitarian and economic benefits of a world without measles."

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## Experts Identify The Six Most Daunting Challenges For The Global Measles Eradication Program

## An Exponential Increase in Resources and Commitment Is Required They Say

In a more thorough cataloguing of the challenges facing the global measles eradication program, Keegan and colleagues have identified the six most daunting challenges currently facing the worldwide measles eradication program

J Infect Dis. (2011) 204 (suppl 1): S54-S61. doi: 10.1093/infdis/jir119

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"Thus, the world is at a crossroads"

-Eradication continued from page 7

- 1. Key measles-endemic countries are at war in 2011, and the world is more heavily armed than ever. Terrorism, both real and perceived, adds to the complexity, and reaching high rates of vaccination coverage in conflict-affected areas will be extremely difficult and dangerous.
- **2.** The highly infectious nature of measles, combined with an increasing global population, greater population density, migration, and urbanization, presents greater challenges in comparison with those faced by 20th century eradication programs.
- 3. Measles is not perceived as a serious problem in some wealthy and middle-income countries, because the development of effective health services has reduced the mortality rate to low levels. The European Region has not eliminated measles, and although changes appear imminent, India, the country with the largest estimated number of measles cases, has not fully embraced existing measles control and mortality reduction strategies.
- **4.** The resistance of the antivaccination lobby in Europe and elsewhere must be overcome.
- **5.** The technical challenges of measles eradication in India may not be fully understood. It remains unclear what level of vaccination

coverage will be required to stop transmission in the large, densely populated states of Uttar Pradesh and Bihar or the level of effort that will be required to achieve it.

**6.** The coexistence of the polio eradication program and other health initiatives could create an unhealthy competition for political commitment and human and financial resources globally. The successful completion of polio eradication would remove this competition and provide renewed confidence in the potential of vaccines to eradicate disease.

-Philosopher continued from page 5

"Epidemiology is in large part a collection of methods for finding things out on the basis of scant evidence, and this by its nature is difficult."

#### On Methods

"It is important that epidemiologists and epidemiology students, appreciate that there are methodological problems in their discipline which have not been solved, and where conceptual work is still necessary to reach even the most pragmatic goals."

#### On Population Data

"...there is an open philosophical question about what the exact rational bearing of population level data on an individual is."

"Epidemiology is in large part a collection of methods for finding things out on the basis of scant evidence"

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#### **Philosophical Topics**

Based on the discussions at the workshops he has helped organize, Broadbent has developed a preliminary list of topics which have either practical or philosophical significance and which could benefit from further philosophical work. They are:

- 1. The need for conceptual clarity in the use of health statistics
- 2. The need for clarity in the use of statistical significance testing in particular
- 3. The difficulty of causal inference and its continued resistance to formal methods.
- 4. The importance of distinguishing between internal and external validity and the difficulties of applying study results to a wider group
- 5. Continued methodological development in epidemiology as a young science
- 6. Understanding the live methodological and conceptual debates within the discipline
- 7. The complexity of the sorts of claims epidemiology makes about general causation
- 8. The paradox of prevention
- 9. Reconsideration of philosophic views of science in light of unique features of epidemiology as a science.
- 10. The need for a philosophy of epidemiology within the philosophy of science.

#### Final Word

Broadbent told the Epidemiology Monitor that the need for a philosophy of epidemiology is the sign of a growing and maturing discipline with an Increasing impact on society.

When asked what response he would like to obtain to his work from the epidemiology community, Broadbent said it would be beneficial if epidemiologists could be more accepting of the types of problems he is seeking to identify. He understands that epidemiologists might not always be inclined to spend precious time discussing problems that "you cannot shut down with a sharp answer". According to Broadbent, the existence of philosophical problems in epidemiology is not a sign of weakness, but a corollary of the maturing and conceptual development of the discipline. They are a sign of the difficulty the human mind has of getting a hold of the concepts epidemiologists use and the phenomena they study. It would be beneficial for epidemiologists to be open to the possibility that a philosophy of epidemiology could be useful, says Broadbent.

Another view, not intended to be critical of epidemiologists, is that epidemiologists should not rely solely on other epidemiologists to resolve these philosophical questions. There is a tendency in every field for senior scientists to wade into the philosophy pool, according to Broadbent, but some papers on philosophical topics by senior epidemiologists are "just not good", he said.

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"the need for a philosophy of epidemiology is the sign of a growing and maturing discipline"

"It would be beneficial for epidemiologists to be open to the possibility that a philosophy of epidemiology could be useful,"

-Philosophy continued from page 9

#### Metaphors

He told the Epi Monitor he does not intend his remarks to be belligerent, but simply a call for epidemiologists to recognize the expertise of others in this domain. "You don't expect birds to be good ornithologists," said Broadbent, and scientists should not expect to be good philosophers of science, any more than philosophers of science can expect to be good scientists. It is difficult for persons to avoid producing just hot air on these types of problems, according to Broadbent. You have to stop yourself. It is hard. Recognizing that philosophers have relevant skills and training, would be a useful, according to Broadbent.

Links to a free download of the PHG report and to the relevant issue of Preventive Medicine are provided below.

Also, read two related articles on the Philosophy of Epidemiology in this issue.

http://www.phgfoundation.org/reports/10491/

http://www.sciencedirect.com/science/journal/00917435z

## **Epi News Briefs**

Published online 12/1/2011

Social Epidemiologist Interviewed in *Epidemiology* Pinpoints His Most Influential---And His Least Appreciated---Publications.

"I really am only interested in work that will make the world a different place." That also means looking for pivotal issues to investigate and not doing "ordinary research", according to Leonard Syme, University of California Berkeley epidemiologist speaking out in an interview in the latest issue of *Epidemiology*.

Syme, described as on one of progenitors of the field of social epidemiology, was inspired early in his career by the findings of sociologist <a href="Emile Durkheim">Emile Durkheim</a> indicating the undeniable influence of underlying social factors in causing suicide in different populations. Syme has devoted his career to elucidating these "causes of the causes".

He told the interviewer, the University of British Columbia's W Thomas Boyce, he considers "Rethinking Disease: Where Do We Go From Here" published in the Annals of Epidemiology in 1996 as his most influential paper. In it he called for a greater focus on defining diseases by what social and environmental causes increase susceptibilities to them much as infectious diseases are referred to as water-borne or food-borne since these broad, fundamental causes are -Continued on page 11 responsible

air on these types of problems,"

"It is difficult for

persons to avoid producing just hot

"You don't expect

birds to be good

ornithologists,"

#### -Briefs from page 10

for multiple different diseases.

In his career, Syme has also sought to change the way epidemiologists seek to use data to intervene in population health by calling for less top down messaging about risk factors to a more participatory approach which involves more intensively the persons affected by the diseases being targeted. Syme called his paper Social Determinants of Health: The Community As An Empowered Partner" his most underappreciated paper. It sought to point out the need for researchers to become experts in working with the people who are the intended recipients of interventions. " And that message I don't think has gotten through," according to Syme.

## New HIV Infections Down 21% And Agencies Are Talking About Ending The AIDS Epidemic

An estimated 34 million people are now living with HIV, an increase of 17% over the last decade, according to UNAIDS. Why? The number of persons dying from AIDS in 2010 has fallen to 1.8 million from a peak of 2.2 million in the mid-2000's and an estimated 2.5 million deaths have been averted in middle to low income countries since 1995 due to the introduction of antiretroviral therapy.

There were 2.7 million new infections in 2010. This was 15% less than in 2001 and 21% below the number of new infections at the peak of the epidemic in 1997.

About 1.2 million of the persons living with HIV are in the USA.

There appears to be added momentum to World AIDS Day on December 1 this year because the tools to halt AIDS are now in hand. According to UNAIDS, "We are on the verge of a significant breakthrough in the AIDS response. The vision of a world with zero new HIV infections, zero discrimination, and zero AIDS-related deaths has captured the imagination...Just a few years ago, talking about ending the AIDS epidemic in the near term seemed impossible, but science, political support, and community responses are starting to deliver clear and tangible results."

Epidemiologist Uses Animated Clay Cartoon To Help Translate Data Into Practice

An editorial in the November 19 issue of The Lancet has brought attention to an animated clay cartoon (claymation) produced by Ian Roberts, an epidemiologist at the Clinical Trials Unit of the London School of Hygiene and Tropical Medicine. What makes the animation interesting for epidemiologists is that the video was created to help translate into practice the positive results of a clinical trial of tranexamic acid for bleeding trauma patients. Roberts was interested in using social media to deliver the message about the life-saving potential of the drug when survey data revealed that the drug is being underutilized despite the compelling RCT results about the drug's benefits -Continued on page 12

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"the video was created to help translate into practice the positive results of a clinical trial" -Briefs continued from page 11

"full use of the drug *could save* **140.000** lives worldwide each year."

were compelling. In the animation, according to Lancet, a clay trauma victim bleeding profusely from the abdomen happily avoids bleeding to death by means of a timely injection of the drug. The goal is for the You Tube video to go viral and make an impact on treatment for trauma victims. According to one report, Robert estimates that full use of the drug could save 140,000 lives worldwide each year.

Watch the claymation at: http://www.youtube.com/watch?v =pIoYJUf1uls&feature=youtu.be http://www.youtube.com/watch?v =udJQNqCWOzo&feature=related

**Canadians Recommend Against Routine Breast Cancer** Screening for Women 40-49 Years of Age

The Canadian Task Force on Preventive Health Care now recommends against routinely screening for breast cancer for women aged 40-49 but does recommend screening every 2-3 years for women 50-69 and 70-74 (Canadian Medical Association Journal, November 22, 2011) The estimated number needed to screen (NNS) to prevent one death from breast cancer in the youngest age group is 2108 for screening conducted once every 2-3 years for about 11 years. According to the recommendations, preventing this one death would also result in about 690 women having a false positive mammogram leading to additional

testing and to an estimated 75 women having an unnecessary biopsy. Estimates of overdiagnosis of breast cancer were not available for this age group but in women 39 years and older, the group estimates 5 women will have an unnecessary lumpectomy or mastectomy for every 1000 women screened. The Task Force judgment is that "this ratio of potential benefit to harm does not justify routine screening in women 40-49 years of age. The Task Force acknowledged that women who place a higher value on a small reduction in mortality and are less concerned about undesirable consequences are likely to choose screening.

GeorgiaStateUniversity

Dean, School of Public Health Georgia State University, a leading research university located in the heart of downtown Atlanta, is conducting a search for the founding Dean of its new School of Public Health. Georgia State's Insitute of Publich Health was setablished in 2001 and received a full accreditation from the Council on Education for Public Health in 2007.

The Search Committee invites letter of nomination and applications (letters of interest, complete CV, and references) to be submitted to School of Public Health Dean Search, c/o Dana R. Carter, Office of the Provost, PO Box 3999, Atlanta, GA 30302-3999. Confidential review of materials will begin November 18. 2011 but position will remain open until filled. For a complete postion description, refer to Current Opportunities at

http://www.gsu.edu/provost/news.html.

Georgia State University, a unit of the University System of Georgia, is an equal oppoortunity institution and is an equal opportunity/affirmative action employer

"5 women will have an unnecessary lumpectomy or mastectomy for every 1000 women screened"

## **Epi-Monitor Job Bank---Sample Listings for November 2011**

For over 30 years the Epi-Monitor has helped epidemiologists find the best jobs in the field. Our publication helps employers cost effectively reach their target audience . Recently we've dramatically expanded our job bank to include:

- ► Over 550 positions currently listed
- ► Opportunities in all 50 states
- ► Openings in 26 countries
- ► 6 universities looking for 5-12 faculty EACH
- ► Jobs in industry with multiple locations
- Listings for non-traditional epi jobs requiring epi education/experience

In addition to listings found in this print newsletter our website, Facebook page, and e-mail alerts are constantly updated and allow us to help you find the job or employee to meet your needs. See a job listing that interests you or want to see our other listings? Stop by our website today!

Shouldn't your next job or employee come from the Epi-Monitor job bank?

## www.epimonitor.net/JobBank.htm

Sample Epidemiology Job Opportunities			
Location	Position	Employer	Contact
California	Asst Prof, Biostatistics	Univ. CA - Merced	mcolvin@umerced.edu
Ohio	Sr. Faculty Position - Epi	Kent State College of Pub Health	mjames22@kent.edu
Massachusetts	Asst/Assoc Prof-Epidemiology	Harvard School of Pub Health	rcantor@hsph.harvard.edu
Iowa	TT Faculty - Genetic Epi	Univ. Iowa	trudy-burns@uiowa.edu
Virginia	Director - Office of Epidemiology	VA Department of Health	rosanne.kolesar@vdh.virginia.gov
New York	Pre-Doc Positions / Cancer Epi	Univ. Buffalo - Roswell Pk Inst.	sphhp-spm@buffalo.edu
California	Epi - Cancer Research	CA Ctr for Cancer Prevention	http://tinyurl.com/42a9ztn
Rhode Island	Prof- Environmental Health	Brown Univ - Dept of Epidemiology	Cassandra_Matthews@brown.edu
Illinois	Faculty	Univ IL – Community Health	robmotl@illinois.edu
Georgia	Faculty – 2 positions	UGA – Public Health	sharon49@uga.edu
Virginia	Dir – Grad Pgm Pub Health	EVMS – Old Dominion	stromand@evms.edu
Minnesota	Epidemiologist Senior	Minnesota Department of Health	gretchen.taylor@state.mn.us
Tennessee	Chair - Dept of Preventative Med	Univ. TN - Health Science Center	drcarter@gsu.edu
Michigan	Asst. Prof - Sustainable Food Sys	Univ Michigan School of Pub Hlth	http://tinyurl.com/6lgnus4
For full details on these and other job openings: http://epimonitor.net/International_Epidemiology_Jobs.htm			

#### University of Alabama at Birmingham Injury Epidemiology

The Department of Epidemiology is accepting applications for a faculty member in the School of Public Health to fill an Injury Epidemiologist position with a 12 month appointment. Rank and tenure earning status commensurate with experience. The successful candidate should have a PhD, MD, or other doctoral degree and relevant research experience. A history of extramural funding and excellence in teaching are highly desirable. Application from women, members of traditionally disadvantaged minority groups, and scientists with disabilities are encouraged.

The successful applicant should demonstrate knowledge and expertise in the design and execution of population level injury research including experience with the government public-use injury-related databases (e.g., NHTSA's National Automotive Sampling System). The applicant should have advanced skills in epidemiologic methods and applied statistical analysis, excellent communication skills, and they should demonstrate potential for the successful development of major injury-related research projects. Teaching responsibilities include graduate-level courses in epidemiologic methods and injury epidemiology.

UAB ranks among the top 21 universities in the nation receiving NIH funding and is nationally respected for the high quality of its medical center and its research and training programs in health sciences. The UAB School of Public Health has 93 full-time primary faculty and 486 students. In recent years the School has consistently ranked second among UAB schools in successfully competing for extramural funding. UAB has a number of resources to enhance the research and training opportunities for this position. The Birmingham metropolitan area boasts some of the nation's most diverse communities with a plethora of social and cultural activities.

Interested applicants should submit current curriculum vitae, a sample of recent research scholarly activity, a cover letter that discusses qualifications and reasons of interest in the positions to:

Search Committee Chair c/o Joanna Carson RPHB 220B, 1665 University Boulevard Birmingham, AL 35294-0022

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#### ASSISTANT PROFESSOR POSITIONS IN EPIDEMIOLOGY

The Department of Epidemiology and Biostatistics in the College of Public Health at the University of Georgia invites applications for two openings as an ASSISTANT PROFESSOR, TENURE-TRACK FACULTY POSITION IN EPIDEMIOLOGY.

The University of Georgia provides excellent opportunities to work collaboratively in an exciting multi-disciplinary environment with strengths that include infectious disease, spatial, chronic disease, aging, cancer, molecular, environmental/occupational and clinical and translational epidemiology. In addition, opportunities exist to partner with other institutions including the Georgia Health Sciences University and the Centers for Disease Control and Prevention. We are seeking applicants with strong research and teaching experience or demonstrated potential in any specialty of epidemiology. Applicants must have a Ph.D. in epidemiology, or M.D., DVM with epidemiology training. The successful candidate will be expected to establish and maintain an independent and collaborative research program with extramural funding and to contribute to teaching and supervision of student projects and dissertation research. Academic appointment will be in the Department of Epidemiology and Biostatistics in the College of Public Health (www.publichealth.uga.edu/). Athens is 60 miles NE of Atlanta, GA with a rich culture that coexists with the university creating an art scene, music scene, and intellectual environment. (www.visitathensga.com/). Applicants should send a cover letter, CV, statements of research and teaching interests, and three representative publications to: Christopher Whalen, M.D., M.S., Chair, Epidemiology Search Committee, Department of Epidemiology and Biostatistics, 132 Coverdell Center, University of Georgia, Athens, GA 30602-2102 (electronic submissions to sharon49@uga.edu). Applicants should also arrange for three letters of recommendation to be sent to the search committee. The University of Georgia is committed to increasing the diversity of its faculty and strongly encourages applications from individuals in under-represented groups. To assure full consideration, application materials (excluding recommendations) should be received by January 31, 2012. Expected start date is August 2012.

The University of Georgia is an Affirmative Action and Equal Opportunity Employer.



# Assistant, Associate, or Full Professor of Epidemiology

The Department of Epidemiology, School of Public Health of the University of Medicine and Dentistry of New Jersey (UMDNJ), invites applications for tenure-track faculty positions at the rank of Assistant, Associate, or Full Professor. The faculty member being recruited is expected to develop and sustain a vigorous, extramurally funded research program. The faculty member is also expected to teach graduate level course and mentor graduate students pursuing an MPH, PhD, or DrPH degree, with a concentration in epidemiology. Applicants with specific interest in cancer, cardiovascular, nutritional, perinatal, environmental, disparity in care, molecular, and/or genetic epidemiology are encouraged to apply. Applicants' area(s) of research interest will complement and enhance the wide range of expertise currently possessed by the faculty at UMDNJ-School of Public Health (www.sph.umdnj.edu), the Cancer Institute of New Jersey (www.cinj.org), the Robert Wood Johnson Medical School (www.rwjms.umdnj.edu), the Environmental and Occupational Health Sciences Institute (www.eohsi.rutgers.edu), and Rutgers University (www.rutgers.edu), all located on the New Brunswick/Piscataway campuses of UMDNJ and Rutgers University. The successful candidate will have excellent opportunities to collaborate with faculty members from all these schools and institutes. An attractive package will be available, including competitive salary and start-up funds. The successful applicant should have academic experience commensurate with the level of appointment, and in particular have a demonstrated record of peer-reviewed publications and a track record of extramural grants or the potential to successfully obtain extramural grants.

Applications will be received and reviewed until the position is filled. Applicants should send their current curriculum vitae, a statement of research and teaching goals, and contact information for three references to: Ms. Irene Karmazsin, Coordinator, Faculty/Staff Affairs, UMDNJ-School of Public Health, 683 Hoes Lane W; Room 327, Piscataway, NJ 08854 or Email (Preferred): karmazif@umdnj.edu. The UMDNJ is an Affirmative Action/Equal Opportunity Employer M/F/D/V and a member of the University Health System of New Jersey. The UMDNJ-School of Public Health is sponsored by the University of Medicine and Dentistry of New Jersey in cooperation with Rutgers, The State University of New Jersey and New Jersey Institute of Technology.

## Indiana University – Purdue / IUPUI

We seek a senior chronic disease epidemiologist with a track record of NIH and other peer-reviewed funding and a currently active research program in cutting edge areas such as molecular and genetic epidemiology, to lead the Department of Public Health (DPH) research program in epidemiology. A qualified applicant will have an international reputation as a leader in chronic disease epidemiology, demonstrated success in mentoring pre- and post-doctoral fellows and junior faculty, and graduate level teaching experience.

Responsibilities will include graduate level teaching in epidemiology, continuing an active and peer-review funded research program, and collaboration with other DPH and IUPUI faculty. There will be the opportunity to lead the Ph.D. program in Epidemiology and to serve as the Division Director for Epidemiology and Environmental Health. For candidates who are cancer epidemiologists there also is the opportunity to hold an endowed chair.

Applicants should submit a curriculum vita, cover letter and names and contact information for six references. Electronic submissions should be addressed to the Search Committee Chair: G. Marie Swanson, Ph.D., MPH, Professor and Chair, Department of Public Health and Associate vice Chancellor for Public Health, IUPUI, at <a href="mailto:pievans@iupui.edu">pievans@iupui.edu</a>. Send inquiries about the position to: G. Marie Swanson at <a href="mailto:swanson3@iupui.edu">swanson3@iupui.edu</a>.

Indiana University is an EEO/AA employer, M/F,D.

#### **Opportunities This Month**

12 - GA State Univ / Dean Schl of Public Hlth

14 - UAB / Injury Epidemiologist

14 - UGA / Epidemiology Faculty

15 - UMDMJ / Professor Epidemiology

15 - IUPUI / Chronic Disease Epidemiologist

16 - Brown Univ./ Epidemiology Professor

**16** - Emory / Short Course:

Foodborne & Waterborne Diseases

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**Director of Operations** Linda P. Flynn, Ph.D.

First Class U.S. Postage **PAID** Permit #1040 Leesburg, FL 34748



### Comprehensive Foodborne and Waterborne

**Diseases Course** (January 9-13, 2012) Directed by:

CDC & Emory University's Rollins School of Public Health will cosponsor a 5-day course on Environmental Microbiology: Control of Foodborne & Waterborne Diseases. This course is designed for public health practitioners and students interested in the safety of food and water. It provides a broad overview of the major foodborne and waterborne diseases. We focus on the microorganisms and chemical agents responsible for food and water-transmitted diseases. We study the diseases they cause, the pathogenesis. clinical manifestations, reservoirs, modes of transmission, and surveillance systems employed. We discuss how information from surveillance is used to improve public health policy and practice in ways that contribute to the safety of our food and water. The transmission, survival, and fate of pathogens in the environment, the concept of indicator organisms as surrogates for pathogens, and the removal and inactivation of pathogens and indicators by water and wastewater treatment processes will be discussed. Control and prevention of these diseases will be emphasized. Examples of the public health impact of quality assurance programs, such as Hazard Analysis and Critical Control Points, to control foodborne and waterborne diseases in both industrialized and developing countries will be highlighted.

Tuition will be charged. The application deadline is January 2, 2012. Apply online at http://www.sph.emory.edu/epicourses.

Contact: Pia Valeriano, MBA, Program Manager Phone 404-727-3485; Email: pvaleri@emory.edu Website: http://www.sph.emory.edu/EPICOURSES



## **Brown University** Public Health Program

Department of Epidemiology

#### Assistant, Associate, or Full Professor Specializing in Environmental Health

Interested applicants should send a letter of application and curriculum vitae. Please indicate the search number (FM 12-6) and whether you are applying for Assistant, Associate or Full Professor in your letter of application. All applicants must have a doctoral degree in epidemiology, environmental health or equivalent, with evidence of rigorous training and research in environmental epidemiology, and a capacity to secure external funding. Candidates for Assistant Professor should arrange for three letters of reference to be sent to the address below.

For more information or to submit an electronic application, please email Cassandra Matthews@brown.edu

#### Applications may also be mailed to:

David Savitz, Ph.D., Search Committee Chair Attention: Cassandra Matthews Brown University, Box G-S121-2 Providence, RI 02912

Brown is an Affirmative Action/Equal Opportunity Employer and actively solicits applications from women and minorities