Frumkin Commentary Says Greater Focus On The Consequentiality Of Epidemiologic Research Is Needed

Calls Policy at Epidemiology “A Formidable Barrier To Addressing Public Health Improvement”

The debate about the proper role for epidemiologists is longstanding and, judging from two recent articles in Epidemiology, far from being resolved (1). The competing values are clear-cut, but the paramount good has not been agreed to. As framed years ago at a Birmingham conference on ethics in epidemiology, the dilemma is—“What are the allegiances of epidemiologists? Do these allegiances have priorities? To the truth? To the social welfare? To the employers?

What is epidemiology all about?” [Epi Monitor, July 1989]

For the Common Good

Weighing in on the side of social welfare as the primary concern of epidemiologists, and quoting Woodrow Wilson that ‘to work for the common good is the greatest creed’, the University of Washington’s

- Frumkin continues on next page

US News and World Report Ranks Schools Of Public Health

Many Of The Oldest Schools Ranked Highest

Graduate school rankings for 2015 have been released by US News and World Report for public health programs. Rankings for public health are released every four years.

According to US News, all the health rankings are based solely on the results of peer assessment surveys sent to deans, other administrators and/or faculty at accredited degree programs or schools of public health. All schools surveyed were sent the same number of surveys. The response rate was 59%.

- Ranking continues on page 6
Howard Frumkin writes in the March issue of *Epidemiology,* that there is a need for a more consequential environmental epidemiology. He quotes from Sandro Galea’s efforts during a presidential address at SER and in the pages of the American Journal of Epidemiology to focus on epidemiologic work that matters for public health, i.e., consequential epidemiology.

Frumkin is critical of the policy at *Epidemiology* which states that “Policy implications of research results many not be included in research reports.” The journal reportedly gives highest priority to publishing etiologic research and its methods and not to potential uses of that information.

**Key Features**

To counter this “separatist” view of the role of epidemiologists, Frumkin identifies 9 features of consequential work in environmental epidemiology, including 6 that are applicable to all areas of epidemiologic work. These are:

1. Prioritizing for study widespread causes of suffering or premature death for which there are plausible environmental contributors.
2. Going beyond etiologic studies to investigate potential interventions.
3. Selecting for study questions that users of the data (decision makers) need to have answered.
4. Using varied and flexible study methods to get at the questions of interest.
5. Avoiding unnecessary replication research as it creates lost opportunities to study more pressing issues.
6. Being proactive about communicating research results.
7. Studying exposures which are potential environmental threats on a large scale.
8. Making increased use of the research design and other skill sets possessed by environmental epidemiologists which give them a comparative advantage in studying certain topics.
9. Exploring and documenting the additional non-health benefits associated with doing consequential environmental epidemiology.

**On Truth As Paramount**

Weighing in on the side of the pursuit of truth as the paramount value in epidemiology, Timothy Lash, the new editor of *Epidemiology,* asserts that “the utility of research results can only be validly measured retrospectively, once they are put to use” (2). He likens Frumkin’s ideas to frameworks for moral decision making such as utilitarianism and consequentialism and opposes their use for prioritizing work in epidemiology. For Lash, such guides are too likely to be misused to be trusted. He adds, the journal’s
“…despite the mounting research findings and high profile reports…public health and particularly the substantial contributions of social and behavioral factors to premature mortality have not received the attention they deserve,” according Richard Suzman of the National Institute on Aging (NIA). This explains part of the motivation for the NIA to sponsor a workshop at the Institute of Medicine to better understand and update the classification of the “causes of the causes” of death in the United States. These classifications are carried out using cause of death data or for multifactorial causes by making estimates based on relative risks and percent distribution of that behavior or factor in the population.

As described in the background to the report, several approaches have been used over the years to get at these root causes. Some of the findings from this work were that “the greatest opportunity to improve health and reduce premature deaths lies in personal behavior, especially that associated with tobacco use, unhealthy diet, physical inactivity, and problem drinking." Medical care plays a minor role in this regard.

A National Research Council report in 2011 and Council and Institute of Medicine report in 2013 reached the now widely publicized conclusion that the US spends more on health care than any other country, but its health outcomes are not superior because Americans are in poorer health and die earlier than people in other high-income countries. This latter report found some behaviors more favorable to health in the US, but several other behaviors less so. For example says the report, “Americans consume more calories per capita, abuse more drugs, are less likely to fasten seat belts, have more traffic accidents involving alcohol, and own more firearms than do people in other high-income countries."

The cause of the health disadvantage in the US was also tied to income inequality and high rates of relative poverty, relative lack of social mobility, and failure to keep pace with improving educational outcomes in other countries.

The IOM report includes the following table from a 2013 publication by McGinnis on the percentages of proximate preventable factors causing premature mortality.

- IOM continues on page 7
“...firewall between research and its policy implications, which has been in effect for 25 years, is one way in which we try to keep the pursuit of knowledge separate from the consideration of its consequences.”

Epidemiology does not reject commentary articles focused on policy but simply does not accept such commentary within the body of research articles. There is support for the separatist position in scientific and even in policy circles because of the need for scientists to be perceived as objective about generating data.

It’s their very detachment, what you might call the cold-bloodedness of science, that makes science the killer app according to an article in National Geographic (3). However, there is irony in that the report is about why people doubt science, and it makes clear that the facts do not speak for themselves, no matter how objective they may be.

Not Advocacy

Frumkin in his commentary does not go so far as to urge that environmental epidemiologists should be advocates, and he recognizes the importance of research not directed specifically at improving health outcomes. He acknowledges that research consequentiality is difficult to measure. He ends by urging that his 9 features should not be used to disqualify certain types of work, but rather should be used as a set of questions to help epidemiologists set priorities in how they invest their time and skills.

His view is echoed in a quote he uses from Bill Foege who asserted that epidemiology is a tool to change the world, not merely to study the world. In Frumkin’s view, the policy at Epidemiology is in sharp contrast and a formidable barrier to addressing public health improvement.

(1 & 2)  http://tinyurl.com/k4qmca
(3)  http://tinyurl.com/njvkag

Observers Speak Out On Frumkin and Lash Commentaries

The Epidemiology Monitor invited members of the International Joint Policy Committee of the Societies of Epidemiology to review and comment on the articles by Frumkin and Lash. Two representatives, Raymond Neutra, and Fiona Sim offered the following reactions to these two pieces.

To The Epidemiology Monitor:

As joint editor-in-chief of Public Health, I ask what is the value of epidemiology that is not ‘consequential’? De facto, it surely becomes ‘inconsequential’, which seems no way to encourage the best emerging scientific brains to participate in this essential pursuit of a core public health science.

Epidemiology that is relevant to the promotion or protection of human or planetary health is central to the promotion or protection of population health. It is standard practice at Public Health to question the potential value to public health policy or practice of epidemiological

- Comments continue on page 7
Contest on Best Advice From An Epidemiologist Receives Multiple Entries

The Epidemiology Monitor has received multiple entries in our new contest launched last month to identify the best advice from epidemiologists on how to live your life. We were inspired to create the contest after reading advice from different animals and other parts of the natural world published by the Earth, Sun, and Moon trading company (e.g., advice from a tree, Go out on a limb, and Drink plenty of water).

Sample Entries

Below are sample entries we have received along with a reprint of the rules for the contest. We hope these entries will prompt further competition from our readers seeking to provide equally or more helpful advice in keeping with the deep wisdom of the epidemiology profession! Our first prize is $300.

Some of the advice from epidemiologists received so far:

Don’t be afraid to be normal.

Try to make a difference in the world, or at least detect one.

Push your confidence limits.
Don’t let outcomes confound you.

Make your associations strong.

Survival is important: but remember, in the long run we’re all dead.

Watch out for bias.

Eat dessert first; and eat the potato salad never.

Contest rules

Submit the most clever double-entendre pieces of advice from an epidemiologist’s perspective and win a $300 prize. Keep your pieces of advice short. Second and third place winners will also be rewarded.

Deadline for submission is May 15. If duplicate entries are received, the prize will be awarded to the earliest submissions. We reserve the right to make the final decision. All submitted entries become the property of The Epidemiology Monitor.

Send your entries to epimon@aol.com

Enter our "advice" contest to win $300. Second and third prize winners get to choose one of these shirts.
"We are honored and humbled that our peers have once again made us the No. 1 school of public health..."

Methods

Respondents rated the academic quality of programs on a scale of 1 (marginal) to 5 (outstanding). They were instructed to select "don't know" if they did not have enough knowledge to rate a program.

Fifty Schools of Public Health accredited by the Council on Education for Public Health were surveyed in the fall of 2014 and ranks calculated in 2015. The top 20 ranked schools along with their scores are listed below.

<table>
<thead>
<tr>
<th>Rank</th>
<th>School</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Johns Hopkins</td>
<td>4.8</td>
</tr>
<tr>
<td>2</td>
<td>Harvard</td>
<td>4.7</td>
</tr>
<tr>
<td>2</td>
<td>UNC Chapel Hill</td>
<td>4.7</td>
</tr>
<tr>
<td>4</td>
<td>Univ of Michigan</td>
<td>4.5</td>
</tr>
<tr>
<td>5</td>
<td>Columbia</td>
<td>4.4</td>
</tr>
<tr>
<td>6</td>
<td>Univ of Washington</td>
<td>4.2</td>
</tr>
<tr>
<td>7</td>
<td>Emory</td>
<td>4.1</td>
</tr>
<tr>
<td>8</td>
<td>Univ of Minnesota</td>
<td>4.0</td>
</tr>
<tr>
<td>9</td>
<td>UC Berkeley</td>
<td>3.9</td>
</tr>
<tr>
<td>10</td>
<td>Boston University</td>
<td>3.6</td>
</tr>
<tr>
<td>10</td>
<td>UCLA</td>
<td>3.6</td>
</tr>
<tr>
<td>12</td>
<td>Tulane</td>
<td>3.5</td>
</tr>
<tr>
<td>13</td>
<td>Univ of Pittsburgh</td>
<td>3.4</td>
</tr>
<tr>
<td>14</td>
<td>George Washington Univ</td>
<td>3.2</td>
</tr>
<tr>
<td>14</td>
<td>Yale Univ</td>
<td>3.2</td>
</tr>
<tr>
<td>16</td>
<td>Univ of South Florida</td>
<td>3.1</td>
</tr>
<tr>
<td>17</td>
<td>Univ of Illinois</td>
<td>3.0</td>
</tr>
<tr>
<td>17</td>
<td>Univ of Iowa</td>
<td>3.0</td>
</tr>
<tr>
<td>19</td>
<td>Ohio State</td>
<td>2.9</td>
</tr>
<tr>
<td>19</td>
<td>Univ of Alabama</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Many of the Graduate Schools have publicized their standings in the rankings focusing either on the rank itself, on being in the top 10, or on progress made in the rankings since the last release. For example, the dean of the school at Johns Hopkins issued this statement--

"We are honored and humbled that our peers have once again made us the No. 1 school of public health in the United States, even during this time of explosive growth in public health education," said Michael J. Klag, dean of Bloomberg School.

Sandro Galea had this to say after BU was named in the top ten.

“I think this reflects the extraordinary work of our faculty, students, and staff over the school’s history...It also represents a recognition of our commitment to be both a global leader in public health scholarship and to train the next generation of the public health workforce with a ‘real world’ approach to empowering communities, locally and globally.”

For a complete list of the rankings of all 50 schools surveyed, visit: http://tinyurl.com/o7otf6d

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http://tinyurl.com/boao7e5
In a summary of the findings from the various national and international studies, the IOM report states that recent analyses of the behavioral determinants of premature mortality suggest that the risk factors amenable to change account for between 35-50% of early deaths in the United States.

Included among the tasks for the IOM workshop were to consider the state of the science of measuring the determinants of the causes of premature death, assessing the availability and quality of data sources, and identifying future courses of action to improve the understanding of the “causes of the causes” of early deaths.

Among the important suggestions made for improving data sources was the incorporation of social and economic factors among the risk factors for premature mortality. In fact, one workshop participant Christine Bachrach stated that “more data and research are needed to strengthen the basis for communicating about the importance of social factors because they are deeply intertwined with and shape behaviors that are important to health outcomes. Therefore, a focus only on behaviors as health determinants is seriously misleading,” according to Bachrach.

In research manuscripts submitted to the journal: those manuscripts that appear to be ‘inconsequential’ in that they have intentionally not addressed the potential utility of their findings, are unlikely to pass initial editorial review.

Fiona Sim

To The Epidemiology Monitor

Since I spent my career doing environmental epidemiology, I am of course sympathetic to Howard Frumkin’s sentiments. I would also add some thoughts:

1) There are other drivers of research priorities than the utilitarian aim of maximizing the nation’s quality

"...a focus only on behaviors as health determinants is seriously misleading,"


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<table>
<thead>
<tr>
<th>Cause</th>
<th>1990 % of total deaths</th>
<th>2010 % of total deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Diet/Activity patterns</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Alcohol</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Microbial agents</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Medical errors</td>
<td>NA</td>
<td>3</td>
</tr>
<tr>
<td>Toxic agents</td>
<td>3.</td>
<td>2.5</td>
</tr>
<tr>
<td>Firearms</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Illicit use of drugs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>All causes</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

-Comments continued from page 4

- Comments continue on page 9
Why People Doubt Science

The recent Disneyland measles outbreak in the US and the controversy about vaccination highlights that medical and scientific consensus is not sufficient to convince some people about what to believe. A timely article in National Geographic entitled “Why Do Many Reasonable People Doubt Science” explains that whether or not people accept facts has a lot to do with whether or not those facts reinforce preexisting beliefs.

Those beliefs in turn are motivated largely by emotion, according to the article, and greatest motivation is sticking with your “tribe” or people who share your fundamental values. One approach to changing people’s minds is to have them learn the facts from trusted persons they identify with. To read the full article, visit:

http://tinyurl.com/njvvkag

Critic Responds To Criticism

Last month we published an article about a review to be published in Environmental Health Perspectives (EHP) in late February on criticisms which have been made in the recent past of the monograph process at the International Agency for Research on Cancer (IARC). The more than 100 authors of the paper had found the criticisms of the IARC monograph process “unconvincing”.

Now one of the critics has punched back. In an article in Forbes where he is a contributor, Geoffrey Kabat likens the review to the use of “an elephant gun to kill a gnat.” He asserts the multi-authored paper focuses on generalities and does not address specifically the criticisms made.

Kabat accuses the IARC review authors of not doing their homework well enough to find an article he wrote in Forbes which he says exonerates him from the charge that he made sweeping and undocumented statements about scientists dissociating themselves from the IARC monograph process.

One thing the critic and his critics agreed on, and that is they both value criticism. Read the article to decide for yourselves at:

http://ehp.niehs.nih.gov/1409149/

UN Official Urging No Let Up In Fight Against Ebola

David Nabarro, special envoy of the Secretary-General on Ebola, told IRIN news that he is “fully confident” that Ebola can be brought under control in the next few months, however, he is quick to add there should be no let up in efforts yet. The Ebola outbreak peaked last September when 1000 cases per week were being reported. That number eventually fell to 100 cases per week in December and January and has remained at that level ever since, according to Nabarro. The major challenges now are earning enough trust in affected communities to be able to carry out effective contact-tracing, having good surveillance data on new cases, having skilled staff in place to do the contact-tracing, and providing good support to the responders.

Nabarro says it is too early to draw any lessons learned from this outbreak.

View the article at: http://tinyurl.com/purom5h
Digital Epidemiology Seen As Promising Tool of the Future

“By 2020, there will be 6.1 billion smartphone users, so it is high time to get serious about digital epidemiology.” That’s the opinion of Marcel Salathe at Penn State University writing for The Conversation website. He defines digital epidemiology as assessing the health of the population in real time using digital traces.

Reviewing examples of digital epidemiology to date, the overview cites the now familiar use of google search data to examine flu trends. Also, Twitter has been used to track disease activity, assess health sentiments, and monitor drug safety. Wikipedia access logs have been enlisted to monitor and forecast disease. Mobile phone data have been used to estimate population movements during disasters and travel patterns related to the spread of malaria.

Mobile Apps for Epi

An intriguing possibility according to Salathe is the use of apps to self-diagnose disease. The article claims we could be using smartphones as mobile clinics and contains a picture of a doctor using a smartphone to conduct an eye exam in Kenya.

Another observer at the South by Southwest Festival, according to Mashable.com is even more specific about the potential of smartphones. “Imagine if your checking your phone 150 times a day — which is the average — what if sometimes you’re getting a facial scan that measures your blood pressure, your heart rate, something else and you’re collecting this massive biometric cloud in the sky while you’re just opening stuff...With this type of density of data just from the invisible—just from opening devices—you could potentially be transforming healthcare.”

To read the overview, visit: http://tinyurl.com/mbukd2k

To read the Mashable article, visit: http://tinyurl.com/m7jl8gp

adjusted DALY’s. When a small environment or work place conveys unfair and unacceptable risks, its research and abatement is a priority even though there is little impact on the national DALY count.

2) The tendencies that Howard wants to reverse are caused more by the way research is funded and less by misguided education and defective attitudes of individual epidemiologists. How could CDC and NIH frame their funding to achieve these worthy goals?

3) That being said, if I were king, I would make epidemiologists study quantitative decision analysis, cognitive psychology and political science so that they had the intellectual tools to understand the policy processes to which they hope to contribute. They need to understand the culture of the other disciplines with which they will be working and how to translate the probabilistic inconvenient truths that they produce so that they are intelligible to others.

Raymond Neutra
Postdoctoral Position Clinical Epidemiology
Boston University. Available July 1, 2015

Candidates should: Be a US citizen or permanent resident, have a doctoral degree in epidemiology or biostatistics, w/ excellent programming & communication skills. The Department with over $10 million in federal grants focuses on the epidemiology of musculoskeletal disorders, rheumatic diseases and aging. Prospective candidates should be highly motivated with an ability to work well in groups and communicate ideas clearly to persons of different academic backgrounds. Please submit a cover letter summarizing your experience, research interests and career goals, PDF of up to 3 representative publications and CV including names and contact information of 3 references by email to Sharon Tomlinson stomlin@bu.edu

Boston University is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.

Epidemiology
Tenure-track or Tenured Faculty Positions

Applications are being accepted for two faculty positions at the rank of Assistant, Associate, or Full Professor at Vanderbilt Epidemiology Center (www.mc.vanderbilt.edu/epidemiology), Institute of Medicine and Public Health. Currently, more than 50 epidemiologists at Vanderbilt are conducting multiple clinical and population-based studies, including three large cohort studies in the U.S. and abroad with survey data and biological samples from approximately 225,000 study participants. Areas of ongoing research include diet and nutrition, environmental exposures, genetic and other biomarkers for disease risk and progression, health behaviors, reproductive epidemiology, and racial disparities in health outcomes. The center is particularly interested in expanding its research and training programs in chronic disease epidemiology.

Candidates should have a doctorate in epidemiology or a related field with additional training or experience in epidemiologic research. Successful candidates are expected to develop and sustain an independent research program in chronic disease epidemiology. Exciting opportunities exist to work on cohort consortium projects and collaborate with existing faculty on multiple ongoing research projects in epidemiology.

To apply, email a cover letter – including a brief summary of research experience and interests – and curriculum vitae to mailto:kin.kreth@vanderbilt.edu. The cover letter salutation line should be directed to: Dr. Wei Zheng, c/o Kim Kreth, Vanderbilt University Medical Center, 2525 West End Ave., 8th floor, Nashville TN 37203-1738.

Vanderbilt University, is one of America’s premier private universities. Vanderbilt School of Medicine is one of the top 15 medical schools for research in the United States (US News and World Report, 2014), and in the Top 10 for NIH funded research. Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.
The University of Minnesota’s School of Public Health (SPH) is seeking a tenured Professor and Head for the Division of Epidemiology and Community Health (EpiCH) to provide strategic and academic leadership for the Division’s 52 primary faculty, more than 300 graduate students, 400 staff, and approximately $25 million annually in sponsored projects research on the etiology and prevention of disease. Visit http://sph.umn.edu/epi for more information on the Division.

Reporting to the Dean of the School of Public Health, the Professor and Head will:

- serve as the chief administrator of the Division and as a member of the SPH Executive Team, building and nurturing its strategic vision and resources to achieve its missions in collaboration with SPH leadership;
- supervise, prepare, implement and monitor the Division budget that encompasses all funding sources and ensures compliance with grant, legislative, and institutional guidelines as well as effective management of Division resources;
- be responsible for advancing and participating in the Division’s diverse spectrum of interdisciplinary research, teaching, and service by leveraging and expanding the Division’s, School’s, and University’s strengths;
- support collaborative activities that cut across the University and community;
- recruit and retain excellent faculty, particularly those from underrepresented backgrounds, and encourage their development with strong and effective mentorship;
- foster a learning environment that attracts a diverse student body;
- strengthen collegial and collaborative culture that is inclusive, diverse, supportive, and values strong faculty governance; and
- maintain an active scholarship portfolio including external funding and peer-reviewed publications.

Candidates must have a Ph.D., Sc.D., M.D., or equivalent degree in a health-related related field and credentials commensurate with appointment as a tenured full professor in the SPH. Candidates are expected to have a nationally/internationally recognized record of research and scholarship, including external funding; demonstrated excellence in graduate program teaching; and documented experience in mentorship, leadership and management in a large diverse academic institution. Applications will be reviewed beginning March 15, 2015, and the position will be open until filled. To apply for the position, please submit a cover letter, CV including publications list, and a list of at least three referees on-line using the following link: http://employment.umn.edu/applicants/Central?quickFind=126753. Reference requisition number 196055. Salary will be competitive and commensurate with qualifications and background.
The Geisel School of Medicine at Dartmouth invites applications for a tenure-track Assistant or Associate professor position with a research emphasis in molecular epidemiology. The appointment will be in the Department of Epidemiology with an affiliation with the Center for Molecular Epidemiology at Dartmouth. Additional affiliations within a broad range of innovative interdisciplinary research centers are available including the Norris Cotton Cancer Center, Dartmouth SYNERGY and the Children's Environmental Health and Disease Prevention Research Center. Teaching and interaction with undergraduate, graduate, and post-doctoral fellows are available, including through our Institute of Quantitative Biomedical Sciences PhD program and other programs.

Applicants should hold a doctoral degree (PhD, MD) or the equivalent - for MD applicants an MPH or MS degree in epidemiology is desirable. Strong preference will be given to applicants with an established track record in interdisciplinary collaboration as well as innovative ideas and experience from which to build a strong extramurally funded research program.

Founded in 1797, the Geisel School of Medicine at Dartmouth draws on the resources of Dartmouth College, Dartmouth-Hitchcock Medical Center and the Norris Cotton Cancer Center to support broad interdisciplinary programs in biomedical research, education, patient care and service. The newly formed Department of Epidemiology offers a growing research program with diverse areas of expertise such as molecular-genetic epidemiology, nutrition and chemoprevention, epigenetics, children's health, cancer, environmental health, pharmacoepidemiology, global studies and much more.

Review of applications will begin immediately and continue until the position is filled. Submissions should include a letter describing the background and interests of the applicant, curriculum vitae, and names and contract information for three references.

Geisel School of Medicine is an equal opportunity/affirmative action employer with a strong commitment to diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, persons of color, persons with disabilities, veterans or any other legally protected group.

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The Bureau of Epidemiology Services (BES) is dedicated to collecting, analyzing and communicating data to monitor and improve the health of New Yorkers. BES uses traditional and innovative methods to provide accurate and timely health data and thoughtful analyses to inform decision-making both within and outside of DOHMH. Also, BES uses a multidisciplinary and collaborative approach to serve and respond to the changing needs of New York City's diverse population.

The Bureau is currently seeking to hire:

**ASSISTANT COMMISSIONER** $60,740-$162,014 **(Salary commensurate with experience)**
Reporting to the Deputy Commissioner of the Division of Epidemiology, the Assistant Commissioner will oversee and manage all activities within BES including research, surveillance, scientific reporting and administration. For a full description of this position and to apply use the following link: [Job ID# 161483](#)

**CIDI DATA ANALYST** $83,133 - $107,826 **(Salary commensurate with experience)**
The Data Analyst will work jointly with the Center for Innovation through Data Intelligence (CIDI) on specific health-related projects and serve as the primary project manager for mutually beneficial initiatives. For a full description of this position and to apply use the following link: [Job ID# 185134](#)

**DIRECTOR, RESEARCH AND EVALUATION** $83,133 - $107,826 **(Salary commensurate with experience)**
The Director will be responsible for the day-to-day management and development of the Research and Evaluation Group as well as oversee the conduct of current research and evaluations projects within the unit. For a full description of this position and to apply use the following link: [Job ID# 171254](#)
The course, now in its 28th year, is intended for epidemiologists, statisticians, clinicians and public health practitioners with an interest in epidemiology. The course offers in the first two weeks five general modules on epidemiological study design and statistical analysis if epidemiological data, and in the third week seven special modules on topics of current relevance for health and advanced methodological issues. The course is taught in English by lecturers mostly from European universities and research institutes and is held in residential form in the “Studium” centre on the hills of Florence.

**Week 1, 22 June – 26 June 2015**
- Epidemiological methods I : Basic principles and introduction to study design. Neil Pearce, Lorenzo Richiardi, Franco Merletti
- Statistical methods in epidemiology I: Basic principles. Simon Cousens and Costanza Pizzi

**Week 2, 31 June – 3 July 2015**
- Epidemiological methods II: Case-control studies. Jørn Olsen, Manolis Kogevinas
- Statistical methods in epidemiology II: Analysis of cross-sectional and case-control studies. Cono Ariti, Aurelio Tobias
- Computer analysis of epidemiological data sets. Manolis Kogevinas, Stefano Mattioli, Aurelio Tobias, Stefania Curti, Chunsen Wu, Jørn Olsen

**Week 3, Special Modules 6 July – 10 July 2015**
- Advanced statistical topics. Per Kragh Andersen, with Annibale Biggeri, Corrado Lagazio and Michaela Baccini
- Key and advanced concepts in epidemiology. Jan Vandenbroucke
- Environmental epidemiology. Josep M. Antó and Jordi Sunyer
- Clinical Epidemiology. Patrick Bossuyt
- Fertility and Pregnancy: an epidemiologic perspective. Debbie Lawlor
- Concepts and methods in causal mediation analysis. Bianca DeStavola
- From personalized to global public health. Nicole Probst-Hensch and Nino Künzli

**Evening Distinguished Lectures:** Rodolfo Saracci, Jørn Olsen and Nino Künzli

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