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THE EPIDEMIOLOGY MONITOR
A monthly update covering people, events, research and key developments

An Interview With Co-Author Ken Rothman On Publication Of Modern Epidemiology, 3rd Edition

The flyers announcing the new edition of Modern Epidemiology appeared in epidemiology mailboxes last month. Because of the role of the book as a source of guidance or reference for many epidemiologists, we interviewed Ken Rothman, one of the new edition's three co-authors who also include UCLA's Sander Greenland and Boston University's Timothy Lash.

EM: How long has it been since the second edition appeared?

Rothman: The second edition appeared in 1998, 12 years after the first edition. With this edition, we are shortening the cycle slightly. Books that focus on concepts and methods usually do not require as short a revision cycle as substantive books, but epidemiologic methods have been evolving quickly, and ten years is certainly enough time to warrant a complete rewrite.

EM: Who is the third author and how did he come to be included as a new author on this edition?

Rothman: The third author, Tim Lash, is an accomplished teacher of epidemiologic methods as well as my colleague at Boston University. He has

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Nancy Krieger Gives UNC Keynote Lecture On Racism and Health

Audience Questions Focus On What Steps Can Be Taken To Eliminate Disparities

Nancy Krieger, Harvard University social epidemiologist, gave the 10th annual William Small Keynote address in late February at the University of North Carolina's Annual Minority Health Conference. The first part of her talk, entitled "The Science and Epidemiology of Racism and Health in the United States: an Ecosocial Perspective", was devoted to debunking the often heard concept that race is genetic or that race is about gene frequency differences. According to Krieger, what matters is gene expression and not gene frequency, and she called race/ethnicity "a historically contingent social category with biological consequences." In other words, race/ethnicity is a social and not a biological construct, and the fact that disparities in health exist says more about society than it does about biology, according to Krieger.

However, she argued for the usefulness of race/etnicity as a social category because it can provide

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evidence of discrimination that then can be used to argue for countermeasures. "No data" could be interpreted to mean "no problem", according to Krieger, and that would be misleading.

"...inequities in health are not immutable..."

Premature Mortality

She used part of her time to present information from a recent paper published in PLoS Medicine on "The Fall and Rise of US Inequities in Premature Mortality: 1960-2002". The main purpose of this work was to examine what happens to the gap in income and health disparities between populations when the overall population health improves as it did in the 42 year period indicated in the title of the paper. The work was prompted in part by speculations that health disparities are inevitable because efforts to improve health of the less well off would also be taken advantage of by those better off and therefore disparities would remain. Krieger found that actually the gap narrowed during the early period 1966-80 and later widened after 1980. If the entire US population had done as well as those most well off during this 42 year period, an estimated 14% of the deaths among whites and 30% among persons of color would have been prevented. These figures equate to 4.9 million lives cut short, according to Krieger. The major point from the work is not the uniqueness of the findings but the implication that inequities in health are not immutable. As Krieger told the audience, "death is inevitable. Premature mortality is not. If we make reducing disparities a priority, progress is possible.

"Some people have different burdens..."

Audience Questions

Following her presentation, Krieger fielded several questions from the listeners, many of whom were interested in knowing how to convince others about the validity of these findings and how to translate them into public health action. In responding to the questions, Krieger made several points, including the following:

1. Inequities can be clearly shown to be due to social causes and not to the failure of individuals. "The evidence is in" on this point said Krieger. It is not that people are making bad choices or that they are not trying hard. Some people have different burdens, she said.

2. Problems in establishing causation are not unique to social epidemiology, Krieger reminded the audience, but are relevant for all of observational science. She used the example of hormone replacement therapy where confounding by social class was ignored and what investigators thought was a benefit in preventing heart disease turned out to be wrong and led to substantial increases in risk of breast cancer. "We misunderstood the problem," she said, "for failure to truly focus on the science". She suggested that there are innovative ways for investigators to collect data and "triangulate" information from different sources to reach conclusions about what the science is really saying.

3. When asked about how embodiment of social inequities operates in the workplace, Krieger noted that the workplace not only produces specific recognized exposures such as dust or chemicals but that work takes place in a social context which has its own social hazards, such as sexual harassment, and these can have health effects.

4. When asked about the most important steps that people could take to reduce disparities, Krieger noted that different skills are needed to turn data into action. Epidemiologists are primarily devoted to the collection of

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evidence, but they are not normally devoted to advocacy or policy work. She urged scientists to be in communication with advocates and policy persons, saying "as a scientist I can't fix society, but I can work with others." One important point she repeated several times was the need for public health professionals to work intersectorally, for example, with professionals in corrections, housing, transportation, etc. Third, she also noted that as a scientist she could think ahead of time about the potential policy relevance of her work. Finally, she said an important step for action is to appeal to broad public discourse about the findings on social inequities so that citizens might better sort out the priorities for the kind of society we want.

Imagine Being HHS Secretary

5. In a similar vein, Krieger was asked what she would do about health disparities if she was Secretary of the Department of Health and Human Services. She demurred saying that those in government would be more insightful, however, she noted that sometimes the perspectives of outsiders can be valuable.

Her first intervention would be proper monitoring of inequities. She returned to the point described earlier in her talk when she said that "no data" did not equate to "no problem". In some situations, we have too little information to know if we have a problem or not, she said. Second, she would increase funding for public health. She noted that only 1% of health dollars are devoted to public health, and that we need "much, much more". Thirdly, she returned to her point about the need for public health to work more intersectorally to help others to see that health is a goal in and of itself, and that not everything should be geared to economics. She called health inequities "unwarranted and unacceptable".

6. Krieger was also asked how consumers could be ambassadors of change. She quickly expressed her distaste for conceiving of the people as consumers when thinking of government and prefers to think of people as citizens. Too much focus on consumers leads to too much focus on individualism which then leads to seeing people as victims and not seeing what binds people together, she said. She argued for seeing the relationship between government and the people as being one of partners, producers, creators.

"...as a scientist I can't fix society, but I can work with others."

And she added that change can be good or bad so we need to ask about change towards what end or goal. She indicated that citizens could be involved in reinvigorating social equity as a goal or measure of progress and not gross domestic product since this measure says nothing about the concentration of wealth. We need more opportunities in which to talk about social justice, human dignity, and human rights, she said, not to "guilt trip" people, but simply to better understand the present in working for a better future.

"...health is a goal in and of itself..."

7. Krieger was asked about the impact of a universal health care system on health disparities. She began by pointing out that sometimes a good health care system is key to addressing the problem at hand, such as when someone is diagnosed with breast cancer. The treatment you get matters. What is meant by universal health care is important to know since if a single payer health system is envisaged, then she could imagine fewer inequities related to prognosis as for example with diabetes. However, the quality of care

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also has impact, so that full coverage in a single payer system with quality health care and a culturally competent health workforce would be needed to tackle health disparities, she said.

8. When asked yet again about translating data into policy, she noted the need for public discourse and for work at each level starting with the community and then extending to the county and then the state. She said that entrenched problems such as social inequities are entrenched for a reason and that it is important to understand these reasons. The problems do not persist because no one has tried or no one has succeeded, but we can go further, she said, and there is much room for improvement.

In closing the session, moderator Adaora Adimora thanked Krieger for her breadth of knowledge, incisive thinking, and commitment to the cause of reducing disparities. Said Adimora, "you're an inspiration to all of us."

To listen to the webcast, visit: http://www.minority.unc.edu/sph/minconf/2008/webcast/ ■

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- The U.S. child poverty rate (21.9%) is five times that of Sweden (4.2%). When it comes to social spending, the figures are reversed: Sweden allocates 18% of its GDP to social spending while the U.S. allocates 4%.
- People in the highest income group can expect to live, on average, at least six and a half years longer than those in the lowest. Those in the middle (families of four making $41,300 to $82,600 a year in 2007) will die, on average, two years sooner than those at the top.
- Low-income adults are 50% more likely to suffer heart disease than top earners. Those second from the top are almost 20% more likely than those at the top.
- College graduates can expect to live at least five years longer than those who have not finished high school, and almost two years longer than those who didn't finish college.
- Children living in poverty are about seven times as likely to be in poor or fair health than children living in high-income households. Middle class children are twice as likely to be in poor or fair health than those at the top.
- Low-income smokers are more likely to become ill and die sooner from tobacco related diseases than smokers who are wealthy.
- The top 1% of the U.S. population holds more wealth than the bottom 90% combined. During the past 25 years, while the rich became richer, the net worth of the least affluent 40% of American families fell by half.
- African American males living in Washington, D.C. have a lower life expectancy (57.9 years) than men living in Bangladesh (58.1) and Ghana (58.3).
- The Pima Indians of southern Arizona suffer one of the highest diabetes rates in the world. One study found 40% of Pima adults are afflicted,

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