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ETS: Science by Press Release

By Frank E. Resnik

All too often epidemiologic science, the study of disease patterns, is held up to be truth, popularly reported as such and used to affect social agenda. Later, if the conclusions or editorial comment by researchers are found by peer review to be inadvertently deceptive or conceptually flawed, it is too late to correct original perceptions.

The entire debate on environmental tobacco smoke (ETS) is a prime example of this social science, the most recent case being a New York study concerning detection of trace amounts of cotinine in the urine of non-smokers.

This study, like others, was popularized before traveling the traditional route of peer review and publication by a scholarly journal.

Scientists should be alarmed at what some suspect was the ulterior motive in releasing the study: using the news media and what I call "science by press release" to influence public policy. This study's release coincided with New York state political activity surrounding indoor air legislation.

The cotinine case is another symptom of a pervasive trend where scientific findings are overpopularized by the media, creating unwarranted anxiety in the public's mind.

In December 1988, the journal *Environment International* published an article by Judson Wells, who estimated that 46,000 people die each year from heart disease and cancer caused by ETS. The findings were widely reported by major news media.

In the same issue, the magazine's editorial expressed concern over the validity of the original data, their application to risk assessment and the statistical treatment of the subject. One reviewer even recommended rejection on the basis that the paper was "too speculative."

Unfortunately, neither the editorial nor the peer review aspect was reported by the general interest news media. Even Wells said of his study two years earlier, "If people are looking at this (estimate) as a proven number, that is not the case."

Another disturbing example was an article by Martha Slattery published in the March 1989 *Journal of the American Medical Association (JAMA)*, which concluded that cervical cancer is linked to ETS.

The media, unable to identify the numerous methodological flaws in the study, dutifully reported this research discovery. An accompanying JAMA editorial on the study raised serious questions concerning the validity of the paper, but it received no media mention.

National attention was focused on ETS, obscuring the significant role of the Human Papilloma Virus (HPV) in cervical cancer. The reality is that a woman who totally avoided ETS would still be at risk.

Unfortunately, reporting on HPV and its probable association to a sexually transmittable disease was limited due to initial media reports linking the cancer to ETS. Meanwhile, HPV now has reached epidemic proportions in this country.

Is our public health being served by this irresponsible use of social science by press release?

Epidemiologic science should be news only when it is determined, confirmed by replication and supported by appropriate peer review that a certain level of any substance produces an indisputable link or is the cause of any disease.

A scientist's job is neither to push political or social goals nor to tailor research to be used to that end. But the news media should not allow itself similarly to be used. *ll*

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