Dr. Brandt's Response: AIDS Is Not the Only Priority

Thank you very much for the opportunity to respond to Dr. James A. Lutschg. Dr. Lutschg's points are very well taken. There is no question that I did announce that AIDS was the Public Health Service's number one priority. However, at no time did I suggest that it was the only priority. With respect to his concerns about cigarette smoking, be assured that I agree that cigarette smoking is the most important preventable health problem that we face. My references to drunk driving, drug abuse, and so forth, were in the context of the necessity to work with law enforcement agencies. I was not trying to say or imply that any of those areas exceeded the importance of cigarette smoking.

Thank you very much for this opportunity to comment. I am delighted to learn that Dr. Lutschg read this article with such interest.

I have received a number of other responses to the article. Indeed, I was asked to address the annual meeting of the Association of Public Health Dentists to emphasize dental problems, and I have also heard verbally from a number of other people. It has clearly stimulated the interest that I was hoping for.

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The "Guidelines" on Reporting Reproductive Health Statistics Tend to Confuse Rather than Clarify

Standardization of terminology in the field of reproductive health would be welcomed by the researchers and practitioners in the field. However, the guidelines of the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (reprinted in *Public Health Reports*, September-October 1988 pp. 464–471) tend to confuse rather than clarify the matters in some respects.

The report makes a distinction between rate and ratio. While defining rate, it states that "events in the numerator of the rate occur to individuals in the denominator." On the other hand, ratio is defined as a "relationship of one element to a *different* (emphasis original) element (where the numerator is not necessarily a subset of the denominator)."

The following set of computational formulae illustrate this distinction:

$$\text{Fetal Death Ratio} = \frac{\text{Number of fetal deaths} \times 1{,}000}{\text{Number of live births}}$$

$$\text{Fetal Death Rate} = \frac{\text{Number of fetal deaths} \times 1{,}000}{\text{Number of live births} + \text{number of fetal deaths}}$$

To reconcile the above computational formulae with the definitions one has to assume the following: when the relationship between fetal deaths and live births alone is measured, the numerator and the denominator constitute two different elements since fetal deaths do not occur to live births. Therefore, this relationship is termed a ratio. However, when fetal deaths are added to live births in the denominator, fetal deaths in the numerator become a subset of the denominator which represents all pregnant women, except those who have induced terminations. In other words, the relevant population at risk consists of all pregnancies intended to end in live births.

However, the above criteria do not seem to have been applied uniformly. Take, for example, the measures concerning induced terminations. "Induced Termination of Pregnancy Ratio I" is quite straightforward since the terminations in the numerator are not a subset of the denominator (live births). However, the following relationship is termed "Induced Termination of Pregnancy Ratio II":

$$\frac{\text{Number of induced terminations} \times 1{,}000}{\text{Number of induced terminations} + \text{live births} + \text{fetal deaths}}$$

The denominator above includes the complete population at risk, that is, all pregnancies, and the numerator is a subset of the denominator. Why, then, has this measure been termed a ratio rather than a rate? There appears to be no other reason for doing so except for reserving the term "rate" for describing the relationship between induced terminations and female population 15–44 years. Even though it is the pregnant women rather than all women 15–44 years who constitute the group at risk for induced termination, by the definitions provided in the report this relationship can technically be termed as a rate. However, if this logic were applied to the measures of fertility, only Crude Birth Rate would qualify as a rate.

Let us take another example:

Maternal Mortality Rate: It is defined as number of deaths attributed to maternal conditions, per 100,000 live births. The report points out that the proper denominator should include all fetal deaths and all induced terminations of the pregnancy, in addition to all live births. But the report falls short of calling the existing measure "maternal mortality ratio," and recommending that the proposed new measure be called "maternal mortality rate."

Since rate is a type of ratio, perhaps a certain amount of arbitrariness is inevitable while drawing a line between "rates" and "ratios." However one would expect an expert committee to be at least consistent in its arbitrariness while recommending standard terminology.

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