Things I Don't Know about Epidemiology

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The worlds of health physics and epidemiology intersect and overlap whether talking about high or low level radiation exposures. Above 0.2 sievert (Sv) there is relatively little controversy about the probabilistic health effects. It is in the low dose range, and particularly below 0.1 Sv, that many very important questions reside. This presentation examines certain epidemiological methods that may give pause to health physicists. The analysis is necessarily simplistic and focuses on some of the underlying assumptions common to many epidemiological studies of low dose effects with the intent to identify and focus on the gaps in communications in order to better define the sources of controversy.

Many thanks to Dr. Brant Ulsh whose presentation, "Low and Slow: It's Different Down Here" at the Annual Meeting of the Health Physics Society in Madison, Wisconsin (July 2013) inspired me to publically admit that, like Dr. Ulsh, I'm not an epidemiologist, but I still like to talk about it.

Biographical Information

Barbara L. Hamrick, JD, CHP, is the Radiation Safety Officer at the University of California (UC), Irvine Medical Center. Barbara received a BS and an MS in physics from UC Irvine, in 1985 and 1987, respectively. She earned a law degree in 1999 from Loyola Law School in Los Angeles and is an active member of the California State Bar. In 2002, Barbara was certified by the American Board of Health Physics.

Prior to joining the UC Irvine Medical Center team, Barbara worked as an instructor and consultant for Dade Moeller & Associates. Before that, Barbara spent nearly 20 years as a health physicist in regulatory programs at the federal, state, and local levels. During that time, Barbara served as Chair of the Organization of Agreement States during 2005-06.

Prior to taking office as President-Elect of the Health Physics Society, Barbara served on the Society's Board of Directors as Secretary (2010-13) and Director (2007-10). Barbara is also currently serving as a member of the National Academies of Sciences Committee on Lessons Learned from Fukushima.