Response to Invited Commentary

Delnevo et al. Respond to “Topical Threats to Epidemiology”

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We appreciate Dr. Dunn’s commentary (1) on our paper (2) and agree that epidemiologists must be questioning, flexible, and creative in our methods. Moreover, we feel it is paramount to implement these methods in a rigorous manner. Our research, which analyzed data from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS), highlighted wireless substitution and its impact on health estimates, as problematic for a specific subgroup, young adults. Recent projections based on data from the National Health Interview Survey suggest that the percentage of young adults living in cell-phone-only households will exceed 50 by the end of 2008 (S. J. Blumberg, National Center for Health Statistics, personal communication, 2007). In her commentary (1), Dunn makes many valid points, though not all of them are specific to health surveys of the general population (e.g., access to medical records). As such, we limit our response to issues relevant to survey research and surveillance.

Dunn notes that the use of random digit dialing (RDD) is less common in countries where household landline telephone service has historically been lacking. Not surprisingly, in recent decades these countries have tended to have the greatest growth in cellular phone usage (3). Indeed, some European Union countries with historically low rates of landline phone use, such as Hungary and the Czech Republic, currently have large numbers of cell-phone subscribers. Moreover, in 2006 the European Union had a wireless substitution rate of 22 percent, which is notably higher than the US rate (11.8 percent), and in some countries the rate of wireless substitution exceeds 50 percent (3, 4). Consequently, cell-phone surveys have been conducted in Europe since at least early 2000, and the European experience should be informative for US researchers.

We agree with Dunn that increased cell-phone usage will lead to methodological innovations. Prenotification, typically done via advance mailing, is a useful technique for facilitating response to RDD surveys (5, 6). This can be done for landline phones, since they are linked to an address, but this method is currently not feasible for cell-phone numbers in the United States. In early research, investigators have experimented with the use of Short Message Service (text messaging) for prenotification, finding mixed outcomes for improving the cell-phone survey response rate (7, 8). However, since Short Message Service is an evolving technology, its utility for prenotification should continue to be evaluated.

We disagree with Dunn that few studies have evaluated the potential threats to survey research from increased use of privacy technologies and legislative efforts. For example, research has been published on telephone answering machines and caller identification (9, 10), as well as the Do Not Call Registry (11). Much of this literature, however, has not been widely disseminated to the public health research community. Rather, much of it has been disseminated through the proceedings and journals of specialized professional organizations, particularly the American Association for Public Opinion Research and the Survey Research Methods Section of the American Statistical Association. Research on survey methods, including those that are not directly health-related, can be of great use to epidemiologists. Indeed, we cited several such articles in our paper (2), and we strongly recommend that our public health colleagues consider these valuable resources.

Ethics is a critical aspect of public health research, but we are unsure what Dunn means in her comment regarding “threats to individual freedom” as an ethical challenge (1). Voluntary participation is a paramount principle in public health research, regardless of methodology. Moreover, we would argue that inadequate sample sizes and the systematic (albeit unintentional) exclusion of certain populations,
such as young adults in RDD surveys, pose even greater ethical challenges that need be remedied.

Lastly, we would be remiss if readers perceived that the BRFSS was not attentive to the threat of wireless substitution to the generalizability of RDD surveys. BRFSS investigators have recently experimented with cell-phone interviewing and have conducted pilot studies in three US states. These efforts will expand in 2008, when 25 states will include cell-phone numbers in their BRFSS surveys.

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REFERENCES