Utility of Telephone Company Records for Epidemiologic Studies of Cellular Telephones


This survey of customers of a large cellular telephone company assessed the feasibility of using billing records as a proxy for the amount of cell phone use, with the goal of ascertaining how much microwave radiation exposure users received from their cell phones. The survey had implications for epidemiologic research on the effects of cell phone use, but its findings had limited utility because the types of phones and patterns of use have changed rapidly over time.

The survey compared information from the 3,949 respondents with corresponding data from company billing records. It revealed that 48% of the account holders were sole users and 69% were the primary users, meaning that they accounted for at least 75% of the use. Respondent reports of the amount of cell phone use were highly correlated with data on the billing record (r = 0.74). Respondent reports of phone type were similarly correlated with data from the manufacturer (r = 0.92).

The survey also inquired about telephone holding patterns, since these have implications for exposure. Most users reported favoring one side of the head when using the telephone, but the side of the head used was not strongly associated with handedness. Preference for using the telephone on one side of the head versus the other is a variable that could be studied in relation to location of intracranial tumors, but this survey showed that handedness would not work as a proxy for side preference.

Link: http://www.ncbi.nlm.nih.gov/pubmed/8728445