# Landline and Cell Phone Usage Patterns in a Large Urban Setting: Results from the 2008 New York City Community Health Survey

Stephen Immerwahr[1], Donna Eisenhower[1], Michael Sanderson[1]
Michael P. Battaglia[2], Andy Weiss[2]
[1]New York City Department of Health and Mental Hygiene, Bureau of Epidemiology Services, 125 Worth St., Room 315 CN-6, New York, NY 10013
[2]Abt Associates, 55 Wheeler St., Cambridge, MA 02138

## Abstract

Much of the research on cell phone surveys uses national data, although urban patterns are known to differ from other areas. The 2008 NYC Community Health Survey -- a telephone survey of 7554 adults from landline sample, plus a pilot survey of 1416 adults from cell phone sample -- provides estimates of several aspects of urban cell phone use. We find considerable differences among dual users by sample source (landline, cell phone) and by cell telephone use ("landline-mostly" vs. "cell-mostly"), although dual frame telephone surveys often consider these equivalent. We also provide estimates of cell phone sharing, multiple-cell phone users, calling plans, service interruption, and intention to go "cell only" in NYC. Implications for the design, conduct, and weighting of dual frame surveys, particularly in urban areas, are discussed.

**Key Words:** urban telephone survey, dual-frame design, cell phones, cell-mostly, cell phone sharing, cell phone calling plans

## 1. Introduction

Much of the recent research of dual frame telephone samples has focused on national and state surveys. Sub-state/local dual frame surveys present additional challenges related to the construction of the cellular sampling frame and the weighting methods, particularly telephone service poststratification control totals (Battaglia et al 2010). When the local area is highly urbanized, the socio-demographic composition of the population differs in important ways from the U.S. population, making it more difficult to assume that urban telephone usage will be consistent with national estimates.

This paper uses data from the New York City Community Health Survey (CHS) to look first at demographic and health-related differences between dual user adults by sample source (landline vs. cellular telephone samples) and then by cell telephone use ("landline-mostly" vs. "cell-mostly"). We also describe several other aspects of cell phone use in New York City, along with implications for health surveillance surveys in urban areas.

## 1.1 New York City Community Health Survey (CHS)

The CHS is an example of a sub-state telephone health survey conducted in a large urban area. Conducted by the New York City Department of Health and Mental Hygiene, the CHS consists of approximately 9000 annual telephone interviews of adults across 42 disproportionate geographic (neighborhood) stratums. The questionnaire content is similar to the Behavioral Risk Factor Surveillance System (BRFSS), with the addition of NYC-specific items. In the 2008 survey, dual users were contacted from both landline and cellular telephone samples. Cell phone users contacted through the landline sample were administered the full survey regardless of dual use status. Dual users contacted through the cell-phone sample were only asked a brief set of socio-demographic, telephone usage, and general health questions. Between September 4, 2008, and February 2, 2009, 7554 interviews were completed from landline telephone sample -- of which 5690 were dual users and 1864 landline-only adults. An additional 1416 interviews were completed from cell phone sample -- 826 brief interviews with dual users and 590 interviews with cell-only adults.

## 1.2 Weighting of the 2008 CHS

Survey weights were used to ensure that the non-overlapping dual frame sample was representative and to produce prevalence estimates from the 2008 CHS. Weights were first calculated for all 7554 interviews from landline sample, taking into account the probability of selection of the landline household and the random selection of one adult from the household. Initial weights were then calculated for the 590 cell-only adult interviews, also taking into account their probability of selection. The two samples were then combined and final weights calculated for these 8144 interviews. The completed adult interviews were grouped into the five boroughs.

For each borough the population distribution of adults by United Hospital Fund (UHF) neighborhood, UHF by race/ethnicity, and UHF by age and gender was assembled from U.S. Census 2000. The completed interviews for each borough were also grouped into three telephone usage categories: only landline telephone service in the household, only cell phone service in the household, and landline and cell phone service in the household. The 2008 New York City Housing and Vacancy Survey (HVS) was used to estimate the distribution of the adult population in each borough for these three telephone usage categories. Similar to patterns of telephone use nationally, most adults in New York City are dual users. Based on data from the 2008 HVS, 70% of New York City adults have both a personal cell phone and live in a household with a landline telephone. Of the remaining telephone-accessible adults, 18% can only be reached by calling a cell phone and 12 % can only be reached via a landline telephone number.

The final poststratified weights were then calculated in a manner that ensured that the weighted sample in each borough had the correct: 1) UHF distribution, 2) UHF by race/ethnicity distribution, and 3) UHF by age and gender distribution, and 4) telephone usage distribution.

To create the overlapping dual-frame estimates, the 826 dual users from the cellular sample were added to the 8144 interviews discussed above. The weighting methodology was the same as that used for the non-overlapping dual frame design except for the following two modifications: 1) initial weights were calculated for the 826 dual users taking into account their probability of selection, and 2) compositing factors of $\lambda = 0.5$ and $1-\lambda = 0.5$ were applied to the initial weights of the two dual user samples before calculating the final poststratified weights for the entire combined sample.

## 2. Dual Users and Dual Frame Designs

"Dual users" are those who can be reached by calling one or more cellular telephones *and* one or more household landline telephones. In *overlapping* dual frame designs, dual users from the landline cellular telephone sample are interviewed and then are weighted to adjust for the probability of selection within the overlap between the two sample frames. *Non-overlapping* designs assume that dual users from these two sample sources are equivalent and only include dual users contacted from landline telephone sample, using cellular telephone sample used to contact and screen for cell-only adults. In this case, only dual users from landline sample are weighted to the dual user population. (The current BRFSS is an example of a non-overlapping design (Link et al 2007).) Both designs require an estimate of the size of the dual-user population.

### 2.1 Dual Users by Sample Source

Examining data from the 2008 CHS, we found large differences between dual users contacted from cellular and landline samples (Table 1). Many of these are similar to those noted between landline-only adults and cell-only adults. Compared to those from landline sample, dual users from cell phone sample were younger; and more likely to be male, non-White, and in "excellent" or "very good" health.

### 2.2 Dual Users: the "Cell mostly" Problem

A different but related concern is that while dual users theoretically can be reached by both cell phone and landline, some dual users are more likely to be reached by one technology. Dual users who are more likely to receive calls on their cell phone are more frequently reached via cell phone sample than landline sample. Conversely, dual users who are landline-mostly will be reached more often by landline sample than by cell sample. This can create a substantial problem for weighting dual-frame surveys, as neither overlapping nor non-overlapping designs provide unbiased samples of dual users. Alternative means are needed to obtain both the size *and* the distribution of use ("landline-mostly," "cell-mostly") among dual users. Again, in urban areas where the population is substantially different from the nation overall, parameters from national data may be insufficient.

Dual users in NYC differ significantly depending on whether they are "cell-mostly" or "landline-mostly." Figure 1 shows that individuals contacted through landline sample were more likely to be "landline-mostly" users, whereas those contacted through cell sample were more likely to be "cell-mostly." When dual users from both landline and cell phone sample were combined, dual users who are cell-mostly were younger and more likely to be male, to be non-White, and to live in a household without children. They were also more likely to say their health was "excellent" or "very good" (Table 2).

Unsurprisingly, these differences are generally in the same direction as differences in NYC between landline-only and cell-only users (Corey et al 2009), and between dual users by sample source (Tables 1 and 2).

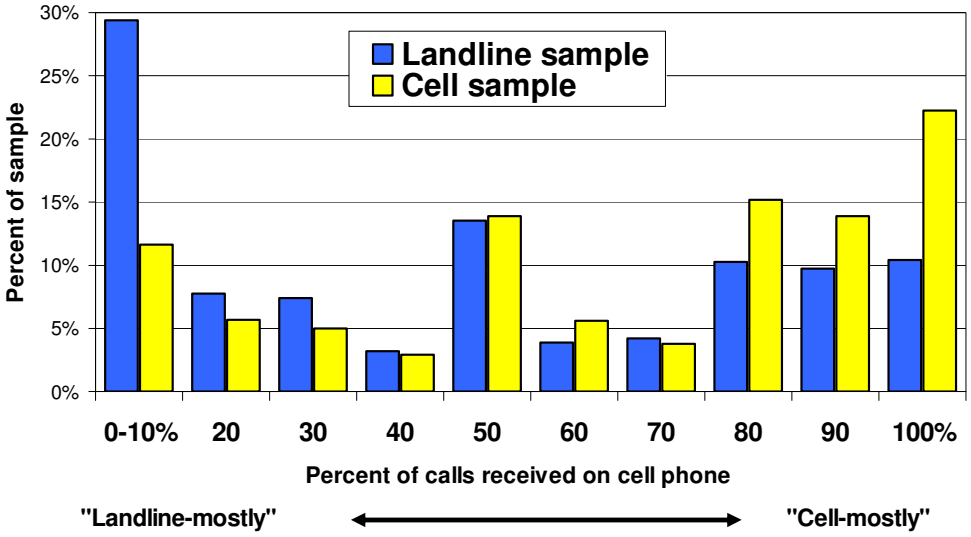


**Figure 1:** Distribution of calls received by dual users on cell phone, by sample type (5690 dual users contacted from landline sample, 826 dual users contacted from cellular telephone sample), from the 2008 Community Health Survey and Cell Phone Pilot. Question wording: "Thinking about all the calls that you receive on your landline or cell phone, what percent, between 0 and 100, are received on your cell phone?"

## 2.3 Health Estimates Among "Landline-Mostly" and "Cell-Mostly" Adults in New York City

Preliminary data from 15 states conducting a dual-frame BRFSS in 2008 suggests there are large demographic and health differences within dual users by level of cell phone usage. Battaglia et al (2009) found that dual users who were "cell mostly" were more likely to be less than 25 years of age, Hispanic, uninsured, and have never married. They were also less likely to have poor physical health, but also more likely to smoke, binge drink, and report having poor mental health. Although 2008 CHS data here are limited to dual users from the landline sample (unlike Battaglia et al 2009), most differences between "cell-mostly" and "landline-mostly" dual users were the same. Among these: "cell-mostly" were less likely to be in poor general health or to be obese. They were also more likely to be sexually active, smoke, binge drink, and be uninsured (Table 3).

## 2.4 Consequences and Implications

The demographic differences in dual users by sample source in the 2008 CHS were considerably larger than those observed in national surveys conducted in late 2007 by the Pew Research Center (Keeter et al 2008). This suggests that sample frame differences among dual users are larger in urban areas.

Data from the 2008 CHS also suggest that estimates of general health status, binge drinking, and sexual activity may be sensitive to weighting of dual users by "cell-mostly" or "landline-mostly." In particular, dual frame studies with non-overlapping designs (where dual users from one sample source are weighted to the population of all dual users) may result in biased estimates if this weighting results in a distribution of telephone usage ("landline-mostly", "cell-mostly") substantially different from the true population. Again, the challenge may be greater in urban areas with large variation in telephone usage patterns.

## 3. Cell Phone Usage Patterns in an Urban Area

Much of the recent research using dual frame telephone samples has focused on national and state surveys. The 2008 CHS and cell pilot surveys provide estimates of cell phone sharing, use of multiple cell phones, cell phone calling plans, and cell phone service interruption across a diverse urban area.

### 3.1 Cell phones sharing among adults

The level of cell phone sharing among adults was similar among both cell-only and dual users (landline sample only): 9% of cell phones from cell sample were shared at least 1/3 of the time with another adult, as were 12% of cell phones from landline sample, with weighed average of 1.2 adults per cell phone. (The average number of adults per landline was 1.9. Data were not available for dual users from the cell phone sample.) NHIS data for the U.S. suggest that one in seven wireless-only households had fewer cell phones than adults (Blumberg and Luke 2009), which implies that at least some sharing is occurring.

The difference in sharing levels between landline and cell phones provides some support for the continued sampling and weighting treatment of all cell phones as single-user devices rather than randomly sampling from within shared cell phone users. Sharing levels may decline further as prices drop and cell phones continue to evolve as personal communication devices.

### 3.2 Cell Phone Ownership

One in ten (11%) of cell phone users report having more than one personal cell phone, "not including cell numbers that are used only for business, fax, or internet access" (8% of cell-only users and 13% of dual users contacted from cell phone sample). (Data were not available for dual users from landline sample.) This is roughly the same proportion of households with landlines that reporting having more than one landline number. Adjusting for the probability of selection for individuals with multiple cell phones may be problematic in ways similar to adjustments for households with multiple landline telephones (Merkle and Langer 2008). The need to adjust for multiple cell phones may become more substantial in the future, however.

### 3.3 Cell phone calling plans

Prepaid ("pay-as-you-go") plans were only used by 10% of NYC cell phone users (12% of cell-only and 10% of dual users from cell phone sample) in 2008. The majority had "limited" calling plans (60% of cell-only and 55% of dual users), and only a third (28% of cell-only and 36% of dual users) had "unlimited" plans. (Data were not available for dual users from landline sample.) Estimates of prepaid plan use nationally were 16% - 20% for 2008 (NMRC 2009).

For dual-frame surveys in urban areas it is still important to reimburse cell phone survey respondents, as most have inelastic calling plans. Those using prepaid plans may be the most sensitive to the cost of completing a survey on their cell phone and are already more difficult to reach because of intermittent service. There are also indications that the use of prepaid plans has increased substantially since 2008, at least nationally (NMRC 2009).

### 3.4 Cell phone service interruption

Cell phone service is less consistent than landline service. Just two-thirds (67%) of cell phones were in constant service for the past 12 months. One in five cell phones (21%) were in service for less than 12 months (with an average of 6 months), and one in seven cell phones (11%) had a break in service of at least one week in the past 12 months. (No comparison data was obtained on how long landlines were in service, but 14% had a break in service of at least one week in the past 12 months.) Among pay-as-you-go users, only 41% had both consistent and uninterrupted service.

Frankel et al (2003) developed a method of weighting a subset of landline telephone respondents to reduce possible bias from undercoverage of households without any kind of telephone service. Now that the dominant mode of telephone use is cell phones, it may be time to revisit this undercoverage adjustment method. Given the high levels of service interruption, the pay-as-you-go population may be a good candidate to represent the phone-less population (or at least the cell-phone-less population) when adjusting for sample frame undercoverage. However, the dynamic nature of the cell phone market -- including an increase in prepaid plans -- may make this only a temporary possibility.

### 3.5 Intention to Go "Cell only"

Among respondents contacted using landline sample, 5% said they were "very likely" to go "cell only" in the next 12 months, and another 7% said they were "somewhat likely." If half these "very" and "somewhat" respondents went "cell only" in 2009, this would mean a next-year increase in the adult "cell only" population from 18% to 23% (a 28 percent increase). This is similar to the change observed in the NHIS between January-June 2008 and January-June 2009. Nationally, the percent of adults who only have cell phone service increased from 16.1% to 21.1% (a 31 percent increase) (Blumberg and Luke 2009).

## 4. Conclusions

Dual-frame surveys pose multiple challenges for survey researchers, particularly at the sub-state level. These include obtaining accurate parameter estimates for telephone use categories. Although most dual-frame studies use a non-overlapping design, where cell phone sample is only used to obtain interviews from cell-only respondents, not all dual users are the same, and these differences may be even greater in urban areas. Because of differences in the dual users obtained by landline sample and by cell phone sample, both overlapping and non-overlapping designs may provide biased estimates of telephone use categories and or cell phone usage within dual users. One potential approach to this problem is to use data from the NHIS to develop statistical models that estimate the percent of adults who are: 1) landline-only, 2) cell-only, and 3) dual users (Battaglia et al 2010). It may then be possible to take the dual users and model a dichotomous outcome for dual users: cell-mostly versus landline-mostly. The modeling process applied to local area data from (for example) the American Community Survey public-use microdata sample would yield parameter estimates for four telephone use categories for weighting of dual-frame surveys: 1) landline-only, 2) cell-only, 3) landline-mostly dual users, and 4) cell-mostly dual users. Among the descriptive data collected, adults in New York City appear to have some unique telephone usage patterns reflecting a highly urbanized environment.

## Acknowledgements

Data was collected by telephone interviewers from Abt-SRBI, a survey research company based in New York City. Landline telephone sample was provided by GENESYS Sampling Systems, and sampled number records were pre-screened using their CSS process, which identifies business and other ineligible numbers so they can be removed before dialing. The cellular telephone sample was provided by Survey Sampling International. The study was approved by the Institutional Review Board of the New York City Department of Health and Mental Hygiene. Statistical analyses was done with SAS 9.1 for Windows.

## References

Battaglia MP, Eisenhower D, Immerwahr S, and Konty K. 2010. Dual-Frame Weighting Of RDD and Cell Phone Interviews at the Local Level. 2010. Presented at the 65th Annual Conference of the American Association for Public Opinion Research.

Battaglia MP, Frankel MR, and Balluz LS. 2009. Cell-Only Adults Versus Cell-Mostly Adults: Does it Make a Difference in Results? Presented at the 64th Annual Conference of the American Association for Public Opinion Research.

Battaglia MP, Frankel MR, and Mokdad AH. 2008. Statistical Challenges Facing Cell Phone Survey. 2008 Proceedings of the Annual Meeting of the American Statistical Association [CD-ROM], Alexandria, VA: American Statistical Association.

Blumberg SJ and Luke JV. 2009. Wireless substitution: Early release of estimates from the National Health Interview Survey, January-June 2009. National Center for Health Statistics. December 2009. Available from: http://www.cdc.gov/nchs/nhis.htm [Accessed August 31, 2010.]

Community Health Survey 2008 Methods. New York City Department of Health and Mental Hygiene. Available from: http://nyc.gov/html/doh/html/survey/survey-2008.shtml [Accessed August 10, 2010]

Corey C, Eisenhower D, Immerwahr S, Konty K, Norton JM, and Sanderson M. 2010. Including New Yorkers Who Can Only Be Reached by Cell Phones in the Community Health Survey: Results from the 2008 Cell Phone Pilot Survey. New York City Department of Health and Mental Hygiene Epi Research Brief 2010 May; 1-8. Available from: http://nyc.gov/html/doh/downloads/pdf/epi/epibrief-cellpilot.pdf [Accessed August 10, 2010]

Frankel MR, Srinath K, Hoaglin DC, Battaglia MP, Smith PJ, Wright RA, and Khare M. 2003. Adjustments for non-telephone bias in random-digit-dialing surveys. Statistics in Medicine, 22: 1611–1626

Keeter S, Dimock M, Kennedy C, Best J, and Horrigan J. 2008. Costs and Benefits of Full Dual-Frame Telephone Survey Designs. Presented at the 63rd Annual Conference of the American Association for Public Opinion Research. Available from: http://pewresearch.org/assets/pdf/cellphone-peoplepress.pdf [Accessed August 10, 2010]

Link M, Battaglia MP, Frankel MR, Osborn L, and Mokdad AH. 2007. Reaching the US cell phone generation: comparison of cell phone survey results with an ongoing landline telephone survey. Public Opinion Q. 2007;71(5):814-839.

Merkle D and Langer G. 2008. How Too Little Can Give You a Little Too Much: Determining the Number of Household Phone Lines in RDD Surveys. Public Opinion Quarterly 72(1): 114-124.

New Millennium Research Council. 2009. Survey: 60 Million US Consumers Worried About Recession Likely to Hang Up On High Cell Phone Costs. Press release, March 19, 2009. Available from: http://newmillenniumresearch.org/news/031909_NMRC_ORC_cell_phone_survey_news_release.pdf [Accessed August 10, 2010]

**Table 1**: Comparison of Dual Users (Have a Cell Phone and Live in a Household with a Landline) from Cell Sample Frame and Landline Sample Frame, 2008 CHS

| *Variable* | *Cell Phone Sample Frame* n=826 | *Landline Sample Frame* n=5690 |
|---|---|---|
| Gender | | |
| Male | 45.2% | 38.7% |
| Female | 54.8% | 61.3% |
| Age | | |
| 18-34 | 36.3% | 18.6% |
| 35+ | 63.7% | 81.4% |
| Years of Age (*Mean, SD*) | 41.1 (14.4) | 49.6 (15.7) |
| Education | | |
| High School/Less Than HS | 32.3% | 31.3% |
| Some College | 24.2% | 20.1% |
| College+ | 43.5% | 48.5% |
| Race/Ethnicity | | |
| White non-Hispanic | 37.8% | 46.5% |
| Black non-Hispanic | 27.2% | 23.7% |
| Hispanic | 23.4% | 19.2% |
| Asian | 9.7% | 8.5% |
| Multi/Other | 1.9% | 2.0% |
| Presence of Children <18 in HH | | |
| No children | 55.0% | 61.9% |
| One or more children | 45.0% | 38.1% |
| Number of children in HH (*Mean, SD*) | 0.9 (1.2) | 0.7 (1.1) |
| General Health Status | | |
| Excellent/Very Good | 55.6% | 48.4% |
| Good | 32.9% | 32.6% |
| Fair/Poor | 11.5% | 19.0% |
| Telephone Use | | |
| ≥ 50% of Calls Received on Cell Phone ("Cell Phone Mostly") | 27.7% | 54.2% |
| < 50% of Calls Received on Cell Phone ("Landline Mostly") | 72.3% | 45.8% |
| % Calls on Cell Phone (*Mean, SD*) | 61.6% (32.0) | 40.4% (33.6) |

Dual users from Cell Sample are unweighted. Dual users from Landline Sample are weighted to citywide population totals to adjust for disproportionate samples drawn from neighborhoods.

All differences significant at $p < .05$ using Pearson Chi-Square or ANOVA tests. Full question wordings: http://www.nyc.gov/html/doh/html/survey/chsdata.shtml

**Table 2**: Comparison of "Cell Mostly" to "Landline Mostly" Among Dual Users from Both Landline and Cell Phone Sample Frames, Weighted to Total Dual Users, 2008 CHS

| *Variable* | *"Cell Mostly" (≥50% of Calls on Cell Phone)* n=2,984 | *"Landline Mostly" (<50% of Calls on Cell Phone)* n=3,046 |
|---|---|---|
| Sample Source | | |
| Cell Phone Sample | 22.6% | 9.8% |
| Landline Sample | 77.4% | 90.2% |
| Gender | | |
| Male | 49.2% | 39.6% |
| Female | 50.8% | 60.4% |
| Age | | |
| 18-34 | 43.2% | 15.6% |
| 35+ | 56.8% | 84.4% |
| Years of Age (*Mean, SD*) | 38.6 (13.6) | 51.6 (16.2) |
| Education | | |
| High School/Less Than HS | 26.2% | 38.9% |
| Some College | 20.8% | 21.4% |
| College+ | 53.0% | 39.7% |
| Race/Ethnicity | | |
| White non-Hispanic | 42.1% | 45.8% |
| Black non-Hispanic | 22.3% | 24.1% |
| Hispanic | 19.5% | 20.1% |
| Asian | 13.8% | 7.7% |
| Multi/Other | 2.3% | 2.4% |
| Presence of Children <18 in HH | | |
| No children | 56.2 | 66.3 |
| One or more children | 43.8 | 37.3 |
| Number of children (*Mean, SD*) | 0.9 (1.2) | 0.8 (1.2) |
| General Health Status | | |
| Excellent/Very Good | 58.3% | 41.8% |
| Good | 30.9% | 36.3% |
| Fair/Poor | 10.8% | 21.9% |
| Telephone Use | | |
| % Calls on Cell Phone (*Mean, SD*) | 75.9% (18.2) | 13.9% (11.9) |

All differences significant at p <.05 using Pearson Chi-Square or ANOVA tests. Full question wordings: http://www.nyc.gov/html/doh/html/survey/chsdata.shtml

**Table 3**: Comparison of "Cell Mostly" to "Landline Mostly" Among Dual Users from Landline Sample Frame Only, Weighted to Total Dual Users, 2008 CHS

| *Variable* | *"Cell Mostly" (≥50% of Calls on Cell Phone)* n=2,419 | *"Landline Mostly" (<50% of Calls on Cell Phone)* n=2,829 |
|---|---|---|
| Gender | | |
| Male | 49.8% | 40.4% |
| Female | 50.2% | 59.6% |
| Age | | |
| 18-34 | 42.2% | 15.7% |
| 35+ | 57.8% | 84.3% |
| Years of Age (*Mean, SD*) | 38.7 (13.1) | 50.1 (15.9) |
| Education | | |
| High School/Less Than HS | 25.1% | 37.4% |
| Some College | 19.5% | 21.4% |
| College+ | 55.4% | 41.2% |
| Race/Ethnicity | | |
| White non-Hispanic | 45.4% | 46.8% |
| Black non-Hispanic | 21.1% | 23.6% |
| Hispanic | 17.3% | 19.3% |
| Asian | 14.0% | 7.8% |
| Multi/Other | 2.1% | 2.6% |
| Presence of Children <18 in HH | | |
| No children | 52.6% | 58.0% |
| One or more children | 47.4% | 42.0% |
| Number of children (*Mean, SD*) | 0.9 (1.1) | 0.8 (1.2) |
| General Health Status | | |
| Excellent/Very Good | 58.4% | 43.0% |
| Good | 30.6% | 35.6% |
| Fair/Poor | 11.0% | 21.4% |
| Telephone Use | | |
| % Calls on Cell Phone (*Mean, SD*) | 75.2% (18.0) | 13.8% (11.9) |
| Health Insurance Coverage | | |
| Currently insured | 85.9% | 90.1% |
| Not insured | 14.1% | 9.9% |
| Smoking Status | | |
| Current Smoker | 59.7% | 59.5% |
| Former Smoker | 17.5% | 14.1% |
| Never Smoked | 22.8% | 26.4% |
| Exercised Past 30 Days | | |
| Yes | 75.0% | 72.8% |
| No | 25.0% | 27.2% |
| Binge Drinking Past 30 Days | | |
| Yes | 19.8% | 8.4% |
| No | 80.2% | 91.6% |
| Ever Diagnosed w/ Diabetes | | |
| Yes | 4.5% | 11.8% |
| No | 95.5% | 88.2% |

All differences significant at p <.05 using Pearson Chi-Square or ANOVA tests. Full question wordings: http://www.nyc.gov/html/doh/html/survey/chsdata.shtml

**Table 3, continued**: Comparison of "Cell Mostly" to "Landline Mostly" Among Dual Users from Landline Sample Frame Only, Weighted to Total Dual Users, 2008 CHS

| *Variable* | *"Cell Mostly" (≥50% of Calls on Cell Phone)* n=2,419 | *"Landline Mostly" (<50% of Calls on Cell Phone)* n=2,829 |
|---|---|---|
| Ever Diagnosed w/ Hypertension | | |
| Yes | 20.1% | 35.3% |
| No | 79.9% | 64.7% |
| Serious Psychological Distress (Kessler-6 >= 12) Past 2 Weeks | | |
| Yes | 4.0% | 5.7% |
| No | 96.0% | 94.3% |
| Sexually Active Past 12 Months | | |
| Yes | 87.4% | 71.1% |
| No | 12.6% | 28.9% |
| Ever Had an HIV Test | | |
| Yes | 65.9% | 50.7% |
| No | 34.1% | 49.3% |
| Height and Weight | | |
| BMI Under 25 | 46.1% | 39.3% |
| BMI 25 - Under 30 (Overweight) | 34.3% | 35.7% |
| BMI Over 30 (Obese) | 19.5% | 25.0% |
| Body Mass Index (BMI) (*Mean, SD*) | 26.2 (5.5) | 27.1 (5.8) |

All differences -- except for "Serious Psychological Distress (Kessler-6>=12 Past 2 weeks" -- are significant at p <.05 using Pearson Chi-Square or ANOVA tests. Full question wordings: http://www.nyc.gov/html/doh/html/survey/chsdata.shtml