BROADBAND ADOPTION IN ILLINOIS:

Who is online, who is not,
and how to expand home high-speed adoption

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Executive Summary

The Partnership for a Connected Illinois (PCI) conducted a statewide survey of Illinois residents in the first quarter of 2012 that sought to understand broadband adoption patterns across the state, as well as the reasons why some Illinois households choose not to have broadband at home. Because PCI had commissioned other survey work focusing on the City of Chicago, the survey conducted for this report focuses on areas in the state outside of Chicago, i.e., excluding Cook County. Specifically, the telephone survey for this report provides a regional breakdown of broadband use in Illinois' 10 eTeam regions.

The survey's main findings are:

- 68% of Illinois adults surveyed in this report have broadband Internet connections at home; 56% of African Americans and 56% of Hispanics have broadband at home. The overall figure is in line with the 68.7% adoption rate that the U.S. Department of Commerce reported for Illinois in late 2010.[1]
- There is significant regional variation in home broadband adoption rates. In 4 eTeam regions of the state – Northwest, Southeast Central, Southern, and West Central – home broadband rates are below 60%. The Northeast section of the state (excluding Cook County) has the highest rate of home broadband adoption with 76%, with the North Central region coming in next at 70%.
- Smartphones have a strong foothold in how people in Illinois access the Internet. Some 46% of Illinois residents have a Smartphone, which permits wireless online access using a handheld device; that figure matches the national Smartphone adoption rate.[2] For the most part, those with Smartphones also have broadband at home – 85% of Smartphone users have home high-speed service. This translates into just 7% of those surveyed having "Smartphones only" as their sole means of online access.

[1] U.S. Department of Commerce, *Digital Nation: Expanding Internet Usage*. NTIA Research Preview, February 2011. Available online at: http://www.ntia.doc.gov/files/ntia/publications/ntia_internet_use_report_february_2011.pdf

[2] Lee Rainie, *Smartphone Ownership Update: September 2012.* Pew Research Center's Internet & American Life Project. Available online at: http://www.pewinternet.org/Reports/2012/Smartphone-Update-Sept-2012/Findings.aspx.

  - Smartphone adoption is particularly strong for African Americans (52%) and Hispanics (60%).
  - Some 15% of African Americans and 18% of Hispanics are "Smartphone only" users (i.e., they have a Smartphone but no home broadband subscription).

- Smartphones are key ingredients to online engagement for those who have them. Illinois residents with Smartphones and home broadband do a greater scope of online activities than those with only broadband at home or Smartphone only access. The Smartphone/home broadband combination is also a significant driver in shaping users' attitudes about how broadband helps in carrying out everyday tasks.
- However, those with Smartphone-only access do substantially fewer online activities than those with both broadband and Smartphones, or broadband-at-home alone. Smartphone only users also have less enthusiastic views about how broadband can help with personal productivity and in carrying out tasks than broadband users, as well as those with broadband and a Smartphone.
- The 32% of Illinois adults without broadband at home are older, more rural, and have lower incomes than broadband users in the state. Overall, the familiar triumvirate of cost, not seeing broadband's relevance, and digital literacy come to the fore as the most important reasons people do not have broadband. At the same time, Illinois non-broadband adopters typically cite multiple reasons for not having service.
  - Some one-quarter (24%) of non-broadband users in Illinois say they would be interested in getting broadband service at home. These users do not have broadband because they cannot afford it, but they also say they would be interested in getting health care information, keeping up with family and friends, and using entertainment applications if they had broadband.
  - Three-quarters (76%) of non-adopters exhibit little interest in home broadband service and they typically cite a range of reasons for not having high-speed Internet at home – such as not seeing the relevance of broadband, digital literacy, and cost barriers.

The PCI statewide survey has the following implications for stakeholders in Illinois:

- Given regional variations in broadband adoption, stakeholders should direct resources to encourage home broadband adoption to areas with lower-than-average home high-speed adoption.
- Smartphones have made significant inroads into addressing access inequities across racial and ethnic categories. However, while Smartphones open the door to online engagement, they do not open the door as widely as does home broadband access.
- The advent of Smartphones indicates that mobile wireless access is a powerful means to drawing current and future broadband users to deeper engagement with the benefits of digital resources. Stakeholders should understand the wireless and wireline infrastructure both play key roles in strategies to improve online access.
- For one-quarter of non-broadband adopters, cost relief – both lower monthly access prices and low-cost computer offerings – is crucial to luring them to broadband. Such users would also benefit from education efforts that emphasize the benefits of health care and information-gathering applications.
- The three-quarters of non-adopters who do not have a strong interest in broadband, comprehensive training programs that emphasize the benefits of broadband – while also providing cost relief and training on how to use the Internet – are important.

Methodology

The PCI survey is a random digit dial telephone survey of 3,506 Illinois adults, conducted between February 23 and April 24, 2012 by Princeton Survey Research Associates International. The survey excluded Cook County. The survey was administered using both cell phones and landline telephones; 1,608 landline interviews were conducted and 1,898 interviews were conducted for respondents using cell phones. Respondents were given the option of completing the survey in English or Spanish.

Introduction

For residents of Illinois, a home broadband connection serves as a pathway to the wonders and benefits of the Internet. For the 68% of Illinoisans with high-speed connections at home, broadband allows them to connect with family, friends, and neighbors, look for bargains, find health and medical information, or communicate with government. The remaining third of Illinois residents who lack broadband service at home miss out on the fun and functionality of the Internet. They also suffer from narrowing offline alternatives to carry out daily tasks, as more ways of doing things migrate to cyberspace and less investment is devoted to "old" offline means.

This report charts broadband and other online access options in places in Illinois outside the City of Chicago. Because the Partnership for Connected Illinois (PCI) commissioned an in-depth survey of online access in the City of Chicago, PCI chose to devote resources for a telephone survey of all other areas in Illinois. PCI also chose a regional approach in survey design; each of PCI's 10 eTeam regions throughout the state were surveyed so that stakeholders could understand broadband adoption patterns in those places.

In addition to asking about broadband adoption, the survey also explored other ways people go online and the devices they use for access. Of particular interest were Smartphones, which nearly half of all Americans have, but the survey also asked about tablet computers and e-readers. The other main focus of the survey was non-adoption – not only understanding the size and nature of those in Illinois without broadband at home, but also the reasons they do not have service. The PCI survey was conducted from late February to early April 2012.

Here are key survey findings for the entire state of Illinois (excluding the City of Chicago):

- 79% of those surveyed are Internet users, which may include dial-up access, access from school, work, or a library, or some other site.
- 68% of those surveyed have broadband service at home.
- 46% of those surveyed have Smartphones that allow them to go online with a handheld mobile device.

Non-adopters in this report refer to the 32% of those surveyed who do not have broadband at home. Some of these may be Internet users – through old-fashioned dial-up or the latest

Smartphone. Or perhaps they use the Internet at school, a library, the workplace, or elsewhere. When asked why they do not have broadband service at home, non-adopters, when permitted to cite more than one reason, said the following:

- 65% cited cost as a reason, such as the monthly service fee (52%) or cost of a computer (31%).
- 58% cited lack of relevance (e.g., they think the Internet is a waste of time or that there is nothing online worth viewing).
- 44% cited digital literacy (they are worried about bad things that could happen online or they are uncomfortable using a computer).
- 22% cited some other reason.
- 15% said the Internet was not available where they live.

The typical non-broadband adopter cited 3 reasons for not having a high-speed Internet connection at home.

When asked to specify the *most important* reason they do not have broadband at home, here is what the non-adopters surveyed in Illinois said:

- 29% stated cost was the main reason, with 16% citing the monthly fee and 9% computer affordability.
- 17% said lack of relevance was the main reason they do not have service.
- 13% cited digital literacy.

Filling out the balance, 21% cited some other reason, 2% said service was not available where they live, and the remaining 18% declined to answer.

This report has five main sections. First, after providing an overview of statewide results, the report shows how access to the Internet varies throughout eTeam regions in the state of Illinois. Second, the report highlights the reasons non-broadband users do not have broadband at home. Third, given the advent of Smartphones as an access device for the Internet, the report investigates where Smartphones fit in people's online usage patterns. The fourth section talks about what might draw non-adopters to Internet use at home. A final section discusses implications of the report's findings.

I. Internet Access in Illinois

a. A portrait of access statewide

Table 1 shows survey results for areas in Illinois outside the City of Chicago for online access, broadband access, cell phone use, Smartphone use, and other relevant technologies. Overall, 68% of Illinois residents in the sample have broadband at home as of the first quarter of 2012. In Chicago, 67.5% of residents had broadband in a survey conducted in 2011.[3] These results compare well to the National Telecommunications and Information Administration's (NTIA) findings for Illinois based on a large scale national survey of 54,000 households; NTIA finds that 68.7% of Illinois households had broadband as of November 2010.

Table 1

	% of all respondents who are …	% of Whites	% of African Americans	% of Hispanics
Cell phone users	91%	91%	91%	95%
Internet users	79	79	73	76
Home broadband users	68	69	56	56
Desktop computer	63	64	50	52
Laptop computer	59	60	51	61
Smartphone users	46	44	52	60
E-reader	20	21	17	13
Tablet users	19	19	19	18
Broadband ***and*** Smartphone users	39	38	37	42
Broadband-at-home ***only*** users	26	27	17	13
Broadband ***and*** Smartphone ***and*** Tablet users	14	13	14	14
Smartphone *only* users	7	6	15	18
Number of cases	3,506	3,108	178	170

Table 1 also shows results broken down by race and ethnicity, with familiar patterns of higher rates of home broadband adoption for whites than for African Americans and Hispanics. However, African Americans and (especially) Hispanics are more likely to have Smartphones than whites.

[3] Karen Mossberger, Caroline J. Tolbert, Allison Hamilton, *Measuring Digital Citizenship: Mobile Access and Broadband*. International Journal of Communication, Vol. 6 (2012). Available online at: http://ijoc.org/ojs/index.php/ijoc/article/view/1777.

The relationship between Smartphone and home broadband access is worth examining in greater detail, as both provide "always on" access of a different sort – one fixed in the home, the other wireless and on-the-go. With 68% of Illinois residents with broadband at home and 46% with Smartphones, it is clear that many have both types of access. Among those with broadband at home, 85% have a Smartphone, suggesting that, for the most part, Smartphones complement people's online access assets. Put differently, "Smartphone only" access is a reality for only 7% of those surveyed, meaning that this small share of respondents have only a Smartphone as their primary online access means, not broadband. Adding broadband to Smartphone access, 75% of those surveyed in Illinois have access either via broadband at home or from a Smartphone.

With African Americans and Hispanics having higher rates of Smartphone adoption than whites, but lower rates of home broadband adoption, it follows that these two minority groups have higher rates of Smartphones only as their online access means. Looking at Smartphone only access in Illinois:

- 18% of Hispanics report having Smartphone only access;
- 15% of African Americans report having Smartphone only access;
- 6% of whites report having Smartphone only access.

As Figure 1 shows below, adding Smartphone access to home broadband access goes a long way toward closing Internet access gaps when focusing on race and ethnicity.

Figure 1

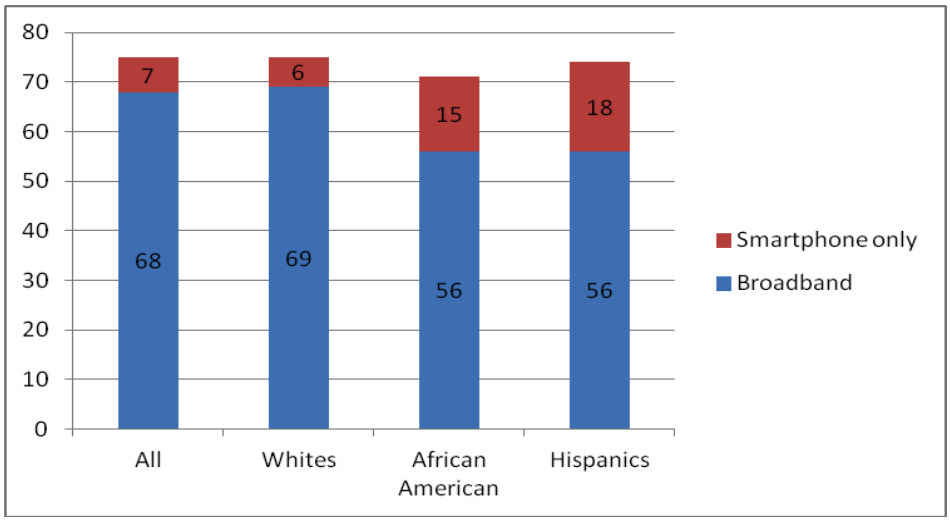

Table 2 presents a more complete picture of the breakdown of broadband-at-home and Smartphone access.

Table 2

	% in each group with broadband at home	% in each group with a Smartphone
Male	69%	49%
Female	66	43
Parents with minor children at home	76	58
Age		
Ages 18-24	76	70
25-34	75	66
35-44	75	58
45-64	71	38
65+	41	13
Race/Ethnicity		
White (not Hispanic)	69	44
Black (not Hispanic)	56	52
Hispanic (English or Spanish speaking)	56	60
Education		
Less than high school	32	28
High school grad	55	39
Some college	74	49
College +	86	55
Household income		
Under $20K	44	31
$20K-$30K	50	31
$30K-$40K	63	42
$40K-$50K	69	43
$50K-$75K	78	48
$75K-$100K	88	56
Over $100K	92	72
Don't know/refused	57	38
Geography		
Urban	73	51
Suburban	73	49
Rural	56	35
Unclassified	56	39
Number of cases	2,622	1,383

In addition to the distinct access patterns by race and ethnicity, there is clearly a more even distribution of Smartphones across socio-economic categories compared to broadband. Less educated Illinois respondents are nearly as likely to have a

Smartphone as broadband at home. Nearly one-third of low-income Illinoisans have Smartphone, while 4 in 9 have broadband. It is nonetheless the case that lower educated and lower income respondents have lower levels of Internet access than their counterparts higher up the ladder. Finally and not surprisingly, young people are more likely to have Smartphones than older Americans, with about two-thirds of those under the age of 35 with Smartphones.

For more detailed information on the demographic breakdowns of all survey respondents, those with broadband at home, those with Smartphones, and Smartphone only users, please see Table I in the report's Appendix.

b. Online access in eTeam regions

The following three tables show results for the 10 eTeam regions that PCI has created for the state as a means to improve regions' capacities to improve their broadband environments.

Table 3a

	Region 1 Central	Region 2 N Central	Region 3 NE Central	Region 4 North Stateline
Cell phone users	89%	92%	90%	90%
Internet users	75	83	81	76
Home broadband users	64	70	67	64
Desktop computer	62	65	59	60
Laptop computer	52	65	59	54
Smartphone users	36	43	43	42
E-reader	17	23	17	20
Tablet users	18	19	13	15
Broadband ***and*** Smartphone users	29	37	36	35
Broadband-at-home ***only*** users	29	30	28	25
Broadband ***and*** Smartphone ***and*** Tablet users	10	12	9	12
Smartphone *only* users	7	6	7	
Number of cases	300	300	301	302

Table 3b

	Region 5 Northeast (excl Cook County)	Region 6 North West	Region 7* SE Central
Cell phone users	93%	85%	84%
Internet users	85	71	66
Home broadband users	76	58	50
Desktop computer	67	60	57
Laptop computer	67	52	46
Smartphone users	55	33	31
E-reader	24	14	16
Tablet users	24	14	11
Broadband ***and*** Smartphone users	49	26	21
Broadband-at-home ***only*** users	24	29	27
Broadband ***and*** Smartphone ***and*** Tablet users	19	7	6
Smartphone *only* users	6	7	10
Number of cases	801	302	300

Table 3c

	Region 8* Southern	Region 9 Southwest	Region 10 West Central
Cell phone users	87%	90%	88%
Internet users	66	74	69
Home broadband users	54	63	54
Desktop computer	54	54	54
Laptop computer	46	55	42
Smartphone users	35	48	29
E-reader	17	17	17
Tablet users	15	15	16
Broadband ***and*** Smartphone users	27	39	22
Broadband-at-home ***only*** users	24	22	29
Broadband ***and*** Smartphone ***and*** Tablet users	9	9	9
Smartphone *only* users	8	9	7
Number of cases	300	300	300

As the tables show, the northeastern portion of Illinois – excluding Cook County – boasts the highest rate of information and communications technology (ICT) adoption, leading the way in home broadband adoption, Smartphone use, as well as adoption of computers, tablets, and e-readers. Other parts in northern Illinois fare well, with the

North Central and Northeast Central regions at or slightly above average on most measures of ICT adoption.

With the exception of the Southwest portion of the state, where Smartphone adoption is somewhat above average and home broadband adoption is slightly below average, other regions significantly lag the Illinois average. The Southeast Central region has the lowest rate of home broadband adoption, at 50% and a low (31%) rate of Smartphone adoption. Its overall Internet adoption rate is 66%, below the statewide average of 79% and equal to the rate in the Southern region. The Southern region has a low home broadband adoption rate of 54% and a 35% Smartphone adoption rate. The West Central region is also comparable to the Southern region, despite its higher overall Internet adoption rate (74%); 54% of residents there have broadband at home and just 29% have Smartphones. The Northwest region of the state has similarities to West Central, with 58% of residents there with broadband at home and 33% with Smartphones.

eTeam regions with lower broadband adoption are all places that are more rural, older, with populations with lower incomes and lower levels of educational attainment – factors that correlate with lower-than-average broadband adoption rats. However, two regions – Southeast Central and the Southern region – have lower broadband adoption rates than expected – even taking into account the factors noted above that predict lower broadband adoption.[4]

For readers interested in the demographic breakdowns for respondents in each of the 10 eTeam regions, please see Tables IIa, IIb, and IIc in the Appendix.

[4] Regression analysis modeled broadband adoption as a function of factors expected to influence the probability of adopting (education, income, geography, age, parental status, and race/ethnicity) *as well as* eTeam region in which the respondent resides. Except for the two regions noted, this variable made no difference; for the two regions noted, the impact was negative and significant.

II. Patterns of online use & the role of Smartphones

The PCI survey also asked respondents about the kinds of things they do online in order to get a profile of the level of interest in various online applications, ranging from educational uses to online shopping. The table below displays the share of Internet users who have *ever* done an activity online about which they were asked. The table also shows frequency of activity by the nature of respondents' online access. This section will have particular interest in Smartphones and their impact on the scope of respondents' online activities.

Table 4 below lists the online activities the survey queried and shows frequencies depending on the kinds of access assets respondents have. More is clearly better when it comes to access points and scope of online activities. The relatively elite set of respondents (14%) who have tablet computers, broadband at home, *and* a Smartphone do the most online. At the other end of the spectrum, those whose only form of online access is a Smartphone do, on average, less online activity than do Smartphone and home broadband users.

Table 4

	All home broadband users	Broadband and Smartphone and Tablet users	Broadband *and* Smartphone users	Broadband-at-home *only* users	Smartphone *only* users
Email	98%	100%	99%	96%	90%
Participate in social networks like Facebook or Linked In	82	89	89	74	82
Research consumer goods and services	87	94	91	84	71
Job search or look for employment opportunities	65	70	73	55	65
Research for education, training or school work	76	87	84	66	73
Search for medical or health-related information	86	91	88	84	70
Buy goods and services online	83	92	86	81	52
Average number of activities (out of 7)	5.8	6.2	6.1	5.4	5.0
Number of cases	2,232	378	1,158	999	225

As the preceding discussion of the demographic and socio-economic status of various groups indicates, there are substantial differences in the make-up of those who are home broadband users and those whose only online access is through a Smartphone. Relative to home broadband users, "Smartphone only" users are younger, have lower levels of educational attainment, lower incomes, and are more likely to be African American or Hispanic. These factors – and not just access means – might explain differences in online usage patterns. In other words, a young Hispanic person might simply be less interested than an older white home broadband user in searching for health information online. That lower level of interest may explain the different likelihoods of looking for such information, not the means by which the two groups go online.

To disentangle these different effects, this paper employs regression analysis, which examines whether access means is linked to observed differences in the scope of online activities or other factors. A simple ordinary least squares model was specified that framed the number of online activities engaged in (on a linear scale of 1 to 7) as a function of various demographic factors (age, gender, parents with minor children at home, level of education), economic ones (household income), and access means (broadband only at home, broadband and a Smartphone, Smartphone only, and other gadgets such as tablet computers and e-readers). The model was run for all internet users in the sample (79%, which includes not just home broadband users, but dial-up users, Smartphone only users, and those who use the internet someplace other than home).

The model finds that there is no correlation between having Smartphone access as one's only online access tool and doing more online activities. In other words, holding demographic and socio-economic factors constant, the analysis confirms the basic finding that Smartphone access alone is linked to greater online engagement. Unsurprisingly, having broadband at home *only* has a positive and significant association with doing more online activities and having *both* broadband at home and a Smartphone has the strongest association. It is also worth noting that the model finds no link between race and the number of online activities when controlling for the factors identified above.

The upshot of this exercise is that Smartphones play a valuable role in opening up access to groups, such as Hispanics, African Americans, and lower-income Americans, who have home broadband adoption rates that lag the average. However, when looking at usage patterns, "Smartphone only" access shows its limits. Those who have it as their means for accessing the Internet do fewer things online than those with home broadband. At the same time, Smartphones are an accelerant for online use in combination with other means, such as home broadband access or tablet computing. Those with both Smartphones and home broadband (and the vast majority of Smartphone users have broadband at home) are heavier users of the Internet than just broadband-at-home users or Smartphone only users.

Access tools and attitudes about online applications

Not only do respondents with different access tools do a somewhat different configuration of online activities, they also have different attitudes about how the internet can impact their lives. The survey asked internet users how the internet can help various parts of their lives, such as saving time, saving money, improving communication with family and friends, improving access to government services, reducing travel time for commuting or visiting others, and making it possible to commute at home. Table 5 below shows what all Internet users said when asked to consider the benefits of online access to their household.

Table 5

Views of the Internet's benefits for the household
(based on all Internet users)

	Very Important	Somewhat Important	Not important	Doesn't apply
Improving communication with family, friends, colleagues and others	52%	34%	9%	4%
Making it possible to work from home	35	16	12	36
Saving time for day-to-day activities	33	37	19	11
Saving money, for example through online shopping	27	36	21	16
Improving access to government services	27	35	19	18
Reducing travel time, for example for commuting or personal errands	27	33	22	18
Number of cases = 2,622				

Table 6 below shows the responses for all internet users, broadband users, broadband *and* Smartphone users, Smartphone users, and those with *only* broadband as their sole access device.

Table 6

How important are the following possible benefits of the internet for your household? (% who said "very important")	All internet users	Home broadband users	Home broadband *and* Smart-phone users	All Smart-phone users	Smart-phone *only* users
Saving time for day-to-day activities	33%	35%	44%	41%	21%
Saving money, for example through online shopping	27	28	34	33	22
Improving communication with family, friends, colleagues and others	52	54	63	61	50
Improving access to government services	27	27	32	31	30
Reducing travel time, for example for commuting or personal errands	27	28	35	34	26
Making it possible to work from home	35	37	46	44	26
Average number identified as "very important"	2.0	2.1	2.5	2.3	1.3
Number of cases	2,622	2,232	1,158	1,383	225

As with online activities, there are significant differences in how respondents with different access tools view the potential benefits of the internet. Those with both a home broadband connection *and* a Smartphone are much more likely to say the internet is very important to them in the listed areas as are Smartphone only users.

A key difference when focusing on attitudes about the internet's benefits versus online activities has to do with Smartphones. When analyzing online activities, broadband-at-home access and the combination of Smartphone and broadband access are both predictors of doing a wider scope of online activities. Doing similar analysis for attitudes, *only* the combination of having *both* a Smartphone and a home broadband subscription is positively associated with seeing the internet as being very important in the areas queried. The Smartphone, then, turns out to be a key ingredient in shaping individuals' view of the internet's value. The Smartphone plays a distinct role in shaping how people

perceive the benefits of the digital world – a not-so-secret sauce by which mobile wireless access kicks people's attitudes about the Internet's benefits into sharp focus.

The importance of wireless shows up in responses to another question asked of all Internet users on whether they think a wireline or wireless connection is better for various tasks. Specifically, the survey asked online users whether activities such as shopping online or sharing content was better done on a wireline connection using a desktop or laptop, or a wireless broadband connection on a mobile device. Here is what they said:

Table 7

Attitudes on the type of broadband connection and online affordances	Wireless	Wireline /Wired	Depends	Don't know
Improving communication with family, friends, colleagues and others	66%	19%	3%	10%
Sharing content with others, such as photos, videos, or text	58	27	2	11
Keeping up with the news in your community	56	26	3	12
Shopping online	49	31	3	14
Improving access to government services	46	32	3	16
Playing games online	41	32	2	21
Watching TV shows, movies and other video online	38	39	1	17
Number of cases = 2,622				

For the most part, Internet users believe a wireless broadband connection on a mobile device is better for online activities – especially for communicating with family and friends, sharing content, and keeping up with news.

Discussion

Smartphones are a strong compliment to online access tools. Those respondents with a Smartphone who also have broadband at home do the widest range of the online activities explored in the Illinois survey. For those who have *only* a Smartphone for accessing the internet, online access is less robust in that these users do fewer things online than broadband or broadband-plus-Smartphone users.

The Illinois survey offers another reason why Smartphone-only access has limits. The survey asked computer users (those with desktops or laptops) and mobile users how confident there were that they could *easily* find information online.

Tables 8 and 9 show that respondents have a higher level of confidence in their ability to find information using a desktop or laptop than with a wireless device. The question on wireless was directed to those who have a tablet computer, wireless enabled laptop, or Smartphone. However, there were no significant differences in responses attributable to which device the respondent said he uses most often for wireless access. When looking at "Smartphone only" users, they have a lower level of confidence in their ability to *easily* find information on their devices, though half are nonetheless very confident.

Table 8

How confident are you that you can easily find the information you need on the internet using your desktop or laptop computer?	All desktop/laptop users	Home broadband users	Broadband *and* Smartphone users
Very confident	75%	78%	85%
Somewhat confident	21	19	14
Not too confident	3	2	1
Not at all confident	1	1	*
Number of cases	2,440	2,189	1,158

Table 9

How confident are you that you can easily find the information you need on the internet using your wireless device?	All users of the internet on a mobile device	Home broadband users	Smartphone *only* users
Very confident	63%	66%	51%
Somewhat confident	29	28	37
Not too confident	5	4	8
Not at all confident	2	1	3
Number of cases	1,422	1,238	225

With smaller screens and generally slower access speeds, it is not too surprising that respondents have lower levels of confidence about the ease of finding online information. Still, people's level of confidence about the utility of Smartphones for finding information easily is strong.

Data caps

One element that may be a factor in people's use of the Internet on their Smartphone is data caps. Many carriers, including major ones such as AT&T and Verizon, place a cap on monthly data usage on mobile devices; once a customer reaches the cap, additional data use includes an additional cost. In this survey, people who pay a monthly data fee on their mobile device were asked whether their plan comes with a data cap, and 43% said they had a cap while 49% said they did not, with 7% saying they did not know. A follow-up question to those with a data cap inquired whether they were aware of their data usage in the context of their cap. Half were either always aware (27%) or mostly aware (22%) of their data caps, with 18% somewhat aware and 29% rarely aware.

Data caps – and awareness of them – have little impact on scope of online activities, at least among the set of activities about which this survey inquired. Those with data plans with caps do the same number of online activities as those without – both an average of 6.2 out of the 7 activities. For those always or mostly aware of data caps, the average number of online activities they reported doing was 6.2, with those on the other side – somewhat or rarely aware – reporting an average 6.3 online activities. The small difference is not statistically significant.

III. Non-adopters in Illinois

One-third (32%) of Illinois residents outside of Chicago do not have broadband at home and a comparable number in Chicago lack broadband. Although it is tempting to see non-adoption as on the other side of a boundary, the fact is that the boundary is permeable. Many non-broadband-at-home users have some online experience and interest in getting high-speed service at home. Among the 11% of respondents who are either dial-up users, Smartphone only users, or go online from work, school, or a friend's house, nearly two-thirds (64%) have used broadband at some point. That is significantly higher than the 46% figure recorded in the FCC survey for the National Broadband Plan.[5] Some 36% of those with dial-up or Smartphone-only access say they would be interested in getting broadband at home.

Non-Internet users also, on occasion, have other members of the household who go online at home. For the nearly 30% of Illinois respondents who do not use the Internet at home or use it at all, 26% say that someone in the house goes online from home. For the most part (57% of the time), that is a broadband connection, though many (29%) of non-Internet users do not know the type of connection being used in their household by someone else.

Many non-broadband users, then, have a relationship to the Internet, through dial-up, through online use elsewhere, or through past home subscription. One size does not fit all with respect to non-adoption, and the reasons for non-adoption similarly do not fall neatly into one category. Non-broadband-at-home users fall into three categories of respondents who received (largely) the same questions in probing into why they do not use broadband at home. For a breakdown of the demographic profiles of home broadband adopters compared to non-adopters in Illinois, please see Table III in the Appendix.

[5] John B. Horrigan, *Broadband Adoption and Use in America.* Federal Communications Commission, OBI Working Paper No. 1. Available online at: http://online.wsj.com/public/resources/documents/FCCSurvey.pdf

a. Dial-up users and those only use their cell phone for online access at home

This group makes up 6% of Illinois respondents and 20% of non-broadband adopters, and here is what they said when asked first whether a specific item listed was a reason for non-adoption and then, as a follow-up, to identify the main reason.

Table 10

Reasons for not having broadband at home (Based on those who have dial up/undesignated type of broadband connection at home or those who only use their cell phone for internet at home)	**Yes**	**No**
You're happy with your current service	64%	31%
The monthly cost is too expensive	49	40
You do not want to enter into a long-term service contract	47	48
The activation or installation fee to get service is too much	43	47
You do not use the internet that much	36	59
You do not need the additional speed it would offer	32	61
It's not available where you live	27	56

When asked to cite the *most important* reason for not having broadband at home, here is what with dial-up or Smartphone only users said.

Table 11

Most important reason for not having broadband at home (Based on those who have dial up/undesignated type of broadband connection at home or those who only use their cell phone for internet at home)	**Yes**
You're happy with your current service	28%
The monthly cost is too expensive	22
It's not available where you live	13
You do not want to enter into a long-term service contract	8
You do not use the internet that much	7
The activation or installation fee to get service is too much	6
You do not need the additional speed it would offer	3
Other (don't know, combination, reason not listed)	14

b. Non-Internet users in non-online households

Illinois respondents who do not use the Internet and do not live in a household with an Internet user are a larger group than dial-up/Smartphone-only users. Some 16% of all Illinois residents interviewed for this survey neither use the Internet nor live in a home with an online user; this comes to 48% of all non-broadband adopters. Here are the reasons they cite for not having broadband Internet service at home.

Table 12

Reasons for not having broadband at home (Based on those who do not use the Internet at all and live in non-Internet homes)	**Yes**	**No**
Monthly cost is too expensive	52%	40%
The activation and installation fee to get service is too much	51	41
You cannot afford a computer	43	55
You are worried about all the bad things that can happen if you use the internet	42	55
The internet is just a waste of time	41	54
You are not comfortable using a computer	40	53
There is nothing on the internet you want to see or use	34	61
You can use the internet all you need to at work	11	84
It's not available where you live	10	84

Turning to the *most important* reason, non-online users in non-online homes said the following.

Table 13

Most important reason for not having broadband at home (Based on those who do not use the Internet at all and live in non-Internet homes)	
You cannot afford a computer	16%
Monthly cost is too expensive	14
You are worried about all the bad things that can happen if you use the internet	10
The internet is just a waste of time	10
You are not comfortable using a computer	10
There is nothing on the internet you want to see or use	7
The activation and installation fee to get service is too much	3
You can use the internet all you need to at work	2
It's not available where you live	1
Other (combination of reasons, don't know, refused, no reason listed)	28

c. *Not-at-home Internet users or those who do not use the Internet at all but live in an Internet household*

A final category of non-broadband adopter encompasses those who do not use the Internet at home, as well as non-users in a house with an online user. This comes to 10% of those surveyed and 32% of non-adopters. As with other non-adopters, this group was asked why they do not have broadband at home.

Table 14

Reasons for not having broadband at home (Not-at-home Internet users or those who do not use the Internet but live in an Internet household)	Yes	No
Monthly cost is too expensive	54%	42%
The activation and installation fee to get service is too much	46	51
You are worried about all the bad things that can happen if you use the internet	36	63
You cannot afford a computer	33	65
You are not comfortable using a computer	29	68
The internet is just a waste of time	25	73
There is nothing on the internet you want to see or use	23	73
You can use the internet all you need to at work	23	75
It's not available where you live	13	83

When asked for the *most important* reason, this group said the following.

Table 15

Most important reason for not having broadband at home (Not-at-home Internet users or those who do not use the Internet but live in an Internet household)	
Monthly cost is too expensive	21%
You are not comfortable using a computer	13
You are worried about all the bad things that can happen if you use the internet	10
You cannot afford a computer	10
The internet is just a waste of time	8
The activation and installation fee to get service is too much	6
You can use the internet all you need to at work	6
There is nothing on the internet you want to see or use	4
It's not available where you live	1
Other (combination of reasons, don't know, refused, no reason listed)	21

d. *Combining Results*

Although there are slight variations in the kinds of questions asked across each category of non-adopter, it is nonetheless possible to aggregate the results into a single table that gives an overall portrait of the reasons why Illinois residents surveyed do not have broadband at home – as well as *most important* reasons.

Table 16

Reasons for not having broadband at home (% for non-broadband users)	Cited as a reason	Cited as *most important* reason
Cost (monthly fee, computer affordability, activation fee)	65%	29%
Monthly fee	52	16
Can't afford computer	31	9
Relevance (Don't want more speed, don't use internet much, nothing you want to see online, internet is waste of time)	58	17
Digital Literacy (worried about bad things online, not comfortable with computer)	44	13
Availability (not available where I live)	14	2
Other (happy with current service, use the internet at work)	22	21
Number of cases	1,274	1,274

In looking at the combined results, it is clear that, when permitted to cite more than one reason for not having broadband, non-adopters indeed do so. On average, non-adopters cite three reasons for not having broadband at home, with cost leading the way and lack of relevance following. In looking at the cost breakout, half (52%) of those without broadband at home say the monthly fee is too much. At the same time, the belief that the Internet is not relevant to them and problems with digital literacy also loom large for non-adopters in Illinois.

The most important reasons that respondents cite for non-adoption in Illinois track fairly closely to those listed in a national sample for the FCC survey conducted for the national broadband plan. In the FCC survey, 36% cited a reason pertaining to cost, 22% cited

problems with digital literacy, and 19% cited a reason that indicated that they did not find the Internet relevant to them.[6] The main difference between the Illinois survey in 2012 and the FCC survey in 2009 is that digital literacy recedes as an issue in Illinois, which is consistent with the finding in the Illinois survey that a large share of Illinois non-adopters have past experience with a computer, something far fewer non-adopters said in 2009 in the FCC survey.

[6] Horrigan, *Broadband Adoption and Use in America*. Ibid.

IV. Luring non-adopters to broadband

An important part of PCI's mission is to get more people online in Illinois with broadband. The survey sought to explore that issue through questions that asked about non-adopters' interest in getting online with broadband and inquiring about the kinds of applications that might draw people to broadband.

When dial-up Internet users or those with a cell phone as their home access means are asked whether they are interested in having broadband at home, 36% said they were interested – about the same share (41%) as in the 2009 FCC survey. A similar question was posed to those who do not use the Internet at home or do not use it at all, and 21% said they would be interested in having Internet service at home. Putting those two sets of non-broadband users together (and recognizing that non-users outnumber dial-up and cell-only users), this means that 24% of non-broadband adopters in Illinois have some interest in broadband service at home. The remaining three quarters express little interest in getting high-speed Internet service at home.

The two different groups of non-adopters – those with interest in service and those who are not – express very different reasons for not having service at home as the following table shows:

Table 17

Reasons for not having broadband at home (% for non-broadband users)	Interested in home broadband		Not interested in home broadband	
	Cited as a reason	Cited as *most important* reason	Cited as a reason	Cited as *most important* reason
Cost (monthly fee, computer affordability, activation fee)	79%	49%	61%	23%
Monthly fee	60	25	50	14
Can't afford computer	38	17	29	7
Relevance (Don't want more speed, don't user internet much, nothing you want to see online, internet is waste of time)	60	9	64	20
Digital Literacy (worried about bad things online, not comfortable with computer)	27	5	50	16
Availability (not available where I live)	28	6	10	1
Other (happy with current service, use the internet at work)	26	13	21	23
Smartphone as sole online access	32%		17%	
Number of cases	277		997	

For those interested in broadband service at home, cost is the most prominent barrier, with factors such as relevance and digital literacy receding as most important reasons. In contrast, those not interested in broadband at home, though concerned about cost, register relatively high levels of concern that the Internet is not relevant to them or that they lack the skills to get online. Finally, it is notable that those interested in broadband are about twice as likely to have Smartphones as their access means. This indicates that, while this group can clearly afford a Smartphones and monthly fee for data, their budgets are constrained such that an additional service – that is, home broadband – is out of reach for many.

To go beyond interest in broadband to what might actually lure people to subscribing, the survey undertook two approaches. First, recent Internet adopters were asked to identify whether or not certain online affordances drew them to home Internet service. Second, non-home broadband users who expressed interest in getting broadband were asked whether certain online activities might tip them to getting the Internet at home.

Respondents who said they had gotten online service at home within the past three years received the question about reasons behind that choice. That definition yielded a modest, though usable, set of 110 respondents. Respondent who do not use the Internet at home or at all and expressed interest in service came to 218 respondents.

Table 18

Reasons for getting online access at home
(those online for three years or less)

	Yes	No	Not working/No kids in School/Not in school/n/a
To email and stay in touch with family and friends	69%	31%	0
To gain access to music, movies and other entertainment	47	52	1
To get health and medical information online	47	52	1
You felt that key information was only available online	37	59	3
Your children wanted internet access	36	50	14
Your children needed it for school	31	55	14
You needed it for school	19	76	5
Your job required online access	18	77	4

Turning to the hypothetical, 218 respondents who were not online users at home or at all received questions on what *would* be a reason for subscribing to home Internet service.

Table 19

Reasons "not at home" or non-Internet users would get service at home (among those interested in getting service)	Yes	No	Not working/No kids in School/Not in school/n/a
To get health and medical information online	80%	19%	n/a
To email and stay in touch with family and friends	75	22	n/a
You felt that key information was only available online	62	32	n/a
To gain access to music, movies and other entertainment	57	41	n/a
Your children needed it for school	50	38	10
You needed it for school	45	49	6
Your job required online access	43	51	5
Your children wanted internet access	43	39	14

There are several commonalities among those who recently became Internet users and those who express interest in it. Both groups say the social dimensions of the Internet draw them in; email and staying in touch with family and friends rise to the top in both instances. Entertainment is also a key motivator in both cases, with its role registering more prominently in the hypothetical question posed to those without home access, but interested in having it. There is also a clear sense that the Internet is the only source for important information; three-fifths of those interested in getting access at home say they believe key information is available only online, while 37% of recent adopters said this.

The desire to find health care and medical information online differs markedly across the two groups. About half of recent at-home adopters cite this as a reason they got service, while 80% of those interested in home broadband service say that this would be a reason for subscribing. One can only guess at the reasons behind this high number, but, demographically, non-adopters interested in getting broadband are – relative to other non-adopters – younger (an average age of 43 versus 57 for non-interested non-adopters), with low-incomes, and high rates of Smartphone-only adoption (with high incidence of getting health care information on the smart handheld device). It is possible

that, with a likely lower rate of having health insurance and a taste of the scope of health information available online, non-adopters with an interest in broadband will see home high-speed service as a way to fill-in the gaps in their access to health care.

Finally, and not least, many recent or interested non-adopters see home access as beneficial for their children, with educational purposes playing a role. Half of interested non-adopters would want it because their children need it for school and nearly half say they would want it for their own educational purposes. Among recent subscribers, about one-third say they got access because their children wanted it and a similar number said it was because their children needed it for school.

For those interested in detailed demographic profiles of those interested in getting broadband at home versus those who are not, please see Table IV in the Appendix.

V. Implications

In looking at the findings of the statewide survey of Illinois residents outside of Chicago, several striking findings emerge:

1) The overall broadband adoption rate in Illinois tracks the national average closely, but the statewide survey reveals that certain parts of the state – mainly in the southern and central parts of the state, but also the northwest – have home broadband adoption rates that significantly trail the average. In 4 eTeam regions of the state – Northwest, Southeast Central, Southern, and West Central – home broadband rates are below 60%. This suggests that stakeholders should channel resources to encourage home broadband adoption to these areas.
2) Smartphones close access gaps for some Illinois residents – with particularly important impacts for African Americans and Hispanics. Some 46% of Illinois residents have a Smartphone (a result that is the same as the national average) and 7% are "Smartphone only" users in that their sole means of online access is the Smartphone and they do not have home broadband access. For African Americans, 15% are "Smartphone only" and the figure for Hispanics is 18%. Although Smartphones are an important access avenue, those with Smartphone only access do a narrower range of online activities than other Internet users. These findings suggest that, while Smartphones open the doors to online access for those who use it as their sole way to get online, they do not open the door as widely as does home broadband access.
3) Smartphones are an important accelerant to both online use *and* people's perceptions about the Internet's ability to help their everyday productivity. Most (85%) of Smartphone users also have broadband at home, and this combination of online assets aligns with greater online engagement when compared to the 7% of respondents with Smartphones only and 26% with broadband at home *only* as their online access means. Those with Smartphones and broadband are also much more likely than others to view the Internet as a way to save time, money, as well as improve how they access government service and work from home. This finding indicates that mobile wireless access is a powerful means to draw current and future broadband users to deeper engagement with the benefits of digital resources. Stakeholders should understand the wireless and wireline infrastructure both play key roles in strategies to improve online access.

4) Non-adopters of broadband at home make up about one-third (32%) of Illinois residents surveyed. Affordability – either of monthly service or computers – are the reason nearly one-third of non-adopters are not online, with lack of digital literacy or lack of awareness of the Internet's value cited as the main reasons for other non-adopters. It is important to recognize, though, that non-adopters cite multiple reasons for not having broadband at home; the typical non-adopter cites 3 reasons (from a menu that covers barriers such as cost, digital literacy, and lack of relevance) for not having broadband.

   Yet non-adopters are not a monolithic group. Some one-quarter say they are interested in getting broadband at home and cost – mainly the monthly access fee but also computer affordability – is the principle reason "interested non-adopters" cite for not having access. The "interested non-adopters" also say getting health and medical information is something they would do with home broadband access, as well as socializing with family and friends and getting key information and entertainment. These findings suggest that cost relief, with education efforts that stress health care and information-gathering applications, could effectively draw these users to sustained home broadband use.

   For the majority of non-adopters – three-quarters of them – the challenge is greater. This group is older and has lower incomes than "interested non-adopters," but it has a more varied set of reasons for not having broadband. Although cost is clearly a problem, this group of non-adopters, when permitted to cite more than one reason for non-adoption, is most likely to say they do not see the relevance of having broadband. Half also cite problems with digital literacy as a reason they do not have broadband. For the majority of non-adopters who do not have a strong interest in broadband, comprehensive training programs that emphasize the benefits of broadband – while also providing cost relief and training on how to use the Internet – are important.

APPENDIX – Detailed Tables

Table I

Demographic & socio-economic overview of respondents by access categories	All surveyed	Home Broadband Users	Smartphone Users	Smartphone Only Users
Male	49%	50%	52%	53%
Female	50	50	48	47
Parents with minor children at home	33	36	41	39
Ages 18-24	12	14	19	26
25-34	16	18	24	29
35-44	18	20	23	16
45-64	36	38	30	23
65+	16	10	5	6
Average Age	**47**	**44**	**39**	**37**
White (not Hispanic)	84	86	81	71
Black (not Hispanic)	8	6	9	17
Hispanic (English or Spanish speaking)	8	6	10	20
Less than high school	10	5	6	21
High school grad	28	22	24	31
Some college	32	35	34	32
College +	30	38	37	16
Household income				
Under $20K	17	11	12	31
$20K-$30K	11	8	7	10
$30K-$40K	8	7	7	11
$40K-$50K	7	8	7	6
$50K-$75K	12	14	12	12
$75K-$100K	13	17	16	8
Over $100K	16	21	25	5
Don't know/refused	16	14	14	17
Geography				
Urban	22	23	24	22
Suburban	49	52	52	40
Rural	18	15	14	23
Unclassified	12	10	10	15
Number of cases	3,506	2,622	1,158	225

Source: Partnership for Connected Illinois Survey, February-April 2012.

Table IIa

Demographic & socio-economic overview of respondents by Illinois Region	Region 1 Central	Region 2 N Central	Region 3 NE Central	Region 4 North Stateline
Male	49%	54%	44%	53%
Female	51	46	56	47
Parents with minor children at home	32	36	32	28
Age				
Ages 18-24	10	9	16	13
25-34	18	13	19	17
35-44	18	26	16	17
45-64	36	34	34	35
65+	19	17	14	19
Average Age	**48**	**47**	**45**	**47**
Race/Ethnicity				
White (not Hispanic)	88	86	75	85
Black (not Hispanic)	9	7	12	10
Hispanic (English or Spanish speaking)	4	4	3	10
Education				
Less than high school	12	8	9	12
High school grad	31	24	34	33
Some college	32	34	29	32
College +	25	33	28	23
Household income				
Under $20K	21	14	27	18
$20K-$30K	11	12	9	16
$30K-$40K	9	7	10	10
$40K-$50K	9	9	8	9
$50K-$75K	16	10	9	9
$75K-$100K	11	16	10	15
Over $100K	10	15	13	12
Don't know/refused	14	16	14	11
Geography				
Urban	39	42	48	26
Suburban	15	30	26	46
Rural	27	12	5	15
Unclassified	19	16	20	11
Number of cases				

Source: Partnership for Connected Illinois Survey, February-April 2012.

Table IIb

	Region 5 Northeast (excl Cook County)	Region 6 North West	Region 7 SE Central
Male	51%	47%	47%
Female	49	53	53
Parents with minor children at home	34	29	34
Age			
Ages 18-24	15	9	7
25-34	16	14	16
35-44	18	20	19
45-64	39	34	35
65+	13	22	22
Average Age	**45**	**50**	**49**
Race/Ethnicity			
White (not Hispanic)	82	93	93
Black (not Hispanic)	7	3	3
Hispanic (English or Spanish speaking)	12	4	3
Education			
Less than high school	8	12	16
High school grad	24	28	32
Some college	29	41	37
College +	37	19	16
Household income			
Under $20K	13	23	23
$20K-$30K	8	14	15
$30K-$40K	7	6	11
$40K-$50K	5	10	9
$50K-$75K	12	15	9
$75K-$100K	16	8	8
Over $100K	22	8	7
Don't know/refused	18	14	18
Geography			
Urban	22	17	1
Suburban	72	23	2
Rural	1	43	81
Unclassified	6	17	17
Number of cases			

Table IIc

	Region 8 Southern	Region 9 Southwest	Region 10 West Central
Male	49%	45%	39%
Female	51	55	61
Parents with minor children at home	26	35	29
Age			
Ages 18-24	13	13	10
25-34	17	21	18
35-44	11	16	13
45-64	39	31	33
65+	22	18	27
Average Age	**49**	**45**	**50**
Race/Ethnicity			
White (not Hispanic)	89	81	95
Black (not Hispanic)	4	16	2
Hispanic (English or Spanish speaking)	3	2	4
Education			
Less than high school	17	10	16
High school grad	32	31	29
Some college	27	34	35
College +	24	25	20
Household income			
Under $20K	23	19	22
$20K-$30K	11	11	15
$30K-$40K	9	10	10
$40K-$50K	10	6	6
$50K-$75K	12	15	12
$75K-$100K	9	13	8
Over $100K	9	11	9
Don't know/refused	16	14	18
Geography			
Urban	2	*	*
Suburban	3	83	73
Rural	71	4	1
Unclassified	24	13	25
Number of cases			

Table III

	Broadband Adopter	Non Broadband Adopter
Male	50%	47%
Female	50	53
Parents with minor children at home	36	25
Age		
Ages 18-24	14	10
25-34	18	13
35-44	20	14
45-64	38	33
65+	10	30
Average Age	**44**	**57**
Race/Ethnicity		
White (not Hispanic)	86	82
Black (not Hispanic)	6	10
Hispanic (English or Spanish speaking)	6	10
Education		
Less than high school	5	23
High school grad	22	39
Some college	35	26
College +	38	13
Household income		
Under $20K	11	30
$20K-$30K	8	16
$30K-$40K	7	9
$40K-$50K	8	7
$50K-$75K	14	8
$75K-$100K	17	4
Over $100K	21	3
Don't know/refused	14	21
Geography		
Urban	23	18
Suburban	52	41
Rural	15	22
Unclassified	10	16
Number of cases	2,622	1,274

Table IV

Demographics those non-adopters interested in getting service compared to those not	Non-adopters interested in service	Non-adopters not interested in service
Male	48%	47%
Female	52	53
Parents with minor children at home	39	20
Age		
Ages 18-24	15	8
25-34	19	11
35-44	23	11
45-64	33	33
65+	10	37
Average age	**43**	**59**
Race/Ethnicity		
White (not Hispanic)	76	84
Black (not Hispanic)	15	9
Hispanic (English or Spanish speaking)	14	9
Education		
Less than high school	20	23
High school grad	38	39
Some college	28	25
College +	14	13
Household income		
Under $20K	36	28
$20K-$30K	13	17
$30K-$40K	11	9
$40K-$50K	7	7
$50K-$75K	10	7
$75K-$100K	5	4
Over $100K	5	3
Don't know/refused	12	24
Geography		
Urban	17	18
Suburban	41	41
Rural	17	23
Unclassified	14	17
Number of cases	277	997