DHCFP

Estimates of the Uninsurance Rate in Massachusetts from Survey Data: Why Are They So Different?

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Executive Summary

Existing surveys generate very different estimates of the uninsurance rate in Massachusetts. Such differences are not unique to the state: the federal government produces at least six different estimates of uninsurance for the nation based on its own surveys, and estimates from state-sponsored surveys often differ from estimates obtained from national surveys (Call et al. 2007). This policy brief examines the estimates of the uninsurance rate in Massachusetts obtained from the Bureau of Labor Statistics/U.S. Census Bureau's Current Population Survey (CPS), the Massachusetts Department of Public Health/Centers for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS), the Massachusetts Division of Health Care Finance and Policy's Health Insurance Survey (DHCFP-HIS), and the Massachusetts Health Reform Survey (MHRS) conducted by the Urban Institute and funded jointly by the Blue Cross Blue Shield of Massachusetts Foundation, the Robert Wood Johnson Foundation, and the Commonwealth Fund. Also included is a summary of how the Division of Health Care Finance and Policy has improved its survey methodology to address the limitations of prior survey estimates.

Why Do Uninsurance Estimates Differ?

Differences in the estimates of the rate of uninsurance from the available survey data for Massachusetts reflect many factors, including:

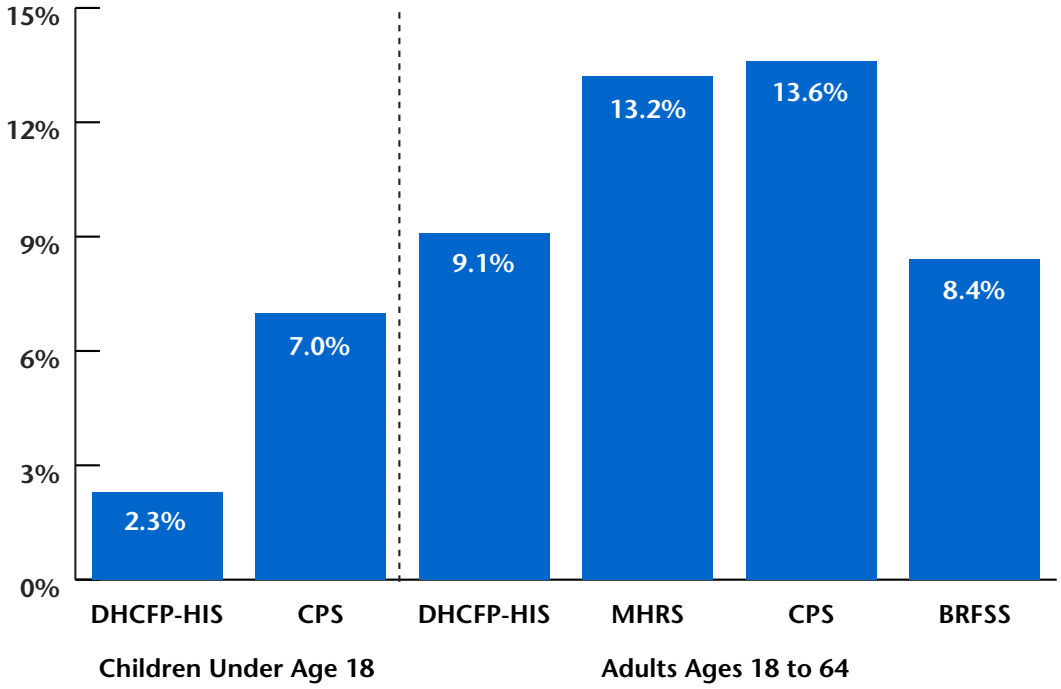
- Differences in the **wording of the insurance questions asked** in the surveys—e.g., the CPS asks about insurance coverage over the past calendar year, while the other surveys collect data on coverage at the time of the survey. MHRS also asks about use of the state's Health Safety Net (which consumers may mistakenly view as coverage) whereas historically the DHCFP-HIS did not ask about such care.
- Differences in **question placement and context** within the survey—e.g., the DHCFP-HIS and MHRS ask about health insurance as a key component of the survey, while the others include health insurance as a secondary topic, likely leading to less accurate responses. While often used to derive estimates of the rate of uninsurance, the primary purpose of the CPS is to generate labor market statistics. The focus of the BRFSS is to collect data on a variety of health risk factors, preventive behaviors, chronic conditions, and emerging public health issues.
- Differences in **survey design and fielding strategies**—e.g., the CPS includes in-person and telephone interviews, while the other surveys rely only on telephone interviews (with the 2008 DHCFP-HIS moving toward a mixture of telephone, web, and mail surveys as part of a re-design discussed further below).
- Differences in **accounting for missing data and other data preparation**—e.g., the CPS has high levels of missing data on health insurance coverage, and the process used to assign values for those missing data likely overstates the level of uninsurance in Massachusetts and understates the number with Medicaid. Work by Cook and Holahan (2007), funded by the Blue Cross Blue Shield of Massachusetts Foundation to address those limitations for CPS data, led to a reduction in the 2005 CPS estimate of uninsurance by about 1.4 percentage points. We would expect a similar result if the same approach was taken with CPS results from 2007. In addition, in the past the DHCFP-HIS had high levels of missing data on source of insurance, race, and income, making analyses using these variables unreliable.
- Differences in **survey fielding time frames** may also impact the results in recent years as health reform was phased in—e.g., the MHRS was fielded during fall 2006 and 2007, and will be fielded again in the fall of 2008. By contrast, the DHCFP-HIS was fielded during February through July in 2007 and May through August in 2008.

Unfortunately, there has been no single survey in Massachusetts that is clearly superior across all of the important dimensions of survey content, design, fielding, and data processing. Of the surveys fielded in Massachusetts, the CPS, which provides the best sample for estimating the overall population in Massachusetts, has a weak measure of health insurance status and a small sample size for Massachusetts relative to the other surveys. Both the BRFSS and MHRS focus only on adults, leaving efforts to track uninsurance among children in Massachusetts to other surveys. Further, while providing comprehensive information on health risk factors and other public health issues, gathering information on health insurance coverage is a secondary goal of the BRFSS, unlike the focus of the DHCFP-HIS and MHRS. The BRFSS, the MHRS and, historically, the DHCFP-HIS all relied on random-digit-dial (RDD) telephone samples. This is an increasingly limited strategy as the number of cell-phone-only households increases in the state, with many likely to be uninsured (Blumberg and Luke, 2008). In 2008, the Division of Health Care Finance and Policy has addressed this concern through a new sampling methodology as discussed further below, while the BRFSS will address this concern in 2009.

What Are the Estimates of Uninsurance in Massachusetts?

Perhaps not surprising given the differences across the surveys, there was wide variation in the estimates of the uninsurance rates for children and adults in Massachusetts for 2006 (Figure 1).

Figure 1: Estimates of the Insurance Rate for Children Under Age 18 and Adults Ages 18 to 64 in Massachusetts, 2006

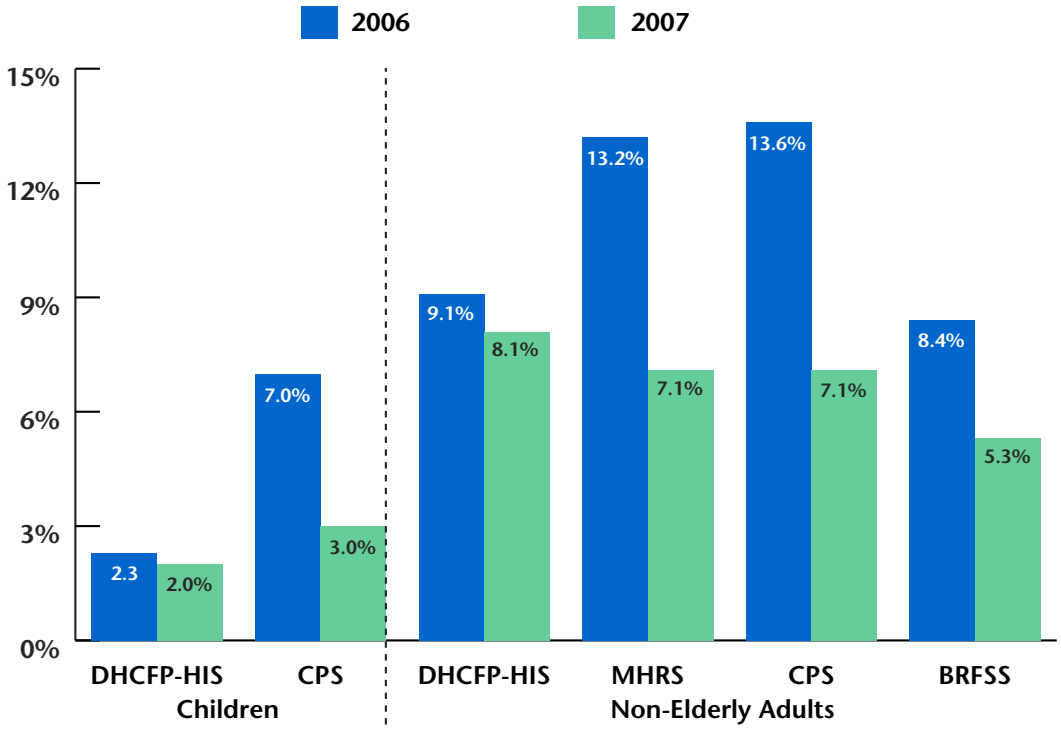


Source: Tabulations by the Urban Institute and Division of Health Care Finance and Policy.

- For children under age 18, the estimates of the uninsurance rate ranged from 2.3% to 7.0% based on the CPS and the DHCFP-HIS.
- For non-elderly adults (ages 18 to 64), the estimates of the uninsurance rate ranged from 8.4% to 13.6%, with two of the surveys producing estimates at the top of the range (13.6% and 13.2%, respectively) and two surveys at the bottom of the range (9.1% and 8.4%, respectively).

The implications of the differences across the surveys for estimating the impact of health reform in Massachusetts over the 2006 to 2007 period are substantial (Figure 2). The DHCFP-HIS shows only a small drop in the uninsurance rate for non-elderly adults between 2006 and 2007, while the CPS, MHRS, and the BRFSS show more substantial drops. Administrative data on health plan enrollment growth between 2006 and 2007, tracked by the Division of Health Care Finance and Policy, suggest that the estimates of the uninsurance rate in 2006 were too low in both the DHCFP-HIS and BRFSS. In contrast, the estimates of the drop in uninsurance between 2006 and 2007 in the CPS and MHRS are generally consistent with the administrative data on insurance coverage growth in the state over the period.

Figure 2: Estimates of the Insurance Rate for Children Under Age 18 and Adults Ages 18 to 64 in Massachusetts, 2006 and 2007



Source: Tabulations by the Urban Institute and Division of Health Care Finance and Policy.

Improving the Estimate of the Uninsurance Rate in Massachusetts

The Division of Health Care Finance and Policy redesigned the DHCFP-HIS for 2008 to address many of the limitations of the existing surveys used to estimate uninsurance in Massachusetts in order to have a reliable estimate of uninsurance moving forward. The 2008 DHCFP-HIS includes a residential address-based sample, similar to that of the CPS, providing a more complete profile of households in Massachusetts than in earlier versions of that survey and in the current BRFSS and MHRS. Unlike those surveys, the new DHCFP-HIS includes households without telephones and cell-phone-only households, two populations that are more likely to be uninsured. The new DHCFP-HIS includes detailed questions on insurance coverage and use of the Health Safety Net for all adults and children in a sample of 4,000 households in the state. It also provides information on access to and use of health care, and on health care costs. Data from the 2008 DHCFP-HIS will be available later this year.

Introduction

Estimates of the uninsurance rate in Massachusetts are routinely reported by the Census Bureau (based on the Current Population Survey—CPS[1]), the Massachusetts Department of Public Health/Centers for Disease Control (based on the Behavioral Risk Factor Surveillance System—BRFSS[2]), and the Massachusetts Division of Health Care Finance and Policy (DHCFP) (based on the state's Health Insurance Survey—DHCFP-HIS[3]). More recently, estimates have also been generated as part of the Massachusetts Health Reform Survey (MHRS[4]), a new survey conducted by the Urban Institute and funded jointly by the Blue Cross Blue Shield of Massachusetts Foundation, the Robert Wood Johnson Foundation, and the Commonwealth Fund to track the impact of health reform in the state through 2008. These surveys have generated very different estimates of the uninsurance rate in Massachusetts. Such differences are not unique to Massachusetts: the federal government produces at least six different estimates of uninsurance based on its own surveys and estimates from state-sponsored surveys often differ from estimates obtained from the national surveys (Call et al. 2007).

Differences in the estimates of the rate of uninsurance from the surveys reflect many factors, including differences in the wording of the insurance questions asked in the surveys, differences in question placement and context, and differences in survey design and fielding strategies, among other things. This policy brief outlines several key differences in the surveys that are used to generate estimates of uninsurance in the Massachusetts: the CPS, BRFSS, DHCFP-HIS, and MHRS. We consider both the version of the DHCFP-HIS that was fielded in 2007 (and in earlier years) and the expanded DHCFP-HIS being fielded in summer 2008. We draw heavily on the work by Call, Davern and Blewett (2007) in this overview of the important factors that may drive differences in survey estimates of the uninsurance rate in Massachusetts.

Table 1 compares the surveys used to produce estimates of uninsurance in Massachusetts along a number of key dimensions. We discuss differences in the surveys below.

Population Coverage and Sample Frame

The samples in the five surveys in Table 1 are intended to represent the non-institutionalized population in Massachusetts and, for the BRFSS and CPS, the non-institutionalized population in the nation as a whole. The MHRS and BRFSS focus only on the non-elderly adult population (ages 18 to 64), while the remaining surveys cover adults and children. The lack of full coverage of the relevant population is a problem when important members of the target population are missing from the sample frame so that the survey is not representative of the overall target population.

Coverage problems arise in the sample designs for all five surveys, although the problems are less severe in the CPS and the new DHCFP-HIS. The prior DHCFP-HIS, MHRS, and BRFSS all relied on random-digit-dial (RDD) surveys to sample households in the state who have a landline telephone number. These surveys miss homeless individuals and families (<1% of households), as well as households that do not have an active landline telephone. The latter includes non-telephone households (about 2% of households) and, increasingly, cell-phone-only households (estimated to be nearly 16% of all U.S. households in 2007 and growing) (Blumberg and Luke 2008). If, as available data suggests, the individuals who are not captured by RDD surveys are more likely to be uninsured, surveys that rely on RDD methods are likely to provide biased estimates of the uninsurance rate (Blumberg and Luke 2008).

In contrast, the sample frame for the CPS is based on a sample of residential addresses, which captures all households in the state except the small number of individuals and families who are homeless at the time of the survey. Similarly, the new DHCFP-HIS is combining an area-based sample (like that used in the CPS) with an RDD sample to capture nearly all residents of Massachusetts. Because of this more complete sample frame, the CPS and the new DHCFP-HIS provide more complete coverage of the households in the state than do the other surveys.[5]

Table 1: Comparison of Selected Surveys of Health Insurance Coverage in Massachusetts

Survey Element	New DHCFP-HIS	Prior DHCFP-HIS	MHRS	CPS	BRFSS
Sponsor	Massachusetts Division of Health Care Finance and Policy	Massachusetts Division of Health Care Finance and Policy	BCBSMA Foundation, Commonwealth Fund, & Robert Wood Johnson Foundation	Bureau of Labor Statistics, Department of Labor (conducted by the Census Bureau)	Massachusetts Department of Public Health & Centers for Disease Control
Primary focus of survey	Estimates of health insurance coverage	Estimates of health insurance coverage	Estimates of impacts of health reform	Labor market characteristics	Health status and health behaviors
Target population	Children and adults	Children and adults	Non-elderly adults (18 to 64)	Children and adults	Adults
Sample frame	RDD and address-based sample	RDD	RDD	Address-based sample	RDD
Survey mode	Telephone, with web and mail options	Telephone	Telephone	In-person and telephone	Telephone
Response rate (most recent)[1]	Not yet available	~60%	~46%	~83% overall; ~70% for the survey component that includes the health insurance questions	~35%
Sample size	~4,000 households	~4,000 households	~3,000 households	~1,000 households in MA (2 to 3 years of data required to produce reliable state estimates)	~21,000 households
Survey period	July-Aug	February-July	October-December	February - April (Annual Social and Economic Supplement)	January-December
Time period for health insurance questions	Current	Current	Current	Prior calendar year	Current
Strategy for asking health insurance questions	Multi-item approach	Funneling approach with screener questions on insurance coverage and subsequent details on source of coverage for those who report insurance	Initial screener on insurance status to select sample member then multi-item approach for selected adult	Multi-item approach	Funneling approach

(continued on next page)

Table 1: Comparison of Selected Surveys of Health Insurance Coverage in Massachusetts (continued)

Survey Element	New DHCFP-HIS	Prior DHCFP-HIS	MHRS	CPS	BRFSS
Health insurance verification question	Yes	Yes	Yes	Yes	No
Whether received care under free care pool	Yes	No	Yes	No	No
Use Massachusetts specific program names in health insurance questions	Yes	Yes (although not Uncompensated Care Pool)	Yes	Limited (likely to contribute to undercount of public coverage)	Yes (although not uncompensated care pool)
Imputation for missing health insurance information	No	No	No	Yes [2]	Yes
Supports estimates of uninsurance rate for subgroups in the state	Yes	Yes	Yes	Limited	Yes
Supports comparisons of uninsurance rate to US average and other states	No	No	No	Yes	Yes
Post-stratification weighting	Proposed: Age, race/ethnicity, sex, geography, & home-ownership	Age & geography	Age, race/ethnicity, sex, & geography	Age, race/ethnicity & sex	Age, race/ethnicity & sex

Note: Information in the table is for the 2007 survey for all surveys except the new DHCFP-HIS. Information for the new DHCFP-HIS is for 2008.

[1] Unfortunately, the response rates are not necessarily calculated the same way across the surveys.

[2] Alternative estimates have been generated that address several problems with the CPS. See Cook and Holahan (2007).

Questions on Health Insurance Coverage

Despite the obvious desire to collect comparable health insurance data across surveys, no two surveys use completely analogous sets of questions. In reality, the five surveys in Table 1 differ with respect to the reference period for the data, the survey strategy, the wording of the questions, and the placement of the questions within the broader survey. Questionnaire designs reflect the struggle to keep questions streamlined to reduce respondent burden, yet detailed enough to ensure that respondents understand the potentially difficult concepts about which data are being collected.

Recall and Reference Period

There is a consensus that it is easier for respondents to report current information than to try to recall information from an earlier period, especially for a concept that can be changing over time. Because of these recall issues, four of the five surveys covered in this brief ask respondents to report on health insurance coverage at the time of the survey. The exception is the CPS, which asks people who are surveyed between February and April to report on health insurance that household members had during the previous calendar year.[6] Any person who is reported to not have a source of coverage is viewed as having been uninsured for the entire previous calendar year. To confirm uninsurance status, the CPS includes a question that asks the respondent to verify that people for whom no coverage was reported were in fact uninsured during the reference period.[7]

Despite the wording of the CPS questions, many analysts have compared the CPS to other surveys and concluded that the uninsurance rate from the CPS is closer to an estimate of the uninsured at a point in time than an estimate of full-year uninsured (Kenney et al. 2006). In its most recent release, the Census Bureau commented on this issue and agreed that its estimates were more closely in line with point-in-time uninsured estimates than estimates for the entire prior year (DeNavas-Walt et al. 2007).

Survey Strategy

There are three basic strategies that surveys use to obtain information on health insurance status (Call 2003). One approach that a survey can follow is an "abbreviated approach" in which the respondent is asked a single question that tries to capture all types of coverage (i.e., public and private). There is also a "funneling approach" that takes people through a series of questions based on their responses to earlier questions. The BRFSS that is used in Massachusetts, along with the prior DHCFP-HIS, use this strategy for collecting information on health insurance coverage.[8] For example, the prior DHCFP-HIS instrument was designed to identify insurance units within each surveyed household and then to determine the current health insurance status (uninsured or insured) of each person in the insurance unit. These basic data were collected in the screener module of the questionnaire. The core of the screener module was a three-question sequence that collected data on health insurance status for each person in the insurance unit (Roman, Hauser, and Lischko 2002):

- Do you (they) currently have any health insurance coverage at all?
- Do you (they) currently have any health insurance through government programs such as Medicare, Medicaid or MassHealth?
- So you (they) currently do not have any health insurance at all. Is that correct?

If the respondent answered "yes" to the first question, the second two questions were skipped. Similarly a "yes" to either the first or second questions, eliminated question 3.

There is also a "multi-item approach" that is used by the CPS and many state surveys, including the MHRS and the new DHCFP-HIS. This approach identifies the source of coverage in the same sequence of questions that is used to determine health insurance status by asking about each source of coverage separately. One strength of the multi-item approach is that it prompts the respondent about most possible types of insurance coverage in an effort to avoid recall problems and problems with the respondents not considering some types of coverage to be insurance. However, a perceived redundancy of the questions may cause respondent fatigue, leading to underreporting of coverage types later in the series (Pascale 2007).

Although the multi-item approach prompts respondents with the range of coverage options in the state, misreporting of coverage by Medicaid enrollees is a concern. A number of studies have reported differences between the counts of public coverage on surveys and administrative data produced by states (see, for example, Call et al. 2001/2002 and Cantor et al. 2007). The underreporting of public coverage may result in Medicaid-enrolled individuals reporting no coverage or some other form of coverage, leading to inflated estimates of the uninsured or of those with other public or private coverage. Most Medicaid enrollees who do not accurately report their coverage appear more likely to report having private coverage than being uninsured (Call et al. 2001/2002; Call 2007). Addressing the Medicaid undercount on the CPS results in moderately lower estimates of the uninsured in Massachusetts, with more of an adjustment needed to align reported public coverage to administrative data for children than adults (Cook and Holahan 2007). Bias to estimates of uninsurance attributed to inaccurate reports of Medicaid coverage are minimal in surveys that ask about current health insurance coverage (Call et al. 2008).

The funneling approach could yield valid estimates of insurance status in Massachusetts, but there are a number of reasons to think that this might not be the case. First, the prior DHCFP-HIS questions do not provide the respondent with any definition of what is meant by health insurance. Many surveys include descriptions of what should or should not be considered as health insurance and of the target populations for the various public programs. For example, respondents could be reminded that health insurance might come from their job or union, could be purchased directly from an insurer, or that the policyholder could be someone not living in the household.

Second, by allowing the respondent to self define health insurance as the prior DHCFP-HIS did, it is possible that some people were reporting that they had coverage that analysts and policymakers might not consider to be health insurance. The first question in the DHCFP-HIS could have captured insurance that offered very limited coverage (e.g., for a single disease or to provide a fixed payment for each hospital day) or, what was likely to be a bigger issue in Massachusetts, care that was paid for through the Uncompensated Care Pool (now called the Health Safety Net). These people may have felt like they had health insurance because they could get care and did not have to pay for it out of pocket, but would not be viewed as being insured for policy purposes.[9]

Wording of the Questions

The wording of specific questions used in surveys of health insurance coverage is related to the questionnaire strategy being used. The "abbreviated approach" and the "funneling approach" are strategies that, by design, rely on very few questions to establish health insurance status. For example, the basic BRFSS uses a single question that asks the respondent if they have "any kind of health care coverage" and defines this term to include "health insurance, prepaid plans such as HMOs, or government plans such as Medicare." The basic BRFSS does not suggest that coverage might come from an employer or directly from an insurer and makes no mention of Medicaid. States have the option of adding to this single-question approach and Massachusetts has done this. In the case of Massachusetts, the BRFSS includes wording about Medicaid, including state-specific program names. As discussed above, the lack of detail in prior DHCFP-HIS wording occurred because

the survey designers used a simple set of questions and believed that more detailed guidance was unnecessary (Roman, Hauser, and Lischko 2002).

The "multi-item approach" used in the CPS, the MHRS and the new DHCFP-HIS provides for questions that are much more detailed than the other survey strategies. Since each source of insurance coverage is typically addressed in a separate question, each question can provide a brief explanation of the source of coverage. For example, a question can explain that employer-provided insurance may come from a current or former employer or union or from a spouse or even someone who does not live in the household (e.g., a divorced parent). The objective of this approach is to prompt the respondent to consider a wide range of sources of coverage and, as a result, reduces the chance that coverage is missed. Similarly, the "multi-item approach" may include a series of questions that use the names of specific state programs to a greater extent than is feasible in a more truncated questionnaire. This is particularly important in Massachusetts because of the renaming of Medicaid as MassHealth and the use of similar sounding coverage options (e.g., CommonHealth, Commonwealth Choice, and Commonwealth Care). Finally, the "multi-item approach" typically uses a verification question similar to the one that is included in the CPS as a final check on uninsurance.

Of the five surveys considered in Table 1, the MHRS and the new DHCFP-HIS provide the most comprehensive list of program names that are specific to Massachusetts. Both surveys also include specific questions about obtaining care through the state's Uncompensated Care Pool/Health Safety Net.

Survey Focus and the Placement of the Health Insurance Questions in the Survey

More accurate information on health insurance coverage is expected in surveys that focus on health insurance issues and ask the health insurance questions relatively early in the survey. Whether or not health insurance questions get placed early in a survey very much depends on the objective of the survey. The CPS is primarily a monthly survey of labor market characteristics. The health insurance questions are asked in the spring Annual Social and Economic Supplement (ASEC), an annual supplement to the monthly CPS that collects information on income and insurance coverage. Health insurance questions are placed near the end of the supplement and, not surprisingly, non-trivial shares of respondents (between 10 and 15 percent) do not complete any of the ASEC, including the health insurance questions. To address this missing data problem, responses for these people are imputed in the CPS (discussed below).

BRFSS is another survey in which the main focus is not health insurance; instead the focus is health status and health behaviors. However, the placement of the health insurance question is still relatively close to the start of the survey. Although the MHRS has the somewhat broader focus of estimating the impact of the health reform in Massachusetts, a central element of the survey is still health insurance coverage of adults. The MHRS uses the multi-item approach and places the health insurance questions prominently in the survey.

The remaining two surveys shown in Table 1 have as their primary focus measuring health insurance coverage. The prior DHCFP-HIS placed the key questions that it used to produce its estimates in the screener part of the interview and asked these questions at the start of the survey. The new DHCFP-HIS uses the more extensive set of questions required for a multi-item approach, but still collects the information early in the survey.

Survey Nonresponse

The CPS, which is conducted by the Census Bureau for the U.S. Department of Labor, includes both in-person and telephone surveys. Nevertheless, the long length of the CPS survey and the placement of the health insurance questions near the end of the ASEC resulted in a response rate for that part of the survey that is 10 to 15 percentage points lower (roughly 68 to 73%).

The response rates for prior DHCFP-HIS and the MHRS are more consistent with current trends in the U.S., as survey response rates continue to decline, particularly for RDD telephone surveys (Keeter et al. 2004; Curtin et al. 2005). The response rate for the BRFSS in Massachusetts, at about 35 percent in 2007, is a bit low relative to current BRFSS standards. The state response rates for the 2007 BRFSS ranged from 27 percent (New Jersey) to 65 percent (Alaska), with a median response rate of 51 percent.[10,11] Nevertheless, the lower response levels in surveys are not, in and of themselves, an indicator of survey quality. As Groves (2006) notes: "[t]here is no minimum response rate below which survey estimate are necessarily subject to bias." Nonresponse is only a problem if nonrespondents are significantly different from respondents on the variables of interest.

Fortunately, much of the potential bias from low response rates can be reduced by using post stratification weights (typically, age, sex, race/ethnicity and geography) that adjust for differences in the characteristics of respondents and nonrespondents (Groves 2006). All of the surveys, except the prior DHCFP-HIS, use post-stratification weighting that adjusts for age, sex, race/ethnicity, and geography. The prior DHCFP-HIS adjusted for age and geography in 2006 and 2007. However even with post-stratification weights, differing response rates among the various Massachusetts studies may in part explain the different survey estimates as nonrespondents may differ from those who respond to the surveys in ways that cannot be corrected through post-stratification weighting. Yet there is some indication that estimates of uninsurance are similar for survey procedures (e.g., number of call attempts) that result in both high and low response rates (Davern 2007).

Data Processing

In general, there is little missing information on health insurance status in four of the five surveys that provide estimates of coverage in Massachusetts. As a result, most estimates are based on those who report insurance coverage, without any imputation for missing data. However, the CPS, with the high level of missing data for the ASEC, does impute values for missing information on insurance status. Because the CPS imputation approach is based on the national sample and does not take the state into account, in a state with a low uninsurance rate, such as Massachusetts, the CPS imputation approach tends to understate coverage and overstate the number of uninsured (Davern et al. 2007). In using the CPS data in a state like Massachusetts, it makes sense to exclude the imputed data and re-weight the remaining CPS observations to state population totals (Cook and Holahan 2007).[12]

Estimates of the Uninsurance Rate in Massachusetts

As shown in Table 2, the prior DHCFP-HIS, MHRS, CPS, and BRFSS produced a range of estimates of the uninsurance rate in Massachusetts for 2006 and 2007. Data for 2008 from the 2008 DHCFP-HIS and the 2008 BRFSS will be available later this year. Data for 2008 from the 2008 MHRS will be available in 2009 as will 2008 data from the 2009 CPS.

For 2006, estimates of the uninsurance rate for the overall population in Massachusetts, which are only available from the prior DHCFP-HIS and the CPS, ranged from 6.4% (prior DHCFP-HIS) to 10.4% (CPS). While there are many differences between the two surveys, at least part of that gap can be explained by some of the limitations of the CPS, including the impact of the Medicaid undercount and the failure to consider the

individual's state of residence in the ASEC imputation procedures in the CPS. Work by Cook and Holahan (2007), funded by the Blue Cross Blue Shield of Massachusetts Foundation to address those limitations for CPS data, led to a reduction in the estimate of the 2005 uninsurance rate of about 1.4 percentage points. We would expect a similar drop in the CPS estimate of the uninsurance rate for 2007 if those limitations were addressed. Nevertheless, while that adjustment would narrow the gap between the estimates from the prior DHCFP-HIS and the CPS, it would not eliminate it.

When we look at the estimate of the uninsurance rate for children in 2006, we find a similarly large gap between the prior DHCFP-HIS and CPS—2.3% versus 7.0%, respectively. Since much of the reduction in the estimate of the overall uninsurance rate for Massachusetts in the 2006 CPS was due to addressing the Medicaid undercount for children, we would expect that to be driving at least part of the difference between the prior DHCFP-HIS and CPS difference for 2006 as well. But, again, even with that adjustment, the estimate of the uninsurance rate for children from the CPS would exceed that of the prior DHCFP-HIS.

In contrast to children, we have four estimates of the uninsurance rate for non-elderly adults in Massachusetts in 2006 with the addition of the MHRS and BRFSS. As shown in Table 2 and illustrated in Figure 1, the estimates of the uninsurance rates for non-elderly adults in the state ranged from 8.4% (BRFSS) to 13.6% (CPS) in 2006, with two of the four surveys (CPS and MHRS) producing estimates at the top of the range (13.6% and 13.2%, respectively) and two surveys—the BRFSS and DHCFP-HIS—at the bottom (8.4% and 9.1%,

Table 2: Comparison of Estimates of Uninsurance Rate in Massachusetts, 2006 and 2007

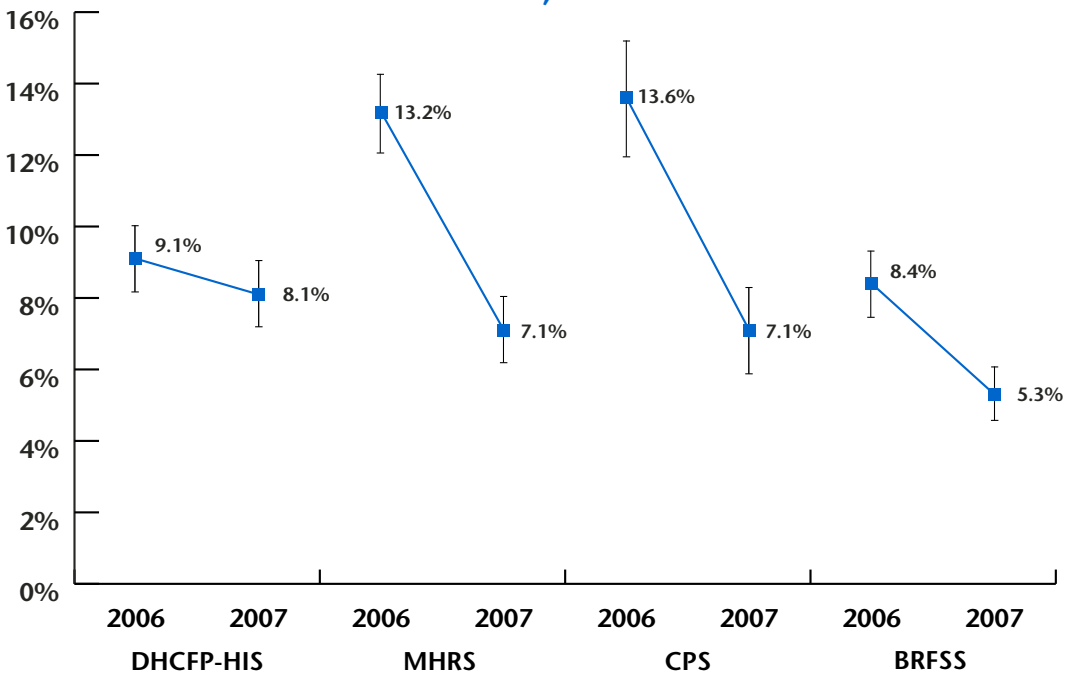
	New DHCFP-HIS	Prior DHCFP-HIS	MHRS	CPS	BRFSS
	%	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Total Population					
2006	N/A	6.4 (5.8-7.0)	N/A	10.4 (9.1-11.6)	N/A
2007	N/A	5.7 (5.1-6.3)	N/A	5.4 (4.5-6.3)	N/A
Children 0 to 17					
2006	N/A	2.3 (1.6-2.9)	N/A	7.0 (4.8-9.2)	N/A
2007	N/A	2.0 (1.3-2.6)	N/A	3.0 (1.5-4.5)	N/A
Adults 18 to 64					
2006	N/A	9.1 (8.2-9.9)	13.2 (12.0-14.4)	13.6 (11.8-15.4)	8.4 (7.3 - 9.4)
2007	N/A	8.1 (7.2-9.0)	7.1 (6.2-8.1)	7.1 (5.7-8.3)	5.3 (4.7 - 5.9)

Source: Tabulations by the Urban Institute and the Massachusetts Division of Health Care Finance and Policy.

Note: (1) Year refers to the data year. This is the same as the survey year for all surveys except the CPS, which asks about insurance coverage in the prior calendar year. (2) We do not show elderly adults aged 65 and older in the table since virtually all are insured.

N/A – This estimate is not available from this survey.

Figure 1: Estimates of the Insurance Rate for Adults Ages 18 to 64 in Massachusetts, 2006 and 2007



Source: Tabulations by the Urban Institute and Division of Health Care Finance and Policy.

respectively).[13] That pattern does not appear to be holding for 2007. The prior DHCFP-HIS, the CPS, and the MHRS generated similar estimates of the uninsurance rate in 2007 (8.1%, 7.1%, and 7.1%, respectively), with the BRFSS estimate somewhat lower (5.3%).

The implications of these differences for estimates of the impacts of health reform over the 2006 to 2007 period in the state are substantial: The prior DHCFP-HIS shows only a small drop in the uninsurance rate for non-elderly adults between 2006 and 2007 (down 11%), while the CPS, the MHRS, and the BRFSS show more substantial drops (49%, 46% and 37%, respectively). Administrative data on the increase in coverage in Massachusetts between 2006 and 2007 (McDonough et al. 2008), suggest that the estimates of the uninsurance rate in 2006 were too low in both the prior DHCFP-HIS and BRFSS. In contrast, the estimates of the drop in uninsurance between 2006 and 2007 in the CPS and MHRS are generally consistent with the administrative data on coverage growth in the state.

Conclusions

No survey is perfect. Of the surveys fielded in Massachusetts, the CPS, which provides the best sample for estimating the overall population in Massachusetts, has a weak measure of health insurance status and a small sample size for Massachusetts.[14] Both the BRFSS and MHRS focus on adults, leaving efforts to track uninsurance among children in Massachusetts to other surveys. The prior DHCFP-HIS, the BRFSS and the MHRS all rely on RDD telephone samples, an increasingly limited strategy as the number of current cell-phone-only households increase in the state.

In an effort to address the limitations of existing surveys used to estimate uninsurance in Massachusetts for both adults and children, DHCFP has re-designed the DHCFP-HIS to expand the coverage of the survey to

include all residential households in the state (not just those with a landline telephone) and to more fully capture the health care insurance and health care options in Massachusetts.[14] The new survey will provide information on the insurance status of all adults and children in a sample of 4,000 households in the state, as well as information on access to and use of health care, and health care costs. Data from that 2008 DHCFP-HIS will be available later this year.

Endnotes

[1] For more information, see www.census.gov/cps/. In addition to the basic CPS estimates, researchers have made modifications to the CPS data that address several data issues to generate revised uninsurance estimates from the CPS. See, for example, Cook and Holahan (2007).

[2] For more information, see www.mass.gov/?pageID=eohhs2terminal&&L=5&L0=Home&L1=Government&L2=Departments+and+Divisions&L3=Department+of+Public+Health&L4=Programs+and+Services+A+-+J&sid=Eeohhs2&b=terminalcontent&f=dph_behavioral_risk_g_about_health_survey&csid=Eeohhs2.

[3] For more information, see www.mass.gov/dhcfp/household survey.

[4] For more information, see www.urban.org/publications/411649.html.

[5] Beginning in 2009, the Massachusetts BRFSS will also include cell-phone-only households.

[6] This corresponds to the time period for the CPS questions on income and employment.

[7] The Census Bureau added the health insurance verification question to the CPS in 2000. The addition of this question led to about an 8 percent drop in the estimate of the number of uninsured based on the CPS (Nelson and Mills 2001).

[8] The BRFSS that is fielded in the states does not add additional health insurance questions uses this type of approach.

[9] Given that the prior DHCFP-HIS estimated the numbers of uninsured in Massachusetts at 372,000 and insured at over 5 million in 2006, if only 2% of the insured group was incorrectly classified as insured and were actually covered by the UCP or a policy that is not considered health insurance, this would imply that the number of uninsured was understated by about 100,000 people. This would comprise most of the gap between the DHCFP-HIS estimates and those derived from the CPS for that period.

[10] http://ftp.cdc.gov/pub/Data/Brfss/2007SummaryDataQualityReport.pdf.

[11] Beginning with the 2008 survey, the Massachusetts Department of Public Health is investing in new survey strategies to improve the response rate for the BRFSS.

[12] In March 2007, the Census Bureau released revisions to CPS estimates of health insurance coverage based on an error discovered in the imputation process. (For more information see http://www.census.gov/hhes/www/hlthins/usernote/usernote3-21rev.html.) This revision resulted in a reduction in the 2005 estimate of the uninsured by 1.8 million nationally and nearly 35,000 in Massachusetts.

[13] Cook and Holahan (2007) found no evidence of a Medicaid undercount in the CPS for adults in Massachusetts in 2005. As a result, they made only a very small change to the estimate of the 2005 uninsurance rate for non-elderly adults in the state to adjust for the imputation in the ASEC.

[14] The Massachusetts Department of Public Health is also making improvements in the state's BRFSS, including investing in strategies to improve the survey response rate in 2008 and expanding the sample to include cell-phone-only households in 2009.

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