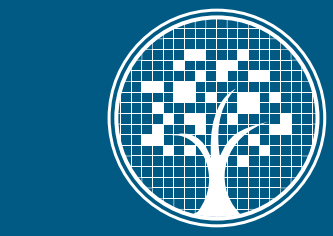

HEALTHCARE COST AND UTILIZATION PROJECT

HCUP Methods Series

An Examination of Expected Payer Coding in HCUP Databases

Report # 2014-03

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services
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EXECUTIVE SUMMARY

The "expected payer" data element in HCUP databases and other similar hospital encounter databases provides information on the type (category) of payer that the hospital expects to be the source of payment for the hospital bill. This data element is widely used as an important explanatory variable in health services research to examine such issues as variations observed in hospitalizations or readmissions and in outcomes such as quality of care, utilization, and costs. In addition, expected payer is used to examine the impact of health system changes and to answer other important policy questions. For example, as health maintenance organizations (HMOs) became more widespread, expected payer was used to examine patient and hospital-level outcomes under managed care arrangements. Because of the great interest in using the expected payer data element to answer research and policy questions, it is important to understand what it captures in order to make best use of this information.

Unlike most data elements in the HCUP databases, the expected payer data element is not created in the same way across States. In large part, this variation is caused by the fact that the national claim standard for hospitals to submit a bill to payers (Uniform Bill), which most States use as the basis for their hospital data collection, does not include a data element for a classification of expected payer. Instead, the Uniform Bill (UB) includes the name and identification number for the specific payer for bill payment. Because of the importance of a payer classification for analyses of hospital services, all States partcipating in HCUP include a data field for expected payer classification. But the historic absence of expected payer classification on the UB has led each statewide data organization to develop its own approach to creating the data element. In developing their expected payer classification codes, statewide data organizations often factor in their local needs and interests to track specific State and local programs that pay for hospital services, different forms of health plans and payers that cover a substantial portion of the residents in their State.

In addition to the classification categories used, other differences exist in the ways that States obtain expected payer information. In most States, hospitals are provided with a set of codes for different payer types as part of their hospital data reporting requirements and are required to provide the code for the type of payer expected to pay the bill. Many hospitals likely rely on the business or financial unit's information on the health plan (e.g., name and plan identifier), information gathered by hospital admissions or registration staff from the patient or the patient's insurance card, or both. In a few States, hospitals are not required to provide the expected payer code; instead the statewide data organization classifies the payer type using information about the payer (e.g., health plan name or identifier) on the claim record reported to them by the hospital.

In addition to the problems related to lack of uniformity in coding and collection practices, there are concerns about the accuracy of the data. Statewide data organizations participating in HCUP report that they are uncertain about hospitals' ability to distinguish certain types of payers with the information that is available to them on expected source of payment. For example, patients covered by a Medicaid managed care plan may not be distinguishable from patients covered by a private insurance managed care plan. Using the expected payer data element for studies of hospital services poses other challenges. The response to the question "Who is expected to pay the hospital for a given service?" may

be different from the response to “Who is the patient’s insurer?” This distinction applies particularly to uninsured patients, whose hospital stays may be paid for by various State or local programs for the indigent that are not insurance programs. Given the wide use of the expected payer data, and these issues surrounding its collection, it is surprising that there have been few studies examining expected payer data collection practices and data quality.

The purpose of this Methods Series report was threefold: (1) to present more detailed information about the expected payer codes collected from HCUP States, (2) to suggest how these expected payer codes can be used for research purposes, and (3) to assess how accurately the HCUP databases capture discharges covered by these payers compared with other national data sources. Although the report provides information for different types of payers, the focus is on payers for low-income populations (especially the uninsured) and managed care. These are two areas of coding that tend to be the least standardized, and they are of increasing interest for researchers.

Investigating the Coding of Expected Payer in the HCUP Databases

For this report, we used the HCUP State Inpatient Databases (SID), which include the universe of the inpatient discharge abstracts in participating States. For calendar year 2011, 47 States participated in HCUP, and their discharges encompassed about 97 percent of all annual discharges in the United States. HCUP includes six uniform categories for identifying the expected payer: Medicare, Medicaid, private insurance, self-pay, no charge or charity, and other payer. State-specific codes for expected payer are mapped into these six uniform categories. We found that States had specific codes for Medicare and privately insured discharges. Some States reported Medicaid and Children’s Health Insurance Programs (CHIP) as separate payers, and other States did not differentiate CHIP from Medicaid. There was also considerable variation across States in the identification of other Federal, State, and local government programs that were coded under the HCUP category of other payer. Examples of the Federal government programs included Indian Health Services (IHS), Black Lung, Title V, Hill-Burton, and Ryan White.

Many of the HCUP Partners identified State-specific or local programs that are included in the "other" category in the HCUP uniform expected payer data element. We researched these programs to determine if they were an insurance program or a “payer of last resort” for inpatient stays for the uninsured. We categorized programs as “insurance” that involved a copayment or premium from the recipient for comprehensive care including hospitalizations or that guaranteed recurrent care through the established mechanism. We categorized programs as a “payer of last resort” that provided temporary care for a single service or a single episode of care or if the program required the individual not to have public or private insurance covering the service or episode of care. It is important to reiterate that although the discharge record indicated that patients were covered under a government program for the inpatient stay, further investigation of these programs identified these hospitalizations as occurring to uninsured patients.

Comparison of HCUP Inpatient Discharges and Health Insurance Enrollment Statistics

After examining the coding of programs for the uninsured, we turned to an examination of the State-specific coding for two other types of patients: those that are dually enrolled in Medicare and Medicaid and those that are enrolled in managed care plans under Medicare, Medicaid, or private insurance. For this analysis, we defined managed care to include the following plan types: health maintenance organization (HMO), preferred provider organization (PPO), and point of service (POS).

Discharges for patients dually enrolled in Medicare and Medicaid could be identified in the 36 States (of 47 States) that report two or more payers in the 2011 HCUP SID. We compared the percentage of Medicaid discharges with dual coverage in the SID with enrollment data from CMS. Generally, the percentage of Medicaid enrollees with dual coverage appeared higher in the HCUP data versus the CMS data, except for a few States.

There was wide variation in whether States identified managed care patients for Medicare, Medicaid, and/or the privately insured. Some States identified separate categories for HMO, PPO, and POS. Other States only reported a combined managed care category. About half of the HCUP States did not have codes for managed care plans.

We compared the percentage of Medicare and Medicaid discharges for managed care plans in the SID with enrollment data from CMS (data were available for 25 States and 23 States, respectively). The percentage of SID Medicare discharges identified as part of a managed care plan tended to be lower than the percentage of Medicare managed care enrollment in the CMS data. Across most States, the percentage of SID Medicare discharges for Medicare managed care plans corresponded closely with the percentage of Medicare enrollees in Medicare managed care plans, as reported by CMS. However, there were a few outlier States with very dissimilar statistics, indicating that coding problems are occurring in specific States. In addition, the percentage of SID Medicaid discharges for Medicaid managed care plans did not correspond closely with the percentage of Medicaid enrollees in Medicaid managed care plans as reported by CMS. These findings indicate that researchers designing studies of Medicaid beneficiaries enrolled in managed care using HCUP data may want to closely examine outlier States before deciding whether to include them in their studies.

No publicly available data source could be identified for managed care enrollment for the privately insured at the State level, so we compared the percentage of Medicare, Medicaid, and privately insured discharges for managed care plans in the SID (data were available for 19 States) with similar information from the Kaiser Family Foundation (KFF) State Health Facts. The SID percentages for total managed care appeared higher than the KFF percentages for most of the States.

Comparison of HCUP Inpatient Discharges and Population Estimates by Type of Insurance

Before we could compare HCUP data with population estimates, we needed to modify the payer coding in the HCUP discharge data to align with the insurance categories used by the 2011 American Community Survey (ACS). Because the ACS includes CHIP under Medicaid, HCUP CHIP discharges captured under other insurance across five States were recoded and combined with Medicaid. The HCUP category for other payer included State-specific coding for Federal, State, and local government

programs that covered an inpatient stay for patients that the ACS considered uninsured (e.g., IHS, Hill-Burton, Ryan White, and county indigent). The HCUP discharges with State-specific payer codes for these programs were combined with discharges coded as self-pay and no charge to create a discharge count for the uninsured.

To assess the degree to which State-specific HCUP data aligned with population-based information, we examined the share of HCUP total discharges by expected payer (Medicare, Medicaid, private, and uninsured) in comparison with the percentage of the population obtained from the ACS. These comparisons were also conducted with selected age groups. The percentage of HCUP discharges for Medicaid and Medicare individuals under age 65 was consistently higher than the corresponding percentage of the population in the ACS data. In contrast, the percentage of HCUP discharges for Medicare individuals aged 65 and older, privately insured and uninsured was lower than the corresponding percentage of the population in the ACS data. Across all payers, there were a few outlier States with very dissimilar statistics. These outliers signal States that may have payer coding problems and/or payer coding that does not align closely with the ACS.

Conclusion

This report presents detailed information about the expected payer codes collected by HCUP States, with a focus on low-income populations (especially the uninsured) and managed care. Across all payers, the comparison of HCUP discharge-based proportions with ACS population-based proportions in 2011 included a few outlier States with very dissimilar statistics. These outliers signal States with possible payer coding problems and/or coding that does not align closely with the ACS.

We summarize the findings for the six HCUP uniform categories below.

- *Medicare*. Codes for Medicare were included in the State-specific coding of payer in all HCUP States. When we compared the Medicare percentage of HCUP total discharges with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently higher than the corresponding percentage of the population for individuals under age 65 and consistently lower for individuals aged 65 and older.
- *Medicare Managed Care*. In 2011, 25 out of 47 States provided detailed coding for Medicare discharges for managed care plans. A comparison of the percentage of HCUP Medicare discharges that are identified as being managed care with CMS enrollment data for Medicare managed care suggested that there may be incomplete reporting of patients enrolled in Medicare managed care plans in a few of these States.
- *Medicaid*. Codes for Medicaid were included in the State-specific coding of payer in all HCUP States. Five States separately identified discharges from CHIP under other payer (out of the 43 States with separate or combined CHIP programs). In this study, discharges with a primary payer of CHIP were considered as Medicaid. When we compared the Medicaid percentage of HCUP total discharges with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently higher than the corresponding percentage of the population.

- *Medicaid and Medicare dual enrollees*. In 2011, discharges for patients dually enrolled in Medicare and Medicaid were identified in the 36 States that report two or more payers in the HCUP SID. Comparison of HCUP data with CMS enrollment data suggested that there may be incomplete reporting of patients dually enrolled in Medicare and Medicaid in a few States.
- *Medicaid Managed Care*. Twenty-three out of 47 States provided detailed coding for Medicaid discharges for managed care plans. To assess the degree to which the HCUP SID accurately capture discharges for Medicaid managed care, we conducted a State-level comparison of SID discharges with CMS enrollment data. The results suggested that there may be incomplete reporting of patients enrolled in Medicaid managed care plans in a few States.
- *Private insurance*. Codes for private insurance were included in the State-specific coding of payer in all 47 HCUP States. When we compared the percentage of HCUP total discharges that had a primary payer of private insurance with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently lower than the corresponding percentage of the population.
- *Private managed care*. In 2011, 33 States provided detailed coding for managed care plans for the privately insured. There was no publicly available State-level, population-based information on privately insured individuals in managed care for comparison with the HCUP discharge data.
- *All managed care*. Only 19 out of 47 States identified managed care plans across Medicare, Medicaid, and the privately insured. To assess the degree to which HCUP SID accurately capture discharges for all managed care plans, we conducted a State-level comparison of SID discharges with Kaiser Family Foundation (KFF) managed care penetration data. The SID percentages for total managed care were similar to or higher than the KFF percentages for most of the States.
- *Self-Pay and No Charge*. These HCUP payer categories captured across all 47 HCUP States are often used to identify uninsured patients. Additional uninsured patients were reported under various Federal, State, and local government programs that were coded under the HCUP payer category of other payer.
- *Other payer*. Some of the programs included under other payer are insurance plans, but others are a payer of last resort for uninsured patients. Programs that might be considered insurance plans included Black Lung and Title V. Programs that we determined as covering the inpatient stay for uninsured patients (payers of last resort) included, but were not limited to, IHS, Hill-Burton, Ryan White, and county indigent programs.
- *Uninsured*. An uninsured category was created for this analysis using discharges coded as self-pay, no charge, and State and local programs serving low-income populations coded under other (e.g., IHS, Hill-Burton, and Ryan White). Table A shows the substantial impact of including discharges from the State and local programs in the count of hospital stays for the uninsured. Counting IHS discharges as uninsured increased the number of uninsured inpatient stays from 2 percent (Oregon) to 68 percent (Alaska). Including discharges reported under State or county indigent programs as uninsured increased the number of uninsured inpatient stays from 22

percent (New Mexico) to 54 percent (California). Counting discharges from other State-specific payers of last resort for inpatient stays as uninsured increased the number of uninsured inpatient stays from 1 percent (Maryland) to 105 percent (Massachusetts). However, when we compared the percentage of HCUP total discharges identified as uninsured with the corresponding percentage of the population obtained from the ACS, we often found that the HCUP percentage was consistently lower than the corresponding percentage of the population.

Table A. Impact of Including Discharges for Programs Reported under the HCUP Payer Category "Other" that Cover Inpatient Stays for the Uninsured

Programs coded under other payer	States with HCUP expected payer codes for these programs	Percent increase in 2011 SID discharges for the uninsured if defined using self-pay, no charge, and specified program
Indian Health Services	Alaska	68%
	Arizona	17%
	Georgia	No discharges reported with this payer code in the SID
	Montana	18%
	New Mexico	14%
	Oregon	2%
State or County Indigent Programs	California	54%
	Colorado	42%
	Nevada	44%
	New Mexico	22%
	Virginia	40%
Other State-Specific Payers of Last Resort	Georgia: Migrant health services	No discharges reported with this payer code in the SID
	Maryland: Maryland Health Insurance Plan	1%
	Massachusetts: Health Safety Net and Children's Medical Program	105%
	Nevada: Section 1011 undocumented aliens	No discharges reported with this payer code in the SID
	Ohio: Hospital Care Assurance Program	2%
	South Carolina: Other Agency, Charity (i.e. Medical Indigent Assistance Program, Hill Burton, County Government, etc.)	49%

Source: Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2011.

Expected payer is the least uniform variable supplied by statewide data organizations. Researchers need to understand the information captured by expected payer data, so that they can use the data appropriately in their studies. This report is intended to be a reference tool to inform research focused on health care utilization and quality by expected payer using the HCUP databases.

INTRODUCTION

The "expected payer" data element in HCUP databases and other similar hospital encounter databases provides information on the type (category) of payer that the hospital expects to be the source of payment for the hospital bill. This data element is widely used as an important explanatory variable in health services research to examine such issues as variations observed in hospitalizations[1,2,3] or readmissions[4] and in outcomes such as quality of care,[5,6] utilization,[7] and costs.[8] In addition, expected payer is used to examine the impact of health system changes and to answer other important policy questions. For example, as health maintenance organizations (HMOs) became more widespread, expected payer was used to examine patient[9] and hospital-level outcomes[10,11] under managed care arrangements. Because of the great interest in using the expected payer data element to answer research and policy questions, it is important to understand what it captures in order to make best use of this information.

Unlike most data elements in the HCUP databases, the expected payer data element is not created in the same way across States. In large part, this variation is caused by the fact that the national claim standard for hospitals to submit a bill to payers (Uniform Bill), which most States use as the basis for their hospital data collection, does not include a data element for a classification of expected payer.[12] Instead, the Uniform Bill (UB) includes the name and identification number for the specific payer for bill

[1] Henke RM, Marder WD, Friedman BS, et al. Geographic variation: a view from the hospital sector. Med Care Res Rev. 2011; 68(6):699-711.
[2] Kozhimannil KB, Shippee TP, Adegoke O, et al. Trends in hospital-based childbirth care: the role of health insurance. Am J Manag Care. 2013 Apr;19(4):e125-32.
[3] Pines JM, Mutter RL, Zocchi MS. Variation in emergency department admission rates across the United States. Med Care Res Rev. 2013 Apr;70(2):218-31.
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[7] Stone ML, LaPar DJ, Mulloy DP, et al. Primary payer status is significantly associated with postoperative mortality, morbidity, and hospital resource utilization in pediatric surgical patients within the United States. J Pediatr Surg. 2013 Jan;48(1):81-7.
[8] Eaton SH, Cashy J, Pearl JA, et al. Admission rates and costs associated with emergency presentation of urolithiasis: analysis of the Nationwide Emergency Department Sample (NEDS) 2006-2009. J Endourol. 2013 Sep 2 [epub ahead of print].
[9] Zhan C, Miller MR, Wong H, et al. The effects of HMO penetration on preventable hospitalizations. Health Serv Res. 2004 Apr;39(2):345-61.
[10] Pracht EE, Orban BL, Comins MM, et al. The relative effectiveness of managed care penetration and the healthcare safety net in reducing avoidable hospitalizations. J Healthcare Qual. 2011 Jul-Aug;33(4):42-51.
[11] Jiang HJ, Friedman B, Jiang S. Hospital cost and quality performance in relation to market forces: an examination of U.S. community hospitals in the "post-managed care era." Int J Health Care Finance Econ. 2013 Mar;13(1):53-71.
[12] Coffey RM, Ball JK, Johantgen M, et al. The case for national health data standards. Health Aff (Millwood). 1997, Sep-Oct;16(5):58-72.

payment. Because of the importance of a payer classification for analyses of hospital services, all States partcipating in HCUP include a data field for expected payer classification. But the historic absence of expected payer classification on the UB has led each statewide data organization to develop its own approach to creating the data element. In developing their expected payer classification codes, statewide data organizations often factor in their local needs and interests to track (1) specific State and local programs that pay for hospital services, (2) different forms of health plans (e.g., HMOs, preferred provider organizations [PPOs]), and (3) payers that cover a substantial portion of the residents in their State (e.g., Indian Health Service in some States). Some States use the "Claim Filing Indicator Code"[13] to obtain expected payer classification. This data element, which is on the electronic hospital claim (ANSI x12n 837i), can be problematic for data analysts because the code set involves overlapping, missing, and obscure concepts and does not include definitions.

To address the lack of a national standard for payers, the Public Health Data Standards Consortium developed the Source of Payment Typology through a consensus process, with input from individual statewide data organizations, the National Association of Health Data Organization, the Agency for Healthcare Research and Quality (AHRQ), the Centers for Disease Control and Prevention (CDC), and other stakeholders.[14] In 2009, the Source of Payment Typology was added to the UB "for public health data reporting only when required by state or Federal law or regulations" (but is not allowed on claims submitted to payers by hospitals). Although AHRQ has actively encouraged statewide data organizations to adopt the Source of Payment Typology, few States have done so.

In addition to the categories used, other differences exist in the ways that States obtain expected payer information. In most States, hospitals are provided with a set of codes for different payer types as part of their hospital data reporting requirements and are required to provide the code for the type of payer expected to pay the bill. No studies on how hospitals determine the expected payer code have been published, but according to anecdotal reports from Healthcare Cost and Utilization Project (HCUP) State representatives it likely varies from hospital to hospital. Many hospitals likely rely on the business or financial unit's information on the health plan (e.g., name and plan identifier), information gathered by hospital admissions or registration staff from the patient or the patient's insurance card, or both. Some hospitals may keep an internal code set for payer type used for their analyses and then map the internal code to the State's required code set. In a few States, hospitals are not required to provide the expected payer code; instead the statewide data organization classifies the payer type using information about the payer (e.g., health plan name or identifier) on the claim record reported to them by the hospital.

In addition to the problems related to lack of uniformity in coding and collection practices, there are concerns about the accuracy of the data. Statewide data organizations participating in HCUP report that they are uncertain about hospitals' ability to distinguish certain types of payers with the information

[13] Agency for Healthcare Research and Quality. Claim Filing Indicator Code. http://ushik.ahrq.gov/ViewItemDetails?system=sdo&itemKey=133096000. Accessed December 1, 2014.
[14] Public Health Data Standards Consortium. Source of Payment Typology (Version 3.0). 2013. http://phdsc.org/standards/payment-typology-source.asp. Accessed December 1, 2014.

that is available to them on expected source of payment. For example, patients covered by a Medicaid managed care plan may not be distinguishable from patients covered by a private insurance managed care plan. In addition, the hospital is reporting *expected* payer. The actual payer could be different than what was expected at the time of the claim submission. This potential discrepancy may be particularly relevant to patients who enter the hospital without insurance coverage, but who the hospital believes will be retroactively enrolled and covered by Medicaid. The hospital's expectation of Medicaid payment may not always be fulfilled.

Using the expected payer data element for studies of hospital services poses other challenges. The response to the question "Who is expected to pay the hospital for a given service?" may be different from the response to "Who is the patient's insurer?" This distinction applies particularly to uninsured patients, whose hospital stays may be paid for by various State or local programs for the indigent that are not insurance programs. Researchers often rely on the payer codes "self-pay" and "no charge" to identify records for the uninsured. This approach omits uninsured patients whose hospital stay is paid for by an indigent care program.

Given the wide use of the expected payer data and these issues surrounding its collection, it is surprising that few studies have examined expected payer data collection practices and data quality. We identified two studies that used California's discharge data from the 1990s that were linked to program enrollment to validate the accuracy of the payer recorded on the discharge data. In the first study,[15] the discharge data were linked to Medicaid (Medi-Cal in California) enrollment files for patients younger than 65 years who were hospitalized for ambulatory care sensitive conditions. The study found that 10 percent of the discharges for Medicaid enrollees were inaccurately coded as private insurance (7 percent), uninsured (2 percent), or other (1 percent). Of discharges for Medicaid enrollees in managed care, 22 percent were erroneously coded in the discharge data as private insurance. In addition, 10 percent of discharge records with an expected payer of Medicaid were not actually Medicaid enrollees during the month of hospitalization.

The second study[16] linked hospital discharge data with health benefits data for a large employer in California (University of California). Coding of plan type in the discharge data among these privately insured patients was most accurate for those enrolled in HMOs (over 80 percent correctly coded) and least accurate for those enrolled in PPOs (28–37 percent correctly coded, depending on the year). Discharges were also miscoded as Medicare for those in group HMOs who were older than 65 years for whom private insurance should have been considered as the primary payer (i.e., the coverage was based on a current employee). However, miscoding of uninsured, Medicaid, or other State/local payer was rare (less than 5 percent).

The purpose of this Methods Series report was threefold: (1) to present more detailed information about the expected payer codes collected from HCUP States, (2) to suggest how these expected payer

[15] Chattopadhyay A, Bindman AB. Accuracy of Medicaid payer coding in hospital patient discharge data: implications for Medicaid policy evaluation. Med Care. 2005 Jun;43(6):586-91.
[16] Buchmueller TC, Allen ME, Wright W. Assessing the validity of insurance coverage data in hospital discharge records: California OSHPD data. Health Serv Res. 2003 Oct;38(5):1359-72.

codes can be used for research purposes, and (3) to assess how accurately the HCUP databases capture discharges covered by these payers compared with other national data sources. Specific objectives included the following:

1. Analyze State-specific expected payer codes for Federal, State, and local government programs that are not well understood and are included under the HCUP expected payer category of "other payer."
2. Identify State-specific expected payer codes for patients who are uninsured.
3. Identify State-specific expected payer codes for individuals who are dually enrolled in Medicare and Medicaid.
4. Identify State-specific expected payer codes for managed care plans.
5. Compare State-specific HCUP inpatient discharges with publicly available enrollment data to assess the degree to which HCUP captures data for these populations.
6. Compare State-specific HCUP inpatient discharges with health insurance population estimates to assess the degree to which HCUP aligns with population-based information.

This Methods Series report first provides an orientation to the coding used in the HCUP databases and addresses Objectives 1 through 4. We make recommendations regarding how to identify programs for uninsured patients who are captured under other payer and for individuals who are dually enrolled in Medicare and Medicaid. We also identify State-specific coding for managed care patients. The next section of the report addresses Objective 5 and provides comparisons of HCUP inpatient discharges with enrollment data for individuals who are dually enrolled in Medicare and Medicaid, Medicare managed care enrollees, Medicaid managed care enrollees, and all managed care enrollees. To address Objective 6, we compare HCUP inpatient discharges by expected payer with corresponding health insurance population estimates for uninsured individuals and those covered by Medicare, Medicaid, and private insurance. This comparison was conducted across and within age groups.

PAYER CODING IN THE HCUP DATABASES

The Healthcare Cost and Utilization Project (HCUP) is a family of health care databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by AHRQ. HCUP databases bring together the data collection efforts of State governments, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level health care data. HCUP includes the largest collection of longitudinal hospital care data in the United States, featuring all-payer, encounter-level information beginning in 1988.

For the analyses in this report, we used the 2011 HCUP State Inpatient Databases (SID), which include the universe of the inpatient discharge abstracts in participating States. In data year 2011, 47 States participated in HCUP, and their discharges encompassed about 97 percent of all annual discharges in the United States. Appendix A lists the HCUP State Partners.

The objectives of this section include the following:

1. Provide an overview of the expected payer coding in the HCUP databases.
2. Identify what is captured in the residual "other payer" category.
3. Identify general and State-specific payer codes for programs created for the uninsured and provide guidance on how the HCUP payer codes could be used to expand the uninsured definition.
4. Identify expected payer codes for individuals who are dually enrolled in Medicare and Medicaid and provide guidance on how the HCUP payer codes could be used to capture these beneficiaries.
5. Identify beneficiaries who are enrolled in managed care or Medicaid managed care and provide guidance on how the HCUP payer codes could be used to capture managed care.

Overview of HCUP Uniform Expected Payer Codes

The HCUP databases include three types of information on the expected payer.

1. *Expected payer as received from the State*. Every HCUP State provides one to three expected payers (HCUP data elements PAY1_X, PAY2_X, and PAY3_X). The coding for the payers is State-specific. For example, one State may code Medicare discharges with the value "M" and another State may use the value "100." States also vary in the level of detail with which they describe programs.
2. *Expected payer plan identifier as received from the State*. A small number of HCUP States provide one or two health plan identifiers for the expected payer (HCUP data elements PAYER1_X and PAYER2_X). The coding for the payers is State-specific and provides additional detailed information on the name or type of insurance plan. For example, the expected payer would indicate private insurance, and the expected payer plan identifier would distinguish the insurance carrier (e.g., Blue Cross, UnitedHealth, Aetna).
3. *HCUP uniformly coded expected payer*. To facilitate comparisons across States, HCUP combines the State-specific detailed categories into six general groups:
    - Medicare (HCUP value 1): patients covered by fee-for-service and managed care Medicare
    - Medicaid (HCUP value 2): patients covered by fee-for-service and managed care Medicaid
    - Private insurance (HCUP value 3): fee-for-service and managed care programs, including Blue Cross, commercial carriers, private health maintenance organizations (HMOs), and preferred provider organizations (PPOs)
    - Self-pay (HCUP value 4): patients who are financially responsible for their stay
    - No charge (HCUP value 5): hospital does not plan to charge the patient or another payer for the stay

- Other (HCUP value 6): Worker's Compensation, TRICARE (health care for military families, formerly known as CHAMPUS), Veterans Affairs (VA) health care, Title V, and other payers.

The State-specific codes in the HCUP data element PAY1_X are combined into the six groups in the HCUP data element PAY1. The State-specific codes in the HCUP data element PAY2_X are combined into the six groups in the HCUP data element PAY2, and the same procedure is completed for PAY3_X and PAY3. The expected payer plan identifier (HCUP data element PAYERn_X) is not used to assign the uniformly defined groups in PAY1, PAY2, or PAY3.

HCUP State-Specific Payer Codes: Common Codes Included in HCUP "Other Payer" Category

Although all HCUP data sources have payer codes to identify discharges insured by Medicare and Medicaid, they vary on the reporting of other Federal, State, and local government programs. Identifying these other types of payers can be important when trying to determine if a patient is uninsured, because some of those programs are only for the uninsured. Below, we describe various programs that are identified as an expected payer in some States' HCUP data and provide suggestions on how they can be coded in research studies.

Children's Health Insurance Program

Background. The Children's Health Insurance Program (CHIP) provides health coverage to children if the family cannot afford private insurance coverage and their household income is too high to qualify for Medicaid.[17] CHIP (formally State CHIP [SCHIP]) is a State-administered program created by the Balanced Budget Act of 1997 (enacted Title XXI of the Social Security Act). It was reauthorized by the Children's Health Insurance Program Reauthorization Act (CHIPRA) of 2009 and reauthorized again by the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010. The program has been extended to September 30, 2015.

CHIP was created as a complement program to Medicaid by providing funding that is intended to increase children's health care coverage and enrollment. Further expansion of these programs came from CHIPRA, which increased Federal funding, provided new tools, and gave fiscal incentives to further expand and strengthen children's coverage in Medicaid and CHIP. CHIP programs are jointly funded by the Federal government and State agencies that administer their State's program.

States can design their CHIP program in one of three ways: Medicaid expansion, a separate program, or a combination of the two approaches. Together, Medicaid and CHIP provide health insurance coverage for over one-third of all children and over one-half of children in families with low income.[18] Information about the name and type of CHIP program in each State is included in Appendix B.

[17] Information about CHIP is available on the Medicaid Web site at http://www.medicaid.gov/medicaid-chip-program-information/by-topics/childrens-health-insurance-program-chip/childrens-health-insurance-program-chip.html. Accessed December 5, 2013.

[18] The Kaiser Commission on Medicaid and the Uninsured. July 2012. Health Coverage of Children: The Role of Medicaid and CHIP. Publication #7698-06. Washington D.C.: Henry J. Kaiser Family Foundation. http://kff.org/medicaid/fact-sheet/health-coverage-of-children-the-role-of/. Accessed September 4, 2013.

HCUP Coding. CHIP is often not coded in the HCUP discharge data. In our review of the HCUP expected payer coding from 2008–2011, six out of 47 States (Florida, Georgia, Kansas, Tennessee, Utah, and West Virginia) had a payer code specific to their CHIP program under the other payer category and actually captured discharges in this category.

Suggestions for Users. Although HCUP discharges identified as CHIP are uniformly coded as other payer in the HCUP expected payer variables, some studies may want to consider these discharges as Medicaid because the Census population surveys take this approach when creating insurance population estimates.

Indian Health Services

Background. As a Federal agency within the U.S. Department of Health and Human Services (HHS), the Indian Health Service (IHS) is a Federal program that provides medical assistance to eligible American Indians and Alaska Natives from federally recognized tribes.[19] Congress provides funds to IHS for the health care of approximately 1.9 million American Indians and Alaska Natives as specified by the Snyder Act of 1921 (25 USC 13) and the permanent reauthorization of the Indian Health Care Improvement Act (enacted in 2010 as part of the Patient Protection and Affordable Care Act). IHS helps pay the cost of selected health care services provided at non-IHS facilities.

HCUP Coding. In our review of the HCUP expected payer coding from 2008–2011, six States (Alaska, Arizona, Georgia, Montana, New Mexico, and Oregon) had a payer code specific to IHS under other payer.

Suggestions for Users. Although HCUP discharges identified as IHS are uniformly coded as other payer in the HCUP expected payer variables, some studies may want to consider these discharges as uninsured for inpatient care, because the Census population surveys consider respondents with IHS alone to be uninsured. IHS is not considered comprehensive coverage.[20]

Black Lung

Background. The Black Lung Benefits Act of 1973 is a workers' compensation program administered by the Office of Workers' Compensation Programs (OWCP) under the United States Department of Labor.[21] This benefit program provides monthly payments and medical benefits to coal miners who are totally disabled from pneumoconiosis (black lung disease) arising from their employment in or around the nation's coal mines. The Act also provides for monthly benefits to a miner's dependent survivors. Unless the miner was awarded benefits pursuant to a claim filed before 1982, a survivor must establish

[19] Information on Indian Health Services is available at http://www.ihs.gov/aboutihs/. Accessed November 17, 2013.
[20] Information on the Census health insurances definitions is available at http://www.census.gov/hhes/www/hlthins/methodology/index.html. Accessed November 15, 2013.
[21] Information on the Federal Black Lung Benefits Program is available at http://www.dol.gov/compliance/topics/benefits-comp-blacklung.htm. Accessed November 15, 2013.

that pneumoconiosis was a substantially contributing cause of the miner's death to be entitled to benefits.

The program provides two types of medical services related to black lung disease: (1) diagnostic testing for all miner claimants to determine the presence of black lung disease and the degree of associated disability and (2) medical coverage for treatment of black lung disease and disability for miners entitled to monthly benefits. Medical coverage includes (but is not limited to) costs for prescription drugs, office visits, and hospitalizations for the treatment of the black lung condition.

HCUP Coding. In our review of the HCUP expected payer coding from 2008–2011, six States (Georgia, Illinois, Kentucky Nevada, Virginia, and West Virginia) had a payer code specific to the Black Lung program under other payer.

Suggestions for Users. It is difficult to discern whether patients identified as having an expected payer of Black Lung on an inpatient discharge should be considered as insured or uninsured. The Black Lung program does not cover the treatment of medical problems not related to the Black Lung condition (e.g., arthritis, diabetes, most heart conditions).[22] Patients enrolled in the Black Lung program may have other health insurance.

Title V

Background. The Federal Title V Maternal and Child Health program is a source of flexible funding that allows States to invest in the child health "infrastructure" for basic and specialty care.[23] The program seeks to assure access to quality care, especially for individuals with low incomes or limited availability of care. This includes (but is not limited to) providing women with access to comprehensive prenatal and postnatal care and providing children with health assessments and follow-up diagnostic and treatment services. Title V is a partnership with State Maternal and Child Health and Children with Special Health Care Needs programs. Each year, State Maternal and Child Health agencies must apply for the Federal grant for Title V, and they are also required to contribute funding.

HCUP Coding. In our review of the HCUP expected payer coding from 2008–2011, 12 States (Connecticut, Georgia, Maine, Maryland, Michigan, Minnesota, Missouri, New Jersey, North Carolina, North Dakota, Texas, and West Virginia) had a payer code specific to the Title V program.

Suggestions for Users. It is difficult to discern whether patients identified as having an expected payer of Title V on an inpatient discharge should be considered as insured or uninsured. Title V provides gap-filling prenatal health services to women and primary and preventive health care to children, including those with special health needs. Patients enrolled in the Title V program may have other health insurance.

[22] Black Lung Medical Benefits at http://www.dol.gov/owcp/dcmwc/regs/compliance/cm-6.pdf. Accessed November 17, 2013.
[23] Information on the Title V program is available at http://mchb.hrsa.gov/programs/titlevgrants/. Accessed November 17, 2013.

Hill Burton

Background. The Hill-Burton Program, created by Congress in 1946, provides funds to hospitals and other health facilities for building and modernization. In return, funded facilities agree to provide a reasonable amount of free or reduced-cost care to people who are unable to pay.[24]

HCUP Coding. In our review of the HCUP expected payer coding from 2008–2011, two States (Nevada and South Carolina) had a payer code specific to the Hill-Burton program coded under other payer. Four other States had the Hill-Burton program coded under self-pay (Georgia and Oregon) or coded under no charge (Illinois and Kentucky). Starting with the 2012 HCUP databases, Hill-Burton is consistently coded under no charge.

Suggestions for Users. The categorization of HCUP discharges identified as Hill-Burton varies between other payer and uninsured (i.e., self-pay or no charge). Studies may want to consider all of these discharges as uninsured for inpatient care, because the program targets people who are not able to pay for hospital care.

Ryan White

Background. In 1990, the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act authorized a program with a flexible structure under which the national program could address local and targeted HIV/AIDS care needs. The legislation has been reauthorized four times, and it is now called the Ryan White HIV/AIDS Program.[25] This program provides HIV-related services in the United States for those who do not have sufficient health care coverage or financial resources for coping with HIV disease. The program fills gaps in care that are not met by other payers.

HCUP Coding. In our review of the HCUP expected payer coding from 2008–2011, only one State (Georgia) had a payer code specific to the Ryan White program.

Suggestions for Users. Although HCUP discharges identified as Ryan White are uniformly coded as other payer in the HCUP expected payer variables, some studies may want to consider these discharges as uninsured for inpatient care, because the Health Resources and Services Administration (HRSA) considers this program a payer of last resort.[26]

State or County Indigent Programs

Background. County programs for medically indigent individuals are government-sponsored programs that are funded using Federal, State, or local government monies. These programs provide health services for individuals with low income and no insurance who have no other source of health care.

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[24] Information on the Hill Burton program is available at http://www.hrsa.gov/gethealthcare/affordable/hillburton/FAQ/getcarefaq.html. Accessed December 5, 2013.
[25] Information on the Ryan White HIV/AIDS program is available at http://hab.hrsa.gov/. Accessed November 17, 2013.
[26] Information on Ryan White HIV/AIDS Programs is available at http://hab.hrsa.gov/tools2/PartA/parta/ptAsec7chap5.htm. Accessed November 17, 2013.

Program structure and requirements vary by State and may also vary significantly across counties (e.g., California[27]). Eligibility is based most often on State or county residency, income and asset limits, medical needs, disability, or other requirements.

Programs vary in their copayment requirements. For example, the Colorado Indigent Care Program requires copayments, but the copayment amount is set to 10 percent or less of an individual's income in a 12-month calendar, and they do not consider themselves a health insurance program (i.e., discounted health services program).[28] Other States do not require such copayments, especially for hospital care.

HCUP Coding. In our review of the HCUP expected payer coding from 2008–2011, six States (California, Colorado, Nevada, New Mexico, South Carolina, and Virginia) had a payer code specific to a State or county indigent program under other payer. Five other States (Arkansas, Tennessee, Texas, Vermont, and Wyoming) had the county indigent programs coded under no charge. The coding of expected payer in Pennsylvania included a combined category of "Self Pay or Charity/Indigent Care" coded under self pay.

Suggestions for Users. The categorization of HCUP discharges identified as a county indigent program varies between other payer and uninsured (i.e., no charge or self-pay). Studies may want to consider all of these discharges as uninsured for inpatient care, because these programs do not provide comprehensive insurance.

HCUP State-Specific Payer Codes: Identifying the Uninsured

Identification of uninsured patients is not always a straightforward task using discharge data. Government programs that are payers of last resort or that provide partial health care coverage do not fit neatly into the concept of comprehensive insurance. This section provides guidance on how the HCUP expected payer codes could be used to capture the uninsured in a manner that takes into account the complexity of the health insurance coverage continuum, and it aligns HCUP expected payer codes with the U.S. Census American Community Survey (ACS) categories for insurance.

Common HCUP Codes Used to Identify the Uninsured

One approach to categorizing HCUP discharges for uninsured patients is to combine discharges if the expected primary payer code listed was self-pay or no charge (PAY1 = 4 or 5). However, in some States there were State-specific programs captured under other government programs (PAY1 = 6) that can be classified as programs for the uninsured. Discharges with payers from the other payer category that were highlighted in the previous section as programs developed to cover the uninsured population or that were defined as payers of last resort should also be recoded into the uninsured category. The information can be reported in either the expected primary payer as received from the State (HCUP data

[27] California Legislative Analyst's Office. Examining the State and County Roles in the Medi-Cal Expansion. February 19, 2013. http://www.lao.ca.gov/analysis/2013/health/ACA/medi-cal-expansion-021913.aspx. Accessed August 23, 2013.
[28] Colorado Department of Health Care Policy and Financing. Colorado Indigent Care Program (CICP). http://www.colorado.gov/cs/Satellite/HCPF/HCPF/1214299805914. Accessed August 23, 2013.

element PAY1_X) or the expected primary payer plan identifier as received from the State (HCUP data element PAYER1_X). Based on our discussion above, discharges with expected primary payer codes for the IHS, Hill-Burton, Ryan White, and county indigent programs would be classified as uninsured. Please see Supplement 1 for State-specific information on HCUP specific payer codes for other government programs that serve the uninsured.

State-Specific Payer Codes for State-Specific Programs for the Uninsured

In addition to recoding discharges associated with the abovementioned programs, some States reported other local government programs under the HCUP other payer category that required additional research to properly classify the program as an insurance program or as a payer of last resort for the uninsured. The research to classify these programs involved several steps. We researched unfamiliar programs identified in the HCUP data under other payer. We also investigated programs identified by the National Conference of State Legislatures (NCSL)[29] as serving the uninsured. We conducted an Internet search of the program to identify if the program was comprehensive insurance and covered inpatient stays. Finally, we contacted the HCUP Partners to (1) clarify programs for which we could not find information on the Internet and (2) seek guidance on where programs that cover the uninsured might be reported in the data they provide to HCUP if we did not find a corresponding payer code.

Ultimately, we categorized programs as *insurance* that were labeled “insurance” on their program's Web site, involved a copayment or premium from the recipient of care (excluding health discount programs not considered health insurance), or guaranteed recurrent care through the established mechanism. We categorized programs as a *payer of last resort* that provided temporary care for a single service or a single episode of care or if the program required the individual not to have public or private insurance covering the service or episode of care. In other words, these payers took effect—either through prospective or retrospective payment—only if there was no other means of payment for services or if the services were only available on a gratis basis. There were some special instances in which programs with stringent requirements and/or extreme stipulations for coverage were included in this category.

Please see Supplement 1 for State-specific information on HCUP payer codes for programs that appear to serve the uninsured. Appendix C includes the full list of State-specific programs identified by the NCSL, the methods used to create the list, information regarding what was learned about each program, and discussion of implications for data users. After careful research, we determined that some programs in the NCSL list were comprehensive insurance for low-income populations.

Impact of Counting Discharges from Select Programs Reported Under the HCUP “Other Payer" Category as Uninsured

Table 1 shows the impact of defining uninsured discharges as the combination of three HCUP payer types: self-pay, no charge, and discharges reported under the HCUP category "other payer" in programs

[29] National Conference of State Legislatures. State Health Programs to Cover the Uninsured. 2013. http://www.ncsl.org/issues-research/health/state-health-programs-to-cover-the-uninsured-2009.aspx. Accessed September 4, 2013.

that cover inpatient stays for the uninsured. The comparison used data from the 2011 SID. Only some HCUP States have the detailed payer coding to identify the other programs serving the uninsured (see Supplement 1 for details). The percent increase in discharges for the uninsured uses the following information:

- Baseline: Sum of discharges identified under the HCUP primary expected payer category for self-pay (PAY1=4) and no charge (PAY1=5)
- Comparison group: Baseline discharge counts with discharges identified by program serving the uninsured reported under other payer (PAY1=6).

Table 1. Impact of Including Discharges for Programs Reported under the HCUP Payer Category "Other" that Cover Inpatient Stays for the Uninsured

Programs coded under other payer	States with HCUP expected payer codes for these programs	Percent increase in 2011 SID discharges for the uninsured if defined using self-pay, no charge, and specified program
Indian Health Services	Alaska	68%
	Arizona	17%
	Georgia	No discharges reported with this payer code in the SID
	Montana	18%
	New Mexico	14%
	Oregon	2%
State or County Indigent Programs	California	54%
	Colorado	42%
	Nevada	44%
	New Mexico	22%
	Virginia	40%
Other State-Specific Payers of Last Resort	Georgia: Migrant health services	No discharges reported with this payer code in the SID
	Maryland: Maryland Health Insurance Plan	1%
	Massachusetts: Health Safety Net and Children's Medical Program	105%
	Nevada: Section 1011 undocumented aliens	No discharges reported with this payer code in the SID
	Ohio: Hospital Care Assurance Program	2%
	South Carolina: Other Agency, Charity (i.e. Medical Indigent Assistance Program, Hill Burton, County Government, etc.)	49%

Five out of the six States with a payer code specific to IHS under other payer actually enumerated discharges in this category in 2011. Counting IHS discharges as uninsured increased the number of uninsured inpatient stays from 2 percent (Oregon) to 68 percent (Alaska). Five States had a payer code specific to State or County Indigent programs. Counting discharges reported under these indigent

programs as uninsured increased the number of uninsured inpatient stays from 22 percent (New Mexico) to 54 percent (California). State-specific programs that were payers of last resort for inpatient stays were identified in six States, but only four of the States enumerated discharges for the category in 2011. Counting discharges from these State and local programs as uninsured increased the number of uninsured inpatient stays from 1 percent (Maryland) to 105 percent (Massachusetts).

HCUP State-Specific Payer Codes: Identifying Patients Dually Enrolled in Medicare and Medicaid

Medicare beneficiaries who have limited income and resources may receive assistance from Medicaid for their Medicare premiums and out-of-pocket medical expenses. Dually eligible patients are individuals who are entitled to Medicare Part A and/or Part B and are also eligible for some form of Medicaid benefit. Medicaid coverage for dually eligible individuals may be limited to certain costs, such as Medicare premiums, or it may include full benefits covered under the State Medicaid plan.[30]

There are several categories of people who are dually eligible for these insurance plans. This includes individuals with limited Medicaid coverage, such as Qualified Medicare Beneficiaries (QMBs), Specified Low-Income Medicare Beneficiaries (SLMBs), Qualifying Individuals (QIs), or Qualified Disabled Working Individuals (QDWIs), and those eligible for full benefits. In HCUP data, dually eligible individuals are not differentiated between categories; rather, they may be flagged based on their primary and secondary expected payers. Therefore, Medicare-Medicaid enrollees identified in the HCUP data may include those with limited or full Medicaid benefits in addition to their Medicare entitlement.

Out of the 47 HCUP States, 36 report two or more payers in the HCUP data, which facilitates the identification of discharges with dual Medicare and Medicaid coverage. Individuals who had Medicare identified as their primary expected payer on a discharge and Medicaid identified as the secondary expected payer, or vice versa, can be considered dually eligible. However, it should be noted that the latter group represents a very small number of records. In HCUP States that report only one expected payer, dually eligible discharges cannot be identified.

HCUP State-Specific Payer Codes: Identifying Patients Enrolled in Managed Care Plans

Some HCUP States provide sufficient detail in their payer coding to identify managed care programs for Medicare, Medicaid, and private insurance. There are various types of managed care programs. For this report, we considered the following categories of managed care.[31]

- *Health maintenance organization (HMO)*. Services are financed by prepaid, fixed, periodic payments that are determined in advance. HMO members pay a fixed monthly fee, regardless of how much medical care is used in an individual month.

[30] Centers for Medicare & Medicaid Services. Medicaid Coverage of Medicare Beneficiaries (Dual Eligibles) At a Glance. March 2013. http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/medicare_beneficiaries_dual_eligibles_at_a_glance.pdf. Accessed September 4, 2013.

[31] Kongstvedt, PR. Managed Care: What It Is and How It Works. 3rd ed. Sudbury, Mass.: Jones and Bartlett Publishers; 2009.

- *Preferred provider organization (PPO)*. PPO members pay for services as they are rendered, in addition to their monthly premium. The prices for services are negotiated by the providers and the PPO sponsors in advance.
- *Point of service (POS) plan*. A managed care insurance plan that allows enrollees to seek care from a physician affiliated with the service provider network at a fixed copayment or to choose a nonaffiliated physician and pay more; this plan is often considered an HMO/PPO hybrid.

It should be noted that Primary Care Case Management (PCCM) plans for Medicare and Medicaid were excluded from the definition of managed care for this report. Medicare Advantage is sometimes viewed as managed care; however, because Medicare Advantage also can include private fee-for-service plans, it was not considered managed care for the purpose of this study, with one exception. One State (Hawaii) clearly identified their Medicare Advantage program (AlohaCare Advantage) as a health maintenance organization.

In the HCUP data, the identification of managed care plans varies. Some States identify separate categories for HMO, PPO, and POS; some States only report a combined managed care category; and some States do not distinguish managed care patients. There is also variation in whether States identify managed care patients for Medicare, Medicaid, and the privately insured (see Table 2). Additionally, they may identify only one or two of the payer groups. For State-specific information on HCUP codes that identify managed care discharges, please see Supplement 2.

Table 2. HCUP States with Managed Care Expected Payer Codes by Type of Payer

Payer	Number of States	Names of States with Managed Care Codes
Medicare	26	Arizona, California, Connecticut, Florida, Georgia ,Hawaii, Iowa, Kansas ,Kentucky ,Maryland, Massachusetts ,Michigan, Minnesota, Montana, Nevada, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Vermont, West Virginia
Medicaid	24	California, Connecticut, Florida, Georgia, Hawaii, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, West Virginia
Private insurance	34	Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Hawaii, Illinois, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nevada, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming

Payer	Number of States	Names of States with Managed Care Codes
All three plans	20	California, Connecticut, Georgia, Hawaii, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New York, North Dakota, Ohio, Oregon, Pennsylvania, Tennessee, Texas, West Virginia

COMPARISON OF HCUP INPATIENT DISCHARGES AND HEALTH INSURANCE ENROLLMENT STATISTICS BY STATE

The objective of this section is to compare HCUP inpatient discharges with health insurance enrollment data to assess the degree which the HCUP SID accurately capture discharges for these groups. This section also highlights outlier States that may not accurately capture discharges across certain types of payers. Comparisons include Medicare-Medicaid dual enrollees, Medicare managed care enrollees, Medicaid managed care enrollees, and all managed care enrollees. The HCUP SID data included community, nonrehabilitation hospitals and required the application of weighting adjustments to account for missing hospitals in the State. Transfers were deleted from the SID to avoid double counting.

Medicare and Medicaid Dual Enrollees

To assess the degree to which the HCUP SID accurately capture discharges for Medicare-Medicaid enrollees, we conducted a State-level comparison of SID discharges and the Centers for Medicare & Medicaid Services (CMS) enrollment data. Information on Medicaid enrollment and the number of enrollees with Medicare and Medicaid (dual) coverage was obtained from the Medicaid Managed Care Enrollment Report, Summary Statistics as of July 1, 2011.[32]

The percentage of SID Medicaid discharges for dually eligible patients is the number of SID discharges for Medicare *and* Medicaid expected payers divided by the total number of SID discharges for Medicaid. This metric was calculated for 36 out of 47 HCUP States. The CMS data shown in Figure 1 reflect the percentage of Medicaid enrollees with Medicare and Medicaid (dual) coverage.

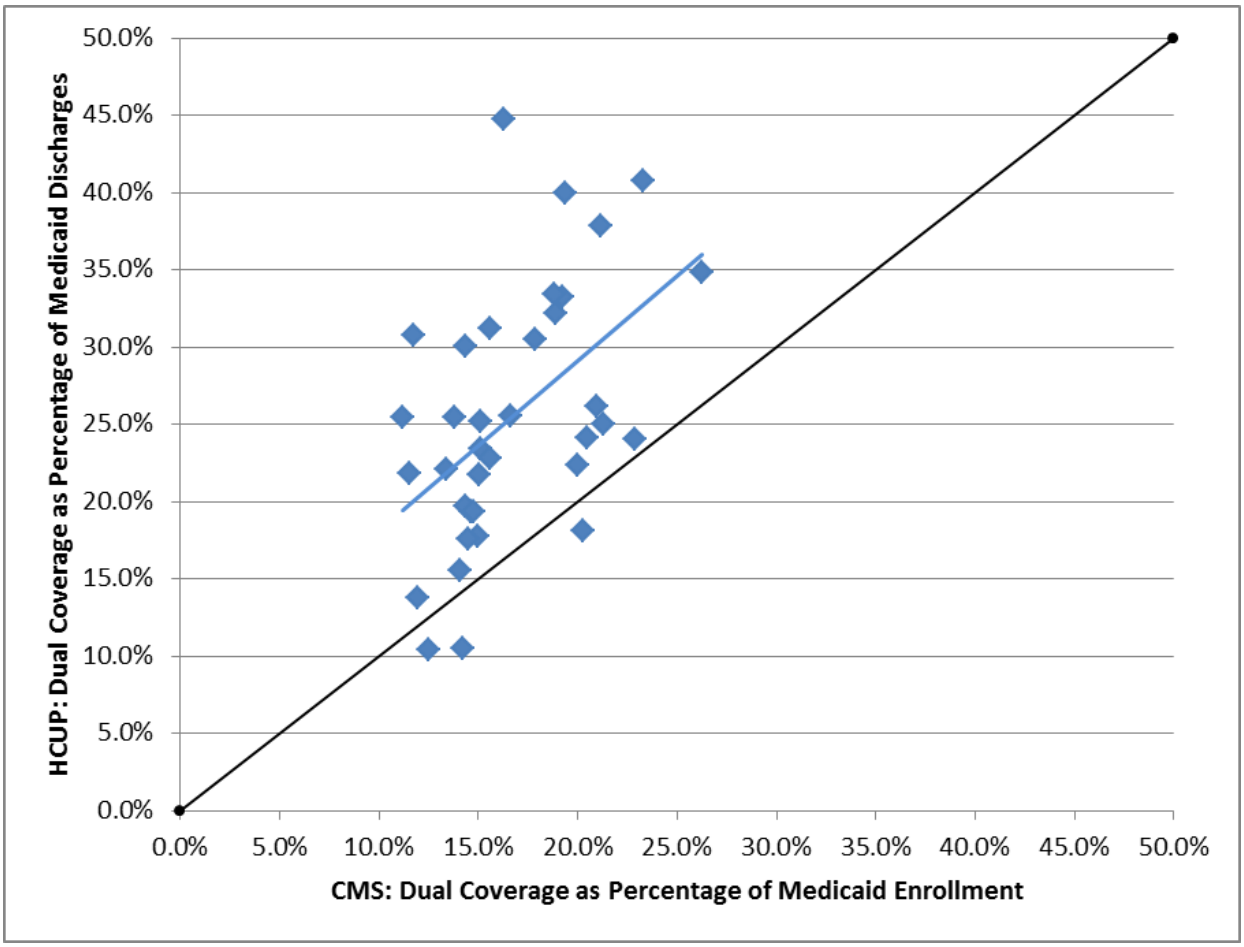
The scatter plot of the results (Figure 1) shows that the percentage of SID Medicaid discharges for patients with Medicaid dual coverage ranged between 10.4 percent and 44.8 percent across States (y-axis), and the percentage of Medicaid enrollees with dual coverage across participating States ranged between 11.2 percent and 26.3 percent (x-axis). Within this range of values, the plot shows that there was a positive linear correlation when comparing the percentage of SID discharges for patients with Medicaid dual coverage against the percentage of Medicaid enrollees with dual coverage across participating States. Generally, the percentage of Medicaid enrollees with dual coverage increased as

[32] CMS Data and Systems Group. 2011 Medicaid Managed Care Enrollment Report: Summary Statistics as of July 1, 2011. http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/Downloads/2011-Medicaid-MC-Enrollment-Report.pdf. Accessed September 4, 2013.

the percentage of HCUP discharges for Medicaid dual coverage also increased (and vice versa). Dual coverage, as measured in this report, appeared higher in the HCUP data versus the CMS data (i.e., State data points were above the perfect linear line [in black], where the SID percentage equaled the CMS percentage). This is not surprising given that dually eligible enrollees tend to have a higher risk of hospitalization than other Medicaid enrollees.

The State data points were neither closely nor widely clustered around the blue linear line fit to the scatter plot. There were a few States with very dissimilar statistics. Researchers designing studies on dual coverage using HCUP data may want to closely examine these outlier States before deciding whether to include them in their studies. Please see Table 4A in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 1. Dual Coverage (Medicare and Medicaid) as a Percentage of Medicaid Using CMS Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011



Medicare Managed Care

To assess the degree to which the HCUP SID accurately capture discharges for Medicare managed care, we conducted a State-level comparison of SID discharges and CMS enrollment data. Information on Medicare total enrollment and enrollees covered by managed care plans was calculated using the CMS Limited Data Set (LDS) Standard Analytical Files (SAF).[33] A State-specific comparison of managed care enrollment totals in the SAF to detail on enrollment for different Medicare Advantage plans available on the KFF State Health Facts Web site[34] indicates that the enrollment counts in the SAF include HMO, PPO, medical savings accounts, and Medicare Advantage private fee-for-service plans.

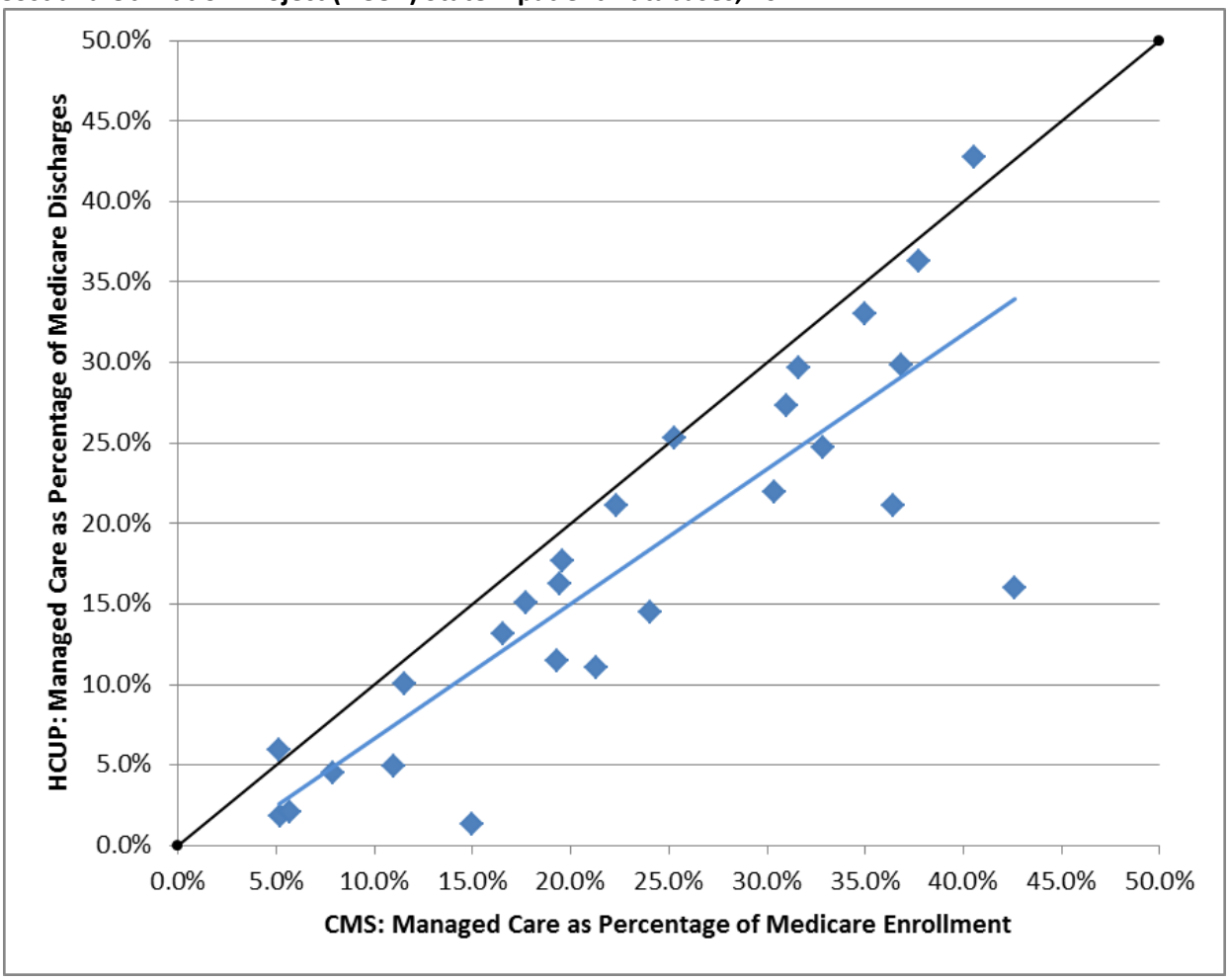
The SID and CMS counts for Medicare include Medicare only and Medicare and Medicaid dual enrollees. The number of SID discharges for Medicare managed care divided by the total number of SID discharges for Medicare captures the percentage of SID Medicare discharges for Medicare managed care plans. This metric was calculated for 26 out of 47 HCUP States. The CMS data shown in Figure 2 reflect the percentage of Medicare enrollees in Medicare managed care plans.

The scatter plot of the results (Figure 2) shows that the percentage of SID Medicare discharges for Medicare managed care plans ranged between 1.3 percent and 42.7 percent across States (y-axis), and the percentage of Medicare enrollees who were enrolled in Medicare managed care plans ranged between 5.1 percent and 42.6 percent (x-axis). The plot shows a strong positive linear correlation when comparing the percentage of SID Medicare discharges for Medicare managed care and the percentage of Medicare enrollees who were enrolled in Medicare managed care plans. Across most States, the percentage of SID Medicare discharges for Medicare managed care plans corresponded closely with the percentage of Medicare enrollees in Medicare managed care plans, as reported by CMS. In other words, the percentage of Medicare enrollees in Medicare managed care plans increased as the percentage of SID Medicare discharges for Medicare managed care plans also increased (and vice versa). The percentage of managed care discharges in the HCUP data tended to be lower than the percentage of managed care enrollment in CMS data (i.e., most of the State data points were below the perfect linear line [in black], where the SID percentage equals the CMS percentage). The State data points were closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing studies of Medicare beneficiaries enrolled in managed care using HCUP may want to closely examine these outlier States before deciding whether to include them in their studies. Please see Table 4B in Supplement 4 for a complete list of State-specific rates in a table format.

[33] More information is available on the CMS Web site at http://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets/StandardAnalyticalFiles.html. Accessed December 5, 3013.

[34] Information on enrollment for Medicare Advantage plans is available on the KFF State Health Facts Web site at http://kff.org/medicare/state-indicator/total-enrollment-by-plan-type/. Accessed July 3, 2014.

Figure 2. Managed Care as a Percentage of Medicare Enrollment Data Using CMS Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011[a]



[a] The SID and CMS counts for Medicare include Medicare only and Medicare and Medicaid dual enrollees

Medicaid Managed Care

To assess the degree to which HCUP SID accurately capture discharges for Medicaid managed care, we conducted a State-level comparison of SID discharges and CMS enrollment data. Information on Medicaid total enrollment and enrollees covered by managed care plans was obtained from the Medicaid Managed Care Enrollment Report, Summary Statistics as of July 1, 2011.[35]

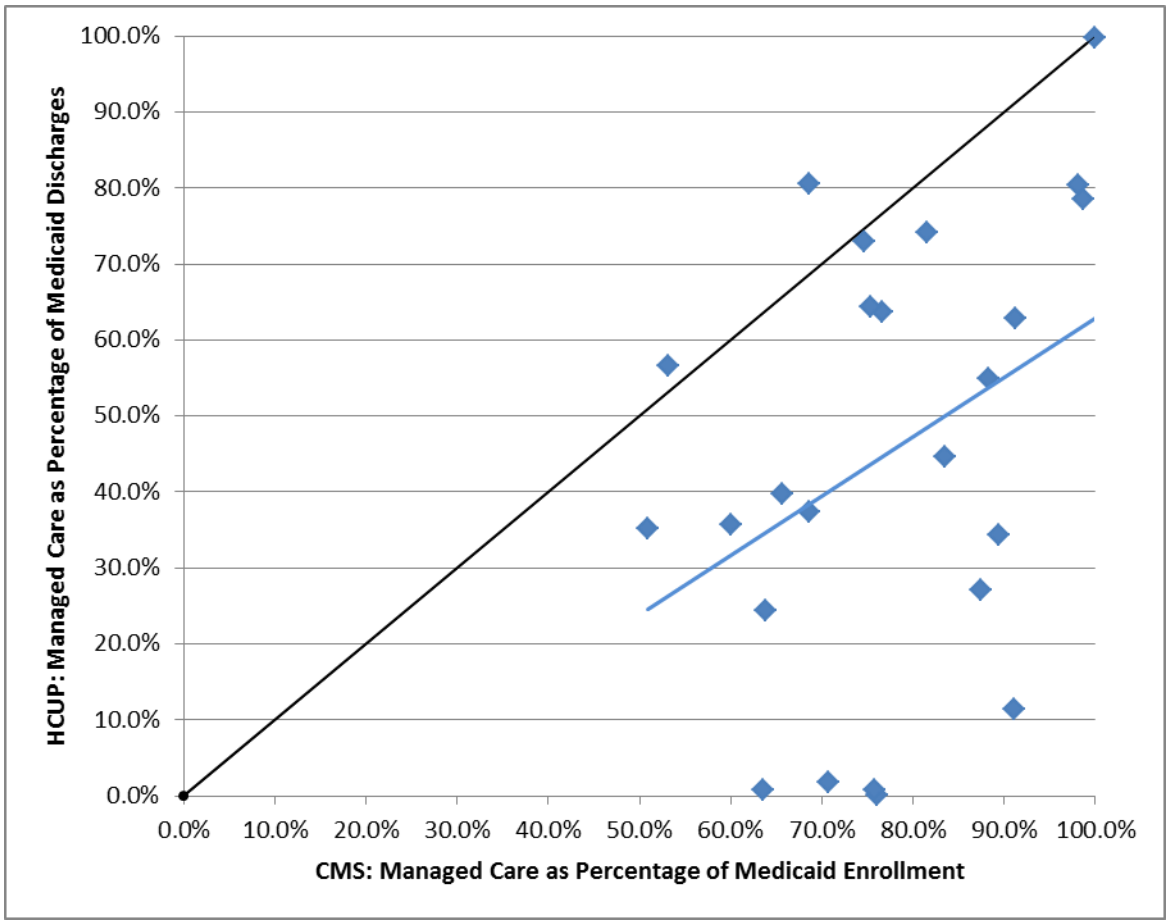
The number of SID discharges for Medicaid managed care divided by the total number of SID discharges for Medicaid captures the percentage of SID Medicaid discharges for Medicaid managed care. Medicaid discharges were identified by the primary payer and did not include dually eligible patients. This metric

[35] CMS Data and Systems Group. 2011 Medicaid Managed Care Enrollment Report: Summary Statistics as of July 1, 2011. http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/Downloads/2011-Medicaid-MC-Enrollment-Report.pdf. Accessed September 4, 2013.

was calculated for 24 out of 47 HCUP States. The CMS data shown in Figure 3 reflect the percentage of Medicaid enrollees in Medicaid managed care plans.

The scatter plot of the results (Figure 3) shows that the percentage of SID Medicaid discharges for Medicaid managed care ranged between 0.0 percent and 99.8 percent across States (y-axis), and the percentage of Medicaid enrollees in Medicare managed care plans ranged between 51.0 percent and 100.0 percent (x-axis). The SID percentage is zero if the State documents payer codes for managed care, but an extremely low number of discharges used those payer codes. The percentage of managed care discharges in the HCUP data tended to be lower than the percentage of managed care enrollment in CMS data (i.e., most of the State data points were below the perfect linear line [in black], where the SID percentage equaled the CMS percentage). The percentage of SID Medicaid discharges for Medicaid managed care plans did not correspond closely with the percentage of Medicaid enrollees in Medicaid managed care plans as reported by CMS. This is evident from the State data points, which were widely dispersed around the blue linear line fit to the scatter plot. Researchers designing studies of Medicaid beneficiaries enrolled in managed care using HCUP may want to closely examine these outlier States before deciding whether to include them in their studies. Please see Table 4C in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 3. Managed Care as a Percentage of Medicaid Enrollment Data Using CMS Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011



All Managed Care

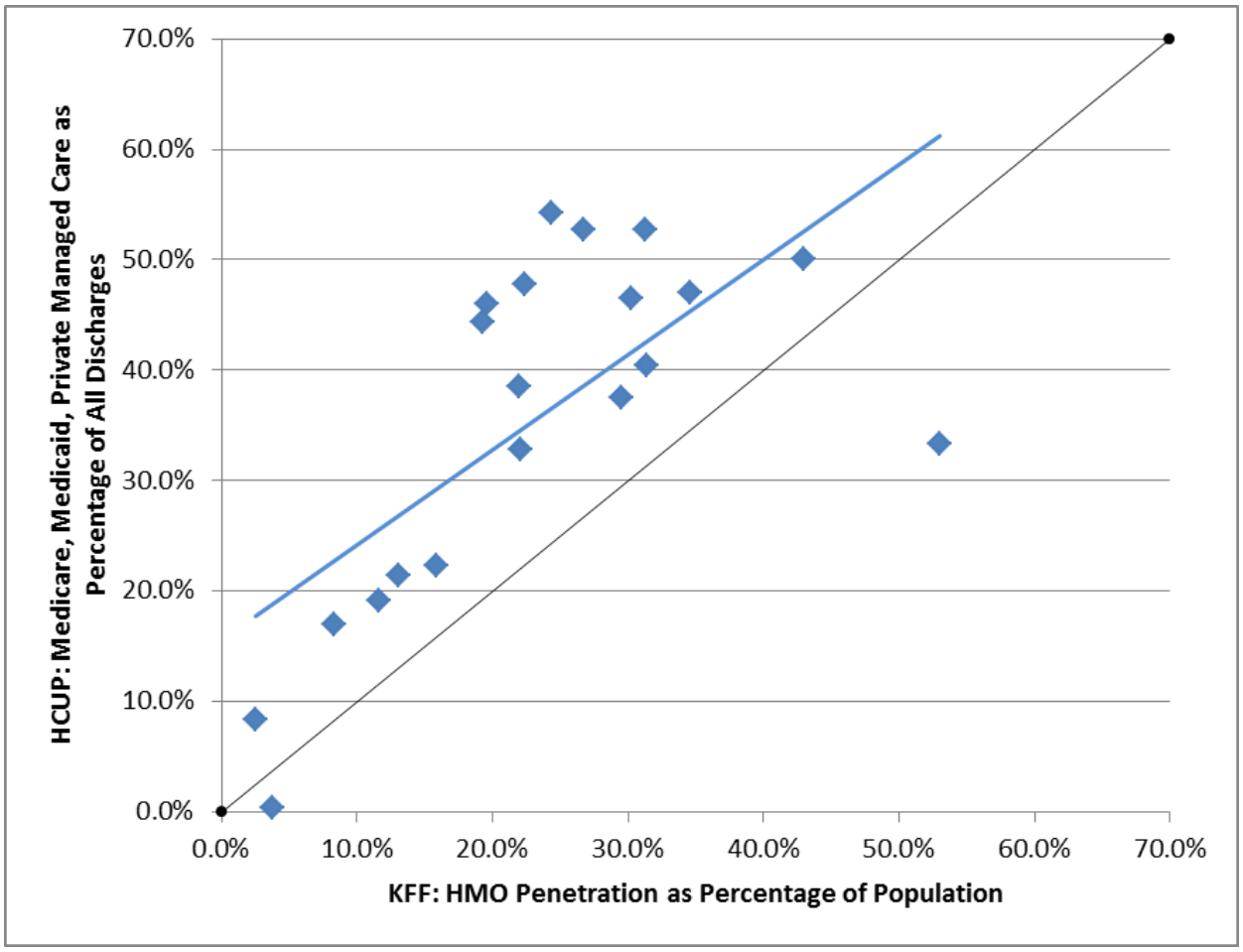
We could not find any publicly available data source for managed care enrollment for the privately insured at the State level. Consequently, we assessed the degree to which HCUP SID accurately capture discharges for all managed care plans. We conducted a State-level comparison of SID discharges and Kaiser Family Foundation (KFF) managed care penetration data. The KFF State Health Facts (http://kff.org/statedata/) provides State-level information on total managed care penetration that includes Medicare, Medicaid, and private insurance. The State-specific penetration statistic represents the percentage of the total population enrolled in managed care plans. It is calculated by InterStudy[36] for KFF using State population estimates from the U.S. Census Bureau as of July 2011. Data include enrollees in traditional HMOs and POS plans through group or commercial plans, Medicare, Medicaid, the Federal Employees Health Benefits Program, direct-pay plans, and unidentified managed care products.

The number of SID discharges for Medicare, Medicaid, or private managed care divided by the total number of SID discharges captures the percentage of SID discharges for managed care. This metric was calculated for 20 out of 47 HCUP States. The KFF estimates shown in Figure 4 reflect the percentage of the total State population enrolled in managed care plans.

The scatter plot of the results (Figure 4) shows that the percentage of SID discharges for managed care ranged between 0.4 percent and 54.2 percent across States (y-axis), and the percentage of the total population enrolled in managed care plans ranged between 2.5 percent and 53.0 percent (x-axis). Generally, the percentage of the total population enrolled in managed care increased as the percentage of SID discharges for managed care also increased (and vice versa). The percentage of managed care discharges in the HCUP tended to be higher than the percentage of managed care penetration in KFF data (i.e., most of the State data points were above the perfect linear line [in black], where the SID percentage equaled the CMS percentage). The State data points were widely dispersed around the blue linear line fit to the scatter plot, and there were a few outlier States with very dissimilar statistics. Researchers designing studies of managed care using HCUP may want to closely examine these outlier States before deciding whether to include them in their studies. Please see Table 4D in Supplement 4 for a complete list of State-specific rates in a table format.

[36] For more detailed HMO or PPO information for a specific State, metropolitan statistical area, or county, contact Health Leaders at http://www.healthleaders-interstudy.com/.

Figure 4. All Managed Care as a Percentage of the Total Using Kaiser Family Foundation (KFF) Managed Care Penetration Rate Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011



COMPARISON OF HCUP INPATIENT DISCHARGES AND POPULATION ESTIMATES BY PAYER AND INSURANCE TYPE

The objective of this section is to compare HCUP discharges by each major payer with corresponding information from available population denominator data to assess the degree to which HCUP SID discharges align with population counts by insurance type. This section also highlights outlier States that may not accurately capture discharges across certain types of payers. First, we discuss sources of payer-specific population data. Second, we compare the share of HCUP SID discharges by expected payer (Medicare, Medicaid, private, and uninsured) with the proportion of the population with the comparable insurance type.

Sources of Population Data by Type of Insurance

At the time of this report, there were seven sources of data that could be used for computing national estimates of people by insurance type (including those without health insurance). Table 3 provides a brief description of these data sources.

Table 3. Sources of Data for Computing National Estimates of People by Insurance Type

Survey	Description
American Community Survey (ACS)	In 2008, the U.S. Census Bureau began fielding a health insurance coverage question in the ACS, establishing a valuable new resource for health services researchers and policymakers. The ACS is an ongoing nationwide survey. Respondents are asked whether they are covered at the time of interview, based on interviews conducted throughout the year.
Current Population Survey (CPS)	CPS is a monthly survey conducted by the Census Bureau that has asked about health insurance in every March interview since 1980 (except 1981). Because of its long-time series, timeliness, and a sample size that is large enough to make State-level estimates, the CPS is the most frequently cited source of statistics regarding the uninsured.
Small Area Health Insurance Estimates (SAHIE)	The Census Bureau's SAHIE program produces estimates of health insurance coverage for States and all counties starting in 2005. The SAHIE program models health insurance coverage by combining survey data with population estimates and administrative records.
Survey of Income and Program Participation (SIPP)	SIPP is a multi-year panel survey that has been fielded somewhat irregularly by the Census Bureau since 1983. SIPP produces national-level estimates for the U.S. resident population and subgroups. Although the SIPP design allows for either longitudinal or cross-sectional data analysis, it is primarily meant to support longitudinal studies. The main objective of SIPP is to provide accurate and comprehensive information about the income and program participation of individuals and households in the United States and about the principal determinants of income and program participation.
National Health Interview Survey (NHIS)	NHIS has monitored the health of the nation since 1957. NHIS data on a broad range of health topics are collected through personal household interviews. For over 50 years, the U.S. Census Bureau has been the data collection agent for the National Health Interview Survey. Survey results have been instrumental in providing data to track health status, health care access, and progress toward achieving national health objectives.
Behavioral Risk Factor Surveillance Survey (BRFSS)	BRFSS is a State-based system of health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. BRFSS was established in 1984 by the Centers for Disease Control and Prevention.
Medical Expenditure Panel Survey (MEPS)	MEPS is a set of large-scale surveys of families and individuals, their medical providers (e.g., doctors, hospitals, pharmacies), and employers across the United States. Data collection began in 1996. MEPS collects data on the specific health services that Americans use, how frequently they use them, the cost of these services, and how they are paid. It also collects data on the cost, scope, and breadth of health insurance held by and available to U.S. workers. MEPS was established in 1996 by the Agency for Healthcare Research and Quality.

Of the seven surveys listed in Table 3, only the Current Population Survey (CPS) and the American Community Survey (ACS) provide State-level health insurance coverage estimates for all States. These two surveys differ in terms of their questions, methods, and measurement of health insurance. Table 4 lists the key differences between the surveys.[37] Major design differences include the reference period (point in time versus all year), sample size, mode of administration, and identification of State-specific program names.

Table 4. Comparison of the American Community Survey and Community Population Survey, 2011

	American Community Survey	Current Population Survey
Survey Methods		
Data collection period	Continuous	February through April
Mode of data collection	Mail, phone, and in person	Phone and in person
Annual number surveyed	About 2 million housing units; about 4.4 million individuals	About 80,000 housing units; about 200,000 individuals
Geographic sampling	Surveys conducted in all U.S. counties and county equivalents each year	Surveys conducted in all States each year, but not in all counties within a State
Population surveyed	U.S. population, including group quarters	Civilian noninstitutionalized population
Health Insurance Measurement		
Uninsured measure	Point in time (at time of survey)	Uninsured all year
State-specific public program names included in survey questions	No	Yes
Verification question included to confirm that individuals who appear to have no health insurance coverage are indeed "uninsured"	No	Yes

Source: State Health Access Data Assistance Center. Comparing Health Insurance Estimates from the American Community Survey and the Current Population Survey. Issue Brief #22. September 2010. http://www.shadac.org/files/shadac/publications/IssueBrief22.pdf. Accessed September 4, 2013.

The 2011 ACS is better aligned with HCUP data when trying to calculate State-specific counts of the uninsured for several reasons. First, the ACS and HCUP capture insurance coverage at one point in time (i.e., at the time of the survey and at the time of the hospital stay). Second, the larger sample size of the ACS compared with the CPS is of benefit for the State-level analysis. Single-year ACS estimates are available for States, whereas the Census Bureau recommends using 3-year average CPS estimates for

[37] This comparison is specific to data year 2011. In 2014, both surveys are modifying their measurements to better track the impact of the Affordable Care Act on insurance status.

State-level comparison. ACS also includes the institutionalized population, which HCUP data also include.

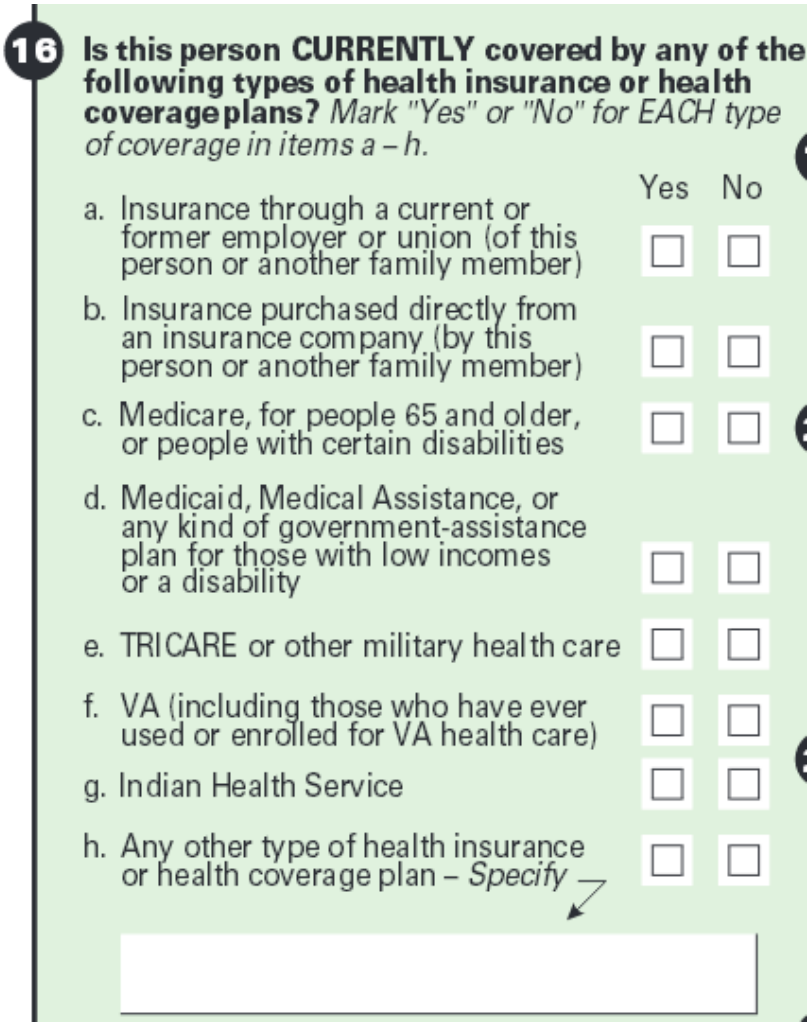
Aligning the American Community Survey with HCUP Data

To properly use ACS data with HCUP data, it is important to understand how each data source defines payer/insurance categories and what modifications are needed to both data sources to align the definitions. This section first addresses how to summarize the ACS population counts to align with HCUP payer definitions, and then discusses how to revise the HCUP payer categories to align with ACS.

Calculating Insurance-Specific Population Estimates from the American Community Survey

The ACS survey question regarding health insurance is shown in Figure 5. The types of health insurance are not mutually exclusive; people may indicate coverage by more than one type.

Figure 5. ACS Survey Question 16 Regarding Health Insurance



The following hierarchical logic was used to calculate insurance-specific population estimates from the ACS data files that were consistent with HCUP data.

1. Assign Medicare
    - If the person responded "Yes" to question 16c for Medicare, consider the response to the question on Medicaid
        - If the person responded "Yes" to question 16d for Medicaid, he or she was counted as having Medicare/Medicaid dual coverage
        - Otherwise, the person was counted as Medicare alone.
2. Then assign Medicaid
    - If the person responded "Yes" to question 16d for Medicaid, he or she was counted as Medicaid.
3. Then assign private insurance
    - If the person responded "Yes" to questions 16a or 16b, he or she was counted as privately insured.
4. Then assign uninsured
    - If the person had no reported health coverage (i.e., reported "No" to questions 16a through 16h) or their only health coverage was Indian Health Service (IHS), he or she was counted as uninsured. People whose only health coverage is IHS are considered uninsured, as IHS is not considered comprehensive coverage.[38]
5. Then assign all remaining people to Other payer.

It should be noted that ACS includes TRICARE or other military health care under employer-based (private) health insurance in statistical tables and reports.[39] In contrast, the CPS categorizes TRICARE as government (public) coverage for tabulation.[40] For the purpose of this analysis, the ACS population counts for TRICARE or other military health care were included under the category of other payer rather than private insurance to align with HCUP.

[38] U.S. Census Bureau. ACS Health Insurance Definitions. http://www.census.gov/hhes/www/hlthins/methodology/definitions/acs.html. Accessed November 16, 2013.
[39] Ibid.
[40] Ibid.

Modification to HCUP Payer Coding to Align with the American Community Survey

The primary expected payer was used to assign the SID discharges into payer categories. The following considerations were made to align HCUP discharge counts by expected payer with the ACS:

- ACS considers CHIP as part of Medicaid. For the purpose of this analysis, we considered HCUP discharges identified as CHIP as Medicaid. See Supplement 3 for State-specific information on recoding these HCUP discharges.
- ACS allows population estimates for only Medicare, only Medicaid, and Medicare and Medicaid dual enrollees. For the purpose of this analysis, we used the combined category of Medicare only with Medicare and Medicaid dual enrollees for both the HCUP discharges and ACS population estimates.
- ACS considers people whose only health coverage is IHS as uninsured, because the IHS program is not considered comprehensive coverage. For the purpose of this study, we also considered HCUP discharges identified as IHS as uninsured. See Supplement 1 for State-specific information on recoding these HCUP discharges.
- For the purpose of this analysis, we considered HCUP discharges identified as Hill Burton, Ryan White, or indigent as uninsured. See Supplement 1 for State-specific information on recoding these HCUP discharges.

Share of Total Discharges by Expected Payer and Age Groups

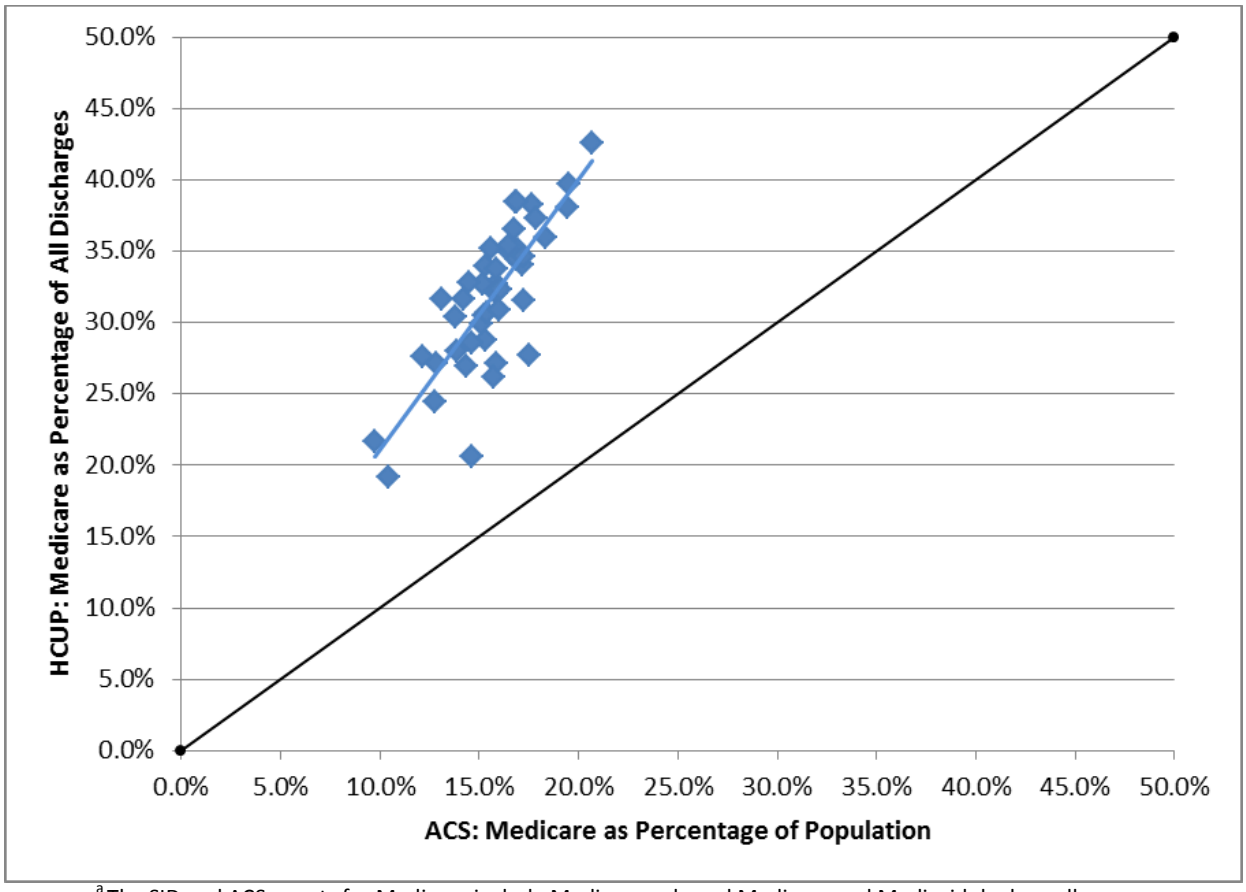
To assess the degree to which HCUP SID discharges align with the ACS population counts, we compared State-level SID and ACS data by payer/insurance type (Medicare, Medicaid, private, and uninsured), overall and within age groups. The age groups for each payer include: Medicare (ages 0–64 and 65+), Medicaid (ages 0–17 and 18–64), private insurance (ages 0–17 and 18–64), and uninsured (ages 0–17 and 18–64).

The HCUP payer mix is calculated as the number of SID discharges for the specific payer divided by the total number of SID discharges. The HCUP age group specific payer mix is calculated as the number of SID discharges by payer and age category divided by the total number of SID discharges for the age category. The HCUP SID data included community, nonrehabilitation hospitals and required the application of weighting adjustments to account for missing hospitals. Transfers were deleted from the SID to avoid double counting. The percentage of the ACS population is the number of people identified by the specific insurance type divided by the total number of people in the State. The age group specific percentage of the ACS population is the number of people identified by the specific insurance type and age group divided by the total number of people in the age group for the State.

Medicare

The scatter plot of the results (Figure 6) shows that the percentage of SID discharges for Medicare ranged between 19.2 percent and 42.5 percent across States (y-axis), and the percentage of the population with Medicare ranged between 9.7 percent and 20.7 percent (x-axis). Generally, as the percentage of the total population that is Medicare increased, the percentage of SID Medicare discharges also increased (and vice versa). The percentage of Medicare discharges in the HCUP was higher than the percentage of Medicare population in the ACS data (i.e., State data points were above the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were very closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing Medicare studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4E.1 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 6. Medicare as a Percentage of the Total Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011[a]

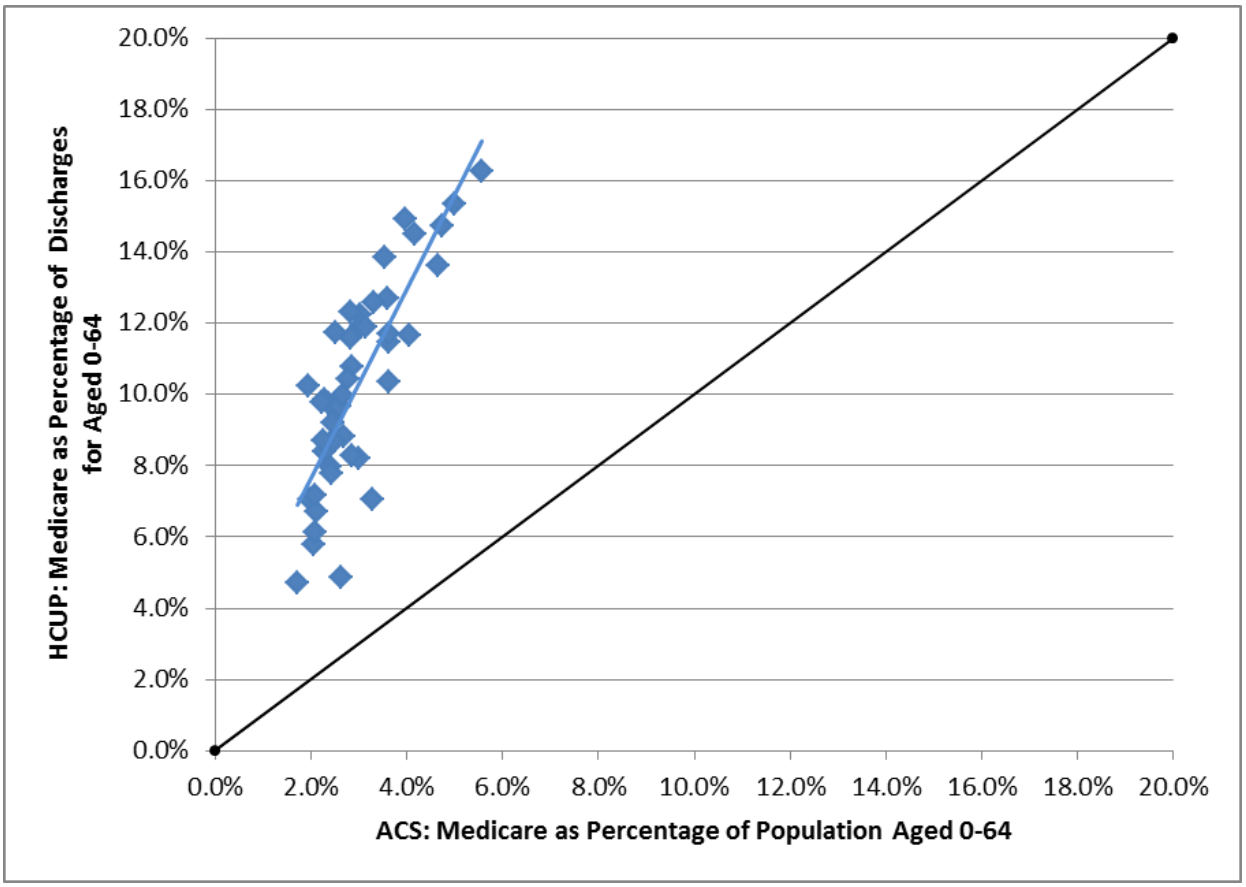


[a] The SID and ACS counts for Medicare include Medicare only and Medicare and Medicaid dual enrollees.

Medicare: Ages 0–64

The scatter plot of the results (Figure 7) shows that the percentage of SID discharges for individuals aged 0–64 with Medicare as the expected payer ranged between 4.7 percent and 16.3 percent across States (y-axis), and the percentage of the population aged 0–64 with Medicare ranged between 1.7 percent and 5.6 percent (x-axis). Within the above mentioned ranges, as the percentage of the population aged 0–64 with Medicare increased, the percentage of SID discharges for individuals aged 0–64 with Medicare as the expected payer also increased (and vice versa). The percentage of discharges for individuals aged 0–64 with Medicare as the expected payer in HCUP was higher than the percentage of the population aged 0–64 with Medicare in the ACS data (i.e., State data points were above the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were clustered around the blue linear line fit to the scatter plot. However, there were outlier States with very dissimilar statistics. Researchers designing Medicare studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4E.2 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 7. Medicare as a Percentage of the Population Aged 0-64 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011[a]

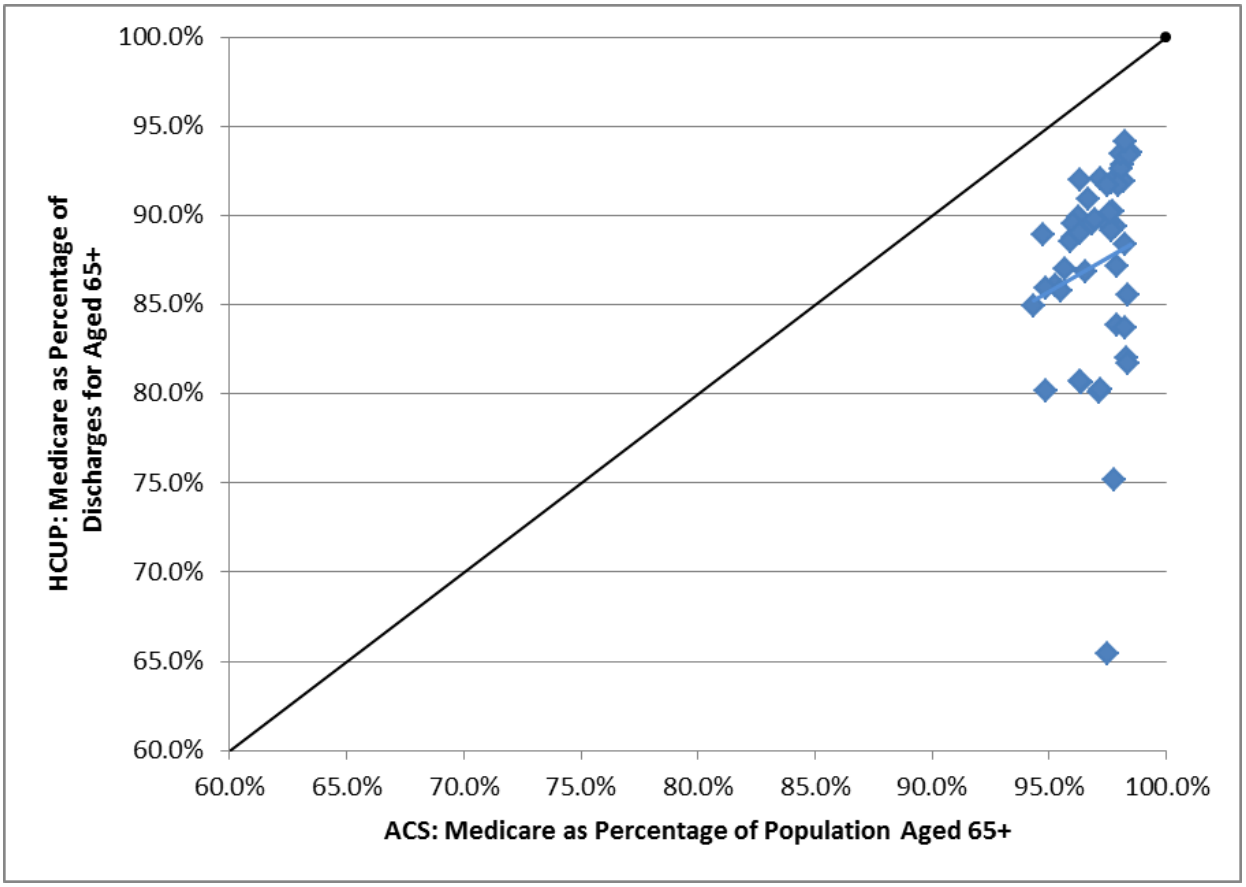


[a] The SID and ACS counts for Medicare include Medicare only and Medicare and Medicaid dual enrollees.

Medicare: Ages 65 and Older

The scatter plot of the results (Figure 8) shows that the percentage of SID discharges for individuals aged 65 and older with Medicare as the expected payer ranged between 65.4 percent and 92.8 percent across States (y-axis), and the percentage of the population aged 65 and older with Medicare ranged between 97.5 percent and 98.1 percent (x-axis). The percentage of discharges for individuals aged 65 and older with Medicare as the expected payer in HCUP was lower than the percentage of the population aged 0–64 with Medicare in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). Within this narrow range, a few of the State data points were clustered around the blue linear line fit to the scatter plot. However, there were outlier States with very dissimilar statistics. Researchers designing Medicare studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4E.3 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 8. Medicare as a Percentage of the Population Aged 65 and Older Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases, 2011[a]

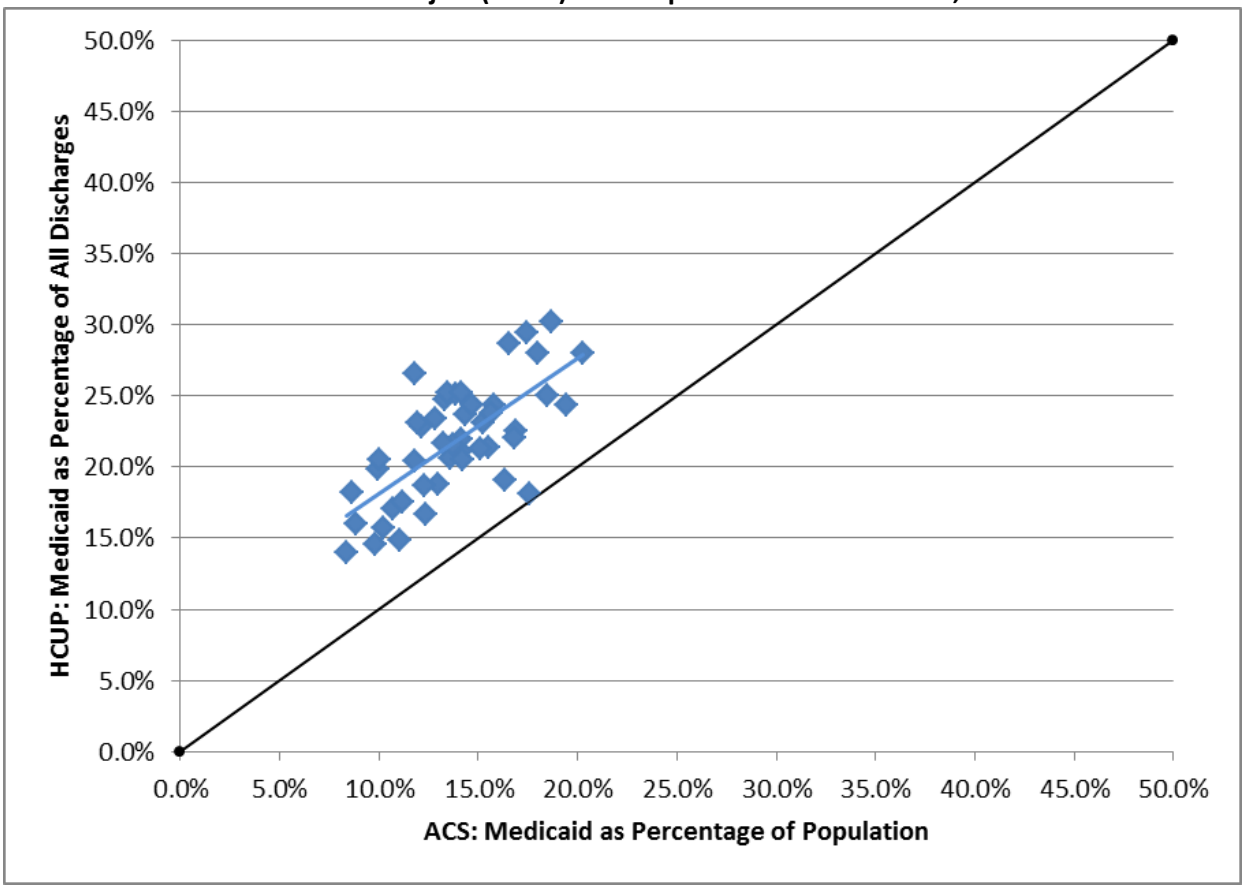


[a] The SID and ACS counts for Medicare include Medicare only and Medicare and Medicaid dual enrollees.

Medicaid

The scatter plot of the results (Figure 9) shows that the percentage of SID discharges for Medicaid (including CHIP and excluding dually enrolled individuals when the State-specific coding was available). The same inclusion and exclusion criteria were applied to the ACS estimates. The results ranged between 14.0 percent and 30.2 percent across States (y-axis), and the percentage of the population with Medicaid ranged between 8.4 percent and 20.3 percent (x-axis). Generally, as the percentage of the total population that is Medicaid increased, the percentage of SID Medicaid discharges also increased (and vice versa). The percentage of Medicaid discharges in HCUP was higher than the percentage of the Medicaid population in the ACS data (i.e., State data points were above the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were very closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing Medicaid studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4F.1 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 9. Medicaid as a Percentage of the Total Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases Data, 2011[a]

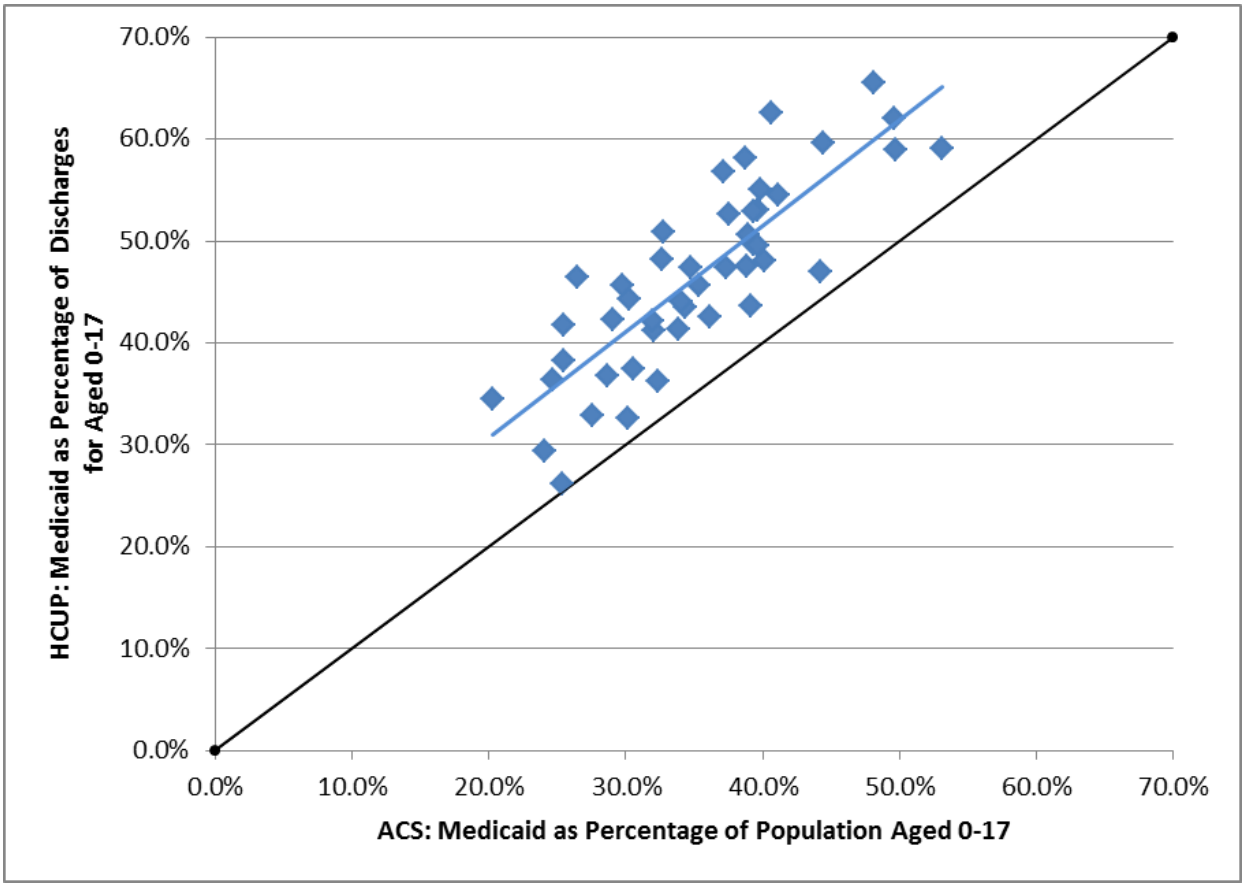


[a] The SID and ACS counts for Medicaid include Medicaid and Children's Health Insurance Program (CHIP), but Medicaid and Medicare dual enrollees are excluded.

Medicaid: Ages 0–17

The scatter plot of the results (Figure 10) shows that the percentage of SID discharges for children aged 0–17 with Medicaid as the expected payer ranged between 26.1 percent and 65.6 percent across States (y-axis), and the percentage of the population aged 0–17 with Medicaid ranged between 20.3 percent and 53.1 percent (x-axis). Generally, as the percentage of the population aged 0–17 with Medicaid increased, the percentage of SID discharges for children aged 0–17 with Medicaid as the expected payer also increased (and vice versa). The percentage of discharges for children aged 0–17 with Medicaid as the expected payer in HCUP was higher than the percentage of the population aged 0–17 with Medicaid in the ACS data (i.e., State data points were above the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing Medicaid studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4F.2 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 10. Medicaid as a Percentage of the Population Aged 0-17 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases Data, 2011[a]

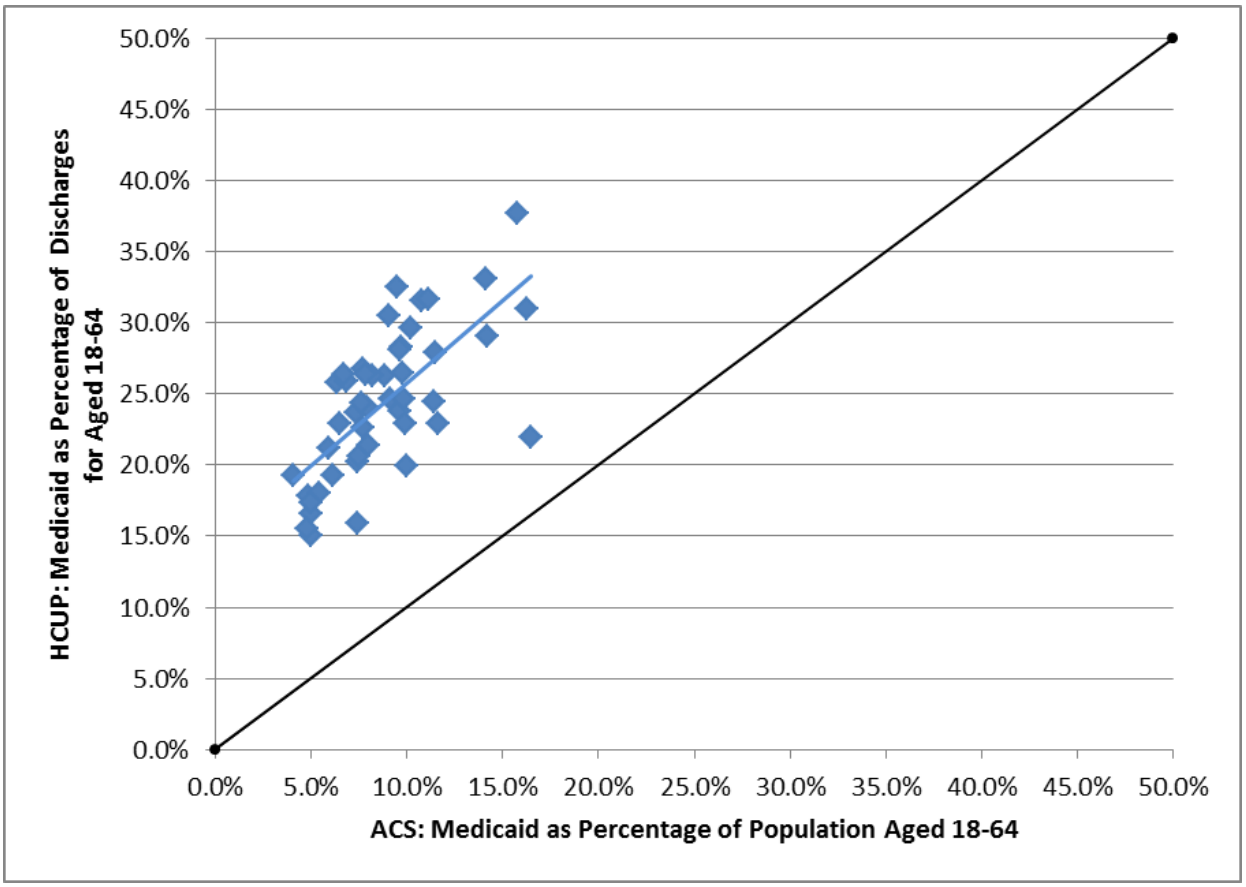


[a] The SID and ACS counts for Medicaid include Medicaid and Children's Health Insurance Program (CHIP), but Medicaid and Medicare dual enrollees are excluded.

Medicaid: Ages 18–64

The scatter plot of the results (Figure 11) shows that the percentage of SID discharges for individuals aged 18–64 with Medicaid as the expected payer ranged between 15.0 percent and 37.7 percent across States (y-axis), and the percentage of the population aged 18–64 with Medicaid ranged between 4.1 percent and 16.5 percent (x-axis). Generally, as the percentage of the population aged 18–64 with Medicaid increased, the percentage of SID discharges for individuals aged 18–64 with Medicaid as the expected payer also increased (and vice versa). The percentage of discharges for adults aged 18–64 with Medicaid as the expected payer in HCUP was higher than the percentage of the population aged 18–64 with Medicaid in the ACS data (i.e., State data points were above the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were very closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing Medicaid studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4F.3 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 11. Medicaid as a Percentage of the Population Aged 18-64 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases Data, 2011[a]

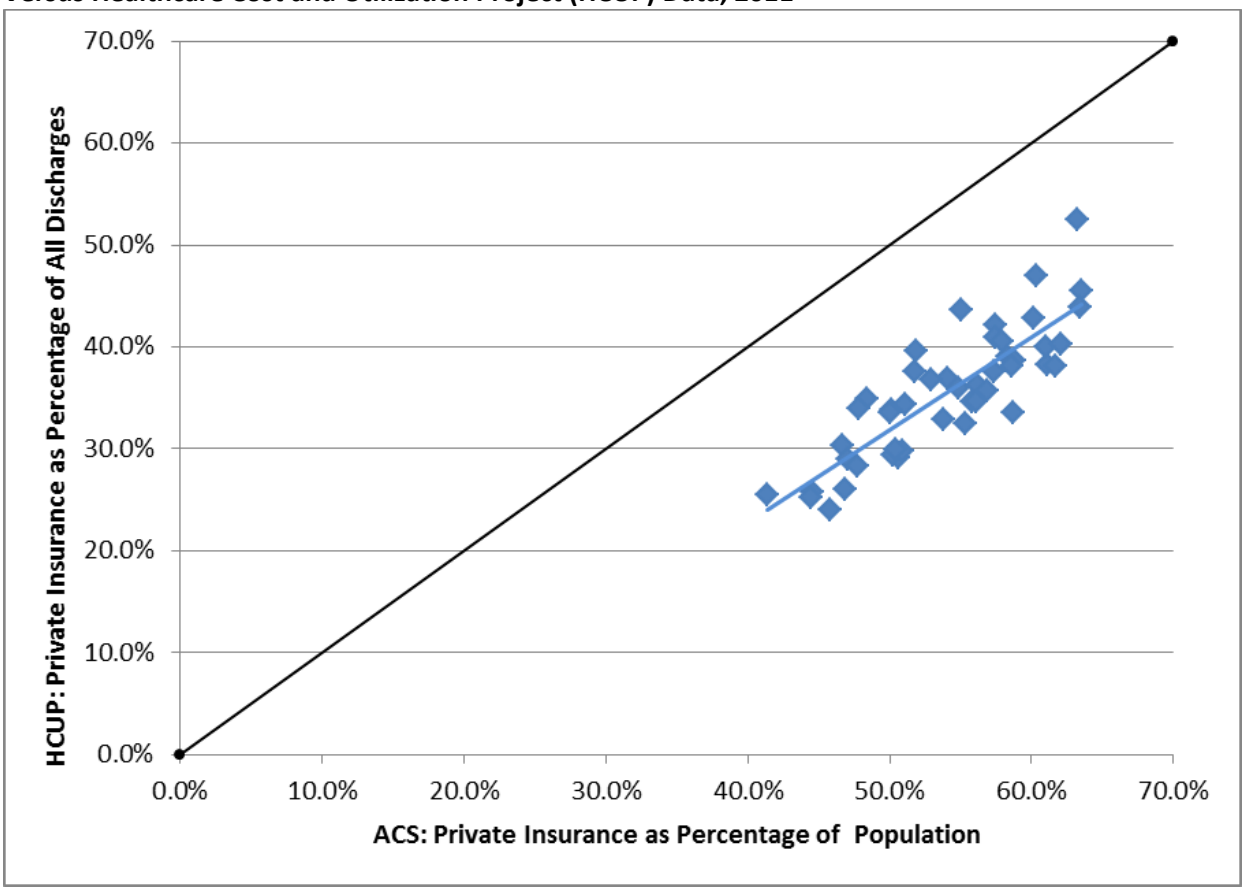


[a] The SID and ACS counts for Medicaid include Medicaid and Children's Health Insurance Program (CHIP), but Medicaid and Medicare duals are excluded.

Private Insurance

The scatter plot of the results (Figure 12) shows that the percentage of SID discharges with private insurance as the primary payer ranged between 24.0 percent and 52.4 percent across States (y-axis), and the percentage of the population with private insurance ranged between 41.4 percent and 63.5 percent (x-axis). Generally, as the percentage of the total population that is privately insured increased, the percentage of SID private discharges also increased (and vice versa). The percentage of privately insured discharges in HCUP was lower than the percentage of the privately insured population in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were closely clustered around the blue linear line fit to the scatter plot. There are States with very dissimilar statistics, so researchers may want to closely examine these outlier States before deciding whether to include them in their studies. Please see Table 4G.1 in Supplement 4 for a complete list of State-specific rates in a table format.

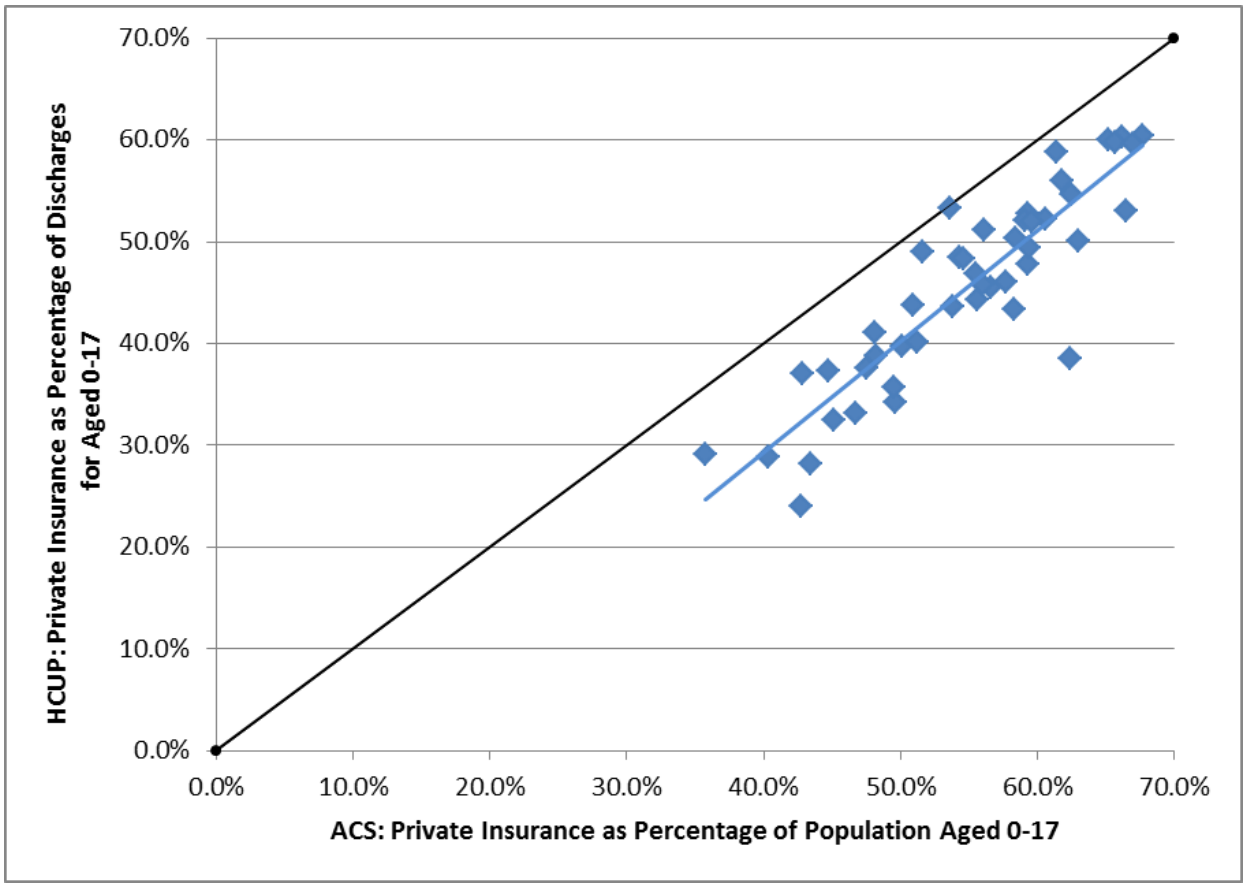
Figure 12. Private Insurance as a Percentage of the Total Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) Data, 2011



Private Insurance: Ages 0–17

The scatter plot of the results (Figure 13) shows that the percentage of SID discharges for children aged 0–17 with private insurance as the expected payer ranged between 24.0 percent and 60.4 percent across States (y-axis), and the percentage of the population aged 0–17 with private insurance ranged between 35.7 percent and 67.7 percent (x-axis). Generally, as the percentage of the population aged 0–17 with private insurance increased, the percentage of SID discharges for children aged 0–17 with private insurance as the expected payer also increased (and vice versa). The percentage of discharges for children aged 0–17 with private insurance as the expected payer in HCUP was lower than the percentage of the population aged 0–17 with private insurance in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4G.2 in Supplement 4 for a complete list of State-specific rates in a table format.

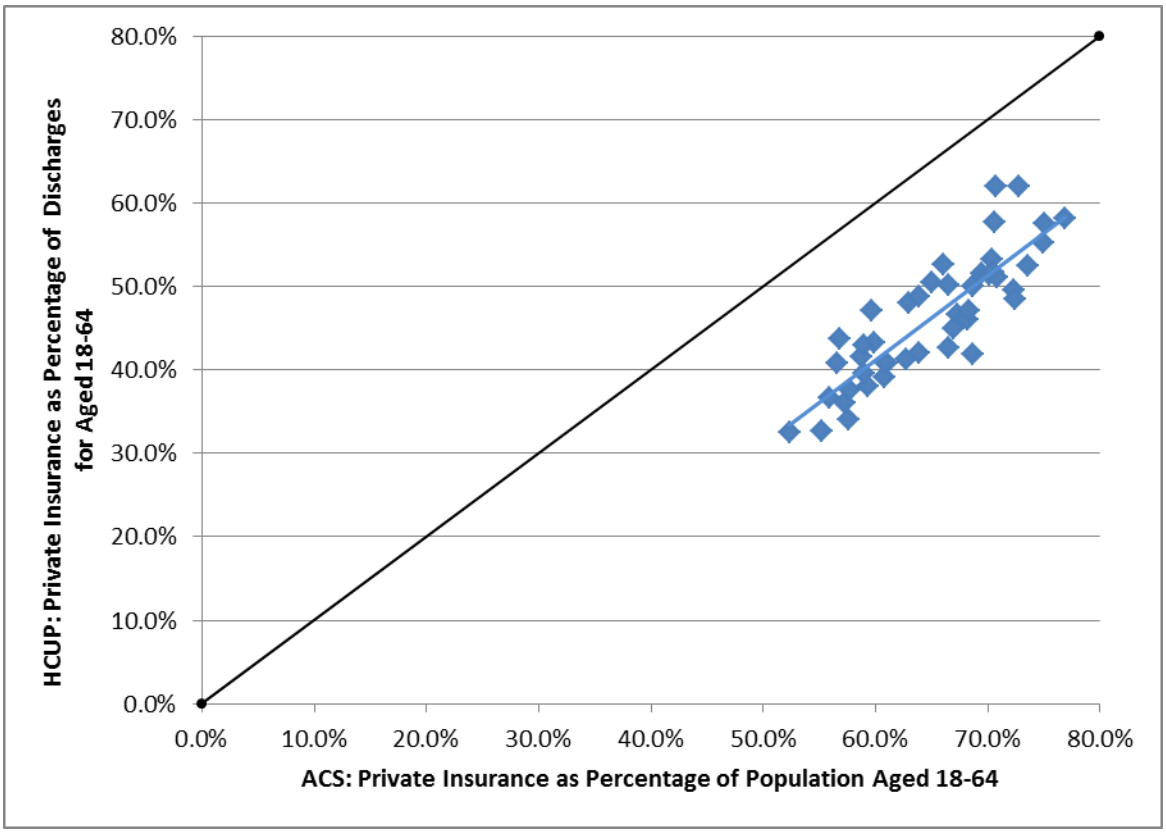
Figure 13. Private Insurance as a Percentage of the Population Aged 0-17 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) Data, 2011



Private Insurance: Ages 18–64

The scatter plot of the results (Figure 14) shows that the percentage of SID discharges for individuals aged 18–64 with private insurance as the expected payer ranged between 32.6 percent and 58.1 percent across States (y-axis), and the percentage of the population aged 18–64 with private insurance ranged between 52.4 percent and 76.8 percent (x-axis). Generally, as the percentage of the population aged 18–64 with private insurance increased, the percentage of SID discharges for individuals aged 18–64 with private insurance as the expected payer also increased (and vice versa). The percentage of discharges for adults aged 18–64 with private insurance as the expected payer in HCUP was lower than the percentage of the population aged 18–64 with private insurance in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were very closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4G.3 in Supplement 4 for a complete list of State-specific rates in a table format.

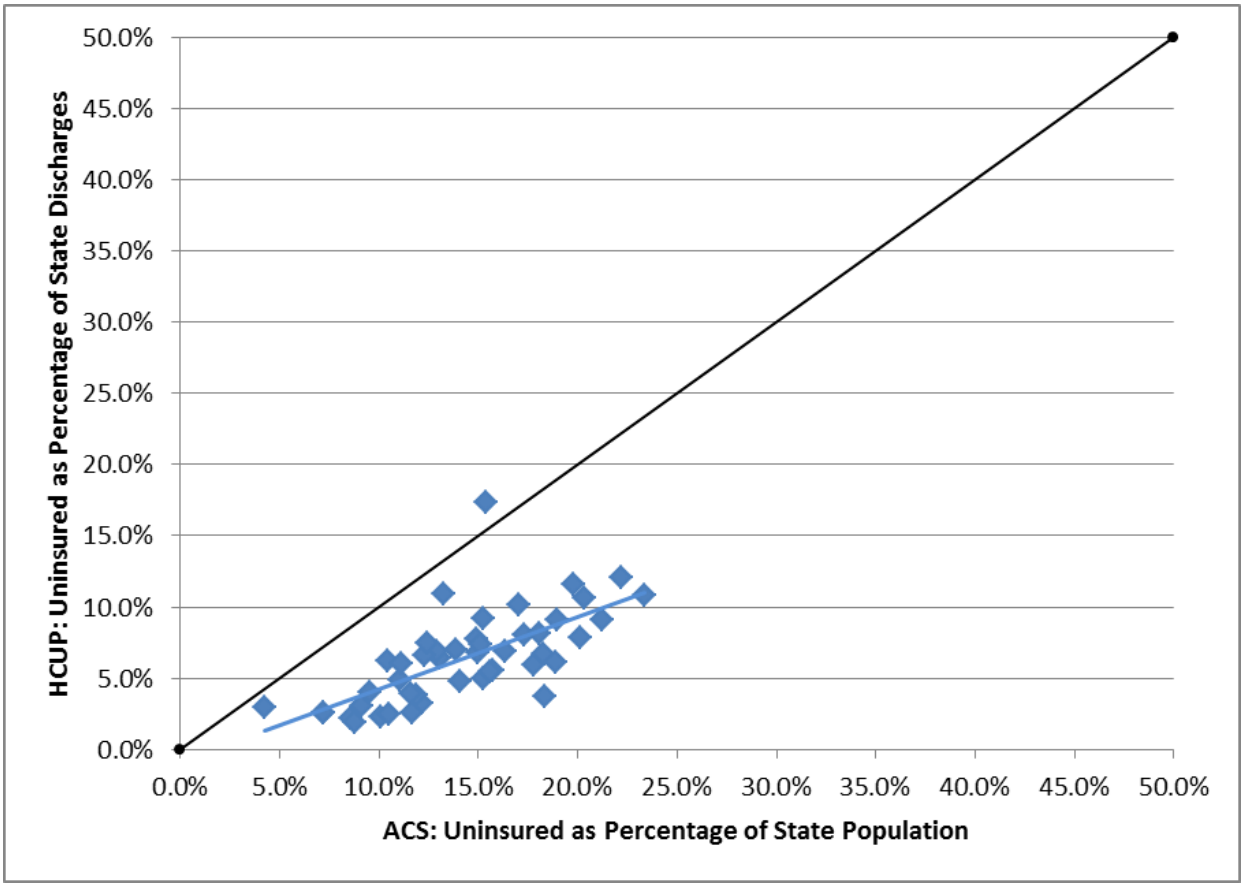
Figure 14. Private Insurance as a Percentage of the Population Aged 18-64 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) Data, 2011



Uninsured

The scatter plot of the results (Figure 15) shows that the percentage of SID discharges for patients with expected payer indicating they are uninsured ranged between 1.4 percent and 17.3 percent across States (y-axis), and the percentage of the population without insurance ranged between 4.3 percent and 23.3 percent (x-axis). Generally, as the percentage of the total population that is uninsured increased, the percentage of SID uninsured discharges also increased (and vice versa). The percentage of uninsured discharges in HCUP was lower than the percentage of the uninsured population in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were very closely clustered around the blue linear line fit to the scatter plot, with a few exceptions. Researchers designing studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4H.1 in Supplement 4 for a complete list of State-specific rates in a table format.

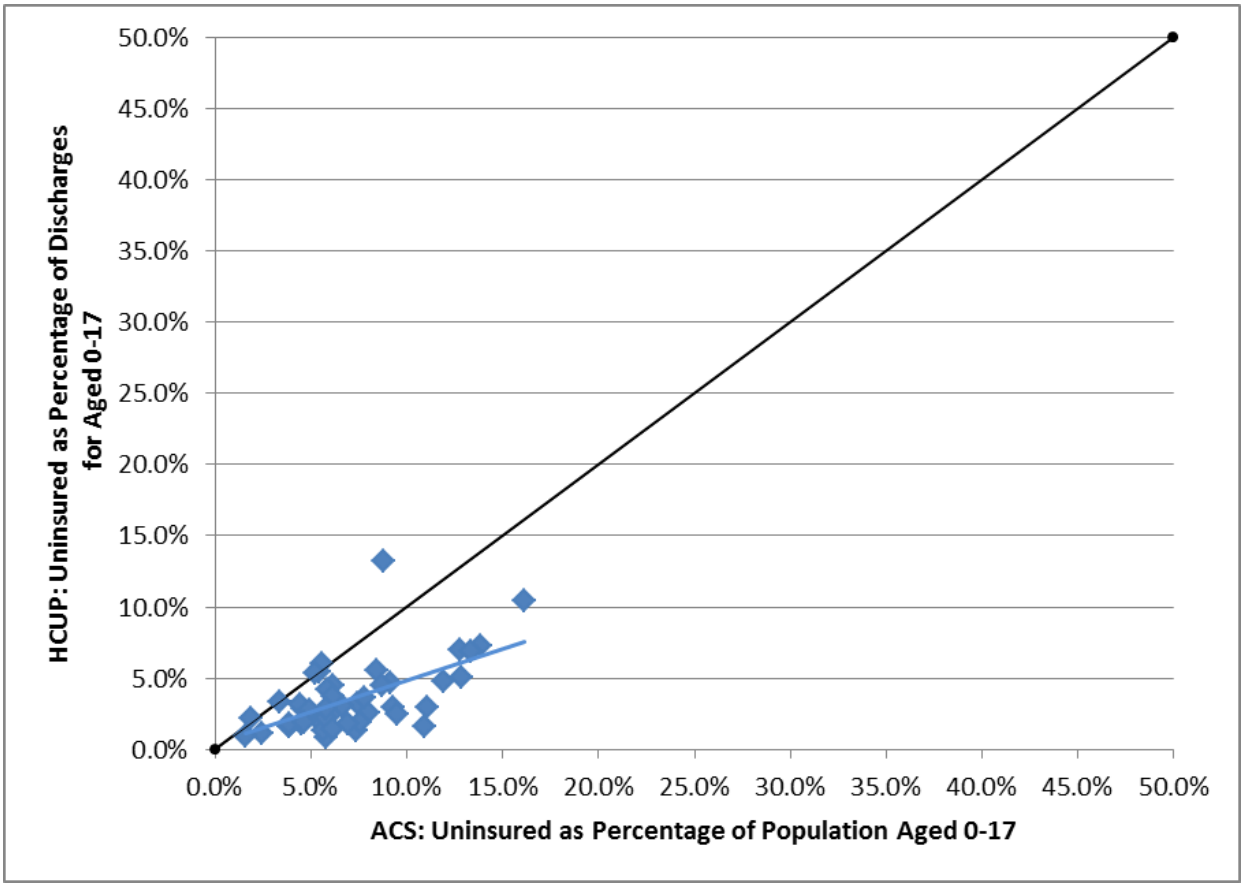
Figure 15. Uninsured as a Percentage of the Total Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) Data, 2011



Uninsured: Ages 0–17

The scatter plot of the results (Figure 16) shows that the percentage of SID discharges for children aged 0–17 with expected payer indicating they are uninsured ranged between 0.8 percent and 13.2 percent across States (y-axis), and the percentage of the population aged 0–17 without insurance ranged between 1.6 percent and 16.1 percent (x-axis). The percentage of discharges for children aged 0–17 with expected payer indicating they are uninsured in HCUP was lower than the percentage of the population aged 0–17 without insurance in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were very closely clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4H.2 in Supplement 4 for a complete list of State-specific rates in a table format.

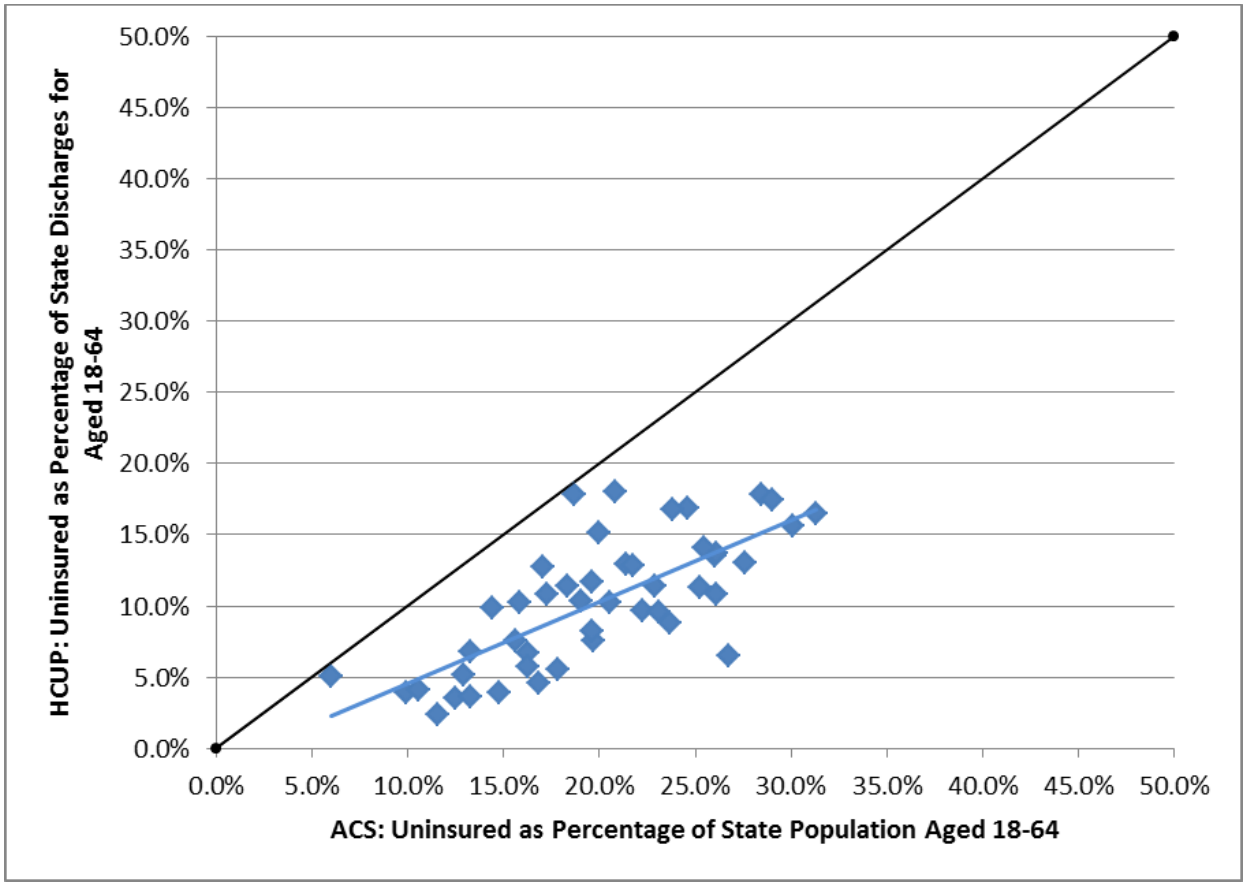
Figure 16. Uninsured as a Percentage of the Population Aged 0-17 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) Data, 2011



Uninsured: Ages 18–64

The scatter plot of the results (Figure 17) shows that the percentage of SID discharges for individuals aged 18–64 with expected payer indicating they are uninsured ranged between 2.4 percent and 18.0 percent across States (y-axis), and the percentage of the population aged 18–64 without insurance ranged between 6.0 percent and 31.3 percent (x-axis). Generally, as the percentage of the population aged 18–64 without insurance increased, the percentage of SID discharges for individuals aged 18–64 with expected payer indicating they are uninsured also increased (and vice versa). The percentage of discharges for adults aged 18–64 with expected payer indicating they are uninsured in HCUP was lower than the percentage of the population aged 18–64 without insurance in the ACS data (i.e., State data points were below the perfect linear line [in black], where the SID percentage equaled the ACS percentage). The State data points were clustered around the blue linear line fit to the scatter plot. However, there were a few outlier States with very dissimilar statistics. Researchers designing studies using HCUP may want to closely examine these outlier States as they relate to their research objectives before deciding whether to include them in their studies. Please see Table 4H.3 in Supplement 4 for a complete list of State-specific rates in a table format.

Figure 17. Uninsured as a Percentage of the Population Aged 18-64 Using American Community Survey (ACS) Versus Healthcare Cost and Utilization Project (HCUP) Data, 2011



DISCUSSION

HCUP included six uniform categories for identifying the expected payer: Medicare, Medicaid, private insurance, self-pay, no charge or charity, and other payer. We found the following about the coding of each payer across States:

- *Medicare*. Codes for Medicare were included in the State-specific coding of payer in all HCUP States. When we compared the Medicare percentage of HCUP total discharges with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently higher than the corresponding percentage of the population for individuals under age 65 and consistently lower for individuals aged 65 and older.
- *Medicare Managed Care*. In 2011, 25 out of 47 States provided detailed coding for Medicare discharges for managed care plans. A comparison of the percentage of HCUP Medicare discharges that are identified as being managed care with CMS enrollment data for Medicare managed care suggested that there may be incomplete reporting of patients enrolled in Medicare managed care plans in a few of these States.
- *Medicaid*. Codes for Medicaid were included in the State-specific coding of payer in all HCUP States. Five States separately identified discharges from CHIP under other payer (out of the 43 States with separate or combined CHIP programs). In this study, discharges with a primary payer of CHIP were considered as Medicaid. When we compared the Medicaid percentage of HCUP total discharges with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently higher than the corresponding percentage of the population.
- *Medicaid and Medicare dual enrollees*. In 2011, discharges for patients dually enrolled in Medicare and Medicaid were identified in the 36 States that report two or more payers in the HCUP SID. Comparison of HCUP data with CMS enrollment data suggested that there may be incomplete reporting of patients dually enrolled in Medicare and Medicaid in a few States.
- *Medicaid Managed Care*. Twenty-three out of 47 States provided detailed coding for Medicaid discharges for managed care plans. To assess the degree to which the HCUP SID accurately capture discharges for Medicaid managed care, we conducted a State-level comparison of SID discharges with CMS enrollment data. The results suggested that there may be incomplete reporting of patients enrolled in Medicaid managed care plans in a few States.
- *Private insurance*. Codes for private insurance were included in the State-specific coding of payer in all 47 HCUP States. When we compared the percentage of HCUP total discharges that had a primary payer of private insurance with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently lower than the corresponding percentage of the population.
- *Private managed care*. In 2011, 33 States provided detailed coding for managed care plans for the privately insured. There was no publicly available State-level, population-based information on privately insured individuals in managed care for comparison with the HCUP discharge data.

- *All managed care*. Only 19 out of 47 States identified managed care plans across Medicare, Medicaid, and the privately insured. To assess the degree to which HCUP SID accurately capture discharges for all managed care plans, we conducted a State-level comparison of SID discharges with Kaiser Family Foundation (KFF) managed care penetration data. The SID percentages for total managed care were similar to or higher than the KFF percentages for most of the States.
- *Self-Pay and No Charge*. These HCUP payer categories captured across all 47 HCUP States are often used to identify uninsured patients. Additional uninsured patients were reported under various Federal, State, and local government programs that were coded under the HCUP payer category of other payer.
- *Other payer*. Some of the programs included under other payer are insurance plans, but others are a payer of last resort for uninsured patients. In addition, some special programs like Black Lung and Title V may cover insured individuals for special services and circumstance. Thus, when these codes are present, it is difficult to know whether that person was insured or not. Programs that we determined as covering the inpatient stay for uninsured patients (payers of last resort) included, but were not limited to, IHS, Hill-Burton, Ryan White, and county indigent programs.
- *Uninsured*. An uninsured category was created for this analysis using discharges coded as self-pay, no charge, and State and local programs serving low-income populations coded under other (e.g., IHS, Hill-Burton, and Ryan White). Counting IHS discharges as uninsured increased the number of uninsured inpatient stays from 2–68 percent. Including discharges reported under State or county indigent programs as uninsured increased the number of uninsured inpatient stays from 22–54 percent. Counting discharges from other State-specific payers of last resort for inpatient stays as uninsured increased the number of uninsured inpatient stays from 1–105 percent. However, when we compared the percentage of HCUP total discharges identified as uninsured with the corresponding percentage of the population obtained from the ACS, we found that the HCUP percentage was consistently lower than the corresponding percentage of the population.

Across all payers, the comparison of HCUP discharge-based proportions with ACS population-based proportions included a few outlier States with very dissimilar statistics. These outliers signal States with possible payer coding problems and/or coding that does not align closely with the ACS.

Expected payer is the least uniform variable supplied by statewide data organizations. Researchers need to understand the information captured by expected payer data, so that they can use the data appropriately in their studies. This report presented detailed information about the expected payer codes collected by HCUP States, with a focus on low-income populations (especially the uninsured) and managed care. Included were directions on how to align the HCUP payer codes with the ACS population data collected by type of insurance. Comparisons of HCUP estimates with external data sources were provided to evaluate similarities of values and thereby illuminate the strengths and limitations of the State-specific payer coding. This report should be used as a reference tool to inform research focused on health care utilization and quality by expected payer using the HCUP databases.

APPENDIX A. HCUP PARTNERS

Alaska State Hospital and Nursing Home Association

Arizona Department of Health Services

Arkansas Department of Health

California Office of Statewide Health Planning and Development

Colorado Hospital Association

Connecticut Hospital Association

Florida Agency for Health Care Administration

Georgia Hospital Association

Hawaii Health Information Corporation

Illinois Department of Public Health

Indiana Hospital Association

Iowa Hospital Association

Kansas Hospital Association

Kentucky Cabinet for Health and Family Services

Louisiana Department of Health and Hospitals

Maine Health Data Organization

Maryland Health Services Cost Review Commission

Massachusetts Center for Health Information and Analysis

Michigan Health & Hospital Association

Minnesota Hospital Association (provides data for Minnesota and North Dakota)

Mississippi Department of Health

Missouri Hospital Industry Data Institute

Montana MHA - An Association of Montana Health Care Providers

Nebraska Hospital Association

Nevada Department of Health and Human Services

New Hampshire Department of Health & Human Services

New Jersey Department of Health

New Mexico Department of Health

New York State Department of Health

North Carolina Department of Health and Human Services

North Dakota (data provided by the Minnesota Hospital Association)

Ohio Hospital Association

Oklahoma State Department of Health

Oregon Association of Hospitals and Health Systems

Oregon Health Policy and Research

Pennsylvania Health Care Cost Containment Council

Rhode Island Department of Health

South Carolina Budget & Control Board

South Dakota Association of Healthcare Organizations

Tennessee Hospital Association

Texas Department of State Health Services

Utah Department of Health

Vermont Association of Hospitals and Health Systems

Virginia Health Information

Washington State Department of Health

West Virginia Health Care Authority

Wisconsin Department of Health Services

Wyoming Hospital Association

APPENDIX B. CHILDREN'S HEALTH INSURANCE PROGRAMS BY STATE

State	Program Name[a]	CHIP Program Design[b,c]	Program Website (Accessed on July 28, 2013)
Alabama	All Kids	Separate	http://www.adph.org/allkids/
Alaska	Denali KidCare	Medicaid Expansion	http://dhss.alaska.gov/dhcs/Pages/denalikidcare/default.aspx
Arizona	KidsCare	Separate	http://www.azahcccs.gov/applicants/categories/KidsCare.aspx
Arkansas	ARKids First	Combination	http://www.benefits.gov/benefits/benefit-details/1090
California	Healthy Families; Children's Health Initiative; County Children's Health Initiative (C-CHIP); Access for Infants and Mothers (AIM);	Combination	http://www.healthyfamilies.ca.gov/Home/default.aspx; http://www.ihps-ca.org/localcovsol/cov_initiatives.html http://www.mrmib.ca.gov/mrmib/cchip.shtml; http://www.aim.ca.gov/Home/default.aspx
Colorado	Child Health Plan Plus (CHP+)	Separate	http://www.cchp.org/index.cfm?action=aboutCHP&language=eng
Connecticut	HUSKY B Program	Separate	http://www.huskyhealth.com/hh/site/default.asp
Delaware	Delaware Health Children Program (DHCP)	Combination	http://www.dhss.delaware.gov/dhss/dmma/dhcp.html
District of Columbia	Healthy Families	Medicaid Expansion	http://ssc.rrc.dc.gov/ssc/cwp/view,a,1218,q,455360.asp
Florida	KidCare	Combination	http://www.floridakidcare.org/index.html
Georgia	PeachCare for Kids	Separate	http://www.peachcare.org
Hawaii	Quest	Medicaid Expansion	http://www.med-quest.us
Idaho	Idaho Health Plan for Children;	Combination	http://healthandwelfare.idaho.gov/Medical/Medicaid/IdahoHealthPlanforChildren/tabid/219/Default.aspx
Illinois	All Kids	Combination	http://www.allkidscovered.com/
Indiana	Hoosier Healthwise	Combination	http://member.indianamedicaid.com/programs--benefits/medicaid-programs/hoosier-healthwise.aspx
Iowa	Hawk-I;Iowa Medicaid Enterprise	Combination	http://www.hawk-i.org/
Kansas	HealthWave	Separate	http://www.ksresourceguide.org/healthwave.htm
Kentucky	KCHIP	Combination	http://kidshealth.ky.gov/en/kchip/

State	Program Name[a]	CHIP Program Design[b,c]	Program Website (Accessed on July 28, 2013)
Louisiana	LaCHIP	Combination	http://new.dhh.louisiana.gov/index.cfm/page/222
Maine	MaineCare	Combination	http://www.maine.gov/dhhs/ofi/services/cubcare/CubCare.htm
Maryland	Maryland Children's Health Program	Medicaid Expansion	http://mmcp.dhmh.maryland.gov/chp
Massachusetts	MassHealth	Combination	http://www.massresources.org/masshealth.html
Michigan	MIChild	Combination	http://www.michigan.gov/mdch/0,4612,7-132-2943_4845_4931---,00.html
Minnesota	MinnesotaCare	Combination	http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_136855
Mississippi	CHIP	Separate	http://www.medicaid.ms.gov/Eligibility.aspx
Missouri	HealthNet for Kids	Combination	http://www.dss.mo.gov/mhk/index.htm
Montana	Healthy Montana Kids/Montana CHIP	Combination	http://hmk.mt.gov/
Nebraska	Kids Connection	Combination	http://www.dhhs.ne.gov/medicaid/Pages/med_kidsconxapp.aspx
Nevada	Check Up	Combination	https://nevadacheckup.nv.gov/
New Hampshire	Healthy Kids;New Hampshire Smiles	Medicaid Expansion	http://www.dhhs.nh.gov/ombp/medicaid/nhmedicaid-children.htm; http://www.dhhs.state.nh.us/ombp/medicaid/children/dental.htm
New Jersey	FamilyCare	Combination	http://www.njfamilycare.org/index.html
New Mexico	New MexiKids/MexiTeens	Medicaid Expansion	http://www.hsd.state.nm.us/mad/
New York	Child Health Plus	Combination	http://www.health.state.ny.us/nysdoh/chplus/index.htm
North Carolina	Health Choice for Children	Combination	http://www.ncdhhs.gov/dma/healthchoice/index.htm
North Dakota	Healthy Steps	Combination	http://www.nd.gov/dhs/services/medicalserv/chip/
Ohio	Healthy Start	Medicaid Expansion	http://www.jfs.ohio.gov/ohp/consumers/HealthyStart.stm
Oklahoma	SoonerCare	Combination	http://www.okhca.org/individuals.aspx?id=11698&menu=40&parts=7453
Oregon	Healthy Kids	Separate	http://www.oregonhealthykids.gov/
Pennsylvania	CHIP	Separate	http://www.chipcoverspakids.com/

State	Program Name[a]	CHIP Program Design[b,c]	Program Website (Accessed on July 28, 2013)
Rhode Island	RIte Care	Combination	http://www.dhs.ri.gov/People/FamilieswithChildren/HealthCare/RIteCare/tabid/213/Default.aspx
South Carolina	Healthy Connections	Medicaid Expansion	http://www1.scdhhs.gov/openpublic/InsideDHHS/bureaus/bureauofeligibilityprocessing/phc.asp
South Dakota	CHIP	Combination	http://dss.sd.gov/medicalservices/chip/faq.asp
Tennessee	CoverKids	Combination	http://www.state.tn.us/tenncare
Texas	CHIP	Separate	http://www.chipmedicaid.org/english/index.htm
Utah	CHIP	Separate	http://www.health.utah.gov/chip
Vermont	Dr Dynasaur	Separate	http://www.greenmountaincare.org/vermont-health-insurance-plans/dr-dynasaur
Virginia	FAMIS and FAMIS MOMS	Combination	http://www.famis.org
Washington	Apple Health for Kids	Separate	http://hrsa.dshs.wa.gov/applehealth/
West Virginia	CHIP	Separate	http://www.wvochs.org/dlh/
Wisconsin	BadgerCare Plus	Combination	http://www.badgercareplus.org
Wyoming	KidCare CHIP	Separate	http://health.wyo.gov/healthcarefin/chip/index.html

[a] Children's Health Insurance Program (CHIP) State Plans, 2011, State Legislation Report, American Academy of Pediatrics (p. 26). http://www.aap.org/en-us/advocacy-and-policy/state-advocacy/Documents/2011_State_Legislation_Report.pdf. Accessed July 28, 2013.

[b] Medicaid designation of CHIP program plan as of January 14, 2013. http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Childrens-Health-Insurance-Program-CHIP/Downloads/CHIPMap-01-14-13.pdf. Accessed July 28, 2013.

[c] States can design their CHIP program in one of three ways: Medicaid expansion, a separate program, or a combination of the two approaches.

APPENDIX C. STATE HEALTH PROGRAMS TO COVER THE UNINSURED BY THE NATIONAL CONFERENCE OF STATE LEGISLATURES

The following tables include a list of State-only programs to cover the uninsured from the National Conference of State Legislatures (NCSL) Web site (http://www.ncsl.org/issues-research/health/state-health-programs-to-cover-the-uninsured-2009.aspx#nv). We researched each program on the Intenet to determine if it was comprehensive insurance, covered inpatient stays, and was identified in the HCUP data.

Methods. We used the NCSL list of State health programs to determine if the program was comprehensive insurance and covered inpatient stays. The NCSL Web site provided a Web link for each program. If the link was invalid, we used Google to search for a current Web link. In our investigation, we found several types of programs, including (1) those that subsidize premiums, (2) those that provide health insurance to individuals with preexisting conditions or who would otherwise be rejected from other health plans, (3) those that create pools of small businesses to make coverage affordable, and (4) those that pay for or reimburse care that is unaffordable.

We categorized programs as "insurance" that were labeled "insurance" on their Web site, that involved a copayment or premium from the recipient of care (excluding health discount programs not considered health insurance), or that guaranteed recurrent care through the established mechanism. We categorized programs as a "payer of last resort" that provided temporary care for a single service or a single episode of care or if the program required the individual not to have public or private insurance covering the service or episode of care. In other words, these payers took effect—either through prospective or retrospective payment—only if there was no other means of payment for services or if the services were only available on a gratis basis. There were some special instances in which programs with stringent requirements and/or extreme stipulations for coverage were included in this category.

We then compared the list of programs identified as insurance or payer of last resort with the programs listed under the HCUP category of other payer (PAY=6). If the information could not be clearly determined, we contacted the HCUP Partner for clarification. State-specific expected payer categories that identified these programs for indigent populations, migrant workers, and undocumented aliens were considered uninsured.

Based on the NCSL list, we identified 75 programs that cover inpatient stays for the uninsured across 43 States. These programs are listed in Table C.1. Unfortunately, we could only find HCUP payer codes for 12 of these 75 programs. The HCUP Partners helped us learn that another 10 programs are probably coded within more general State-specific payer categories. The programs that do not seem to cover inpatient stays or are no longer in existence are listed in Table C.2.

Suggestions to Users. It is important to understand several limitations related to the identification and analysis of the uninsured populations because of the complexities of these funding mechanisms.

First, "health insurance" is not clearly defined, in general. Most broadly, "health insurance" is defined as "insurance against loss through illness," which could be any one of the mechanisms that we have listed previously. We see similar variations in definitions of being "uninsured" by various agencies that track

rates. This ambiguity makes the study of the uninsured complex, requiring varying levels of assumptions to shape the analyses.

Second, most of the identified State programs did not map directly to HCUP payer categories. Therefore, it is unclear where these individuals are being counted under these State programs. Some may be classified under "other State programs," but it is likely that many are now grouped among the privately insured. Analytic complications related to this categorization are discussed further below.

In summary, the funneling of a population of uninsured individuals into private insurance when the insurance is acquired through a government insurance program creates more heterogeneity in the case mix for this private insurance group. For example, high risk pool insurance programs, which exist in many States, cover individuals with preexisting conditions who may otherwise be rejected from other health insurance programs. Some of the programs created for the uninsured are more similar to public insurance programs than to private insurance provided by employers. In this way, differences between the uninsured and privately insured might be attenuated, as more typically "uninsured" individuals are represented in the privately insured category.

Table C.1 State-Only Programs that Cover Inpatient Stays

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Alaska	Alaska Comprehensive Health Insurance Association (ACHIA)	Insurance (High Risk Pool)	No	https://www.achia.com/benefit_info.asp Accessed on July 25, 2013
Arizona	HealthCare Group	Insurance	No	http://www.healthcaregroupaz.com/ HCGA will stop providing coverage to all enrolled members effective midnight on December 31, 2013. From Partner: Program is being disbanded due to the implementation of the Arizona Health Insurance Exchange required by the Affordable Care Act and will have its own new payer code in Arizona data, PAY1_X =15 (Arizona Health Insurance Exchange).

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Arizona	Pima Community Access Program	Payer of Last Resort	No	http://www.mypcap.org/ Accessed on July 25, 2013 From the HCUP Partner: County nonprofit organization that has partnered with health care providers in the county community.
Arkansas	Arkansas's Comprehensive Health Insurance Pool	Insurance (High Risk Pool)	No	http://www.chiparkansas.org/rates-benefits/ Accessed on July 25, 2013 From the HCUP Partner: Coded under PAYn_X=B (Blue Cross/Blue Shield, Medi-Pak, Medi-Pak Plus).
Arkansas	ARHealthNetworks	Insurance	No	https://arhealthnetworks.com/Plan_About.php Accessed on July 25, 2013 From the HCUP Partner: Coded under PAYn_X= I (Commercial Insurance) or H (HMO/Managed Care)
California	Major Risk Medical Insurance Program (MRMIP)	Insurance (High Risk Pool)	No	http://www.mrmib.ca.gov/MRMIB/MRMIP.shtml Accessed on July 25, 2013 From the HCUP Partner: Californians qualifying for the program participate in the cost of their coverage by paying premiums. The State of California supplements those premiums to cover the cost of care in MRMIP. Tobacco tax funds currently subsidize the MRMIP.

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
California	Healthy San Francisco	Payer of Last Resort	No	http://www.healthysanfrancisco.org/visitors/What_Services_Are_Included.aspx Accessed on July 25, 2013 From the HCUP Partner: Healthy San Francisco receives funding from the city, the Federal government, and fees imposed on San Francisco businesses that do not provide health coverage From their workers. The Health Care Security Ordinance included a requirement that employers with more than 20 workers spend at least a minimum amount toward employee health coverage.
California	County Medical Service Program (CMSP)	Insurance	Yes - Program is coded under "County Indigent Programs" PAYn_X = 050-053	http://www.cmspcounties.org/ Accessed on July 25, 2013 From the HCUP Partner: County Indigent Programs. Patients covered under Welfare and Institutions Code Section 17000. Includes programs funded whole or in part by County Medical Services Program (CMSP), California Healthcare for Indigents Program (CHIP), and/or Realignment Funds, regardless of whether a bill is rendered.

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
California	Medically Indigent Service Program (MISP)	Payer of Last Resort	Yes - Program is coded under "County Indigent Programs" PAYn_X = 050-053	http://www.chcf.org/publications/2009/10/county-programs-for-the-medically-indigent-in-california http://rcrmc.org/home/index.php?option=com_content&view=article&id=25&Itemid=20 Accessed on July 25, 2013
Colorado	CoverColorado	Insurance (High Risk Pool)	No	https://www.covercolorado.org/ Accessed on July 25, 2013
Connecticut	Health Reinsurance Association (HRA)	Insurance (High Risk Pool)	No	http://www.hract.org/hra/index.htm Accessed on July 25, 2013
Connecticut	Charter Oak Health Plan	Insurance	Yes – PAYn_X source value U coded under HCUP PAYn category for Other	http://www.charteroakhealthplan.com/coh/site/default.asp Accessed on July 25, 2013
Connecticut	State Administered General Assistance (SAGA)	Payer of Last Resort	No	http://www.ct.gov/dss/lib/dss/pdfs/sagacashandmedical.pdf Accessed on July 25, 2013
Florida	Florida Comprehensive Health Association (FCHA)	Insurance (High Risk Pool)	No	http://myfloridachoices.org/ Accessed on July 25, 2013
Florida	Hillsborough County HealthCare Program	Insurance	No	http://www.hillsboroughcounty.org/?nid=864 Accessed on July 25, 2013
Illinois	Illinois Comprehensive Health Insurance Plan (ICHIP)	Insurance (High Risk Pool)	No	http://www.chip.state.il.us/default.htm Accessed on July 25, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Indiana	The Indiana Comprehensive Health Insurance Association (ICHIA)	Insurance (High Risk Pool)	No	http://www.in.gov/idoi/2570.htm Accessed on July 25, 2013
Indiana	Healthy Indiana Plan	Insurance	No	http://www.in.gov/fssa/hip/2344.htm Accessed on July 25, 2013
Indiana	Health Advantage	Insurance	No	http://www.hhcorp.org/hhc/index.php/programs/health-advantage Accessed on July 25, 2013
Iowa	Health Insurance Plan of Iowa (HIPIowa)	Insurance (High Risk Pool)	No	https://hipiowa.com/default.asp Accessed on July 25, 2013 From the HCUP Partner: HIPIowa provides insurance to Iowa residents who have been denied coverage or who are unable to obtain individual health insurance.
Kansas	The Kansas Health Insurance Association (KHIA)	Insurance (High Risk Pool)	No	http://www.khiastatepool.com/ Accessed on July 25, 2013
Kansas	Project Access	Payer of Last Resort	No	http://www.centralplainshealthcarepartnership.org/index.php/project-access/ Accessed on July 25, 2013
Kentucky	Kentucky Access	Insurance (High Risk Pool)	No	https://www.kentuckyaccess.com/index.cfm Accessed on July 25, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Louisiana	Louisiana Health Plan (LHP)	Insurance (High Risk Pool)	No	http://www.lahealthplan.org/index.html Accessed on July 25, 2013 From the HCUP Partner: Insurer is ceasing operations on December 31, and its policyholders will need to seek health-insurance coverage elsewhere. Best code to identify this payer on our file to HCUP would be PAYn_X= I ("Other Health Insurance Company")
Maine	Dirigo Health Agency (DHA)	Insurance	No	http://www.dirigohealth.maine.gov/; https://www.harvardpilgrim.org/portal/page?_pageid=213,331257&_dad=portal&_schema=PORTAL Accessed on July 25, 2013 From the HCUP Partner: Inpatient stays for people covered by Harvard Pilgrim through Dirigo Health are coded as Harvard Pilgrim.
Maryland	Maryland Health Insurance Plan (MHIP)	Insurance (High Risk Pool)	Yes – PAYERn_X source value 93 and 94 coded under HCUP PAYn category for Other	http://www.marylandhealthinsuranceplan.state.md.us/ Accessed on July 25, 2013
Maryland	Medical Assistance for Families	Insurance	No	http://dhmh.maryland.gov/ma4families/SitePages/Home.aspx Accessed on July 25, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Massachusetts	Commonwealth Care	Insurance	Yes – PAYn_X source value Q coded under HCUP PAYn category for Other	https://www.mahealthconnector.org/portal/site/connector Accessed on July 25, 2013
Massachusetts	Medical Security Program	Payer of Last Resort	Yes – PAYERn_X source value 178 for Children's Medical Security Plan (CMSP) coded under HCUP PAYn category for Other	http://www.mass.gov/lwd/unemployment-insur/programs-and-services-for-claimants/medical-security-program-msp/ Accessed on July 25, 2013
Michigan	Access Health	Insurance	No	http://www.access-health.org/for-members/access-health-plan Accessed on July 25, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Minnesota	General Assistance Medical Care (GAMC)	Insurance	Yes – various PAYn_X codes specific to GAMC coded under HCUP PAYn category for Other but could be considered Medicaid	http://www.benefits.gov/benefits/benefit-details/1449 Accessed on July 25, 2013
Minnesota	Minnesota Comprehensive Health Association (MCHA)	Insurance	No	http://mchamn.com/about/about-mcha/ Accessed on July 25, 2013 From the HCUP Partner: MCHA is captured with PAYn_X= 400-04-00 (MN Comp. Health Care), although we see variations on that theme. The MCHA program is designed for enrollees with preexisting conditions that have been turned down for typical medical coverage. This program is being transitioned out of existence in 2014 when the Affordable Care Act prevents health plans from denying enrollment because of preexisting medical conditions.

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Mississippi	Comprehensive Health Insurance Risk Pool Association	Insurance Insurance (High Risk Pool)	No	http://www.mississippihealthpool.org/index.php Accessed on July 25, 2013 From the HCUP Partner: The program provides private insurance and does not cover inpatient stays from the uninsured. The patients would not be identified in the payer coding.
Missouri	Missouri Health Insurance Pool (MHIP)	Insurance Insurance (High Risk Pool)	No	http://www.mhip.org/ Accessed on July 25, 2013
Montana	Montana Comprehensive Health Association Plan	Insurance Insurance (High Risk Pool)	No	http://www.mthealth.org/ Accessed on July 25, 2013
Nebraska	Nebraska Comprehensive Health Insurance Pool	Insurance	No	http://www.nechip.com/ Accessed on July 24, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
New Hampshire	New Hampshire Health Plan	Insurance	No	http://mchamn.com/about/about-mcha/ Accessed on July 25, 2013 From the HCUP Partner: MCHA is captured with PAYn_X= 400-04-00 (MN Comp. Health Care), although we see variations on that theme. The MCHA program is designed for enrollees with preexisting conditions that have been turned down for typical medical coverage. This program is being transitioned out of existence in 2014 when the Affordable Care Act prevents health plans from denying enrollment because of preexisting medical conditions.
New Jersey	Catastrophic Illness in Children Relief Fund Program	Payer of Last Resort	No	http://www.nj.gov/humanservices/cicrf/home/index.html Accessed on July 24, 2013 From the HCUP Partner: DOH Program and claims are not submitted to Medicaid/Family Care

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
New Jersey	Work First New Jersey/General Assistance	Payer of Last Resort	No	http://www.state.nj.us/humanservices/dfd/programs/assistance/ Accessed on July 24, 2013 From the HCUP Partner: GA is part of Charity Care so the hospitals could be using PAYn_X: 095 Indigent (most appropriate) 098 Hospital Responsibility 099 Other Miscellaneous 031 Direct Pay 039 Other Source of Patient Pay
New Jersey	NJ Family Care Advantage	Insurance	No	http://www.horizonnjhealth.com/ourplans/njfamilycareadvantage/about-plan-affordable-health-care-your-children Accessed on July 24, 2013 From the HCUP Partner: NJ Family Care (advantage) can be reported with code PAYn_X= 008.
New Mexico	Premium Assistance for Kids	Insurance	No	http://www.insurenewmexico.state.nm.us/PAKHome.htm Accessed on July 24, 2013; New enrollment ceased September 1, 2010.
New Mexico	Premium Assistance for Maternity	Insurance	No	http://www.insurenewmexico.state.nm.us/PAMHome.htm Accessed on July 24, 2013; New enrollment ceased September 1, 2010.

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
New Mexico	New Mexico Medical Insurance Pool	Insurance	No	http://www.nmmip.org/hrp1/ Accessed on July 24, 2013. From the HCUP Partner: This program is run by Blue Cross Blue Shield and would be labeled as such under Primary Payer.
New York	Family Health Plus	Insurance	No	http://www.health.ny.gov/health_care/family_health_plus/index.htm Accessed on July 24, 2013.
New York	Healthy NY	Insurance	No	http://www.dfs.ny.gov/healthyny/ Accessed on July 24, 2013
North Carolina	Pre-existing condition insurance plan (formerly Inclusive Health)	Insurance	No	https://www.pcip.gov/ Accessed on July 24, 2013
North Carolina	NC Health Net	Payer of Last Resort	No	http://www.ncdhhs.gov/orhcc/partners/healthnet.htm Accessed on July 24, 2013
North Carolina	Project Access for Buncombe County	Payer of Last Resort	No	https://www.bcmsonline.org/pa/pp/ Accessed on July 24, 2013
North Dakota	Comprehensive Health Association of North Dakota	Insurance	No	http://www.chand.org/ Accessed on July 24, 2013 From the HCUP Partner: Program appears to be either in PAYn_X= 500-99-00 or 600-02-00.
Ohio	Children's Buy-In	Insurance	No	http://www.wcmhblogs.com/autism/comments/ohios_childrens_buy-in_programa_state-funded_health_care_program_for_certai/ (Flyer; full website unavailable). Accessed on July 24, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Oklahoma	Oklahoma Health Insurance High Risk Pool	Insurance	No	http://okhrp.org/ Accessed on July 24, 2013
Oregon	Oregon Medical Assistance Pool	Insurance	No	http://www.oregon.gov/OHA/OPHP/omip/Pages/index.aspx Accessed on July 24, 2013
Pennsylvania	Adult Basic	Insurance	No	http://www.portal.state.pa.us/portal/server.pt/community/health_insurance/9189/adultbasic/592645 Accessed on July 24, 2013; program terminated coverage in February 2011.
Pennsylvania	General Assistance/Medical Assistance (Medicaid)	Payer of Last Resort	No	http://www.dpw.state.pa.us/foradults/healthcaremedicalassistance/index.htm Accessed July 25, 2013
Rhode Island	Health Pact	Insurance	No	http://www.healthpactplan.com/index.html Accessed on July 24, 2013
South Carolina	South Carolina Health Insurance Pool	Insurance	No	http://doi.sc.gov/ Accessed on July 24, 2013
South Dakota	South Dakota Risk Pool	Insurance	No	http://riskpool.sd.gov/ Accessed on July 24, 2013
Tennessee	Cover Tennessee	Insurance	Yes – PAYn_X source value 11 coded under HCUP PAYn category for Other	http://www.covertn.gov/web/cover_tn.html Accessed on July 24, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Tennessee	Access Tennessee	Insurance	Yes – PAYn_X source value 13 coded under HCUP PAYn category for Other	http://www.covertn.gov/web/access_tn.html Accessed on July 24, 2013
Tennessee	Knoxville Area Project Access	Payer of Last Resort	No	http://www.knoxvilleareaprojectaccess.org/ Accessed on July 24, 2013
Texas	State Kids Insurance Program	Insurance	No	http://www.ctcd.edu/hr/empl_benefit/skip_flyer.pdf (Flyer; full site not available) Accessed on July 24, 2013
Texas	Texas Health Insurance Pool	Insurance	No	http://www.txhealthpool.com/ Accessed on July 24, 2013
Texas	County Indigent Health Care Program	Payer of Last Resort	No	http://www.dshs.state.tx.us/cihcp/default.shtm Accessed on July 24, 2013
Texas	TexHealth	Insurance	No	http://texhealth.org/ Accessed on July 24, 2013
Utah	Utah Comprehensive Health Pool	Insurance	No	http://www.healthpocket.com/medicaid-public-plans/plan/utah-comprehensive-health-insurance-pool-hiputah-2qz88 Accessed on July 24, 2013
Virginia	Indigent Health Care Trust Fund	Payer of Last Resort	No	http://www.richmondsunlight.com/bill/2009/sb1448/ (Looks to have been repealed) Accessed on July 24, 2013 From the HCUP Partner: Program reimburses hospitals for charity care.

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Virginia	State and Local Hospitalization	Payer of Last Resort	No	http://www.gcva.us/dpts/ss/ssprograms.htm#slh (Local link; no broader links available) Accessed on July 24, 2013 From the HCUP Partner: Program would be reported under charity care or self-pay (depending upon how hospitals list this), but there is no specific code used for this.
Washington	Washington State Health Insurance Pool	Insurance	No	https://www.wship.org/Default.asp Accessed on July 24, 2013
Washington	Basic Health	Insurance	No	http://www.basichealth.hca.wa.gov/ Accessed on July 24, 2013
Washington	Health Insurance Partnership	Insurance	No	No link
Washington	Project Access	Payer of Last Resort	No	http://www.spcms.org/projectaccess/index.htm Accessed on July 24, 2013
West Virginia	Access WV	Insurance	Yes – PAYn_X source value 55 coded under HCUP PAYn category for Private	http://apps.wvinsurance.gov/accesswv/ Accessed on July 24, 2013
West Virginia	West Virginia Small Business Plan	Insurance	Yes – PAYn_X source value 56 coded under HCUP PAYn category for Private	http://www.wvsbp.org/index2.html Accessed on July 24, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes (Some notes were gathered from emails from the HCUP Partners about programs in their State)
Wisconsin	Health Insurance Risk Sharing Plan (HIRSP)	Insurance	Yes – PAYn_X source value OTH56 coded under HCUP PAYn category for Other	http://www.hirsp.org/ Accessed on July 24, 2013
Wyoming	Wyoming Health Insurance Pool	Insurance	No	https://sites.google.com/a/wyo.gov/doi/consumers/bulletins-links/wyoming-health-insurance-pool Accessed on July 24, 2013

Table C.2 State-Only Programs that Do Not Cover Inpatient Stays or Are No Longer in Existence

State	Program Name	Health Insurance Program or Payer of Last Resort	Covers Inpatient Stays	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes
Alaska	Chronic and Acute Medical Assistance (CAMA)	Payer of Last Resort	No	No	http://dhss.alaska.gov/dhcs/Pages/cama/default.aspx Accessed on July 25, 2013
Arizona	Primary Care Program	Payer of Last Resort	No	No	http://www.mihs.org/services-and-programs/arizona-primary-care-program-formerly-tobacco-tax-program Accessed on July 25, 2013
Arizona	Health Insurance Premium Tax Credits program	Program ending	n/a	n/a	http://www.irs.gov/Individuals/The-Health-Coverage-Tax-Credit-(HCTC)-Program The legislation that authorized the Health Coverage Tax Credit (HCTC) expires on January 1, 2014, and the tax credit will no longer be available. Accessed on July 25, 2013
Arizona	HealthCare Connect	No longer in business	n/a	n/a	http://www.healthcareconnect.org/ Inactive link; Accessed on July 25, 2013
Florida	Health Flex Plan	Insurance	No	n/a	http://healthflex.org/index.html Accessed on July 25, 2013
Georgia	Georgia Volunteer Health Care Program (GVHCP)	None	n/a	n/a	http://health.state.ga.us/programs/healthaccess/gvhcp/ Accessed on July 25, 2013
Kansas	Employer Health Insurance Contribution Credit	None	n/a	n/a	http://www.ksrevenue.org/taxcredits-employer.html Accessed on July 25, 2013
Maine	Maine Rx Plus	None	n/a	n/a	http://maine.gov/dhhs/mainerx/index.htm Accessed on July 25, 2013

State	Program Name	Health Insurance Program or Payer of Last Resort	Covers Inpatient Stays	Listed as Source-Specific HCUP Payer Category	Reference Links and Notes
Maryland	Primary Care Coalition of Montgomery County	Payer of Last Resort	No	n/a	http://www.primarycarecoalition.org/help-with-health-care/ Accessed on July 25, 2013
Michigan	Kent Health Plan	No	No	n/a	http://www.kenthealthplan.org/default.aspx Accessed on July 25, 2013
Vermont	Healthy Vermonters	Insurance; prescription assistance	No	No	http://www.greenmountaincare.org/vermont-health-insurance-plans/prescription-assistance Accessed on July 24, 2013
Virginia	Access to Health	Payer of Last Resort	No	No	http://www.accesspartners.org/2.html Accessed on July 24, 2013