

May 2016

## **Identifying Rural Health Clinics in Medicaid Data**

Marisa Domino, PhD; Seth Tyree, MA, MS; Regina Rutledge, PhD; Mark Holmes, PhD

#### BACKGROUND

In 1977, Public Law 95-210 created the Rural Health Clinic (RHC) Medicare and Medicaid reimbursement designation for qualified primary care practices. RHCs must be located in non-urban areas with documented health care shortages. There are currently more than 4,100 RHCs across the U.S.<sup>1</sup> Some RHCs operate as independent medical practices, while others are part of a hospital-owned system or other health care organization. RHCs are statutorily required to have a nurse practitioner, physician assistant or certified nurse-midwife available for at least 50% of clinic operating hours.

Much less is known about patients of RHCs than about patients of other providers, such as Federally Qualified Health Centers (FQHCs). Previous research conducted by the North Carolina Rural Health Research Program analyzed Medicare claims data to learn more about RHCs and Medicare beneficiaries, including comparisons to rural and urban

#### **KEY FINDINGS**

- Claims-based payment data are important for the analysis of Rural Health Clinics (RHCs) use by Medicaid beneficiaries. However, valid identification of such claims can be a complex process.
- Six potential methods of identifying RHCs in Medicaid claims are enumerated. The most feasible method of identifying RHC claims in Medicaid data may be the combined use of the provider specialty, type of program, and place of service codes.
- The recommended method should assist policy makers and researchers who are attempting to use Medicaid data to answer health policy questions related to RHCs.

FQHCs.<sup>2, 3</sup> Conducting similar research for Medicaid enrollees has been more difficult. Unlike federally managed Medicare claims, Medicaid claims are managed by states, and state-to-state differences in identification and treatment of RHCs in claims data make it difficult to conduct national analyses. To better understand Medicaid enrollees' utilization of RHCs, the North Carolina Rural Health Research Program identified and tested several methods for identifying RHCs in Medicaid claims data. This brief describes and compares different methods to identify RHCs in the Medicaid claims of four states.

#### **METHODS**

State data from North Carolina, Georgia, California and Texas were drawn from the Centers for Medicare and Medicaid Services' (CMS) Medicaid Analytic Files Extract (MAX) data system. These states represent a cross-section of rural states. Furthermore, these states' data have been used previously in other research by the study team and were available at relatively low cost. MAX data compiles Medicaid enrollment and claims data from states and provides extensive cleaning and reorganization, and thus

may vary from Medicaid claims available directly from state data systems, although, the source fields (variables and underlying data) should be comparable.

MAX organizes Medicaid-paid claims into one of four categories: inpatient claims, long-term care claims, prescription drug claims, and other services—which includes all claims that do not fit into the first three categories, including outpatient and ambulatory services, as well as home health, laboratory, x-ray, dental, transportation and other claims. We examined claims from the other services (OT) file to focus on outpatient and ambulatory claims.

1

#### RESULTS

No single method for identifying all RHC Medicaid claims exists. We describe six methods of identifying RHC Medicaid claims, include the specific coding used in MAX data where appropriate, and provide an overview of each.

- I. **Method 1: Provider Specialty Code**: A standardized coding scheme that is used across states does not currently exist. Some states include RHC as a specialty type, while others do not. In states that include RHCs as a provider specialty type, this is selected by billing providers and can vary over time in ways that may or may not reflect actual changes in RHC status (e.g., a clinic can bill some claims as an RHC and other claims as a multi-specialty clinic).
- II. Method 2: Type of Program (TOP) Code: This is an optional code that can be used to indicate whether services were funded under a special program, such as the RHC program (MAX TOP=3 indicates RHC funding). Using this code in isolation will exclude other services provided in RHCs.
- III. Method 3: Place of Service (POS) Code: This is a code indicating where a service was performed. RHC is one of the options (MAX POS=72 is in an RHC). Using this code in isolation from other codes will exclude services provided in other locations.
- IV. Method 4: Medicaid Billing ID: A list of CMS Certification Numbers (CCNs) for RHCs identified using the last four digits on facility type were generated using the CCN list from CMS (3800-3974 and 8900 -8999 are Free-standing Rural Health Clinics; 3975-3999 and 8500-8899 are Provider-Based Rural Health Clinics). Prior to 2009, each state used their own system of Medicaid provider identifiers. Some states used Medicare-based systems such as Online Submission and Compilation of Availability Records (OSCAR) or CCNs, while others developed homegrown codes. The CCN list of RHCs only merges to the Medicaid Billing provider in some states (one out of four in our sample states; North Carolina). Beginning in 2009, states began phasing the national system of provider identifiers (NPI) into their Medicaid claims. In practice, we find that some states are including the prior Medicaid Billing iD fields. Additional identifiers were obtained for RHCs in the CCN list from CMS's National Plan & Provider Enumeration System (NPPES) in all years.
- V. **Method 5: Taxonomy Code in MAX**: Beginning in 2009, CMS began providing a Taxonomy code in the MAX data, which was derived by merging with the NPPES file on NPI. Only a single taxonomy code was derived for the MAX data. In our experience and based on communication from the MAX data custodians,<sup>4</sup> this field may not be very useful for identifying RHC claims.
- VI. **Method 6: National Provider Identifiers Coded as RHCs**: The NPPES allows providers to select one or more taxonomy codes to describe their specialty or clinic type, and one of the options is an RHC. However, because of the difficulties described above with the NPI field, merging post-2009 claims by NPI to the NPPES file results in limited success and varies substantially by state.

Table 1 provides the annualized number of unique Medicaid claims and resulting total Medicaid dollars from the four sample states using each method in isolation, for years 2006-2008 (prior to NPI) and 2009-2010. For Methods 1-4, Table 1 reports the number of unique claims and total expenditures when only the single Method is used, without regard to the value of the other Methods. The first rows (labeled by method number) of the two panels report the number of claims that meet at least one of the available Methods for each time period (Methods 1 -4 for 2006-2008; and Methods 1-6 for 2009-2010). The row labeled "Claim meets at least one of the above methods" in each panel report the number of claims and resulting expenditures that meet any of the Methods for each time period. This results in the largest possible number of RHC claims that are considered reliable. The final row in each of the two panels of Table 1 reports the number of claims and associated expenditures if only Methods 1-3 are used, since Methods 4-6 require additional information not available in claims data. By comparing the final row to the row above it, one can assess whether there is a gain from having the additional information required by Methods 4-6.

Specialty codes only identify claims in two of the four states (North Carolina and Texas), due to the lack of a code for RHCs in one state and missing specialty codes in the other state. Type of Program (TOP) and Place of Service (POS) codes demonstrate substantial variability in identifying RHC claims. Using pre-2009 data, TOP generates more RHC claims in most states, ranging from a low of 21.2% of all RHC claims identified by Methods 1-4 in Georgia to a high of 99.2% of claims identified in North Carolina. These numbers decrease somewhat using more recent data due to the

# Table 1: Number of Unique Claims and Total Expenditures Meeting Criteria for Each Method,by State and Time Period, Annualized

Methad 1: Specialty code onlyImage: Signal System Syst	2006-2008 Methods Data Panel	North Carolina	Georgia	California	Texas
Claims     336.46.     0     0     679.275       Proportion of all RHC claims     53.211.225     S0     S0     S52.374.063       Method 2: Type of Program (TOP) only     -     -     63.7%       Claims     99.2%     21.2%     85.7%     63.7%       Proportion of all RHC claims     99.2%     21.2%     85.7%     63.7%       Expenditures     S14.834.697     \$2.91.108     S13.81.07.25     S52.86.392.00       Claims     8.7%     72.4%     95.6%     66.43.13       Proportion of all RHC claims     8.7%     72.4%     95.6%     66.44.13       Claims     51.5.19.59     S5.84.9.20     S231.75.19.19     S52.37.063       Claims     51.5.23.024     S6.86.86.27     S28.73.068     S5.7%       Expenditures     S15.23.024     S6.88.86.27     S23.77.01.96     S5.23.79.068.05       Claims     76.426     20.1.462     2.88.281     1.076.439       Orbito of all RHC claims     10.0%     10.00%     10.00%       Claims     753.294     66.458     S23.77.199.9	Method 1: Specialty code only				
Proportion of all RHC claims     70.0%     0.0%     0.0%     6.3.3%       Expenditures     53.211.22     50     55.217.4053       Claims     760.023     42.734     1.95.642     685.770       Proportion of all RHC claims     54.4.834,607     52.011.038     5193.160.725     552.863.738       Method 2: Place of Service (POS) only        66.388     145.778     2.182.704     666.343       Proportion of all RHC claims     8.75     72.44%     95.66%     66.16%       Expenditures     53.551.995     55.848.920     52.31.751.919     55.236.93.783       Method 4: Medicaid Billing Dto CCN list        52.374.063       Claims     63.148     61.538     713.133     594.668     73.238     53.628.926     52.397.063       Claims     83.0%     30.556     55.05     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     53.673.086     <	Claims	536,461	0	0	679,275
Expenditures     53,211,225     50     60     85,2374,063       Method 2: Type of Program (TOP) only     760,028     42,734     1,956,142     663,7%       Proportion of all RHC claims     514,834,467     \$2,01.08     5193,167,275     552,836,733       Method 2: Place of Service (POS) only     66,348     145,778     2,182,704     663,413       Proportion of all RHC claims     8,7%     72,4%     95,5%     66,5%       Expenditures     53,551,995     55,848,920     523,177,919     552,374,063       Method 2: Medicald Billing D to CCN list     0     0     0     0       Claims     652,148     61,1538     713,133     554,608       Proportion of all RHC claims     100%     100%     100%     100,00       Claim meets at least one of the above methods     0     22,83,281     1,076,489       Proportion of all RHC claims     703,294     161,342     2,182,704     664,5%       Claim meets at least one of Methods 1.3     0     0     725,414     694,917       Claims     709,204     0     725,414     65	Proportion of all RHC claims	70.0%	0.0%	0.0%	63.1%
Nethod 2: Type of Program (TOP) only     Proportion of all RHC claims	Expenditures	\$3,211,225	\$0	\$0	\$52,374,063
Claims     760,028     72,724     1,956,142     668,770       Proportion of all RHC claims     514,834,697     \$2,011,038     \$193,162,725     \$52,363,733       Method 3: Place of Service (POS) only     66,388     145,778     2,182,704     663,413       Proportion of all RHC claims     8,7%     72,4%     95,6%     66,548       Dependitures     \$3551,959     \$5,848,920     \$231,751,919     \$52,374,063       Method 4: Medicaid Billing ID to CCN list     636,448     61,538     713,133     \$594,608       Claims     \$12,513,644     56,425     \$231,751,919     \$52,374,063       Claims est at least one of the above methods     0     22,83,281     1,076,439       Claim meets at least one of Methods 1.3     100%     1000%     1000%       Claims     766,225     \$239,736,522     \$73,306,836       Claim meets at least one of Methods 1.3     0     \$6,836,627     \$239,736,522     \$73,306,836       Claim meets at least one of Methods 1.3     0     \$00,757,191     \$52,324,087     \$30,00%     80,00%     \$30,00%       Claim meets at least one of Methods	Method 2: Type of Program (TOP) only				
Proportion of all RHC claims     99.2%     21.2%     88.7%     63.7%       Expenditures     \$14,834,697     \$2,011,038     \$193,162,725     \$52,363,733       Method 3: Place of Service (POS) only     6.3.88     145,778     2,182,704     663,413       Proportion of all RHC claims     8,7%     72.4%     95.6%     661,6%       Expenditures     533,551,995     \$55,848,920     \$223,751,919     \$55,23,74,063       Method 4: Medicald Billing D to CCN list     636,448     61,538     713,133     \$54,603       Claims     512,513,634     \$1,150,530     \$80,565,605     \$36,730,896       Claims     766,426     201,462     2,283,281     1,076,489       Proportion of all RHC claims     100%     100%     100,0%     100,0%       Claims     99.6%     80,134     95.6%     64.64,917       Proportion of all RHC claims     783,324     161,342     2,182,704     694,917       Odo-     723,74,751     523,751,919     552,374,087       Zobrotion of all RHC claims     73,33%     0,0%     0,0%     \$82,49,17,910 <td>Claims</td> <td>760,028</td> <td>42,734</td> <td>1,956,142</td> <td>685,770</td>	Claims	760,028	42,734	1,956,142	685,770
Expenditures     \$14,834,697     \$2,011,038     \$193,162,725     \$52,363,733       Method 3: Place of Service (POS) only     66,388     145,778     2,182,704     663,413       Proportion of all RHC claims     8,7%     72,4%     95,65     61,64%       Expenditures     53,55,199     55,848,820     52,237,51,919     55,23,274,063       Method 4: Medical Billing ID to CCN list     53,25,199     55,246,83     713,133     594,608       Proportion of all RHC claims     63,0%     30,0%     31,23%     55,28       Expenditures     \$15,623,024     \$6,886,627     \$239,735,522     \$73,096,836       Claim mets at least one of Methods 1-3     000%     100%     1000%     1000%     1000%       Claims     763,294     161,342     2,182,704     69,437       Expenditures     \$51,562,30,24     \$6,493,976     \$231,751,919     \$52,374,063       Claims     763,294     161,342     2,182,704     69,437       Claims     763,294     161,342     2,182,704     69,437       Claims     713,715     51,75,234	Proportion of all RHC claims	99.2%	21.2%	85.7%	63.7%
Nethod 3: Place of Service (POS) only     66,388     145,778     2,182,704     66,3413       Proportion of all RHC claims     8,376     72.4%     95.6%     61.6%       Expenditures     \$33,551,995     \$5,848,920     \$231,751,919     \$55,274,063       Method 4: Medicial Billing D to CCN list     636,148     61,538     713,33     594,608       Calims     636,148     61,538     713,33     594,608       Proportion of all RHC claims     83,0%     30,5%     312,2%     55,2%       Claim meets at least one of the above methods     766,626     201,462     2,283,281     1,076,489       Proportion of all RHC claims     515,62,302     56,88,6627     5231,751,919     553,274,087       Claims     10,87     763,294     161,342     2,182,704     694,917       Proportion of all RHC claims     515,162,342     56,489,376     5231,751,919     553,274,087       Claims     713,375     0     0     725,141     725,441       Proportion of all RHC claims     733,38     0.0%     8.42%       Spenditures     \$4,017,910	Expenditures	\$14,834,697	\$2,011,038	\$193,162,725	\$52,363,733
Claims     66,38     145,778     2,182,704     66,634       Proportion of all RHC claims     53,551,995     \$55,848,920     \$231,751,919     \$552,374,063       Method 4: Medicaid Biling Ib to CCN list	Method 3: Place of Service (POS) only				
Proportion of all RH2 claims     8.7%     72.4%     95.6%     61.6%       Expenditures     \$3,551,995     \$5,848,920     \$231,751,919     \$55,234,063       Method 4: Medicaid Billing ID to CCN list     636,148     61,538     713,133     \$594,608       Proportion of all RH2 claims     83,00%     30,5%     \$12,853,80     \$52,874,003       Claim mets at least one of the above methods     0     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     10	Claims	66,388	145,778	2,182,704	663,413
Expenditures     \$3,551,995     \$5,848,920     \$231,751,919     \$52,374,063       Method 4: Medicaid Billing ID to CCN list     Gains     636,148     61,538     713,133     594,608       Proportion of all RHC claims     83.0%     30.5%     31.2%     55.2%       Expenditures     \$12,513,634     \$20,556,627     \$280,555,628     \$26,730,968       Claim meets at least one of the above methods     100%     100%     100%     100%     100%       Claim meets at least one of Methods 1-3     766,420     201,462     2,83,281     1,076,489       Proportion of all RHC claims     763,294     161,342     2,182,704     664,917       Claim meets at least one of Methods 1-3     763,294     161,342     2,182,704     664,69       Expenditures     \$515,62,342     56,493,976     \$231,751,919     552,374,087       Z009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67.33     24.5%     84.0%     8	Proportion of all RHC claims	8.7%	72.4%	95.6%	61.6%
Method 4: Medicaid Billing ID to CCN list        Claims     636,148     61,538     713,133     594,608       Proportion of all RHC claims     \$83,0%     30,5%     31,2%     55,2%       Expenditures     \$12,513,634     \$1,150,530     \$80,655,605     \$36,730,896       Claim meets at least one of the above methods     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100%     100.0%     100%     100.0% </td <td>Expenditures</td> <td>\$3,551,995</td> <td>\$5,848,920</td> <td>\$231,751,919</td> <td>\$52,374,063</td>	Expenditures	\$3,551,995	\$5,848,920	\$231,751,919	\$52,374,063
Claims     666,148     61,338     713,133     594,608       Proportion of all RHC claims     813,0%     30,5%     31,2%     55,2%       Expenditures     512,513,634     51,150,530     580,565,605     536,730,896       Claim meets at least one of the above methods     100%     100%     100%     1000,6%       Claim meets at least one of Methods 1-3     765,226     22,03,281     00,66,866,627     5239,736,522     573,096,636       Claim meets at least one of Methods 1-3     763,294     161,342     2,182,704     694,917       Proportion of all RHC claims     99,6%     80,1%     95,6%     66,6%       Expenditures     \$51,162,342     \$6,433,976     \$231,751,919     \$52,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only     0     0     725,141       Proportion of all RHC claims     73,3%     0.0%     84,2%       Expenditures     \$4,017,910     \$0     \$57,889,173       Claims     717,716     \$1,744,973     \$57,889,173	Method 4: Medicaid Billing ID to CCN list				
Proportion of all RHC claims     83.0% 512,513,634     30.5% 511,50,530     31.2% 580,566,605     55.2% 530,730,896       Claim meet at least one of the above methods Claims     766,426     201,462     2,283,281     1,076,489       Proportion of all RHC claims     100%     100%     100,0%     100,0%       Expenditures     515,623,024     56,886,627     5239,736,522     573,096,836       Claim meets at least one of Methods 1-3       649,917       Proportion of all RHC claims     99,6%     80,1%     95,6%     66,40%       Expenditures     515,162,342     56,493,976     5231,751,919     552,274,087       2009-2010 Methods Data Panel     North Carolina     Georgia     Calims     725,141       Proportion of all RHC claims     73.3%     0.0%     0.0%     557,889,173       Method 1: Specialty code only       749,704       Claims     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67,33%     24.5%     84,0%     87,1%       Expenditures     514,4556,176     51,781,931	Claims	636,148	61,538	713,133	594,608
Expenditures     \$12,513,634     \$11,50,530     \$80,565,605     \$36,730,896       Claim meets at least one of the above methods     766,426     201,462     2,283,281     1,076,489       Proportion of all RHC claims     100%     100%     100%     100%     100%       Claim meet at least one of Methods 1-3     0     2,283,281     1,076,489       Claims     99,6%     868,627     \$523,776,522     \$573,096,836       Claims     99,6%     80,1%     95,6%     66,46%       Expenditures     \$151,62,342     \$6,493,976     \$231,751,919     \$522,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only     0     0     725,141       Proportion of all RHC claims     73,3%     0.0%     82,497       Systematitures     \$4,017,910     \$0     \$0     \$57,889,173       Method 2: Place of Porgram (TOP) only     Claims     65,134     178,993     \$258,679,531     \$57,846,479       Method 3: Reace of Service (POS) only     Claims     66,134     178,	Proportion of all RHC claims	83.0%	30.5%	31.2%	55.2%
Claim meets at least one of the above methods     Internal     Internal     Internal       Calims     766,426     201,462     2,283,281     1,076,489       Proportion of all RHC claims     100%     100%     100.0%     100.0%       Expenditures     \$15,623,024     \$6,886,627     \$239,736,522     \$73,096,836       Claim meets at least one of Methods 1-3     Claims     99,6%     80,1%     95,6%     64,6%       Expenditures     \$15,162,342     \$6,493,976     \$231,751,919     \$52,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     Califormia     Texas       Method 1: Specialty code only     Claims     73,3%     0.0%     0.0%     \$84,2%       Expenditures     \$4,017,910     \$0     \$57,889,173     Method 2: Type of Program (TOP) only     717,716     \$1,744     2,584,257     749,704       Proportion of all RHC claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     62,2%     84,6%     \$4,9%     \$44,56       Expenditures     \$13,812,20     \$4,910,246	Expenditures	\$12,513,634	\$1,150,530	\$80,565,605	\$36,730,896
Claims     766,426     201,462     2,283,281     1,076,489       Proportion of all RHC claims     100%     100%     100%     100%     100%     100%     1000%     664.6%     5231,751,919     552,374,087     200-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only       73.3%     0.0%     0     725,141       Proportion of all RHC claims     73.3%     0.0%     0     \$57,89,173     Method 2: Type of Program (TOP) only       747,716     51,741     2,584,257     749,704     Proportion of all RHC claims     67,33%     24,5%     84,0%     87,1%     Expenditures     \$57,889,173     S57,889,173       Method 2: Pace of Service (POS) only </td <td>Claim meets at least one of the above methods</td> <td>. , ,</td> <td>. , ,</td> <td>. , ,</td> <td>. , ,</td>	Claim meets at least one of the above methods	. , ,	. , ,	. , ,	. , ,
Proportion of all RHC claims     100%     100%     100%     1000%     1000%       Expenditures     \$15,623,024     \$6,886,627     \$239,736,522     \$73,096,836       Claim set at least one of Methods 1-3     763,294     161,342     2,182,704     694,917       Proportion of all RHC claims     99,6%     80,1%     95,6%     64,6%       Expenditures     \$15,162,342     \$64,93,976     \$231,751,919     \$52,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only     0     0     725,141     Texas       Proportion of all RHC claims     73,3%     0.0%     0.0%     84,2%       Expenditures     \$4,017,910     \$0     \$57,889,173       Method 2: Type of Program (TOP) only     0     72,51,41     Texas       Claims     61,314     178,998     2,917,802     728,434       Proportion of all RHC claims     6,52%     84,6%     94,9%     84,6%       Expenditures     \$3,81,230     \$4,010,24\$     \$30,893,873     \$57,889,143	Claims	766,426	201,462	2,283,281	1,076,489
Expenditures     \$15,623,024     \$6,886,627     \$239,736,522     \$73,096,836       Claims     763,294     161,342     2,182,704     694,917       Proportion of all RHC claims     99,6%     80,11%     95,6%     64,6%       Expenditures     \$15,162,342     \$6,493,976     \$231,751,919     \$523,274,087       2009-2010 Methods Data Panel     North Carolina     Georgia     Calims     725,141       Proportion of all RHC claims     73,3%     0.0%     0     725,141       Proportion of all RHC claims     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67,3%     24,5%     84,60%     87,1%       Expenditures     \$14,556,176     \$1,744     2,584,257     749,704       Proportion of all RHC claims     67,3%     24,5%     84,6%     87,1%       Expenditures     \$34,1556,176     \$1,781,931     \$255,679,531     \$57,889,173       Method 2: Neace of Service (POS) only     Image: S3,811,230     \$24,5%     84,6%     94,9%     \$4,84,9%       Claims     6,134     178,998 <td>Proportion of all RHC claims</td> <td>100%</td> <td>100%</td> <td>100%</td> <td>100.0%</td>	Proportion of all RHC claims	100%	100%	100%	100.0%
Claim meets at least one of Methods 1-3     Claim 5	Expenditures	\$15.623.024	\$6.886.627	\$239.736.522	\$73.096.836
Claims     763,294     161,342     2,182,704     694,917       Proportion of all RHC claims     99,6%     80.1%     95,6%     64,6%       Expenditures     \$515,162,342     \$6,493,976     \$523,751,919     \$52,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only      0     725,141       Proportion of all RHC claims     73.3%     0.0%     0.0%     84.2%       Expenditures     \$4,017,910     \$0     \$0     \$57,889,173       Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Proportion of all RHC claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     66,2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,846,479       Method 3: Place of Service (POS) only            Claims     67,2%     17,3%     2.8%     0.5%     58,4,69     9,4,9%	Claim meets at least one of Methods 1-3			,,	. ,,
Proportion of all RHC claims     99.6%     80.1%     95.6%     64.6%       Expenditures     \$15,162,342     \$6,433,976     \$231,751,919     \$52,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only     0     0     725,141     Texas       Proportion of all RHC claims     73.3%     0.0%     0.0%     \$84.2%       Expenditures     \$4,017,910     \$0     \$0     \$57,889,173       Method 2: Type of Program (TOP) only           Claims     67.3%     24.45%     84.0%     87.1%       Proportion of all RHC claims     66.134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$33,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     18,64,242     \$1,083,542     \$4,635,254     \$33,7491       Meth	Claims	763,294	161,342	2,182,704	694,917
Expenditures     \$15,162,324     \$6,493,976     \$231,751,919     \$52,374,087       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only     Image: California     Texas       Claims     781,877     0     0     725,141       Proportion of all RHC claims     73.33     0.0%     0.0%     84.2%       Expenditures     \$4,017,910     \$0     \$57,889,173       Method 2: Type of Program (TOP) only     Image: Calims     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$11,7716     51,744     2,584,257     749,704       Method 2: Type of Program (TOP) only     Image: Calims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$33,811,230     54,910,246     \$305,493,873	Proportion of all RHC claims	99.6%	80.1%	95.6%	64.6%
Construction     Construction     Construction     Construction       2009-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only             Claims     73.3%     0.0%     0.0%     84.2%  <	Expenditures	\$15 162 342	\$6 493 976	\$231 751 919	\$52 374 087
Z005-2010 Methods Data Panel     North Carolina     Georgia     California     Texas       Method 1: Specialty code only <td>2000 2010 Mathada Data Danal</td> <td>North Coroline</td> <td>ço,455,570</td> <td>California</td> <td>\$52,574,007</td>	2000 2010 Mathada Data Danal	North Coroline	ço,455,570	California	\$52,574,007
Method 1: Specialty code only     781,877     0     0     722,141       Proportion of all RHC claims     73.3%     0.0%     0.0%     84.2%       Expenditures     \$4,017,910     \$0     \$57,889,173       Method 2: Type of Program (TOP) only          Claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only           Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list            Claims     716,496     36,583     86,849     4,678         Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%        Expenditures     \$10,8	2009-2010 Methods Data Panel	North Carolina	Georgia	California	Texas
Claims     781,877     0     0     725,141       Proportion of all RHC claims     73.3%     0.0%     0.0%     84.2%       Expenditures     \$4,017,910     \$0     \$0     \$57,889,173       Method 2: Type of Program (TOP) only     0     1     1     1       Claims     717,716     \$1,744     2,584,257     749,704       Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only     0     0     1	Method 1: Specialty code only		-	-	
Proportion of all RHC claims     73.3%     0.0%     0.0%     84.2%       Expenditures     \$4,017,910     \$0     \$0     \$57,889,173       Method 2: Type of Program (TOP) only           Claims     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only            Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,433,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims </td <td>Claims</td> <td>781,877</td> <td>0</td> <td>0</td> <td>725,141</td>	Claims	781,877	0	0	725,141
Expenditures     \$4,017,910     \$0     \$0     \$57,889,173       Method 2: Type of Program (TOP) only          Claims     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only            Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134 <t< td=""><td>Proportion of all RHC claims</td><td>73.3%</td><td>0.0%</td><td>0.0%</td><td>. 84.2%</td></t<>	Proportion of all RHC claims	73.3%	0.0%	0.0%	. 84.2%
Method 2: Type of Program (TOP) only     V17,716     51,744     2,584,257     749,704       Claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only           Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     10.47	Expenditures	\$4,017,910	\$0	\$0	\$57,889,173
Claims     717,716     51,744     2,584,257     749,704       Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only           Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonony from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     194,876	Method 2: Type of Program (TOP) only				
Proportion of all RHC claims     67.3%     24.5%     84.0%     87.1%       Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only           Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched t	Claims	717,716	51,744	2,584,257	749,704
Expenditures     \$14,556,176     \$1,781,931     \$258,679,531     \$57,846,479       Method 3: Place of Service (POS) only          Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list           Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc           Claims     70,116     <	Proportion of all RHC claims	67.3%	24.5%	84.0%	87.1%
Method 3: Place of Service (POS) only     Image: constraint of the service (POS) only     Image: constraint of the service (POS) only       Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list     Image: constraint of the service (POS) only     Image: constraint of the service (POS) only     1mage: constraint of the service (POS) only       Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files     Image: constraint of the service (POS) only     Image: constraint of the service (POS) only     75.6%       Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740	Expenditures	\$14,556,176	\$1,781,931	\$258,679,531	\$57,846,479
Claims     66,134     178,998     2,917,892     728,434       Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list          Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc         64.2%     \$552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%     \$53,116,906	Method 3: Place of Service (POS) only				
Proportion of all RHC claims     6.2%     84.6%     94.9%     84.6%       Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list          Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc           Claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1	Claims	66,134	178,998	2,917,892	728,434
Expenditures     \$3,811,230     \$4,910,246     \$305,493,873     \$57,889,143       Method 4: Medicaid Billing ID to CCN list          Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc           Claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods	Proportion of all RHC claims	6.2%	84.6%	94.9%	84.6%
Method 4: Medicaid Billing ID to CCN list     Image: constraint of all RHC claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files     Image: constraint of all RHC claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc     Image: constraint of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods     Image: constraint of all RHC claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     1,006,353     211,559     3,075,426     860,952 <td>Expenditures</td> <td>\$3,811,230</td> <td>\$4,910,246</td> <td>\$305,493,873</td> <td>\$57,889,143</td>	Expenditures	\$3,811,230	\$4,910,246	\$305,493,873	\$57,889,143
Claims     716,496     36,583     86,849     4,678       Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc            Claims     70,116     56,526     1,391,885     552,743        Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods           Claims     1,066,353     211,559     \$316,435,813     \$69,400,910       Expe	Method 4: Medicaid Billing ID to CCN list				
Proportion of all RHC claims     67.2%     17.3%     2.8%     0.5%       Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files           Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc         552,743       Proportion of all RHC claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$533,116,906       Claim meets at least one of the above methods           Claims     1,066,353     211,559     3,075,426     860,952        Proportion of all RHC claims     100%     1000%     1000%     1000.0	Claims	716,496	36,583	86,849	4,678
Expenditures     \$18,964,242     \$1,083,542     \$4,635,254     \$337,491       Method 5: Taxonomy from MAX files          Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc           Claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods          Claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     100%     100%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claims     1,016,019     190,552     2,9	Proportion of all RHC claims	67.2%	17.3%	2.8%	0.5%
Method 5: Taxonomy from MAX files     Image: Claims of the system of the syste	Expenditures	\$18,964,242	\$1,083,542	\$4,635,254	\$337,491
Claims     194,876     86,134     378,329     650,453       Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc            Claims     70,116     56,526     1,391,885     552,743      64.2%        64.2%       64.2%         64.2%       64.2%         64.2%	Method 5: Taxonomy from MAX files				
Proportion of all RHC claims     18.3%     40.7%     12.3%     75.6%       Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc           Claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods          Claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     100%     100%     100.0%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3            Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditure	Claims	194,876	86,134	378,329	650,453
Expenditures     \$10,708,017     \$2,220,318     \$64,280,034     \$61,482,740       Method 6: NPI matched to NPPES files posthoc     C     C     C       Claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods     C     C     C     S0,075,426     860,952       Proportion of all RHC claims     1,066,353     211,559     3,075,426     860,952     860,952       Proportion of all RHC claims     100%     100%     100%     100.0%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3     C     C     C     C       Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816 <td>Proportion of all RHC claims</td> <td>18.3%</td> <td>40.7%</td> <td>12.3%</td> <td>75.6%</td>	Proportion of all RHC claims	18.3%	40.7%	12.3%	75.6%
Method 6: NPI matched to NPPES files posthoc     Image: matched to State     Ima	Expenditures	\$10,708,017	\$2,220,318	\$64,280,034	\$61,482,740
Claims     70,116     56,526     1,391,885     552,743       Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods          Claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     1,006     100%     100%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889,881	Method 6: NPI matched to NPPES files posthoc				
Proportion of all RHC claims     6.6%     26.7%     45.3%     64.2%       Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods           Claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     100%     100%     100%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3           Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889,881	Claims	70,116	56,526	1,391,885	552,743
Expenditures     \$3,055,620     \$1,505,041     \$172,999,076     \$53,116,906       Claim meets at least one of the above methods           Claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     100%     100%     100%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3            Claims     1,016,019     190,552     2,917,892     770,050	Proportion of all RHC claims	6.6%	26.7%	45.3%	64.2%
Claim meets at least one of the above methods     Image: Claims     State     <	Expenditures	\$3,055,620	\$1,505,041	\$172,999,076	\$53,116,906
Claims     1,066,353     211,559     3,075,426     860,952       Proportion of all RHC claims     100%     100%     100%     100%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3            Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889.881	Claim meets at least one of the above methods				
Proportion of all RHC claims     100%     100%     100%     100.0%       Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3            Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889,881	Claims	1,066,353	211,559	3,075,426	860,952
Expenditures     \$22,466,166     \$5,914,859     \$316,435,813     \$69,400,910       Claim meets at least one of Methods 1-3            Claims     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889.881	Proportion of all RHC claims	100%	100%	100%	100.0%
Claim meets at least one of Methods 1-3     Image: Claim s     1,016,019     190,552     2,917,892     770,050       Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889,881	Expenditures	\$22,466,166	\$5,914,859	\$316,435,813	\$69,400,910
Claims1,016,019190,5522,917,892770,050Proportion of all RHC claims95.3%90.1%94.9%89.4%Expenditures\$16,884,543\$5,408.816\$305,493,873\$57.889.881	Claim meets at least one of Methods 1-3			,,	
Proportion of all RHC claims     95.3%     90.1%     94.9%     89.4%       Expenditures     \$16,884,543     \$5,408,816     \$305,493,873     \$57.889,881	Claims	1,016.019	190,552	2,917,892	770,050
Expenditures \$16,884,543 \$5,408,816 \$305,493,873 \$57.889.881	Proportion of all RHC claims	95.3%	90.1%	94.9%	89.4%
	Expenditures	\$16,884.543	\$5,408.816	\$305,493.873	\$57,889.881

greater number of identifiers possible beginning in 2009. Place of Service yields a lower proportion of RHC claims than does TOP in two states (North Carolina and Texas) and a higher proportion in the other two states (Georgia and California), which does not change over time. Combined, the first three methods (which are self-contained in the MAX data and do not require mergers to other sources of data) identify the vast majority (96-99%) of RHC claims in two states (North Carolina and California) and a lower proportion of claims (65-80%) in the other two states (Georgia and Texas). Using 2009-2010 data, Methods 1-3 increase the proportion of RHC claims identified to be between 89-95% of all RHC claims across all four states. In the later years of data, using the taxonomy code in the MAX file only identifies between 12-76% of RHC claims. However, the vast majority (95-99%) of these RHC claims. In addition, the reliability of this variable to identify RHCs (Method 5) has been questioned by others,<sup>4</sup> and it yields a low match rate; therefore, we cannot recommend its use in isolation of other identifiers. Similarly, identifying RHCs post-hoc through the NPPES data taxonomy fields (Method 6) yields a low identification rate, ranging between 7-64%, and, therefore, we do not advocate its use as a singular method.

### CONCLUSION

To identify RHC claims and services from Medicaid data, at a minimum, we suggest using the combination of Methods 1-3, which use the TOP, POS, and specialty codes and will capture the majority of RHC claims, especially in more recent years of data. If programming and data resources include the ability to obtain additional external data on RHCs identified by CCNs and merged using CCN and other identifiers obtained from NPPES, then the number of RHC identified claims can be increased, but only modestly. If only RHC stream funding is desired, Method 2: TOP should likely be used. For identification of services delivered only in bricks-and-mortar RHCs, either POS or specialty code matches should be used (Methods 1 & 3), depending on the state.

#### **REFERENCES AND NOTES**

THE CECIL G. SHEPS CENTER FOR HEALTH SERVICES RESEARCH

- 1. Kaiser Family Foundation. Number of Medicare Certified Rural Health Clinics, in State Health Facts 2015. http://kff.org/other/state-indicator/total-rural-health-clinics/. Accessed 1/15/2016.
- 2. Radford A, Kirk D, Howard A, Holmes, GM. March 2013. Findings Brief. Profile of Rural Health Clinics: Clinic & Medicare Patient Characteristics. NC Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, the University of North Carolina at Chapel Hill.
- 3. Radford A, Kirk D, Howard HA. December 2012. Findings Brief. Profile of Rural Health Clinics: Medicare Payments & Common Diagnoses. NC Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, the University of North Carolina at Chapel Hill.
- Bencio D, Sykes J. Medicaid Analytic Extract Provider Characteristics (MAXPC) Evaluation Report, 2009 Final Report. Mathematica Policy Research. November 30, 2012. https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/ MAXPC\_2009\_Final\_Eval\_Rpt.pdf. Accessed 3/25/2016.

This study was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under cooperative agreement # U1CRH03714. The information, conclusions and opinions expressed in this brief are those of the authors and no endorsement by FORHP, HRSA, HHS, or The University of North Carolina is intended or should be inferred.



