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Policy matters

Medicaid Covered Births, 2008 Through 2010, in the Context of the Implementation of Health Reform

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A B S T R A C T

Background: Medicaid is a major source of public health care financing for pregnant women and deliveries in the United States. Starting in 2014, some states will extend Medicaid to thousands of previously uninsured, low-income women. Given this changing landscape, it is important to have a baseline of current levels of Medicaid financing for births in each state. This article aims to 1) provide up-to-date, multiyear data for all states, the District of Columbia, and Puerto Rico and 2) summarize issues of data comparability in view of increased interest in program performance and impact assessment.
Methods: We collected 2008–2010 data on Medicaid births from individual state contacts during the winter of 2012–2013, systematically documenting sources and challenges.
Findings: In 2010, Medicaid financed 48% of all births, an increase of 19% in the proportion of all births covered by Medicaid in 2008. Percentages varied among states. Numerous data challenges were found.
Conclusions/Implications for Research and Policy: Consistent adoption of the 2003 birth certificate in all states would allow the National Center for Health Statistics Natality Detail dataset to serve as a nationally representative source of data for the financing of births in the United States. As states expand coverage to low-income women, women of childbearing age will be able to obtain coverage before and between pregnancies, allowing for access to services that could improve their overall and reproductive health, as well as birth outcomes. Improved birth outcomes could translate into substantial cost savings, because the costs associated with preterm births are estimated to be 10 times greater than those for full-term births.

Introduction and Background

The Medicaid program is a major source of public financing for health care services provided to pregnant women, infants, and children in the United States. In 2012, the program covered 35% of all children, including infants, as well as a significant number of deliveries across the nation (Kaiser Commission on Medicaid and the Uninsured, 2013). Hospital discharge data analyzed for the Agency for Healthcare Research and Quality indicate that Medicaid paid for 44.4% of complicated deliveries and 56.3% of noncomplicated deliveries nationally in 2009 (Stranges et al., 2012). According to the Guttmacher Institute, 47.6% of all 4.2 million births in 2006, intended or unintended, were publicly funded (Sonfield, Kost, Benson Gold, & Finer, 2011). Yet another estimate from the National Governors' Association (NGA) puts Medicaid-funded births at nearly half of all births in 2010, up from 41% in 2003 (NGA, 2011).

The majority of women enrolled in Medicaid (72%) are in their reproductive years (ages 18–44) and qualify on the basis of 1) income and/or 2) pregnancy, disability, or by the virtue of being a working or nonworking parent (Kaiser Family Foundation,

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2012). Under federal law, states participating in the Medicaid program are required to cover pregnant women, infants, and young children ages 0 to 5 under 133% of the federal poverty level (FPL) and school-aged children ages 6 to 18 under 100% FPL. Many states have expanded Medicaid eligibility above these thresholds for particular groups of women and children. For example, as of January 2012, 39 states had expanded Medicaid eligibility for pregnant women to 185% FPL and beyond (Kaiser Commission on Medicaid and the Uninsured, 2012).

Although states offer Medicaid coverage to working and nonworking women who are parents and women who have disabilities, the income eligibility levels are generally very low (i.e., far below the FPL), thereby excluding many poor women from coverage, such that only 10% of all women are covered by Medicaid (Kaiser Family Foundation, 2011). In addition, only eight states and the District of Columbia provide coverage for some adults, including women of reproductive age, who do not have children (but could become pregnant; Heberlein, Brooks, Alker, Artiga, & Stephens, 2013). In 2009, more than one in five women of reproductive age was uninsured, representing approximately 13.8 million women ages 15 to 44 (Guttmacher Institute, 2013).

The Affordable Care Act (ACA) will extend Medicaid coverage to thousands of low-income women, previously uninsured, some of whom will become pregnant. Kenney and colleagues (2012) estimate that 4.6 million currently uninsured women ages 19 to 44 could qualify for Medicaid coverage if all states chose to expand eligibility to 133% of the FPL (or 138% owing to a 5% income disregard). However, the Supreme Court decision issued in June 2012 leaves Medicaid expansion under ACA uncertain, because expansion is now optional and left to states to decide. Further, it is likely that many women will remain uninsured because women at the lowest income levels do not qualify for the Advance Premium Tax Credit available to others through the health exchange plans (Pellegrini & Garro, 2013). Research shows that adults with family incomes up to 133% FPL are more likely to experience disruption in eligibility, which would likely lead to churning between programs more than once within a year for women (Sommers & Rosenbaum, 2011).

As part of ACA, states need to maintain their Medicaid eligibility levels for adults until health insurance exchanges are fully operational, presumably until January 1, 2014 (Rosenbaum, 2011). State maintenance of effort requirements do not apply to adults without disabilities or who are not pregnant if their income is above 133% FPL and the state can prove current or projected budget deficits (Rosenbaum, 2011). Hence, some women may lose their Medicaid coverage while others will remain uninsured, either because they are eligible but not currently enrolled in Medicaid or owing to restrictions based on their immigration status. For all of these women, emergency Medicaid will remain an important source of financing for births.

Given this changing landscape, it is important to have a baseline understanding of current levels of Medicaid financing for births in the states. Information on the percentage of births covered by Medicaid nationally and by each state is scarce and often inconsistent, as indicated. The two most recent studies to date on Medicaid-financed births by state were published by the NGA in 2011, using its own survey of all 50 states and the five U.S. territories fielded in August 2010 and completed in fall (NGA, 2010), and the Guttmacher Institute in 2011, using 2006 Pregnancy Risk Assessment Monitoring System (PRAMS) data and other sources for all 50 states and the District of Columbia (NGA, 2010; Sonfield et al., 2011). The NGA gathers data from U.S. states and territories through its Annual Maternal and Child Health Survey of Governors. Although the NGA provides a rough estimate of the total U.S. births funded by Medicaid, its most recent reports indicate missing or incomplete data for 20 states and it is unclear how the data included in the report were collected and defined (NGA, 2011). The Guttmacher Institute analyzed PRAMS data from 2006 but has not updated these data since. PRAMS is a state-specific, population-based surveillance system sponsored by the U.S. Centers for Disease Control and Prevention, which identifies and monitors select maternal experiences before, during, and after pregnancy. Not all states participate in PRAMS and participation is not consistent from year to year. States survey by mail and telephone residents who have recently given birth.

The most comprehensive source for U.S. birth data by payer is the 2010 Natality Detail dataset, compiled by the U.S. Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS). The Natality Detail dataset is an annual census of live births based on the U.S. Standard Certificate of Live Birth. The 2010 Natality data include birth data based on two birth certificate formats, the 1989 version and the 2003 revision of the U.S. Standard Certificate of Live Birth. Only states using the 2003 birth certificate format reported "principal source of payment for this delivery" (U.S. Centers for Disease Control and Prevention, 2010). As of January 1, 2010, 33 states, the District of Columbia, and two territories had implemented the revised birth certificates, representing 76% of all 2010 U.S. births (U.S. Centers for Disease Control and Prevention, 2010). Thus, although most comprehensive, the Natality Detail dataset excludes data from a significant number of states ($n = 17$). In addition, whereas the 2010 version represents the first public release of this type of data by payer, the delayed release of the 2010 Natality Detail data reduced the time available to analyze the data before Medicaid eligibility changes taking effect across the nation.

With this time constraint in mind, this paper seeks to fulfill the following two aims: 1) To provide up-to-date, multiyear data for all states, the District of Columbia and Puerto Rico for Medicaid-funded births as a baseline pre-ACA eligibility changes; and 2) to summarize issues of data comparability in light of increased requirements on states and interest from policymakers in assessing program performance and impact.

Methods

In an effort to update the available information on Medicaid-funded births and supplement the NCHS payer data anticipated for release in 2013, we collected 2008–2010 data on Medicaid births from individual state contacts during the winter of 2012–2013. Our priority with the individual state data collection was to gather birth frequencies for the 17 states that have not adopted the 2003 birth certificate, because their Medicaid births are not reflected in the NCHS dataset, although we were able to collect data from all 50 states, Washington DC, and Puerto Rico. Throughout the process, we noted inconsistencies in the way states gather and report Medicaid birth data. For some states, the frequencies were obtained from Vital Statistics, whereas others provided data using Medicaid data systems or state hospital discharge datasets.

The NCHS Natality Detail dataset provided a baseline for total birth counts for all states for 2008 through 2010. State Vital Statistics units' websites were scanned for total birth counts and Medicaid birth frequencies in October and November 2012. Several states (AL, AR, NH, OR, PA, SD, WY) had published births

by payer online and for those states the state website was the primary source of information with follow-up calls for clarification as needed. We then proceeded to contact representatives from state Vital Statistics units to collect total birth and Medicaid birth frequencies for the remaining states in November and December of 2012.

Based on the 2010 NCHS Natality file, 33 states and the District of Columbia utilize the 2003 certificate containing payer information (U.S. Centers for Disease Control and Prevention, 2010). However, we collected information from Vital Statistics units for 41 states and the District of Columbia, 30 of them being states with new certificates and 11 of the 17 states without revised birth certificates who have added their own payer question. In some of the states (IL, NM, OK, TX) and the District of Columbia with payer source information in their birth certificates, we chose to utilize data from a different source (i.e., Medicaid claims data or hospital discharge data) owing to poor data quality and a large number of records with missing payer information.

Medicaid birth frequencies were collected from Medicaid data systems for 5 of the 17 states and Puerto Rico that do not use the revised birth certificate and Hawaii provided data from its hospital discharge database. Wherever possible, we used Medicaid claims data over hospital discharge data for consistency. However, the choice of data source depended on the individual state reporting systems and preferences of the state contacts about the most convenient way to generate the data. Data sources for Medicaid-funded births are reported by state and territory in Table 1.

Table 1
Data Sources for Medicaid-Funded Births by State

State	Revised Birth Certificate	Source of Birth Data
Alabama	No	Vital Records
Alaska	No	Vital Records and Medicaid
Arizona	No	Vital Records
Arkansas	No	Medicaid
California	Yes	Vital Records
Colorado	Yes	Vital Records
Connecticut	No	Vital Records and Medicaid
Delaware	Yes	Vital Records
District of Columbia	Yes	Medicaid
Florida	Yes	Vital Records
Georgia	Yes	Vital Records
Hawaii	No	HCUP
Idaho	Yes	Vital Records
Illinois	Yes	Medicaid
Indiana	Yes	Vital Records
Iowa	Yes	Vital Records and Medicaid
Kansas	Yes	Vital Records
Kentucky	Yes	Vital Records
Louisiana	No	Medicaid
Maine	No	Medicaid
Maryland	Yes	Vital Records
Massachusetts	No	Vital Records
Michigan	Yes	Vital Records
Minnesota	No	Vital Records and Medicaid
Mississippi	No	Medicaid
Missouri	Yes	Vital Records
Montana	Yes	Vital Records
Nebraska	Yes	Vital Records
Nevada	Yes	Medicaid
New Hampshire	Yes	Vital Records
New Jersey	No	Vital Records
New Mexico	Yes	HCUP
New York	Yes	Vital Records
North Carolina	No	Vital Records and Medicaid
North Dakota	Yes	Vital Records
Ohio	Yes	Vital Records
Oklahoma	Yes	Medicaid
Oregon	Yes	Vital Records
Pennsylvania	Yes	Vital Records
Puerto Rico	No	Medicaid
Rhode Island	No	Vital Records
South Carolina	Yes	Vital Records
South Dakota	Yes	Vital Records
Tennessee	Yes	Vital Records
Texas	Yes	HCUP
Utah	Yes	Vital Records
Vermont	Yes	Vital Records
Virginia	No	Vital Records
Washington	Yes	Vital Records
West Virginia	No	Vital Records
Wisconsin	No	Vital Records and Medicaid
Wyoming	Yes	Vital Records

Abbreviation: HCUP, Healthcare Cost and Utilization Project.

Results

State-Based Medicaid Birth Estimates

In 2010, Medicaid financed approximately 48% of births in the United States. The proportion of births financed by Medicaid varied substantially among states, with fewer than one quarter of births financed by Medicaid in Hawaii (24%) and nearly 70% financed by Medicaid in Louisiana (Table 2).

Overall, northeastern and northwestern states in the United States tend to have the lowest proportion of births financed by Medicaid, whereas southern states tend to have the highest proportions of Medicaid-financed births (Figure 1). Arkansas, Louisiana, Maine, Mississippi, the District of Columbia, and Puerto Rico each reported over 60% of births financed by Medicaid in 2010.

The proportion of births financed by Medicaid has increased over the last few years. The 2010 estimate for proportion of births financed by Medicaid represents a 9% increase in the proportion of births financed by Medicaid from the prior year, when Medicaid covered 44% of births, and a 19% increase from 2008 when Medicaid covered 40% of births. The percent change in Medicaid-funded births varies among the states, with some seeing declines in the proportion of Medicaid births over the past few years, whereas others have seen increases in Medicaid-financed births (Table 3).

Data Challenges and Limitations

This study necessitated the use of a variety of data sources to account for differences in state data collection and data availability. Given this variation, several challenges emerged related to reconciling state-reported data with NCHS data, missing data, and differences in how the data were collected, among others. These challenges present some limitations in the results summarized herein.

Vital records data

Owing to the timing of reporting and the specificity of collecting resident birth data, there are discrepancies (in the range of 0.01%–5%) between the number of total births reported by states and the NCHS data. The discrepancies are usually small and mostly related to births to residents that took place out of state. To calculate the percentages of Medicaid births, we used state-reported total birth counts (as opposed to NCHS birth counts) to reduce bias and reflect discrepancies related to out-of-state births in both the numerator and the denominator.

Table 2
Births Financed by Medicaid, 2008 to 2010*

State	2008 Total Births	2008 Medicaid Births	2008 % Medicaid Births	2009 Total Births	2009 Medicaid Births	2009 % Medicaid Births	2010 Total Births	2010 Medicaid Births	2010 % Medicaid Births
Alabama	64,345	31,106	**48.34**	62,476	30,980	**49.59**	59,979	31,498	**52.52**
Alaska	11,469	5,743	**50.07**	11,342	5,916	**52.16**	11,502	6,053	**52.63**
Arizona	99,215	52,081	**52.49**	92,616	49,538	**53.49**	87,053	46,393	**53.29**
Arkansas†	40,662	25,928	**63.76**	39,686	25,337	**63.84**	38,224	25,659	**67.13**
California	551,567	260,195	**47.17**	526,774	248,705	**47.21**	509,797	242,732	**47.60**
Colorado	70,029	24,007	**34.28**	68,607	24,911	**36.31**	66,349	24,431	**36.82**
Connecticut	40,388	11,393	**28.21**	38,876	11,700	**30.10**	37,448	11,770	**31.43**
Delaware‡	12,016	5,740	**47.77**	11,369	5,529	**48.63**			
District of Columbia§,‖	9,134			9,008	6,446	**71.56**	9,156	6,218	**67.91**
Florida	231,417	102,339	**44.22**	221,391	105,257	**47.54**	214,519	104,721	**48.82**
Georgia	146,414	55,053	**37.60**	141,332	57,416	**40.62**	133,668	56,009	**41.90**
Hawaii	19,462	4,459	**22.91**	18,891	4,707	**24.92**	18,933	4,551	**24.04**
Idaho	25,156	8,155	**32.42**	23,726	8,744	**36.85**	23,202	8,954	**38.59**
Illinois	176,634	89,800	**50.84**	171,077	88,722	**51.86**	165,200	85,978	**52.04**
Indiana	88,679	38,842	**43.80**	86,126	39,270	**45.60**	83,867	39,071	**46.59**
Iowa	40,221	15,297	**38.03**	39,662	15,732	**39.67**	38,514	15,582	**40.46**
Kansas	41,815	10,689	**25.56**	41,388	11,225	**27.12**	40,439	13,159	**32.54**
Kentucky	56,901	25,756	**45.26**	55,929	24,584	**43.96**	54,128	23,594	**43.59**
Louisiana	65,063	45,339	**69.68**	65,109	45,076	**69.23**	62,555	43,175	**69.02**
Maine	13,605	6833	**50.22**	13,466	7103	**52.75**	12,950	8164	**63.04**
Maryland‖	77,268	45,019	**58.26**	74,999	43,281	**57.71**	73,783	19,132	**25.93**
Massachusetts	76,969	19,469	**25.29**	74,966	19,666	**26.23**	72,835	19,485	**26.75**
Michigan	121,231	52,226	**43.08**	117,309	51,620	**44.00**	114,717	51,944	**45.28**
Minnesota	72,382	27,897	**38.54**	70,617	30,521	**43.22**	68,407	29,983	**43.83**
Mississippi‖	44,904	27,994	**62.34**	42,809	27,600	**64.47**	39,984	25,864	**64.69**
Missouri	80,944	38,004	**46.95**	78,849	37,675	**47.78**	76,718	32,411	**42.25**
Montana	12,595	3,795	**30.13**	12,280	3,985	**32.45**	12,058	4,225	**35.04**
Nebraska	26,992	10,049	**37.23**	26,931	10,038	**37.27**	25,916	8,070	**31.14**
Nevada	39,474	14,801	**37.50**	37,523	14,446	**38.50**	35,724	15,737	**44.05**
New Hampshire	13,684	3,839	**28.05**	13,389	3,865	**28.87**	12,873	3,845	**29.87**
New Jersey	112,428	26,904	**23.93**	109,543	26,748	**24.42**	101,409	28,499	**28.10**
New Mexico	30,156	16,518	**54.78**	28,873	16,034	**55.53**	27,795	14,832	**53.36**
New York	249,655	111,282	**44.57**	246,592	112,814	**45.75**	242,914	111,144	**45.75**
North Carolina‖	130,758	68,838	**52.65**	126,785	68,186	**53.78**	122,302	65,775	**53.78**
North Dakota	8,931	2,539	**28.43**	8,974	2,562	**28.55**	9,088	2,594	**28.54**
Ohio	148,592	55,859	**37.59**	144,569	55,957	**38.71**	139,034	53,140	**38.22**
Oklahoma‖	53,733	32,601	**60.67**	52,729	33,898	**64.29**	51,798	33,125	**63.95**
Oregon	49,117	19,993	**40.70**	47,188	19,865	**42.10**	45,596	20,463	**44.88**
Pennsylvania	139,830	43,642	**31.21**	139,653	46,034	**32.96**	138,532	45,260	**32.67**
Puerto Rico	45,689	25,613	**56.06**	44,830	26,799	**59.78**	42,203	25,231	**59.78**
Rhode Island	12,031	5,495	**45.67**	11,421	5,321	**46.59**	11,166	5,142	**46.05**
South Carolina	63,077	30,341	**48.10**	60,682	28,348	**46.72**	58,325	29,153	**49.98**
South Dakota	12,074	4,096	**33.92**	11,930	4,225	**35.41**	11,795	4,244	**35.98**
Tennessee	85,480	41,784	**48.88**	82,109	41,413	**50.44**	79,345	40,703	**51.30**
Texas	412,224	181,305	**43.98**	408,487	191,513	**46.88**	392,876	187,140	**47.63**
Utah‖,¶	55,372	13,796	**24.92**	53,587	15,628	**29.16**	51,925	15,911	**30.64**
Vermont	6,342	2,805	**44.23**	6,109	2,791	**45.69**	6,224	2,901	**46.61**
Virginia	106,578	28,189	**26.45**	104,979	28,047	**26.72**	102,934	30,626	**29.75**
Washington	90,270	33,687	**37.32**	89,242	34,802	**39.00**	86,480	33,545	**38.79**
West Virginia	21,493	9,232	**42.95**	21,275	9,464	**44.48**	20,407	10,575	**51.82**
Wisconsin	68,367	33,848	**49.51**	70,824	34,694	**48.99**	68,367	33,848	**49.51**
Wyoming	8,022	2,944	**36.70**	7,874	2,896	**36.78**	7,541	2,892	**38.35**
Total	**4,280,854**	**1,715,957**	**40.08**	**3,942,972**	**1,730,568**	**43.89**	**3,780,519**	**1,805,151**	**47.75**

* Missing data are not included in the total national estimates.
† AR reported the number of newborns on Medicaid as opposed to birth counts.
‡ DE does not have final figures for 2010 and is waiting on information from one of the payers.
§ The District of Columbia did not provide Medicaid claims data for 2008 owing to data quality issues.
‖ Some of the states (MD, MS, NC, OK, UT) and the District of Columbia adopted the 2003 certificate in the middle of our data collection period, either in 2009 or 2010, thus producing inconsistencies in the data within a state over time as the questions changed.
¶ UT provided resident data in state only.

Because two thirds of all states have adopted the 2003 birth certificate, most states provided birth frequencies using vital records data. We used resident birth counts as opposed to occurrence data because we found it was the most common approach in birth data reporting and it better served the scope of our research. Resident births are "births occurring within the United States to U.S. citizens and to residents who are not citizens, allocated to the usual place of residence of the mother in the United States" (U.S. Centers for Disease Control and Prevention, 2010). Births to U.S. residents occurring outside the

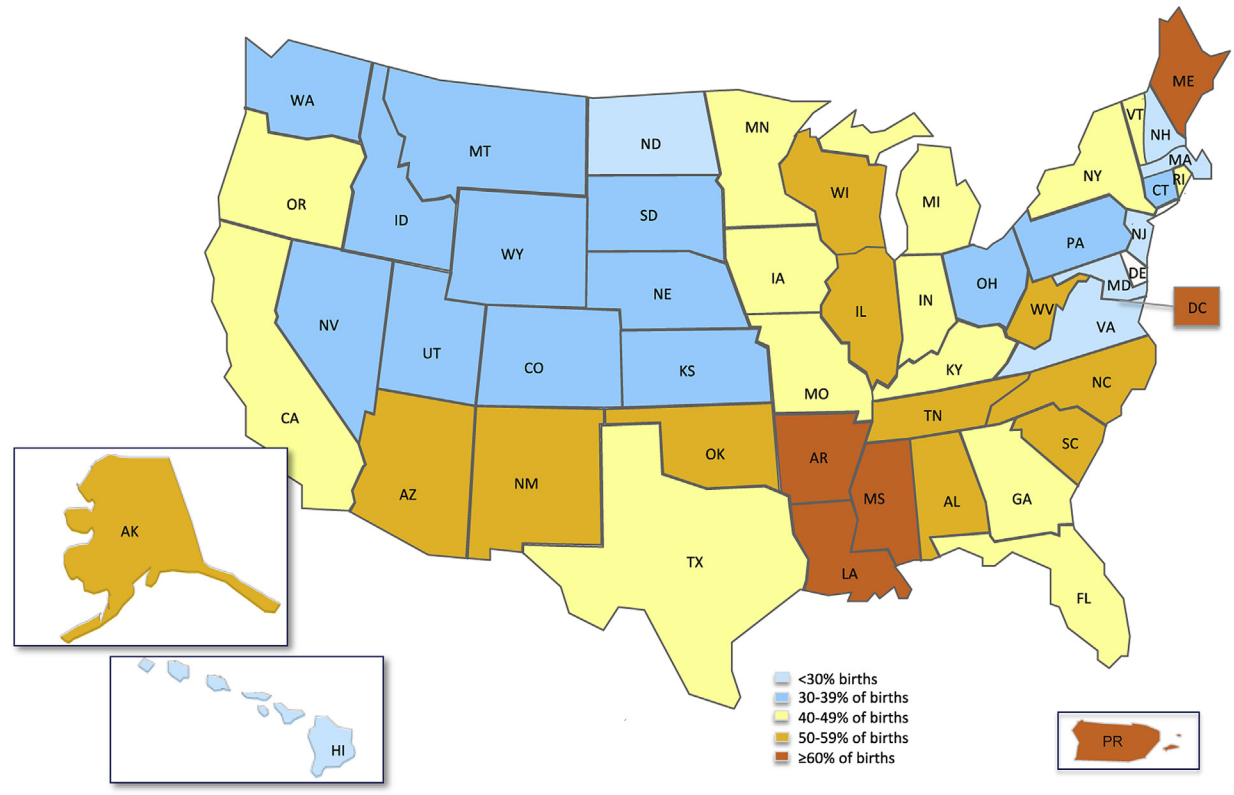

Figure 1. .Percent of births financed by Medicaid (2010).

United States and births to non-U.S. residents (included usually in occurrence birth data) are not included in resident birth frequencies, which suited our need for U.S. birth counts. However, the use of resident data has its own challenges in addition to the general vital statistics data limitations, as follows.

Time lag for reporting. The 50 states, District of Columbia, Puerto Rico, Virgin Islands, Guam, and Canadian provinces have an agreement allowing for the exchange of statistical copies of birth and death records for events occurring in a state other than the state of residence (Massachusetts Department of Public Health, 2013). This exchange causes a lag between the time the state calculates the in-state resident birth and the out-of-state births. For example, Utah was only able to provide in-state Medicaid resident birth counts.

Missing/unknown payment source. Some states (GA, MT, NM, OH, TN, WV) and the District of Columbia reported resident birth counts with a large number of unknowns (up to 30%; Table 4). The unknowns are generally owing to out-of-state deliveries, because birth certificates from the surrounding states may not include a payer question.

Self-reported data. It is important to note that the payer information on the standard birth certificate is provided by the mother and represents her expectation for payment for delivery. The 2003 certificate asks for source of payment and provides fours options: Medicaid, private insurance, self-pay, and other.

Some states that have not adopted the revised birth certificate have added their own question to the 1989 birth certificate, such as “Are you eligible/do you qualify for medical assistance?.” In the majority of cases, the form is completed by a hospital nurse based on insurance information. However, the question still registers expectations rather than actual payment, even if based on an existing insurance policy. In addition, even though the nurses fill in the information based on insurance card validation for the cases of emergency Medicaid, the claim is not settled until at least 30 days after birth; in some cases, Medicaid may not be the final payer despite being listed on the birth certificate.

Different payer questions. Some states (MD, MS, NC, OK, UT) and the District of Columbia adopted the 2003 certificate in the middle of our data collection period, either in 2009 or 2010, thereby producing inconsistencies in the data within a state over time as the questions changed. In addition, states that have added their own payer questions before adopting the new certificate format had a wide variation in the types of questions used (Figure 2).

Questions ranged from asking about the Medicaid coverage of the birth to inquiring about Medicaid eligibility in general or Medicaid eligibility at any time during the pregnancy.

Table 3
Percent Change in Number of Births Financed by Medicaid, 2008 to 2010

State	% Change 2008–2009	% Change 2009–2010	% Change 2008–2010
Alabama	2.59	5.91	8.65
Alaska	4.17	0.90	5.11
Arizona	1.91	−0.37	1.52
Arkansas	0.13	5.15	5.29
California	0.08	0.83	0.91
Colorado	5.92	1.40	7.41
Connecticut	6.70	4.42	11.41
Delaware	1.80	—	—
District of Columbia	—	−5.10	—
Florida	7.51	2.69	10.40
Georgia	8.03	3.15	11.44
Hawaii	8.77	−3.53	4.93
Idaho	13.66	4.72	19.03
Illinois	2.01	0.35	2.37
Indiana	4.11	2.17	6.37
Iowa	4.31	1.99	6.39
Kansas	6.10	19.99	27.31
Kentucky	−2.87	−0.84	−3.69
Louisiana	−0.65	−0.30	−0.95
Maine	5.04	19.51	25.53
Maryland	−0.94	−55.07	−55.49
Massachusetts	3.72	1.99	5.78
Michigan	2.14	2.91	5.11
Minnesota	12.14	1.41	13.73
Mississippi	3.42	0.34	3.77
Missouri	1.77	−11.57	−10.01
Montana	7.70	7.98	16.30
Nebraska	0.11	−16.45	−16.36
Nevada	2.67	15.50	17.47
New Hampshire	2.92	3.46	6.49
New Jersey	2.05	15.07	17.43
New Mexico	1.37	−3.91	−2.59
New York	2.65	0.00	2.65
North Carolina	2.15	0.00	2.15
North Dakota	0.42	−0.04	0.39
Ohio	2.98	−1.27	1.68
Oklahoma	5.97	−0.53	5.41
Oregon	3.44	6.60	10.27
Pennsylvania	5.61	−0.88	4.68
Puerto Rico	6.64	0.01	6.65
Rhode Island	2.01	−1.16	0.83
South Carolina	−2.87	6.98	3.91
South Dakota	4.39	1.61	6.07
Tennessee	3.19	1.70	4.95
Texas	6.59	1.60	8.30
Utah	17.01	5.08	22.95
Vermont	3.30	2.01	5.38
Virginia	1.02	11.34	12.48
Washington	4.50	−0.54	3.94
West Virginia	3.56	16.50	20.65
Wisconsin	−1.05	1.06	0.00
Wyoming	0.22	4.27	4.50
Total	9.49	8.79	19.12

Implementation challenges. Birth statistics by payer may also be inconsistent from year to year owing to challenges in the initial implementation of the 2003 certificate. The first year of reporting usually does not yield reliable data as providers adjust to the new forms. Additionally, the certificate may not be adopted by the calendar year. In the District of Columbia, for example, the 2003 certificate was not in circulation until after the start of the 2009 calendar year and the data for 2009 exclude January.

Medicaid data

The majority of the 17 states that have not adopted the 2003 birth certificate reported Medicaid birth frequencies from state Medicaid databases, based either on Medicaid claims data or on Medicaid eligibility. The major difference between the two is that Medicaid claims represent an actual payment for services rather than an expectation for such. Presumptive eligibility allows individuals to use Medicaid funds for services while their application is being processed, which takes about a month. In those cases, even if Medicaid is listed as a payer, it may not actually pay for the service if the individual is ineligible. An option for pending Medicaid eligibility is not provided in the 2003 birth certificate, although, for example, Maryland had such an option in its earlier version of the payment question (Figure 2). Similarly, individuals who provide no payment source or another payment source often eventually have their delivery costs covered by Medicaid. An additional challenge with the Medicaid data relates to eligibility based on mother versus child. In some cases, a mother whose delivery was covered by Medicaid or who was covered for her pregnancy through fetal coverage through the Children's Health Insurance Program offered by states who have taken up the Children's Health Insurance Program "unborn child" coverage option may not be eligible for Medicaid, but the child would qualify owing to a higher income threshold for children (Dailard, 2002; Kaiser Commission on Medicaid and the Uninsured, 2012). In these cases, inconsistencies in reporting may result from lack of clarity on the forms about whether Medicaid should cover delivery or just newborn care.

Table 4
States With the Highest Percentage of Births With Unknown Payment Source

State*	Percent of Unknown Answers		
	2008	2009	2010
District of Columbia	—†	24.09	9.16
Georgia	23.52	14.74	11.57
Montana	9.88	7.57	2.43
Ohio	4.18	4.57	4.08
Tennessee	3.76	4.39	5.14
West Virginia	25.88	25.32	13.58

* NM did not provide a precise figure for births from Vital Statistics, but estimated the unknown answers at 25% to 30% of all birth certificates (see *Hospital Discharge Data*).

† The District of Columbia adopted the 2003 birth certificate in 2009.

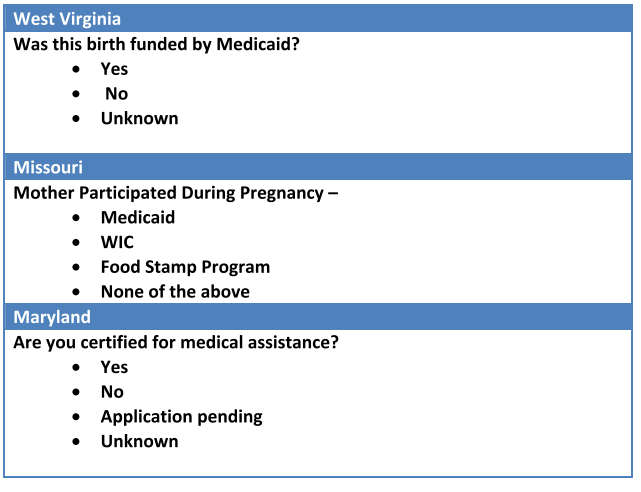

Figure 2. Examples of state-added birth certificate payment questions.

Number of newborns versus number of deliveries. States can report on Medicaid deliveries or on the number of newborns. The two numbers do not always match given twin and multiple births, but states can account for the discrepancy using Medicaid newborn claims. However, Medicaid does not pay separately for newborn care in states with capitated payments. To account for all and provide for accurate counts, providers must submit a $0 claim for each newborn, which often does not happen in practice. In our research, all states except Arkansas reported Medicaid deliveries, which is a more accurate number for the needs of our study.

Hospital discharge data

Hospital discharge data can also be a source for Medicaid birth data. Hospital discharge data are limited to in-state deliveries and do not include home deliveries (which tend to be negligible in number). However, it can be of superior quality to other data sources in states with large numbers of unknowns, such as New Mexico, for example, where not all hospitals report payer data on the birth certificate and the unknowns from birth records are 25% to 35%.

Linked datasets for Medicaid births

At least six states have linked birth records with Medicaid data to generate Medicaid birth frequencies. In Alaska, Connecticut, Minnesota, and Nevada, birth records are linked with Medicaid eligibility information, whereas in Iowa and North Carolina the linkage is with Medicaid claims data. Linkages with Medicaid claims should provide the highest quality data, because once the claim has been processed the confirmed source of payment is Medicaid, a clear benefit over self-reported data. However, this is not always possible and can be cumbersome for states, because the organizational structure of the state health departments may not support collaboration between the Health Statistics unit and the Medicaid agency. In North Carolina, for example, such cooperation exists owing to years of collaboration between the state's Health Statistics unit and the Medicaid agency, which have worked together on a number of projects and have an established partnership that facilitates data sharing.

Discussion

Our research shows that none of the current reporting systems is ideal, each with its own challenges and limitations. In addition, the use of three different data collection and reporting systems cannot yield reliable national figures and limits the consistency in the reported numbers. Consistent adoption of the 2003 certificate in all states would allow the NCHS Natality Detail dataset to serve as a nationally representative source of data for the financing of births in the United States, once the challenges of the initial implementation are resolved. The U.S. Centers for Disease Control and Prevention NCHS is currently working with states who have yet to implement the 2003 certificate to expedite adoption of the certificate, and thus availability of a uniform method for obtaining payer source data. For states that previously used Vital Records to collect payer information but only recently adopted the 2003 certificate, the difference in counts owing to the question format changes will diminish over time. In addition, vital record linkages with Medicaid data systems provide the highest quality data. However, the small number of states that have attempted data linkage demonstrates the inherent challenges. With the implementation of the ACA, there will be a continued need for accurate, timely, and uniform reporting on maternity coverage in Medicaid and in the health insurance exchanges. State health departments should work to build linkages between Vital Records and Medicaid data systems, and specifically Medicaid claims.

Implications for Practice and/or Policy

Although nearly half of births are financed by Medicaid, historically very few nonpregnant women have been eligible for Medicaid coverage. A 2012 study of health insurance coverage for women of reproductive age found that 19% of nonpregnant women were currently uninsured in 2009, with only 8% receiving coverage through Medicaid (Kozihimannil, Abraham, & Virnig, 2012). Under health care reform, states have the option to expand Medicaid coverage to low-income women regardless of pregnancy status. This option has significant implications for Medicaid-financed birth outcomes and costs. As states expand coverage to low-income women, women of childbearing age will be able to obtain coverage before and between pregnancies, allowing for access to services that could improve their overall and reproductive health as well as birth outcomes (Pellegrini & Garro, 2013). Likewise, improved birth outcomes could translate into substantial cost savings, because the costs associated with preterm births are estimated to be 10 times greater than for full-term births (Institute of Medicine, 2006). Medicaid covers complex births disproportionately: Medicaid paid for over half of all hospital stays for preterm and low birth weight infants, and about 45% of infant hospital stays owing to birth defects in 2009 (Agency for Healthcare Research and Quality, 2012). To understand the effects of Medicaid expansions and changes moving forward, including its effect on cost, quality, access, and health outcomes, it is important to have a clear sense of Medicaid's contribution in the current context and how this contribution may evolve in the near future.

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