

# Adolescent Birth Rates, Percentage of Repeat Births and Births in High Poverty Areas by Medical Service Study Area: California, Aggregated 2010-2012



Center for Family Health  
Maternal, Child and Adolescent Health

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## **Adolescent Birth Rates, Percentage of Repeat Births and Births in High Poverty Areas by Medical Service Study Area: California, Aggregated 2010-2012**

### **Introduction**

Early childbearing is an important public health issue that can be addressed by monitoring surveillance data such as the adolescent birth rates. Data on adolescent birth rates, in particular across smaller areas, is a valuable part of surveillance that informs program planning efforts targeting localized needs.

The adolescent birth rate (ABR; number of live births per 1,000 females aged 15-19) in California has been declining since the early 1990s. In 2012, California's ABR was three births per 1,000 lower than the ABR in the U.S. as a whole.<sup>1</sup> However, across the 58 California counties, wide disparities in the ABR persist. In general, ABRs in counties located in the northern coast of the state are lower than ABRs in counties located in the Central Valley region. For example, the county with the highest 3-year aggregated birth rate in 2010-2012 (Tulare County in the Central Valley) had a rate five times greater than the county with the lowest 3-year aggregated birth rate (Marin County in the northern coast of California).<sup>2</sup>

Although the county is the standard geographic area utilized for understanding within-state differences in ABR, there are instances when sub-county level geographies are preferable, particularly when adolescent childbearing is concentrated in small areas and county-level data masks areas of localized need. To address the need for sub-county level data, the California Department of Public Health (CDPH), Maternal, Child, and Adolescent Health Division (MCAH) periodically publishes adolescent birth data at the Medical Service Study Area (MSSA) level.

MSSAs are clusters of census tracts that do not cross county boundaries. These clusters were developed to identify areas of unmet priority for health care coverage.<sup>3</sup> MSSAs are recognized by the U.S. Health Resources and Services Administration, Office of Shortage Designation as rational service areas for purposes of designating Health Professional Shortage Areas, Medically Underserved Areas and Medically Underserved Populations. Based on its population density, each MSSA is defined as urban, rural, or frontier. Urban MSSAs population densities range from 251 to 31,000 persons per square miles, rural MSSAs' population densities are less than 250 persons per square mile, and frontier MSSA's population densities are less than 11 persons per square mile. MSSAs are revised, as needed, with community input following each decadal census and provide stable, meaningful sub-county geography that can be used for identifying needs in a more localized area.



MSSA level adolescent birth data were previously made available for the years 2000-01 and 2004-05.<sup>4</sup> This current report presents data for aggregated years 2010-2012 and includes three indicators of adolescent childbearing at the MSSA level for each of the 58 California counties: (1) the ABR; (2) the percentage of repeat adolescent births (PRB); and, (3) the percentage of adolescent births in areas with a high concentration of poverty, referred to as high poverty areas (PBHP).

## Data Sources and Methods

The data presented in this report were derived from several sources. The numbers of live births, repeat births, and births in high poverty areas were aggregated from the 2010-2012 geocoded Birth Statistical Master Files (BSMF).<sup>5</sup> High poverty areas were determined using the American Community Survey 5-year data by census tract<sup>6</sup> and merged with the geocoded BSMF. The MSSA population was derived using the Department of Finance (DOF) population data<sup>7</sup> and the 2010 Census<sup>8</sup>, using the procedure as described here.

First, using the 2010 Census, the population of females aged 15-19 by census tract was aggregated to the MSSA level. Second, the population distribution by MSSA was calculated and applied to the DOF county population data to obtain the estimated numbers of adolescent females aged 15-19 at each MSSA. To obtain the population data in each MSSA by race/ethnicity, a similar approach was conducted for each racial/ethnic group distribution in each of the 58 California counties. For example, the population of the white females aged 15-19 by census tract from the 2010 Census was aggregated into the MSSA-level data, and the proportion for each MSSA was calculated. These proportions across MSSA were then applied to the corresponding DOF county population of white females aged 15-19 to obtain the MSSA population.

To support local planners in their efforts to identify areas in their community that have both elevated ABR and PRB, a measure that combined both these indicators was developed. First, the quartile, a statistical measure that divides the values of ABR and PRB into four defined intervals was calculated. Then, each MSSA was assigned a category according to the quartile values of the ABR and PRB. For ABR, the quartile cut-offs are as follows: (1) 0.0-13.7; (2) 13.8-25.0; (3) 25.1-38.8; and (4) 38.9 and above. The PRB cut-offs are as follows: (1) 0.0-12.3; (2) 12.4-15.6; (3) 15.7-19.0; and (4) 19.1 and above. Because some areas have suppressed ABR and/or PRB data due to their instability, an additional category was formed called 'No ABR, No PRB.'

Next, these data were cross tabulated such that the row and column were arrayed producing 25 table cells (see Appendix Table 1), representing the 16 cells as generated by the ABR and PRB quartiles (4 by 4 table) and an additional nine cells (four each for ABR and PRB plus one category for MSSA with both ABR and PRB suppressed). To permit interpretation of the classification scheme, cells in this 25-cell table were then collapsed



into six groups representing a simplified matrix of adolescent birth frequency. This produced the following categories: (1) No ABR, No PRB (consisted of MSSAs with data suppressed due to their instability); (2) Low ABR and Low PRB; (3) Low, No ABR and Low, No PRB; (4) High ABR and Low, No PRB; (5) Low ABR and High PRB; and (6) High ABR and High PRB.

***Definition of Key Terms***

Adolescent birth rate (ABR): Number of live births per 1,000 females aged 15-19.

Percentage of repeat births (PRB): Number of females aged 15-19 with a previous live birth per 100 females aged 15-19 with a live birth.<sup>9</sup>

High poverty area: Census tracts where 20 percent of residents are below the federal poverty level as designated by the U.S. Census Bureau.<sup>10</sup>

Percentage of adolescent births in high poverty area (PBHP): Number of live births to females aged 15-19 that occurred in a high poverty area within an MSSA per 100 females aged 15-19 with a live birth in the MSSA.

**Results**

There are 58 counties and 542 MSSAs in California, ranging from one MSSA in counties such as Alpine, Calaveras, Del Norte, San Benito, and Sierra to 99 MSSAs in Los Angeles. San Diego County has the second largest number of MSSAs at 38. The ABR by MSSA ranged from 0 to 108.5 births per 1,000 women aged 15-19 while PRB and PBHP ranged from 0 to 30.4%, and 0 to 99.3%, respectively.

Statewide, the ABR based on the 3-year aggregated data was 28.4 births per 1,000, the percentage of repeat births was 17.4% and more than half (53.1%) of adolescent births occurred in a high poverty areas.

Table 1 shows the variability in ABR, PRB and PBHP by race and Hispanic ethnicity. The ABR among Asians was the lowest at 5.6 per 1,000, while the ABR among Hispanics was the highest at 43.1 per 1,000. The PRB was also highest among Hispanic (18.5%) adolescents although it was lowest among White (12.7%) adolescents. In contrast to overall birth rates, Asian adolescents had the second highest percentage of repeat births. White adolescents had the lowest percent of births occurring in a high poverty area, whereas nearly sixty one percent (60.6%) of births to Black adolescents occurred in a high poverty area.



Table 1. Adolescent Birth Rates, Percentage of Repeat Births, and Percentage of Births in High Poverty Areas by Race and Hispanic Ethnicity: California, 2010-2012

	Statewide	Black	Asian	Hispanic	White
Adolescent birth rate	28.4	34.2	5.6	43.1	11.5
Percent repeat births	17.4%	16.4%	17.2%	18.5%	12.7%
Percent births in high poverty areas	53.1%	60.6%	54.3%	56.1%	34.4%

Data sources: Birth Statistical Master Files, 2010-2012, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060 as of January 2013, and Census 2010. American Community Survey, 5-year (2008-2012) aggregated data. Note: Data for Pacific Islander/ Native Hawaiian, American Indian/Alaskan, and those of multiple races are not shown as they are not included in the MSSA table due to small numbers; single year data for these subgroups are available at [http://www.cdph.ca.gov/data/statistics/Documents/140602%20ver%202012%20TBR%20press%20release%20combined%20slides\\_updatedCDPHlogo\\_final.pdf](http://www.cdph.ca.gov/data/statistics/Documents/140602%20ver%202012%20TBR%20press%20release%20combined%20slides_updatedCDPHlogo_final.pdf)

### ***Rural and Urban Status***

More than half (58%) of MSSAs were classified as urban, 32% rural, and 10% frontier. For the purposes of this report, frontier MSSAs (n = 54) were included in the rural category. A majority of the population (87%) lived in urban areas and the majority of births (84%) occurred in these areas as well. Of the four major race/ethnic groups, White adolescents were the least likely to reside (81%) in urban areas and least likely to give birth, in urban communities (71%).

Table 2 presents a breakdown of the ABR, PRB and PBHP by urban/rural status statewide and by race and Hispanic ethnicity. The results show that the ABR was significantly higher in rural/frontier MSSAs than in urban MSSAs. There was little difference in the PRB or PBHP by rural and urban status.

The variation across population subgroups by race and Hispanic ethnicity and urban and rural status was substantial. Notably, the ABR among Asian and White adolescents was twice as high in rural/frontier areas compared with urban areas.

Considerable variation was also evident in the PRB by urban and rural status, particularly among Black and Asian adolescents, with adolescents in rural communities more likely to have a repeat birth than those in urban communities. Similar to the ABR, the greatest variation in the PBHP by urban and rural status was observed among White and Asian adolescents.



Table 2. Adolescent Birth Rates, Percentage of Repeat Births, and Percentage of Births in High Poverty Areas by Race and Hispanic Ethnicity and MSSA type: California, 2010-2012

MSSA type	Statewide		Black		Asian		Hispanic		White	
	Rural/ Frontier	Urban								
Adolescent birth rate	33.7	27.0	41.8	33.4	11.7	5.2	48.0	41.7	18.5	9.5
Percent repeat births	18.0%	17.4%	20.6%	16.0%	21.9%	16.8%	19.6%	18.3%	13.3%	12.4%
Percent births in high poverty areas	53.6%	54.0%	60.0%	61.4%	62.3%	54.3%	57.9%	56.7%	41.2%	32.9%

Data sources: Birth Statistical Master Files, 2010-2012, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060 as of January 2013, and Census 2010. American Community Survey, 5-year (2008-2012) aggregated data.

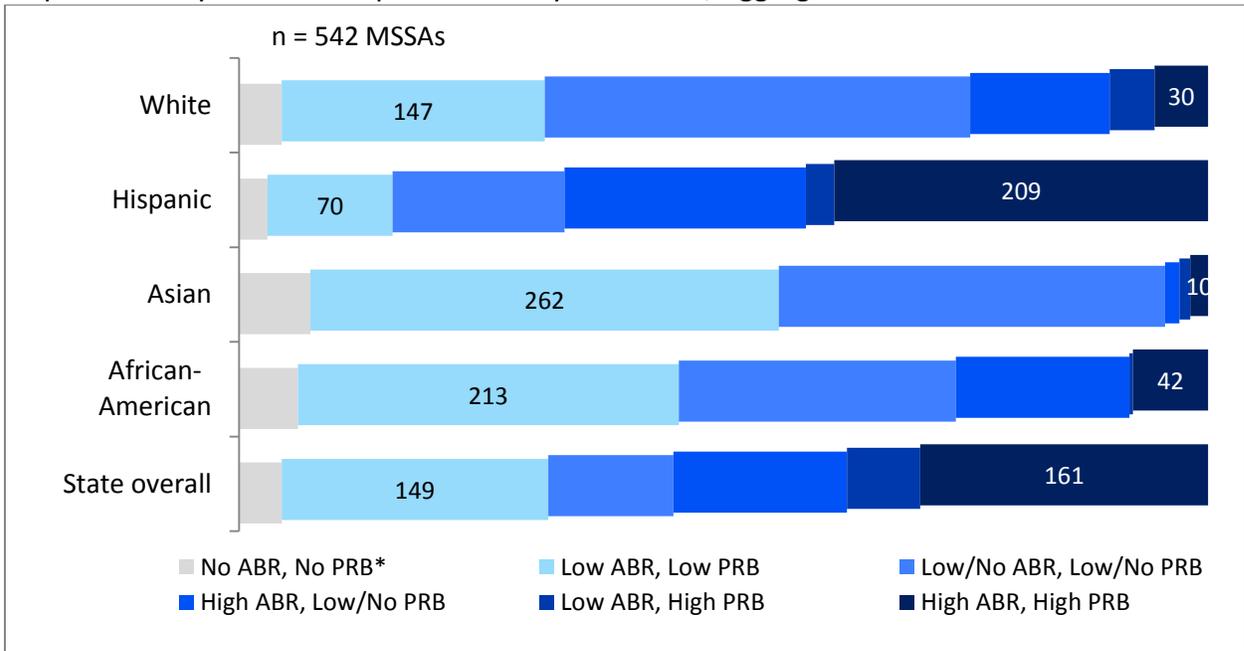
***Combined Birth Rates and Percentage of Repeat Births***

To assist local planners ascertain which MSSAs may benefit from intervention, MSSAs with the highest ABR and PRB were identified. Figure 1 presents the number of MSSAs in six categories of combined ABRs and PRBs, statewide and by race and Hispanic ethnicity.

Overall, 30% (n=161) of the state’s MSSAs had both high ABR and PRB, while 27% (n=149) demonstrated both low ABR and low PRB. Examining the combined ABR and PRB by race and Hispanic ethnicity revealed considerable differences. For example, among Hispanic adolescents, 39% (n=209) of MSSAs showed high ABR and PRB, while just 13% (n=70) exhibited both low ABR and low PRB. This pattern was reversed among Asian, Black and White adolescents.



Figure 1. Number of MSSAs by level of combined adolescent birth rate and percentage of repeat birth by race and Hispanic ethnicity: California, Aggregated 2010-2012



Data sources: Birth Statistical Master Files, 2010-2012, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060 as of January 2013, and Census 2010. \* Included MSSA with suppressed data.

**Statewide specific maps**

Separate statewide maps for each of the three indicators – ABR, PRB, and PBHP – by MSSA are shown in the Appendix. Each MSSA was assigned a category according to the indicator’s quartile value. These categories are represented in the maps by a colored gradient from very light blue (lowest value) to very dark blue (highest value). For example, State Map 1 (representing MSSA-level ABRs) demonstrates that MSSAs in the Central Valley generally had higher birth rates (very dark blue areas) than MSSAs in the coastal region of the state (very light blue areas).

Additional maps showing the combined ABR and PRB data for Black, Asian, Hispanic and White adolescents are also found in the Appendix. Colored bars representing the combined ABR and PRB were used consistently in the maps showing the data by race and Hispanic ethnicity. The colored bar gradient scales range from very light blue to very dark blue representing Low ABR and Low PRB to High ABR and High PRB, respectively. Statewide, the ABR and PRB for Asian and White adolescents were below the state levels; although pockets of MSSA with high ABR and PRB can be observed among these subgroups, as shown in State Maps 5 and 7.



Two additional bar legends were included for all the maps: 1) a bar with black dots denoting caution when using these data, because of the small numbers in these categories; and 2) a bar legend with crosshatch denoting data that were suppressed. See Data Suppression and Limitation section below for details.

### ***County specific maps***

In the Appendix, individual maps for each of the 58 counties are presented in alphabetical order. Each map includes the MSSA identification number, the MSSA name, and the MSSA type (urban, rural, frontier), along with the corresponding values of combined ABR and PRB, represented by the colored bars gradient scales. Because of the large number of MSSAs (n=99) in Los Angeles County, we separated the county's map into eight Service Planning Area (SPA),<sup>11</sup> with MSSAs conforming to the SPA in which it belongs.

Colored bars representing the six categories of combined ABR and PRB were used consistently throughout the maps. The colored bar gradient scales range from very light blue to very dark blue representing Low ABR and Low PRB to High ABR and High PRB, respectively. Two additional legend bars were included, one with black dots and one with crosshatch to denote caution when using data from cells with small numbers and to denote data suppression, respectively. See Data Suppression and Limitation section below for details.

The number of births, ABR, number of repeat births, PRB, PBHP and their respective 95 percent confidence intervals for the rates and percentages by MSSA are accessible via a downloadable file in a comma-separated value (CSV) file format that can be read by Excel<sup>®</sup>. In addition, the county and type of MSSA were included in the CSV file. In a separate document, a data dictionary was generated to describe the data elements included in the CSV file.

### **Data Suppression and Limitation**

This report used data suppression rules that ensures the reliability of data and protects the privacy of adolescent mothers.<sup>12</sup> Two statistical measures – 95 percent confidence intervals (CI) and relative standard errors (RSE) – were used to annotate the reliability of the results presented in this report. The CI is an estimate around ABR, PRB and PBHP indicating the reliability of these indicators and can be interpreted as the range of values that would contain the true value 95% of the time. The RSE is an estimate indicating whether the ABR, PRB and PBHP meets standards of reliability or precision and is defined as the ratio of the standard error of the estimate divided by the estimate and multiplied by 100.

In the downloadable CSV data file available with this report, the CIs were shown with their corresponding indicator and an annotation when the RSE was between 30-49 percent; the data were suppressed when the RSE is equal to or greater than 50 percent or the



denominator and numerator did not meet standards of reliability. PBHP data for MSSA with a value of 100 percent were suppressed.<sup>12</sup> Similarly, in the maps, a bar legend with dots was used when RSE is between 30-49 percent and a bar legend with a crosshatch was used if data were suppressed.

The data presented in this report have limitations. The method used in estimating the MSSA population assumed that population changes (due to migration and mortality) were distributed equally across all MSSAs (within each county) among all females aged 15-19, during the years 2010 through 2012. A small number (n=3471) of births to women in the “other” race category was not separately estimated by MSSA, because the population of “other” race category was allocated only at the county level through the Census Modified Race Summary File. Comparing these data with the previous report using data from 2001-2002 and 2004-2005 is not advisable due to differences in methodology and population data sources.



## References and Technical Notes

1. Ventura SJ, Hamilton BE, Mathews TJ. National and state patterns of teen births in the United States, 1940–2013. National vital statistics reports; vol 63 no 4. Hyattsville, MD: National Center for Health Statistics. 2014 [http://www.cdc.gov/nchs/data/nvsr/nvsr63/NVSR63\\_04.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr63/NVSR63_04.pdf)
2. California Teen Births, 2000-2012. California Department of Public Health, Maternal, Child and Adolescent Health Division, Epidemiology, Assessment, and Program Development Branch. June 2014. [http://www.cdph.ca.gov/data/statistics/Documents/140602%20ver%202012%20TBR%20press%20release%20combined%20slides\\_updatedCDPHlogo\\_final.pdf](http://www.cdph.ca.gov/data/statistics/Documents/140602%20ver%202012%20TBR%20press%20release%20combined%20slides_updatedCDPHlogo_final.pdf)
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4. Takahashi ER, Florez CJ, Biggs MA, Ahmad S, Brindis CD (2008). *Teen Births in California: A Resource for Planning and Policy*. Sacramento, CA: California Department of Public Health, Maternal, Child and Adolescent Health Division and Office of Family Planning, and the University of California, San Francisco.
5. California Department of Public Health, Center for Health Statistics and Informatics. Birth Statistical Master Files, 2010-2012. Geocoding included the following process. 1) Raw address data was submitted to ERSI ArcGIS software for geocoding; 2) Remaining uncoded addresses were manually cleaned (e.g., fixing misspelling, removing apartment numbers) and resubmitted for geocoding. This process resulted in 98.8% of the 116,376 adolescent births in 2010-2012 being successfully geocoded. The 2010-2012 BSMF were geocoded using ESRI StreetMap Premium. See <http://www.esri.com/data/streetmap/> and [http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=An overview of geocoding](http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=An%20overview%20of%20geocoding) for more information about ESRI and an overview of the geocoding process.
6. U.S. Census Bureau. American Community Survey 2008-2012 population below poverty level by census tract using American FactFinder; <http://factfinder2.census.gov>. The census tracts where 20% or more of the total population is under the federal poverty level were aggregated and merged with the BSMF. See <http://www.census.gov/content/dam/Census/library/publications/2014/acs/acs-27.pdf> for the Census designation of 20.0 percent or more as a "high poverty area."
7. California Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, January 2013.
8. U.S. Census Bureau. Census 2010 population by census tract using American FactFinder; <http://factfinder2.census.gov>.
9. Using 2010-2012 geocoded Birth Statistical Master Files; excludes births where birth order is unknown or the number of previous live births is greater than 6 (less than 1% of births excluded). This method is consistent with the national estimates of repeat births among adolescents in the United States. See <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a4.htm>
10. Data were from the U.S. Census Bureau 2012 American Community Survey 5-year data using American FactFinder; <http://factfinder2.census.gov>. For general information about ACS poverty estimates, see <http://www.census.gov/hhes/www/poverty/poverty-cal-in-acs.pdf>.
11. See <http://publichealth.lacounty.gov/chs/SPAMain/ServicePlanningAreas.htm> for more information about Los Angeles County Service Planning Area
12. The cutoff for ABR denominator is 50 females aged 15-19; birth counts and rates were suppressed if denominator is below cutoff and numerator (number of live births) is between 1 and 5 or if the calculated relative standard error (RSE) is greater than or equal to 50%. The cutoff for PRB and PBHP denominator is 20 births aged 15-19; birth counts and percentages were suppressed if denominator is below cutoff and the numerator is between 1 and 5 or if the calculated RSE is greater than or equal to 50%. PBHP was suppressed if the value is 100%. See <http://wonder.cdc.gov/wonder/help/natality/NatalityPublicUseUserGuide2012.pdf> for more information on the National Center for Health Statistics guidance on computations of rates and percentages and <http://www.doh.wa.gov/Portals/1/Documents/5500/SmallNumbers.pdf> for Guidelines for Working with Small Numbers.



Appendix Table 1. Guide to Adolescent Birth Rate and Percentage of Repeat Birth Categorizations by Medical Service Study Area

	No PRB	PRB-Q1	PRB-Q2	PRB-Q3	PRB-Q4
No ABR					
ABR-Q1					
ABR-Q2					
ABR-Q3					
ABR-Q4					

Total number of MSSA: n=542

	Low ABR; Low PRB (n=149)
	Low/No ABR; Low/No PRB (n=70)
	High ABR; Low/No PRB (n=97)
	Low ABR; High PRB (n=41)
	High ABR; High PRB (n=161)
	ABR/PRB suppressed* (n=24)

**Notes:**

**ABR:** Adolescent Birth Rate; **PRB:** Percentage of Repeat Birth

**Q:** Quartile, a statistical measure that divides the values of ABR and PRB into four defined intervals

\* See the report's section on Data Suppression and Limitation

ABR-Q1: Low ABR ( 0.0-13.7)

ABR-Q2: Low ABR (13.8-25.0)

ABR-Q3: High ABR (25.1-38.8)

ABR-Q4: High ABR (38.9 & above)

No ABR/No PRB: ABR & PRB suppressed

PRB-Q1: Low PRB ( 0.0-12.3)

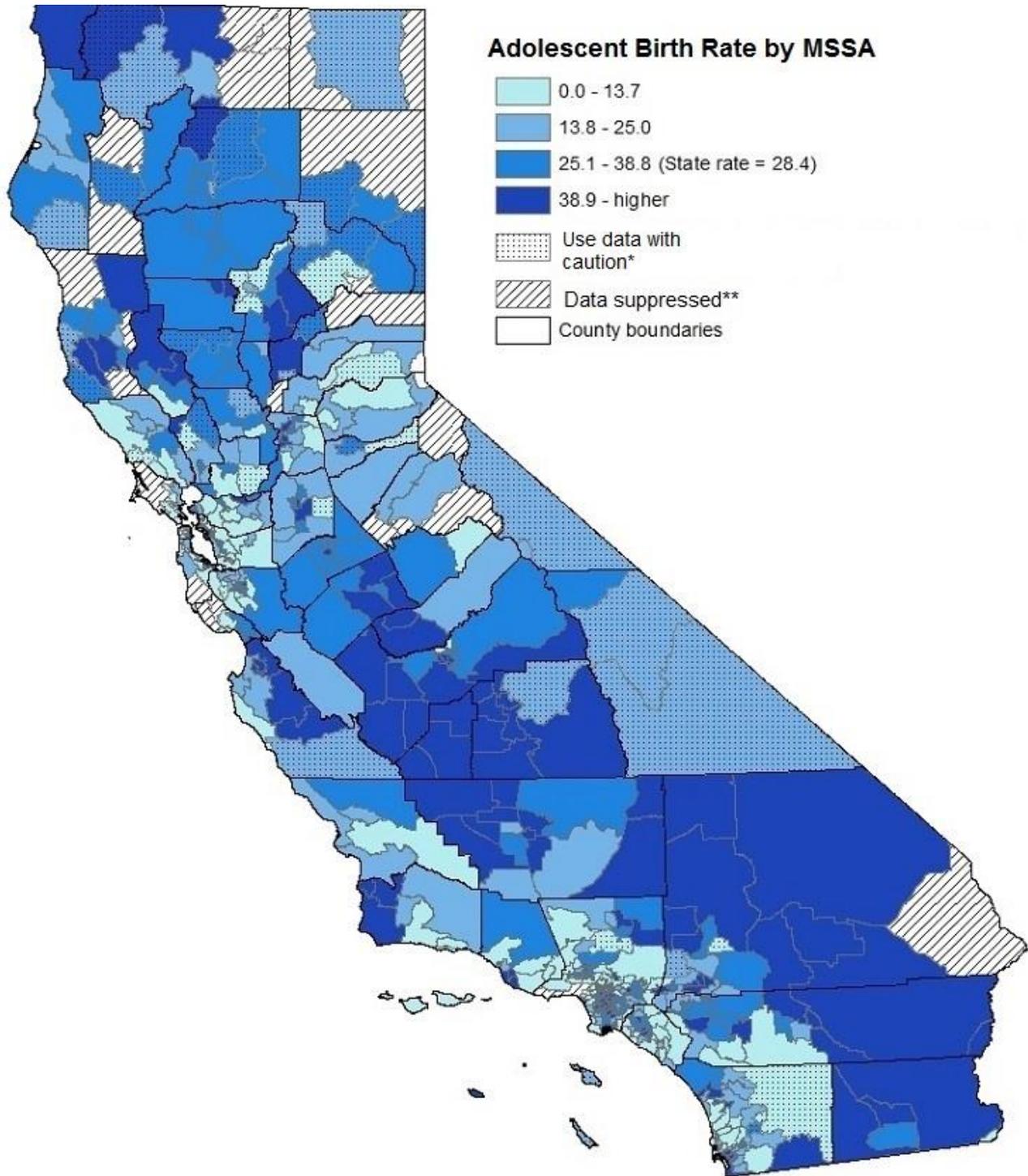
PRB-Q2: Low PRB (12.4-15.6)

PRB-Q3: High PRB (15.7-19.0)

PRB-Q4: High PRB (19.1 & above)

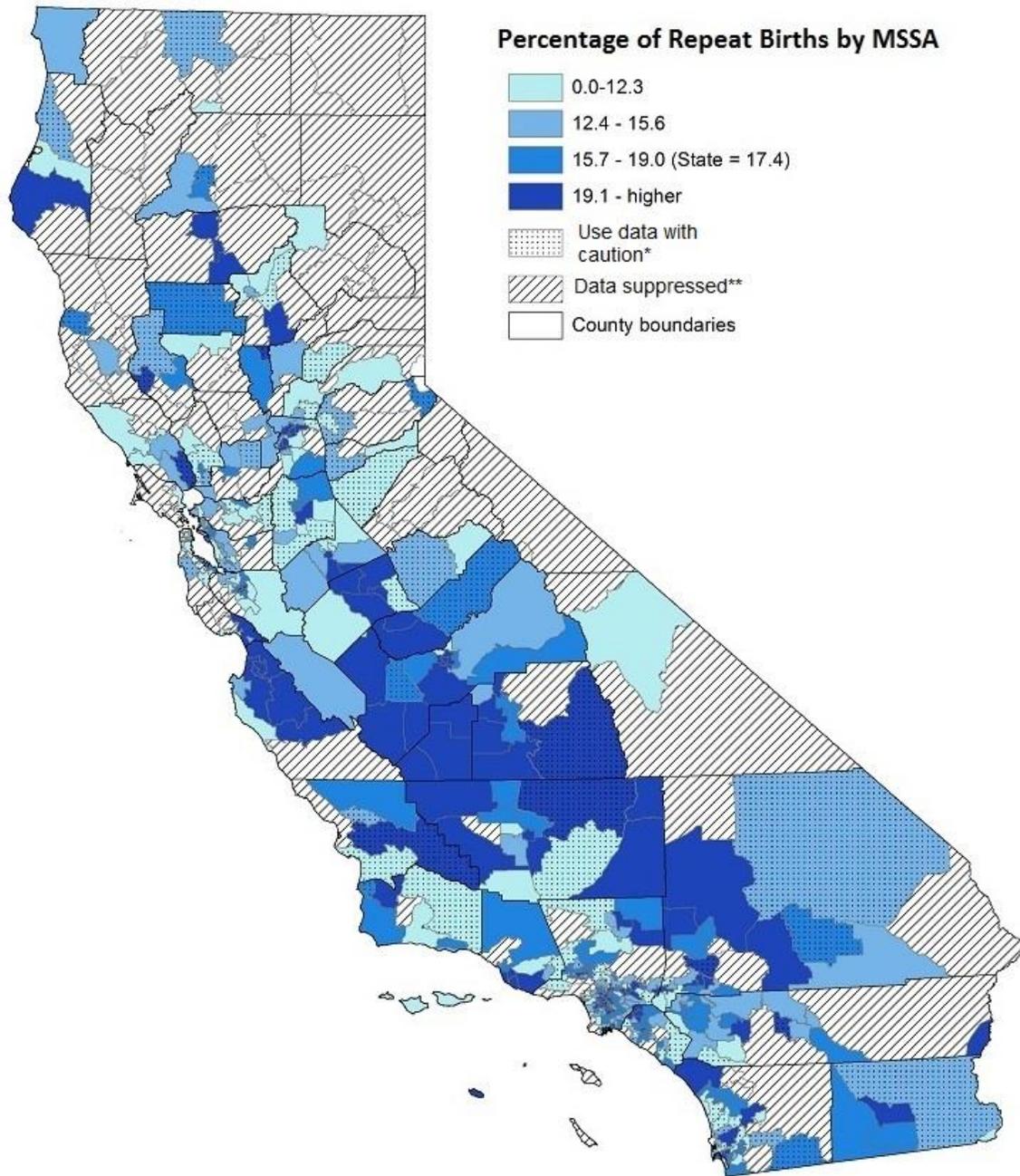


State Map 1. Birth Rates for Adolescents Aged 15-19 by MSSA: California, Aggregated 2010-2012



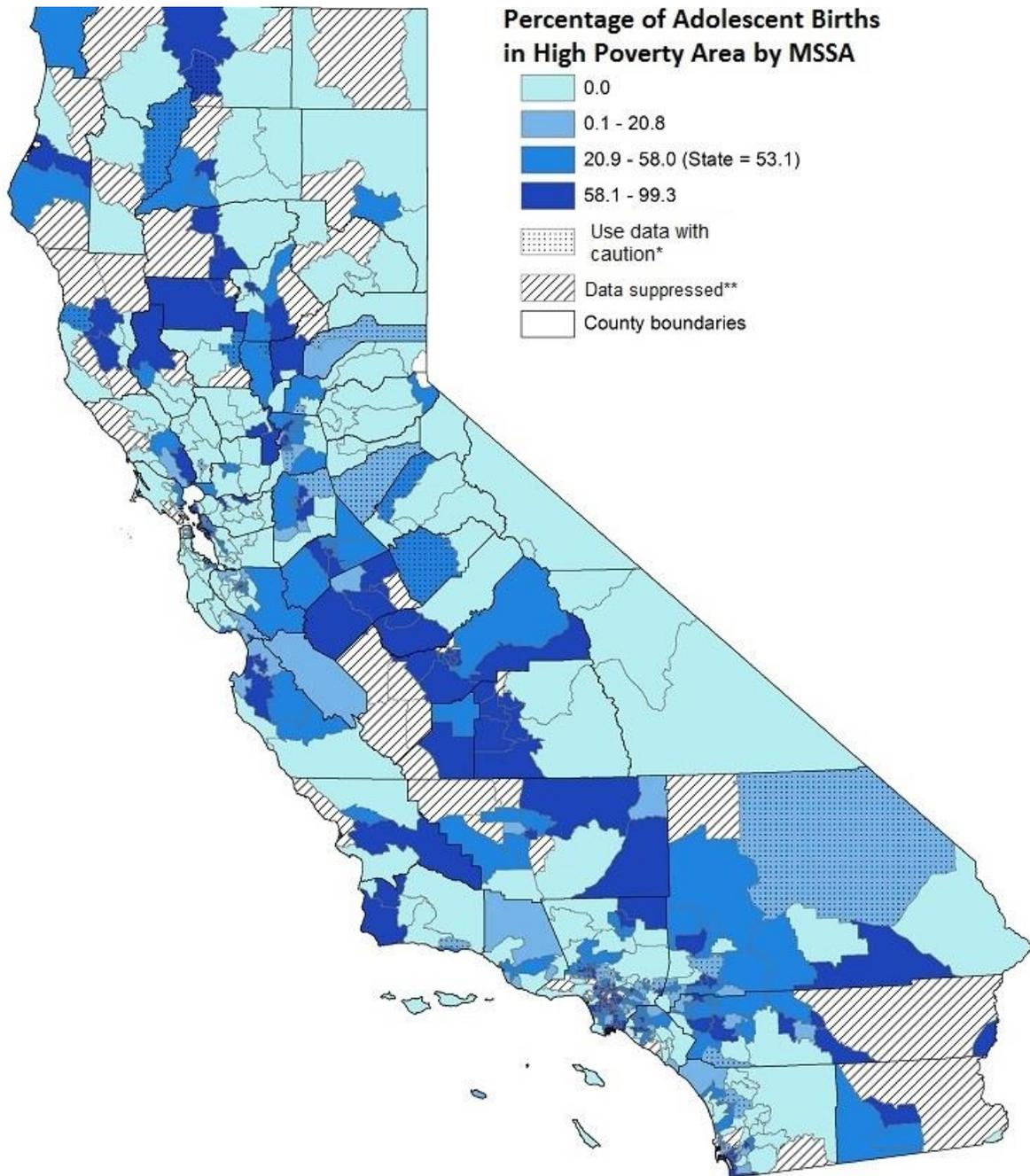
Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics. Population: 2010-2012, California Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, CA, January 2013 and U.S. Census Bureau, Census 2010 population by census tract using American FactFinder. Notes: ABR is adolescent birth rate; MSSA is Medical Service Study Area. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.

State Map 2. Percentage of Repeat Births for Adolescents Aged 15-19 by MSSA: California, Aggregated 2010-2012



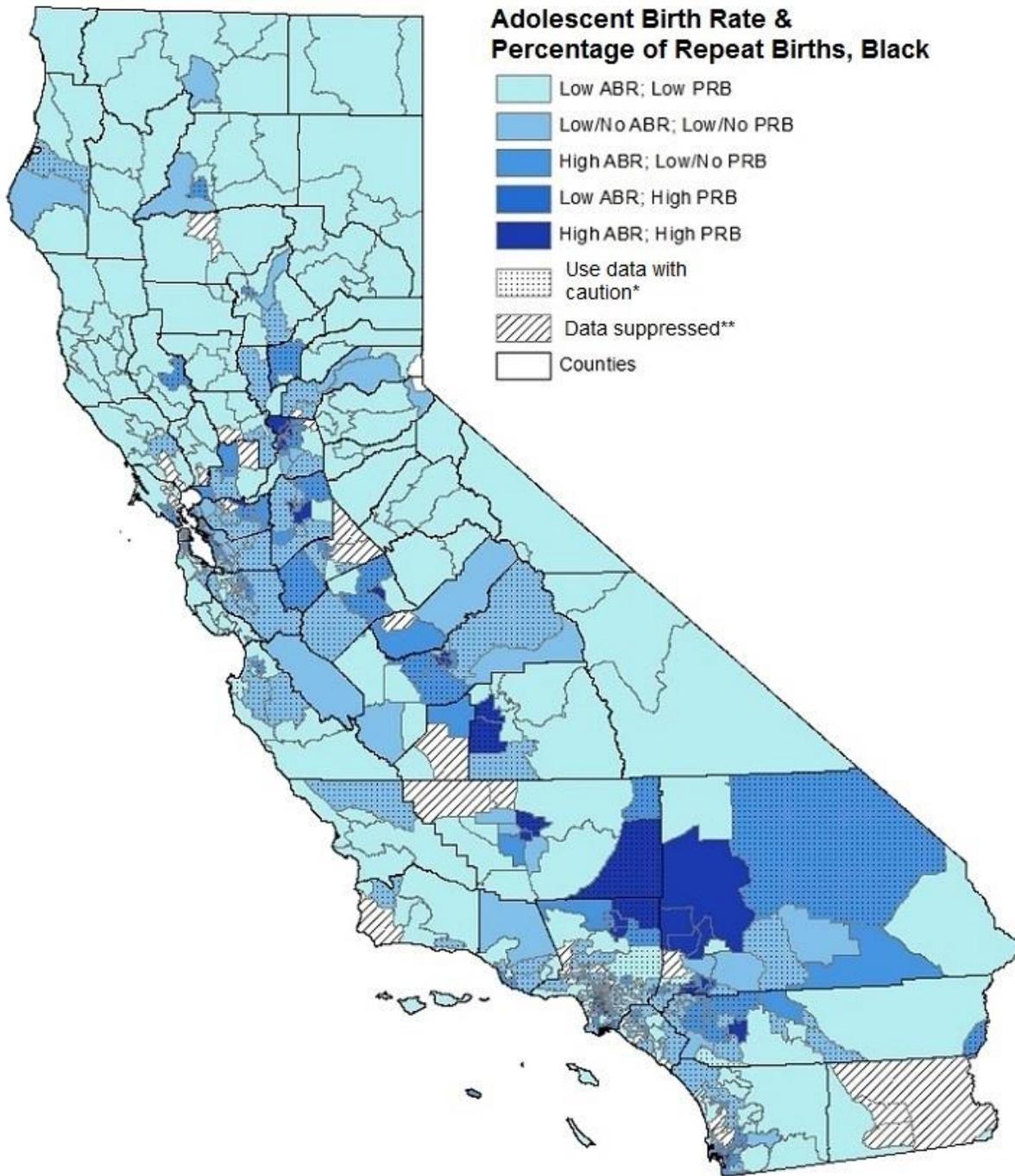
Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics.  
 Notes: PRB is percentage of repeat birth; MSSA is Medical Service Study Area. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.

State Map 3. Percentage of Births in High Poverty Area for Adolescents Aged 15-19 by MSSA: California, Aggregated 2010-2012



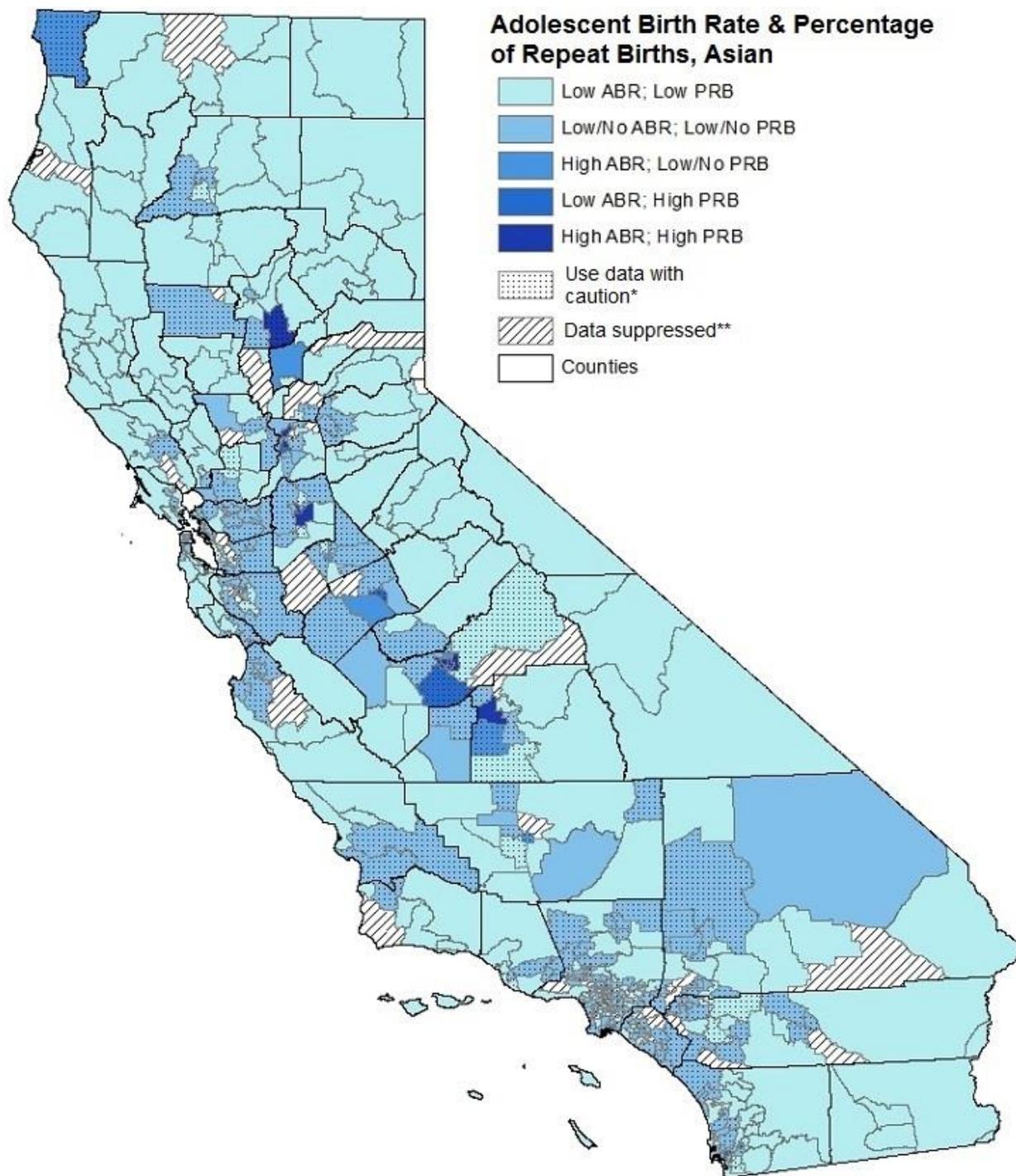
Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics. American Community Survey, 2008-2012, U.S. Census Bureau. Notes: PBHP is percentage of births in high poverty areas; MSSA is Medical Service Study Area. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.

State Map 4. Combined Birth Rates and Percentage of Repeat Births for Black Adolescents Aged 15-19: California, Aggregated 2010-2012



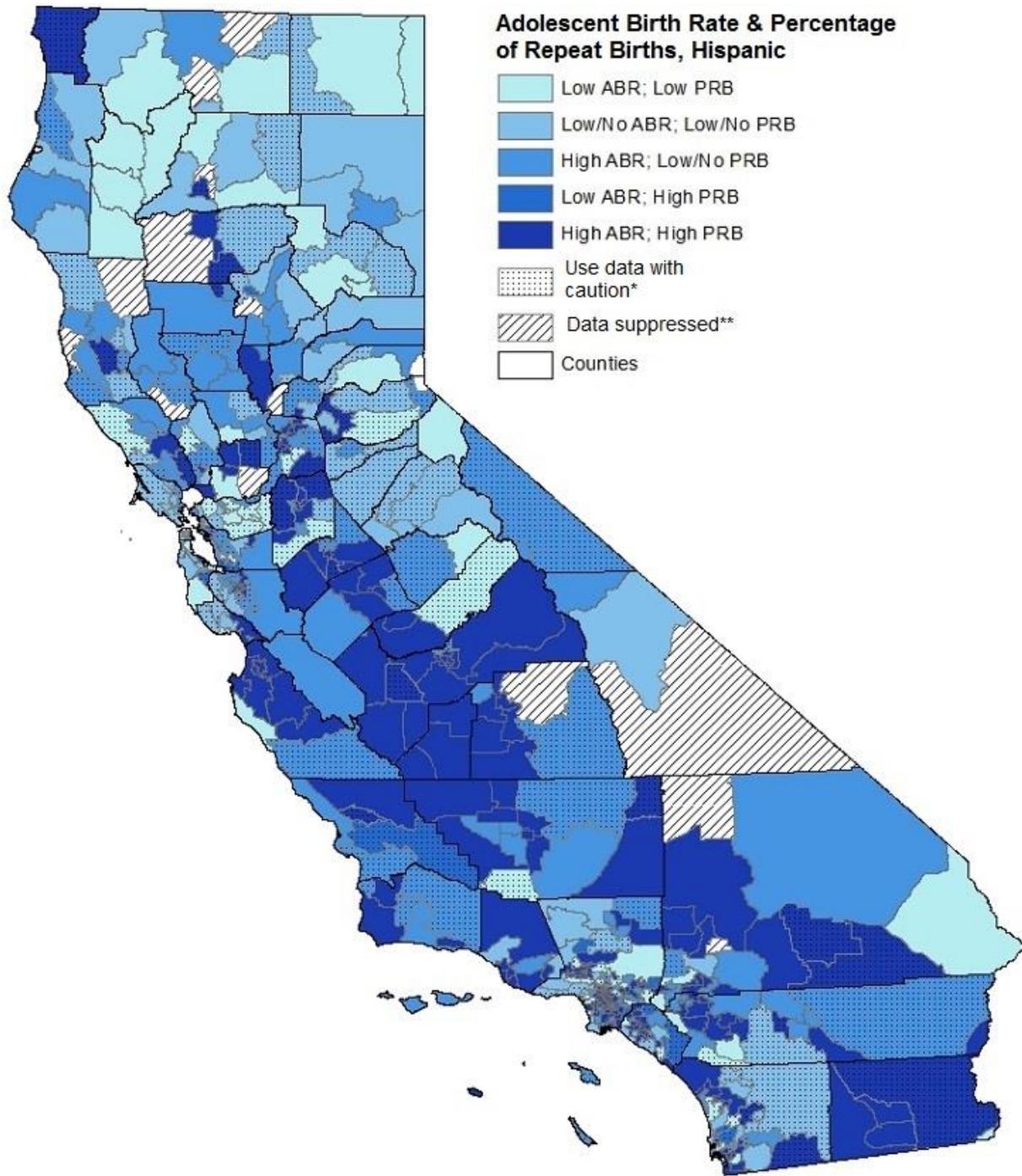
Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics. Population: 2010-2012, California Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, CA, January 2013 and U.S. Census Bureau, Census 2010 population by census tract using American FactFinder. Notes: ABR is adolescent birth rate; PRB is percentage of repeat birth; MSSA is Medical Service Study Area. See Data Sources and Methods section of this report for details about the combined ABR and PRB. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.

State Map 5. Combined Birth Rates and Percentage of Repeat Births for Asian Adolescents Aged 15-19: California, Aggregated 2010-2012



Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics. Population: 2010-2012, California Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, CA, January 2013 and U.S. Census Bureau, Census 2010 population by census tract using American FactFinder. Notes: ABR is adolescent birth rate; PRB is percentage of repeat birth; MSSA is Medical Service Study Area. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.

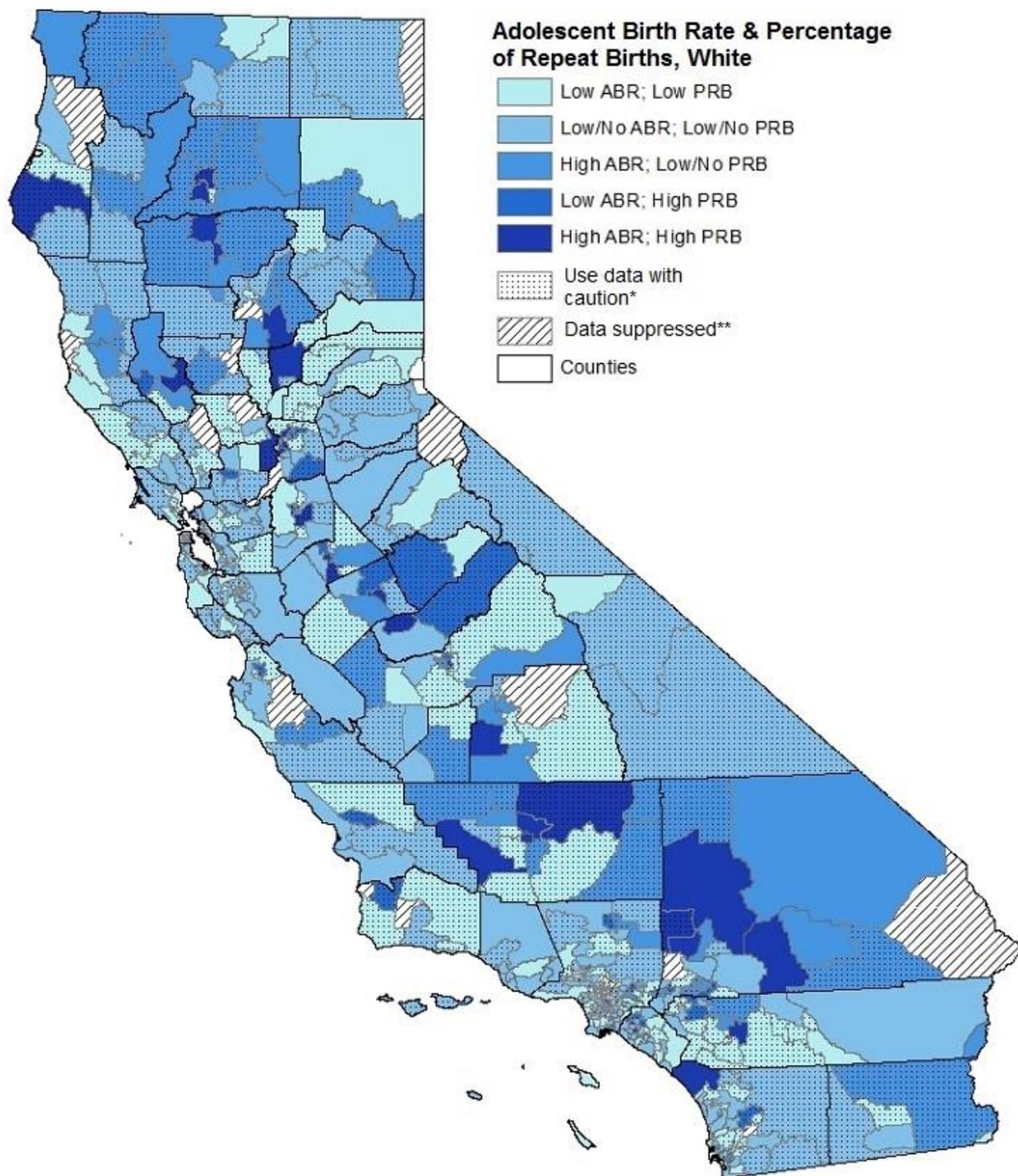
State Map 6. Combined Birth Rates and Percentage of Repeat Births for Hispanic Adolescents Aged 15-19: California, Aggregated 2010-2012



Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics. Population: 2010-2012, California Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, CA, January 2013 and U.S. Census Bureau, Census 2010 population by census tract using American FactFinder. Notes: ABR is adolescent birth rate; PRB is percentage of repeat birth; MSSA is Medical Service Study Area. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.



State Map 7. Combined Birth Rates and Percentage of Repeat Births for White Adolescents Aged 15-19: California, Aggregated 2010-2012



Data sources: Births: 2010-2012, Birth Statistical Master File, California Department of Public Health, Center for Health Statistics and Informatics. Population: 2010-2012, California Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, CA, January 2013 and U.S. Census Bureau, Census 2010 population by census tract using American FactFinder. Notes: ABR is adolescent birth rate; PRB is percentage of repeat birth; MSSA is Medical Service Study Area. \*Relative standard error is between 30%-49%;\*\*Data not shown, see Data Suppression and Limitation section for details about suppressed data and relative standard error.

