



# Public Costs from Unintended Pregnancies and the Role of Public Insurance Programs in Paying for Pregnancy-Related Care National and State Estimates for 2010

Adam Sonfield and Kathryn Kost

## HIGHLIGHTS

- Nationally, 51% of all U.S. births in 2010 were paid for by public insurance through Medicaid, the Children's Health Insurance Program and the Indian Health Service.
- Public insurance programs paid for 68% of the 1.5 million unplanned births that year, compared with 38% of planned births.
- Two million births were publicly funded in 2010; of those, about half—one million—were unplanned.
- A publicly funded birth in 2010 cost an average of \$12,770 in prenatal care, labor and delivery, postpartum care and 12 months of infant care; when 60 months of care are included, the cost per birth increases to \$20,716.
- Government expenditures on the births, abortions and miscarriages resulting from unintended pregnancies nationwide totaled \$21.0 billion in 2010; that amounts to 51% of the \$40.8 billion spent for all publicly funded pregnancies that year.
- To put these figures in perspective, in 2010, the federal and state governments together spent an average of \$336 on unintended pregnancies for every woman aged 15–44 in the country.
- In the absence of the current U.S. publicly funded family planning effort, the public costs of unintended pregnancies in 2010 might have been 75% higher.
- The total gross potential savings from averting all unintended pregnancies in 2010 would have been \$15.5 billion. This is less than the total public cost of all unintended pregnancies, because even if all women had been able to time their pregnancies as they wanted, some of the resulting births still would have been publicly funded. These potential savings do not account for the public investment in family planning services and other interventions that might be required to achieve them.



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# Introduction

Unintended pregnancy has long been acknowledged as an important health, social and economic problem in the United States—one that creates hardships for women and families and threatens the health and well-being of women and their infants.<sup>1-4</sup> Those consequences, in turn, have broad societal implications, including for the national economy and the extent of government expenditures.

Rates of unintended pregnancy are far higher among women living at or near the poverty level than among higher-income women—a disparity that grew substantially between 1994 and 2008.<sup>5,6</sup> Most of these low-income women are eligible for public coverage of pregnancy-related care through Medicaid, the Children’s Health Insurance Program (CHIP) or the Indian Health Service (IHS). Thus, these programs play a central role in preserving maternal and child health, and a substantial share of the cost burden of unintended pregnancy is likely to fall on the public.

This report provides national and state-level estimates for 2010 for public expenditures on unintended pregnancy, as well as for the contribution of public insurance programs in providing essential care to pregnant women and children. It closely follows the methodology used for the Guttmacher Institute’s 2006 and 2008 estimates.<sup>7,8</sup> However, because of several key changes to the methodology, public expenditure estimates for 2010 are not comparable with those for earlier years. Rates and numbers of unintended pregnancies in each state in 2010 are [presented elsewhere](#).<sup>9</sup>

## WHAT IS UNINTENDED PREGNANCY?

An unintended pregnancy is one that was either mistimed or unwanted. If a woman did not want to become pregnant at the time the pregnancy occurred, but did want to become pregnant at some point in the future, the pregnancy is considered mistimed; if she did not want to become pregnant then or at anytime in the future, the pregnancy is considered unwanted.

An intended pregnancy is one that was desired at the time it occurred or sooner.

When calculating unintended pregnancy rates, women who were indifferent about becoming pregnant are counted with women who had intended pregnancies, so that the unintended pregnancy rate only includes pregnancies that are unambiguously unintended.

In this report, births resulting from unintended pregnancies are referred to as unplanned and those resulting from intended pregnancies are referred to as planned.

# Methodology

The analysis in this report is based on the methodology used for the Guttmacher Institute's first state-level estimates of the publicly funded costs of births from unintended pregnancy for 2006 and its follow-up for 2008.<sup>7,8</sup> More details on the methodology can be found in those reports.

This report focuses on the cost of publicly funded births: those births with deliveries paid for by Medicaid, CHIP or IHS, including Medicaid and CHIP managed care plans, and Medicaid and CHIP programs operating under Section 1115 waivers (which permit states to receive federal funding for programs that do not meet federal Medicaid and CHIP requirements). For these 2010 estimates, we have included costs of prenatal care, labor and delivery, postpartum care and 60 months of care for the child. Also, we factored in the relatively small public costs of abortions and miscarriages resulting from unintended pregnancies.

To estimate the costs of publicly funded births, we obtained three underlying state-level estimates for each state: the number of unplanned births in a given year, the proportion of unplanned births with deliveries paid for by public programs and the cost to those programs for each birth. The same three underlying estimates were also obtained for planned births and births overall.

## Number of Births

A related Guttmacher Institute analysis estimated 2010 unintended pregnancy rates for all 50 states and the District of Columbia.<sup>9</sup> That analysis utilized birth counts from the U.S. vital statistics system; data on the intendedness of births from the Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based surveillance project of the Centers for Disease Control and Prevention (CDC); data from similar state-conducted surveys; and results from multivariate linear regression analyses for several states for which data were unavailable. We obtained the estimated number of unplanned births for each state from unpublished tabulations of the data used in that analysis. Descriptions of and additional notes about those data sources can be found in that report.<sup>9</sup>

## Births Paid for by Public Programs: Survey Data

PRAMS was the primary source for the proportion of births—all births, unplanned births and planned births—with deliveries paid for by Medicaid, CHIP and IHS. The core PRAMS questionnaire for 2010 asked how the respondent's delivery was paid for. Possible responses included Medicaid, personal income, private health insurance and up to two additional categories defined by individual states; respondents could also answer "other" and write in additional information.

PRAMS or similar data were available for 42 states. For 38 states, we obtained weighted estimates of the proportion of births paid by public funds from 2010 PRAMS data: Alabama, Alaska, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

For these 38 states, we identified CHIP and IHS programs, Medicaid and CHIP managed care plans, and Medicaid and CHIP waiver programs. For some states, these payment options were included on the PRAMS questionnaire as a response option for the delivery payment question and listed either within the Medicaid payment category or as a separate category.

The IHS was included as a state-specific category in nine states in the 2010 PRAMS survey (Alaska, Minnesota, Mississippi, Nebraska, New Mexico, Oklahoma, Oregon, Washington and Wisconsin). In addition, the following state-specific programs were included in this analysis: Alabama (All Kids), Alaska (Alaska Native Health Service), Arkansas (ARKids First), Colorado (Child Health Plan Plus), Connecticut (State Administered General Assistance and Charter Oak), Florida (Medipass), Illinois (All Kids, Moms and Babies), Michigan (Medical Outpatient Maternity Services), Nebraska (Medicaid managed care), New Jersey (New Jersey FamilyCare), New Mexico (Salud!), New York (Prenatal Care Assistance Program), North Carolina (Baby Love, NC Health Choice,

Health Check, Carolina Access), Pennsylvania (adultBasic), Rhode Island (RIte Care), Tennessee (CoverKids, Cover Tennessee and TennCare), Vermont (Dr. Dynasaur), Virginia (FAMIS) and Wisconsin (BadgerCare or BadgerCare Plus).

In addition, the payment-for-delivery question included an “other” response category, allowing respondents to write in other forms of payment. Relevant write-in responses were included for 26 states with data we were able to analyze. Those included variations and misspellings of Medicaid, CHIP and IHS; alternate program names, including generic ones (e.g., “medical assistance” or “Title XIX”) and state-specific ones (as confirmed on state Web sites); and the names of specific managed care plan issuers that specialize in Medicaid and other public insurance programs (as confirmed on state and issuer Web sites).

We also obtained tabulations from PRAMS-like surveys in four states: California (2011 Maternal and Infant Health Assessment, or MIHA), Idaho (2010 Pregnancy Risk Assessment Tracking System, or PRATS), Iowa (2010 Barriers to Prenatal Care survey) and Kentucky (2008 PRAMS pilot survey).

### **Births Paid for by Public Programs: Multivariate Regression**

For the remaining nine jurisdictions, PRAMS or similar data were unavailable: Arizona, the District of Columbia, Indiana, Kansas, Montana, Nevada, New Hampshire, North Dakota and South Dakota. For these, we report, in Table 1, estimates from a study by Markus and colleagues (2013) on the proportion of all births paid for by Medicaid in 2010.<sup>10</sup>

That study, however, does not include estimates for unplanned births or planned births. Instead, we used a multivariate linear regression analysis to predict estimates of the proportions of unplanned and planned births paid for by public coverage (including Medicaid, CHIP or IHS).

In the model, each of the 42 states with data represented an observation. The dependent variable was the proportion of unplanned births for which the delivery was covered by public insurance. (A separate model was estimated for planned births.) Independent variables, measured at the state level, included measures of the demographic composition of women aged 15–44, overall birthrate, unplanned birthrate, proportion of all births paid for by Medicaid and income-eligibility threshold for pregnancy-related care under Medicaid and CHIP. The model’s demographic measures included the percentage of women of reproductive age in the state who were in a particular age-group (15–19, 20–24 and 25–34), race or ethnicity category (non-Hispanic white, non-Hispanic black, Hispanic, and American Indian or Alaskan Native),

poverty status category (proportion below the poverty line) and insurance category (Medicaid/CHIP and uninsured); the reference categories, which were excluded to prevent overspecification of the model, were 35 or older, non-Hispanic other, proportion at or above the poverty line and proportion with private insurance, respectively. This model was identical to the model used for the 2008 study.<sup>8</sup>

The R<sup>2</sup> of the final model indicated that 89% of the variation in the proportion of unplanned births that were publicly funded and 95% of the variation in the proportion of planned births that were publicly funded could be accounted for by the independent variables.

Standard errors for the nine predicted values of the proportion of unplanned births that were publicly funded ranged from 0.01 to 0.05, except for in the District of Columbia (0.10), which is somewhat unlikely to conform to a model in which all the other observations are states, as opposed to cities. Standard errors for the nine predicted values of the proportion of planned births that were publicly funded ranged from 0.01 to 0.04 (0.06 for the District of Columbia).

### **Cost per Publicly Funded Birth**

State-level data on the average cost of a Medicaid-funded birth and 12 months of infant care in 2010 were drawn from an earlier Guttmacher Institute report.<sup>11</sup> Data on the cost of a CHIP- or IHS-funded birth were not available; for the current analysis, we assumed that it was the same as for a Medicaid-funded birth. Briefly, data on these Medicaid costs are not consistently collected for all states, but were available in applications or evaluations completed by 25 states that have sought a federal waiver to expand Medicaid eligibility specifically for family planning services (adjusted for inflation when necessary), and from another 10 states and the District of Columbia in response to a Guttmacher Institute survey.<sup>12</sup> For the remaining 15 states, we obtained estimates by averaging the available data and adjusting for differences among states in their Medicaid payment rates for physicians.

Additional data on the average cost of Medicaid-funded care for months 13–60 were drawn from a Guttmacher Institute analysis published in 2014, which expanded and updated our methodology for assessing the public savings related to U.S. publicly funded family planning services.<sup>13</sup> That analysis relied upon 2010 state-level data from the Medicaid Statistical Information System.

For the current analysis, we separated the average cost of a Medicaid-funded birth for each state into state and federal costs, on the basis of the state’s FY 2010 federal medical assistance percentage (i.e., the proportion of medical costs under Medicaid for which states receive

reimbursement from the federal government).<sup>14</sup>

We multiplied the number of unplanned births in each state by the proportion of such births paid for by public programs to arrive at each state's number of publicly funded unplanned births. That figure was then multiplied by the average cost of a Medicaid-funded birth in the state to arrive at a total cost for the state. The same process was used for the cost of all publicly funded births in each state (including planned births, which we subsequently calculated by subtraction).

## Public Costs for Miscarriages and Abortions

One change from the 2006 and 2008 iterations of this analysis is that, for 2010, we included estimates of the public costs of miscarriages and abortions to arrive at a more complete estimate of the total public costs of unintended pregnancies. Neither addition had a substantial effect on the nationwide total costs, with miscarriages accounting for 1.5% of total costs and abortions accounting for 0.3%.

We obtained unpublished numbers of total miscarriages and of miscarriages from unintended and intended pregnancies from a related Guttmacher Institute analysis of 2010 unintended pregnancy rates.<sup>9</sup> Following the methodology of the Guttmacher Institute's expanded assessment of the benefits and savings from publicly funded family planning services,<sup>13</sup> we assumed that the proportion of miscarriages that were publicly funded was equal to the proportion of births that were publically funded. That same report estimated that the average cost of a publicly funded miscarriage is 9.8% of the average cost of publicly funded maternity and infant care. We applied that estimate here to arrive at state-level cost estimates per miscarriage.

Public expenditures for abortions in 2010 were published in a prior Guttmacher Institute report.<sup>12</sup> Almost all of those costs are for the 17 states that use their own funds to pay for abortions for publicly insured women.

## Potential Savings from Preventing Unintended Pregnancies

The Guttmacher Institute's expanded assessment of the benefits and savings from publicly funded family planning services also included an adjustment to account for the likelihood that some unintended pregnancies would not actually result in public savings if prevented.<sup>13</sup> That is because, in some cases, a woman who is able to prevent a mistimed pregnancy, but eventually has a wanted one, may only delay rather than avoid the costs to public insurance. The expanded assessment concluded that 73.3% of unplanned publicly funded births would be cost-saving

to the government if prevented. The methodology for arriving at that adjustment factor is described in detail in the original report. (The adjustment factor is based on national data; state-level adjustments were not feasible with existing data.)

For this report, we estimated the total public costs for unintended pregnancies, alongside a second set of estimates for the potential gross savings from preventing those unintended pregnancies. To arrive at the second set of estimates, we applied the 73.3% adjustment factor to the costs of unplanned births. Note that these estimates do not account for the cost of the public investment (e.g., in family planning services) that might be required to achieve these potential savings.

## National Totals

According to the National Survey of Family Growth (NSFG), there were an estimated 1.67 million unplanned births in the United States in 2008;<sup>15</sup> by comparison, the state-specific estimates from the 2008 iteration of this study summed to 1.81 million unplanned births that year.<sup>8</sup> To account for that difference, in the 2008 report, we presented both unadjusted U.S. totals (summed from the state-level data) and adjusted U.S. totals (for unplanned births, that was calculated as 92.5%—1.67 million divided by 1.81 million—of the unadjusted totals). Throughout that report, we referred exclusively to adjusted totals when discussing national estimates.

For 2010, we did not have a national estimate from the NSFG of unplanned births. (The most recent national estimate is from 2008; the next national estimate, which is expected to be published later this year, will be for 2011.) Therefore, we continued to use the 92.5% adjustment factor from the 2008 iteration of this study.

## Limitations

Our estimates are subject to a number of limitations, many of which are inherent to the array of sources from which data were drawn and have been discussed previously.<sup>16,17</sup> Several others are important to highlight here.

Our method of attributing costs to state and federal governments has shortcomings. There are two ways it could understate federal contributions: We did not account for enhanced federal reimbursement to states for pregnant women enrolled in CHIP, rather than Medicaid; nor did we assign costs paid for by the IHS entirely to federal expenditures (IHS does not have a state matching component). Our method could overstate federal contributions, as well. We did not reduce federal expenditures to account for the typically lower reimbursement rate to states for women covered by Medicaid only for labor and

delivery on an emergency basis (e.g., for undocumented immigrants). The number of births affected by all three of these limitations, however, was relatively small, compared with the group for whom states receive reimbursement at their standard federal medical assistance percentage.

The public expenditures for unintended pregnancies, intended pregnancies and all pregnancies estimated in this paper for 2010 are not comparable with the public expenditures estimated in earlier Guttmacher papers for 2006 and 2008. As noted above, we included costs of prenatal care, labor and delivery, postpartum care and 60 months of care for the child, and we also factored in the relatively small public costs of abortions and miscarriages resulting from unintended pregnancies. The 2006 and 2008 estimates included only 12 months of care for the child, and did not include the costs of abortions and miscarriages.

# Findings

## Publicly Funded Births

- Nationally, 68% of the 1.5 million unplanned births in 2010 were paid for by public insurance programs, compared with 51% of all births and 38% of planned births (Table 1).
- Two million births were publicly funded in 2010; of those, about half—1.0 million—were unplanned. (By comparison, 1.5 million out of 4.0 million total births nationwide were unplanned, 38%.)
- In eight states and the District of Columbia, at least 75% of unplanned births were paid for by public programs (Map 1). Mississippi was the state with the highest proportion (82%); the proportion in the District of Columbia was 85%. All but two of those nine jurisdictions are in the South (as categorized by the U.S. Census Bureau), a region with high levels of poverty.
- In six states, the proportion of unplanned births paid for by public programs was below 50%; North Dakota had the lowest proportion (37%). The six states with the lowest proportions follow no clear geographic pattern
- State-level patterns for public coverage of all births (Map 2) and planned births were very similar to those for unplanned births. Mississippi and the District of Columbia had the highest proportions, and other southern states followed closely. New Hampshire and North Dakota had the lowest proportions paid for by public insurance programs.

## Public-Sector Costs

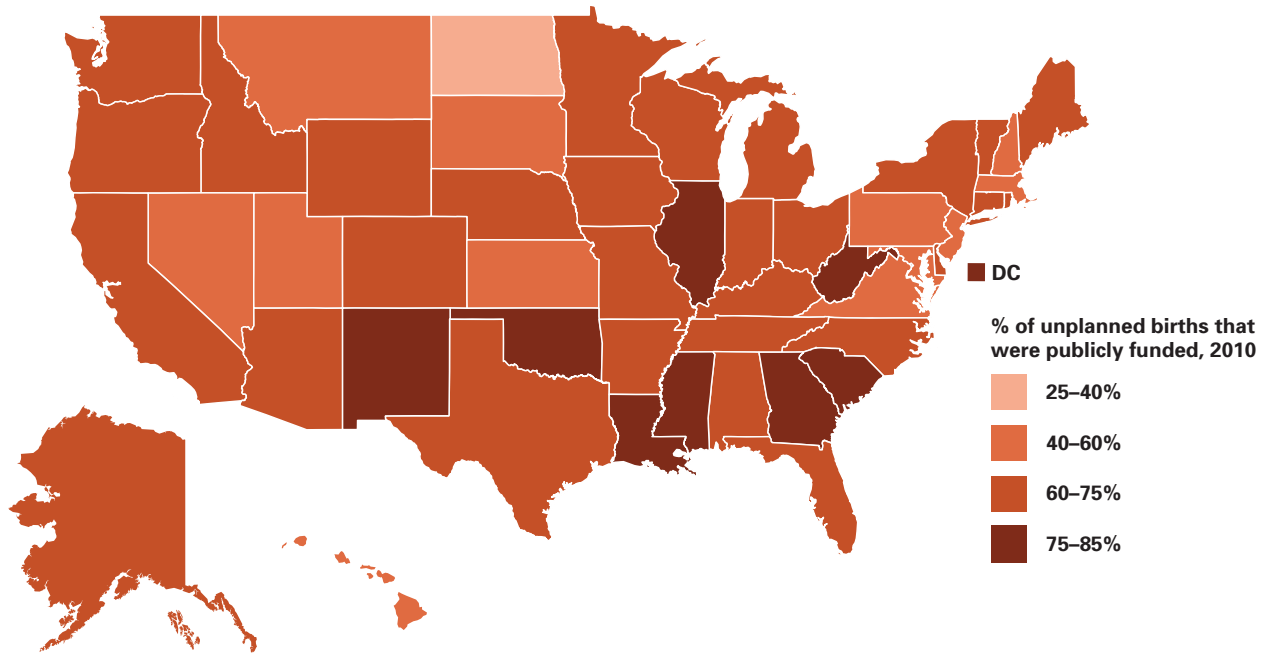
- On average, a publicly funded birth cost \$12,770 in prenatal care, labor and delivery, postpartum care and the first 12 months of infant care; care for months 13–60 cost, on average, another \$7,947, for a total cost per birth of \$20,716 (Table 2).
- Government expenditures on unintended pregnancies nationwide totaled \$21.0 billion in 2010; of that, \$14.6 billion were federal expenditures and \$6.4 billion were state expenditures (Table 3).
- In 19 states, public costs related to unintended pregnancies exceeded \$400 million (Map 3). Texas spent the most (\$2.9 billion), followed by California (\$1.8 billion),

New York (\$1.5 billion) and Florida (\$1.3 billion). (Those four states are the nation's most populous.)

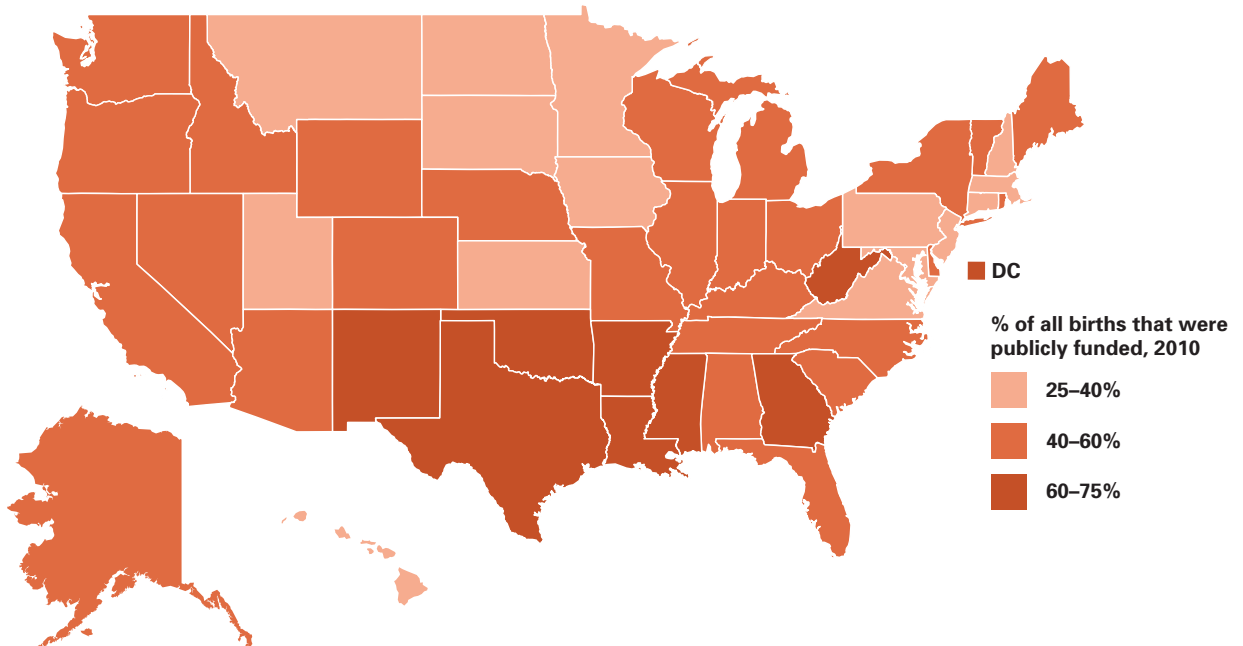
- To put these figures in perspective, the federal and state governments together spent an average of \$336 on unintended pregnancies for every woman aged 15–44 in the country.
- The average per woman aged 15–44 public expenditures on unintended pregnancies ranged from \$107 in New Hampshire to \$790 in Alaska; expenditures varied by state for a number of reasons, including variations in medical costs, the proportions of women who are poor and on Medicaid, the proportions of all births that are unplanned and the overall fertility rate of women in the state.
- The total potential gross savings from enabling women to avert all unintended pregnancies in 2010 would have been \$15.5 billion. This is less than the total public cost of all unintended pregnancies (74% of that total), because even if all women had been able to time their pregnancies as they wanted, some births still would have been publicly funded when they eventually occurred. In other words, improved access to and use of contraceptives would have, in some cases, only delayed the public costs, rather than avoided them entirely. (These potential savings do not account for the public investment in family planning services and other interventions that might be required to achieve them.)
- The federal and state governments spent \$19.8 billion for planned pregnancies in 2010; when added to the \$21.0 billion for unplanned pregnancies, the total for all publicly funded pregnancies was \$40.8 billion (Table 4). Thus, 51% of government expenditures on pregnancies in 2010 were spent on unplanned pregnancies.
- According to prior Guttmacher Institute research, the public investment in family planning services resulted in \$15.8 billion in gross savings in 2010 from helping women avoid unintended pregnancies and the resulting births, abortions and miscarriages.<sup>13</sup> Putting that in the context of this study's findings, in the absence of the publicly funded family planning effort, the annual public costs of unintended pregnancy might be 75% higher—\$36.8 billion, instead of \$21.0 billion.



**MAP 1. Medicaid and other public insurance programs paid for 68% of U.S. births resulting from unintended pregnancies in 2010, including at least 60% of births in 37 states and the District of Columbia**



**MAP 2. Medicaid and other public insurance programs paid for 51% of all U.S. births in 2010, including at least 40% of births in 35 states and the District of Columbia**



**MAP 3. Government expenditures on unintended pregnancies totaled \$21 billion in 2010, and surpassed \$400 million in 19 states**

