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CHAPTER



Maternity Services: Examining Eligibility and Coverage in Medicaid and CHIP

Key Points

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- ▶ In 2010, Medicaid and the State Children's Health Insurance Program (CHIP) paid for almost half of all births in the United States (about 1.8 million hospital births). Medicaid spending in the 12 months before and 2 months following deliveries for women in 2008 was about \$11 billion.
- ▶ Between 1984 and 1990, the Congress expanded Medicaid eligibility for poor and low-income pregnant women and children, creating new mandatory and optional eligibility groups. States are required to provide pregnancy-related coverage to pregnant women below 133 percent of the federal poverty level (FPL); a majority of states provide coverage to women above that level.
- ▶ The Patient Protection and Affordable Care Act (ACA) has several provisions affecting pregnant women, including mandating maternity care and other pregnancy-related services. Under the ACA in 2014, states have considerable discretion whether or not they will cover pregnant women above 138 percent FPL, and many have the option to reduce Medicaid or CHIP eligibility to this group in favor of exchange coverage. Because separate eligibility pathways based on pregnancy will continue, the possibility of churning exists as women gain and lose eligibility based on their pregnancy status and cycle among Medicaid, CHIP, and private coverage available through health insurance exchanges, or to an uninsured status.
- ▶ Although CHIP originally did not include coverage for pregnant women, states can offer CHIP-financed services to pregnant women through Section 1115 waivers or through an option to cover services for unborn children. A law enacted in 2009 allowed states to cover pregnant women through state plan amendments.
- ▶ Depending on the eligibility pathway, services covered under Medicaid and CHIP range from full Medicaid benefits to coverage of only services related to the pregnancy to emergency coverage for labor and delivery.
- ▶ Many states offer benefits to pregnant women that are not offered to other Medicaid adult enrollees, including dental services, prenatal risk assessments, home visiting programs, targeted case management, preconception counseling, psychosocial counseling, and substance abuse treatment.
- ▶ Almost one-third of Medicaid deliveries (31 percent) were by cesarean section, a figure comparable to rates for all births. Cesarean deliveries cost more than vaginal deliveries and are associated with more adverse outcomes. Many states, in partnership with the federal government and private organizations, have initiated programs to reduce elective cesarean sections and non-medically indicated induced deliveries before 39 weeks of gestation to help improve maternal and infant outcomes and to reduce costs.

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In 2010, Medicaid and the State Children’s Health Insurance Program (CHIP) together paid for nearly half of the nearly 4 million live births in the United States.¹ Maternity-related services covered by the programs include prenatal care, labor and delivery services, and 60 days of postpartum care.

There is room for improvement in the delivery of maternity services and related outcomes in the United States—overall and within Medicaid and CHIP. About one in eight of all babies born in the United States in 2011 were preterm (born before 37 weeks gestation), and 8 percent of babies born in that year were considered to have low birth weight (LBW, defined as less than 2,500 grams or 5 pounds, 8 ounces; Hamilton et al. 2012). As a major payer of maternity services, Medicaid plays a key role in reducing preterm births and improving care and outcomes for women and babies. Current efforts by state Medicaid programs to reduce unnecessary or potentially harmful procedures—such as non-medically indicated inductions or scheduled cesarean sections prior to 39 weeks of gestation—include both payment incentives and educational programs. Other efforts promote medical homes, tobacco cessation, obesity management, oral health, and early prenatal care.

The Patient Protection and Affordable Care Act (ACA, P.L. 111–148, as amended) includes many provisions that could benefit pregnant women, including the streamlining of Medicaid eligibility, the creation of health insurance exchanges with subsidized coverage, and the establishment of essential health benefit packages. However, issues remain related to transitions in eligibility due to changes in pregnancy status that create discontinuities in coverage, as well as discrepancies in covered benefits between Medicaid, CHIP, and insurance plans offered through the exchanges.

This chapter describes the role of Medicaid and CHIP in covering maternity care. It begins by presenting general statistics about births in the United States in order to put Medicaid and CHIP's role in a broader context. It then provides an overview of current eligibility pathways to Medicaid and CHIP for pregnant women, the packages of services offered to women who become eligible via each pathway, and how the ACA could affect the pathways and benefit packages. Next, the chapter describes Medicaid initiatives designed to improve maternal and perinatal outcomes. Finally, it concludes with a discussion of several policy issues, including those relating to ACA implementation, which MACPAC will follow over the next few years.

Policy Context: Births in the United States

Birth rates in the United States have been declining over time, as have births to teenage and unmarried mothers. There also have been recent declines in the share of births that are preterm or LBW babies, and in infant mortality.

Birth rate. The birth rate for 2011 was the lowest rate ever reported in the United States (63.2 births per 1,000 women aged 15 to 44). Birth rates vary considerably by state, ranging from 51.5 births per 1,000 women aged 15 to 44 in Rhode Island, to 83.6 births per 1,000 women aged 15 to 44 in Utah (Hamilton et al. 2012).

Teenage birth rate. The teenage birth rate fell to a historic low in 2011—31.3 births per 1,000 women aged 15 to 19—down 8 percent from 2010 (34.2 per 1,000). The birth rate for teenagers has declined more than 3 percent per year since the most recent peak in 1991 (61.8 per 1,000), and the rate of decline has accelerated since 2007 (Hamilton et al. 2012). Six percent of Medicaid deliveries in 2008 were to women under

age 18 (MACPAC analysis of Medicaid Statistical Information System (MSIS) data, 2013).

Non-marital birth rate. Over two-fifths of all births (40.7 percent) in 2011 were to unmarried women. The percentage of births to unmarried women increased in 4 states and declined in 10 states between 2010 and 2011. Unmarried teenagers accounted for 18 percent of all non-marital births in 2011, the lowest percentage ever reported (Hamilton et al. 2012).

Preterm birth rate. The preterm birth rate (the percentage of births delivered at less than 37 completed weeks of gestation) fell for the fifth straight year in 2011 to 11.7 percent, from its 2006 peak of 12.8 percent (Hamilton et al. 2012). Rates declined in 47 states and the District of Columbia between 2010 and 2011, while remaining essentially unchanged in the remaining states.

The preterm birth rate rose by more than one-third from 1981 to 2006. Although at its lowest level in more than a decade, the 2011 preterm birth rate is still higher than rates reported during the 1980s and most of the 1990s (Martin et al. 2010).

Infant mortality rate. There were 26,408 infant deaths in the United States in 2009—a 6 percent decline from 2008. The U.S. infant mortality rate was 6.4 infant deaths per 1,000 live births in 2009 compared to 6.6 in 2008. Infant mortality was higher for male infants, infants born preterm, infants born with LBW (who were more likely to be twins or higher order births), and to mothers who were unmarried. From 2007 to 2009, infant mortality rates ranged from a high of 11.5 per 1,000 live births for the District of Columbia to a low of 4.8 per 1,000 live births for New Hampshire (Mathews and MacDorman 2013).

Low birth weight rate. The 2011 LBW rate was 8.1 percent (Hamilton et al. 2012). The LBW rate had increased more than 20 percent from

the mid-1980s through 2006, but declined slowly from 2006 to 2011. In 2010, the jurisdictions with the highest percentages of LBW babies were Alabama, the District of Columbia, Louisiana, and Mississippi; each had more than 10 percent of newborns in this category. The lowest percentages were in Alaska, New Hampshire, North Dakota, Vermont, and Washington—all with a LBW rate lower than 7 percent (Martin et al. 2012b).

Low-income births. In 2010, 48 percent of children under age five lived in households whose incomes were below 200 percent of the federal poverty level (FPL) (U.S. Census Bureau 2011). Over the past four decades, nearly half of children born to poor parents were poor for at least half their childhoods—that is, persistently poor—and there have not been significant improvements for recent generations (Ratcliffe and McKernan 2012).

Factors associated with pregnancy and birth outcomes

Most births occur without adverse outcomes. The problems that do occur for mothers and infants during pregnancy and the birth process often stem from preventable causes. Maternal behaviors known to be related to poor birth outcomes include tobacco use, alcohol and drug use, and failure to consume adequate folic acid. Other conditions associated with poor pregnancy outcomes include unintended pregnancy, suboptimal birth spacing, physical abuse, and high levels of stress (Bailey and Byrom 2007, D’Angelo et al. 2007).

Certain maternal health conditions (e.g., diabetes, hypertension, and obesity), if uncontrolled, can have a long-term negative impact on a woman’s health and can lead to poor infant outcomes. Uncontrolled diabetes during pregnancy, for example, raises the risk of maternal health problems and birth defects threefold (D’Angelo et al. 2007). Persons living below 200 percent

FPL are almost twice as likely to have diabetes as persons above 400 percent FPL and are also significantly more likely to be obese (NCHS 2012). Obesity before and during the early months of pregnancy is closely linked to diabetes and is also associated with stillbirth, early neonatal death, fetal macrosomia (big baby, or large for gestational age, syndrome), birth defects, preeclampsia, and hypertensive and thromboembolic disease. In addition to these conditions, having had a previous preterm, LBW infant is a predictor of poor birth outcomes for subsequent pregnancies (D’Angelo et al. 2007).

Preterm births and low birth weight. Preterm birth and LBW babies are more likely than other infants to spend time in a neonatal intensive care unit (NICU) or a neonatal intermediate care unit (NINT). These special nursery hospital units or facilities are staffed and equipped to provide continuous specialized support for newborns requiring intensive care. According to a study commissioned by the March of Dimes, the average NICU stay at reporting hospitals cost about \$76,000 for 13.2 days (March of Dimes 2011).² Nearly 7 percent of U.S. newborns were admitted to a NINT or a NICU in 2008, and about half of NICU stays at children’s hospitals were paid for by Medicaid (Children’s Hospital Association 2013, Osterman et al. 2011).

Medicaid and CHIP Eligibility for Pregnant Women

Historically, to be eligible for Medicaid or CHIP, an individual must fall into an eligibility category, such as pregnant women, and must meet certain financial and non-financial requirements. Generally, each category includes mandatory and optional eligibility groups. Because states can choose whether or not to adopt optional groups as part of their state plans, eligibility varies from state to state.

States can also receive approval from the Centers for Medicare & Medicaid Services (CMS) to expand eligibility via a Section 1115 demonstration waiver to individuals who would not otherwise be eligible for Medicaid or CHIP. Section 1115 demonstrations are initially approved for a five-year period, but can be renewed for additional years.

This section describes the various pathways through which pregnant women may become eligible for Medicaid or CHIP. The next section describes Medicaid or CHIP coverage provided to pregnant women by eligibility group.

Medicaid eligibility for pregnant women through 2013

Before 1984, the only pregnant women states were required to cover in Medicaid were eligible through two pathways: (1) as parents or caretaker relatives of dependent children receiving cash assistance under the Aid to Families with Dependent Children (AFDC) program, or (2) as disabled individuals. Today, most become eligible under more recent eligibility categories created specifically for pregnant women.

In 1984, the Congress added a mandatory eligibility category for certain low-income pregnant women who would be eligible for AFDC if their child were born and living with them. Between 1984 and 1990, the Congress repeatedly expanded Medicaid eligibility for low-income pregnant women, creating new mandatory and optional eligibility groups.

Pregnant women up to 133 percent FPL. Since 1989, pregnant women with incomes at or below 133 percent FPL have been a mandatory Medicaid eligibility group (Table 1-1). Because their eligibility is related to their income relative to the FPL, this pathway is referred to as mandatory poverty-related pregnant women. States are only required

to cover pregnancy-related services for this group, but may cover full Medicaid benefits at the state option. Most states define such services broadly enough to equal full Medicaid coverage (CMS 2012).

Pregnant women with incomes above 133 percent FPL. All but nine states have extended Medicaid coverage to pregnant women above the required level of 133 percent FPL. Among those states, a majority (36 states and the District of Columbia) have raised their eligibility threshold for pregnant women to 185 percent FPL or higher. Iowa, Wisconsin, and the District of Columbia cover pregnancy-related services for optional poverty-related pregnant women with incomes as high as 300 percent FPL (MACPAC 2013).

CHIP

Compared to Medicaid, CHIP covers far fewer pregnant women. In 2012 there were about 10,000 pregnant women and 318,000 unborn children covered by CHIP (MACPAC analysis of CHIP enrollment data 2013). CHIP originally did not permit any coverage of pregnant adults. However, CMS later issued guidance allowing states to provide CHIP-financed services to pregnant women through Section 1115 demonstration waivers, or through an option to cover services for unborn children. The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA, P.L. 111-3) created additional CHIP eligibility pathways for pregnant women.

Section 1115 waivers. In 2000, CMS issued guidance announcing it would use the authority under Section 1115 of the Social Security Act (the Act) to approve waivers of federal CHIP law to enroll uninsured pregnant women in CHIP under certain prescribed circumstances (CMS 2000). CHIP Section 1115 waivers give states the flexibility to provide comprehensive health benefits to pregnant women throughout

TABLE 1-1. Legislative Milestones in Medicaid and CHIP Coverage of Pregnant Women

1984	<p>Deficit Reduction Act of 1984 (DRA, P.L. 98–369)</p> <ul style="list-style-type: none"> ▶ Required states to provide Medicaid to pregnant women with no other dependent children who would be a single parent (or a parent with the other parent incapacitated) and eligible for Aid to Families with Dependent Children (AFDC) if the child were born. ▶ Required states to provide Medicaid to pregnant women who would be in a family with two able-bodied parents (one of whom must be unemployed) and who would be eligible for AFDC if the child were born.
1986	<p>Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA, P.L. 99–272)</p> <ul style="list-style-type: none"> ▶ Required states to cover pregnant women meeting state AFDC income and resource standards, regardless of the employment or marital status of the family. ▶ Required 60 days postpartum coverage for pregnant women. ▶ Provided that pregnancy-related services available to covered women need not be available to other Medicaid enrollees.
1986	<p>Omnibus Budget Reconciliation Act of 1986 (OBRA '86, P.L. 99–509)</p> <ul style="list-style-type: none"> ▶ Allowed states the option to cover all pregnant women (and young children up to age 5) in families with incomes at or below 100 percent of the federal poverty level (FPL), regardless of their AFDC eligibility status or assets. ▶ Permitted states to provide ambulatory prenatal care to women during a presumptive eligibility period of up to 45 days, if: <ul style="list-style-type: none"> ■ the woman has begun maternity care with a qualified provider; ■ the provider determines that the woman's family income falls below the applicable Medicaid standard and notifies the state of the woman's eligibility within five working days; and ■ the woman applies for such benefits within 14 days of being presumed eligible.
1987	<p>Omnibus Budget Reconciliation Act of 1987 (OBRA '87, P.L. 100–203)</p> <ul style="list-style-type: none"> ▶ Allowed states the option to extend Medicaid coverage to pregnant women and infants up to 185 percent FPL.
1988	<p>Medicare Catastrophic Coverage Act of 1988 (MCCA, P.L. 100–360)</p> <ul style="list-style-type: none"> ▶ Required states to phase in Medicaid coverage for all pregnant women and infants in families with income up to 100 percent FPL. (Much of MCCA was repealed in 1989, but provisions related to pregnant women were retained.)
1989	<p>Omnibus Budget Reconciliation Act of 1989 (OBRA '89, P.L. 101–239)</p> <ul style="list-style-type: none"> ▶ Required Medicaid coverage for all pregnant women (and children under age 6) in families with incomes at or below 133 percent FPL.

TABLE 1-1, Continued

1996	Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA, P.L. 104–193) <ul style="list-style-type: none"> ▶ Prohibited Medicaid coverage for non-emergency services to otherwise eligible legal non-citizens entering the United States on or after August 22, 1996 (including pregnant women), until they have resided in the United States for five years. Permitted coverage after the five-year ban at state option.
2009	Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA, P.L. 111–3) <ul style="list-style-type: none"> ▶ Permitted states to cover lawfully residing pregnant women and children through Medicaid and CHIP without regard to the five-year residency requirement. ▶ Allowed states to cover low-income pregnant women under CHIP through a state plan amendment.
2010	Patient Protection and Affordable Care Act of 2010 (ACA, P.L. 111–148) <ul style="list-style-type: none"> ▶ Added tobacco cessation programs for pregnant women and services provided at freestanding birth centers as mandatory benefits.

pregnancy, as well as during a 60-day postpartum period (CMS 2009). However, CHIP funding is capped, and states are required to prioritize coverage for children over coverage for adults. In fiscal year (FY) 2012, Colorado covered 4,873 pregnant women and Virginia covered 4,101 pregnant women under a CHIP waiver (MACPAC 2013).

Unborn child state plan option. In 2002, CMS provided a means of covering prenatal care under a CHIP state plan by revising the definition of the term child in federal regulations to include the period from conception to birth (CMS 2002). States that elect this option provide coverage to the unborn child, not the pregnant woman herself. Therefore, only services related to pregnancy or conditions that could complicate pregnancy may be covered using this option, although states have broad flexibility in defining these services. A pregnant woman may receive prenatal care under this option, regardless of her immigration status, because the fetus will be a citizen once born (CMS 2009, CMS 2002). Postpartum services for mothers are not covered under any circumstance. In FY

2012, 16 states enrolled approximately 318,000 unborn children in CHIP (MACPAC analysis of CHIP enrollment data 2013).

CHIP state plan coverage of pregnant women.

CHIPRA allows states to provide health care coverage for uninsured, targeted low-income pregnant women under the CHIP state plan. Unlike the unborn child option, the CHIPRA option covers the pregnant woman—providing comprehensive benefits that include prenatal and delivery care, as well as 60 days of postpartum care. Cost sharing and benefit rules under this option must be comparable to the rules for children in CHIP. In FY 2012, New Jersey covered 312 women under this option, and Rhode Island covered 379 (MACPAC 2013).

Coverage provided through this option must not replace existing Medicaid coverage for pregnant women, and states must provide Medicaid to pregnant women with incomes up to at least 185 percent FPL. States must also provide CHIP to children with family incomes up to at least

200 percent FPL in order to cover targeted low-income pregnant women (CMS 2009).

Presumptive eligibility for pregnant women

As described in Table 1-1, the Omnibus Budget Reconciliation Act of 1986 (P.L.99-509) allowed states to permit certain qualified providers to provide ambulatory prenatal care to pregnant women on the basis of preliminary eligibility information, even if they have not formally been determined eligible. This mechanism of presumptive eligibility allows women to obtain Medicaid-covered prenatal care immediately. This ensures that providers are paid for any services they deliver during the presumptive eligibility period, even if the pregnant woman is not subsequently determined eligible. Under current law, a presumptive eligibility period lasts for up to 60 days, when the full eligibility determination must be completed for coverage to continue. Currently 31 states allow presumptive eligibility for pregnant women (KFF 2013).

Non-citizens

Eligibility for Medicaid maternity benefits and services differs by immigration status of the pregnant woman. Medicaid eligibility for non-citizens who are unauthorized or illegally present is limited to coverage for the treatment of an emergency medical condition, including labor and delivery. These individuals must meet all of Medicaid's financial and non-financial eligibility criteria, other than immigration status, in order to qualify for emergency coverage.

Under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193), most legal immigrants (referred to as qualified aliens in that law) are subject to a five-year bar on regular Medicaid eligibility, at which point their coverage becomes a state option.

As with non-citizens who are unauthorized or illegally present, these qualified aliens are eligible for emergency Medicaid during their five-year waiting period (and beyond, if a state opts not to provide them with regular Medicaid coverage), but only if they meet all other eligibility criteria for the program. In 2009, CHIPRA permitted states to provide regular Medicaid and CHIP coverage to all lawfully residing pregnant women and children, including those otherwise subject to the five-year waiting period (CMS 2010).

In 2008, there were about 295,000 deliveries paid for by Medicaid under the restricted emergency benefit for non-citizens (Table 1-2).

The ACA and eligibility for maternity services

Pregnant women will be affected by ACA provisions that change Medicaid eligibility for many adults and create subsidies for private coverage through health insurance exchanges.

Under the ACA, states must maintain eligibility and enrollment policies for Medicaid that were in place for pregnant women (and all adults) at the time the law was enacted until new health insurance exchanges are operational in 2014. At that time, all states must determine eligibility for pregnant women (and certain other populations) using the new national income counting methodology, modified adjusted gross income (MAGI). As part of MAGI-based eligibility determinations, states will be required to disregard income equal to 5 percent FPL. For this reason, income eligibility in 2014 for populations including pregnant women is often referred to at its effective level of 138 percent FPL, even though federal statute specifies 133 percent FPL.

With the expiration of the maintenance of effort for adults in 2014, many states will have the option to transition pregnant women with

incomes above 138 percent FPL from Medicaid to private coverage available through health insurance exchanges. However, states that had a higher income standard in effect for pregnant women in 1989 must keep their higher standard (§1902(l)(2)(A) of the Act); this long-standing maintenance of effort appears to apply to 19 states (NGA 1990).

Pregnant women and the new adult group. The ACA called for expanding Medicaid eligibility in 2014 to nearly all non-elderly adults with income up to 138 percent FPL. Newly eligible individuals in this expansion group are funded with a 100 percent federal match in 2014, 2015, and 2016, with the rate declining to 90 percent for 2020 and beyond. The ACA specifies that pregnant women with incomes below 138 percent FPL are not eligible for coverage under the new adult group. Because states are not required to track the pregnancy status of women enrolled through the new adult group, women who enroll in this group and later become pregnant are likely to stay enrolled in the adult group (CMS 2013). It is possible that some pregnant women would request that the state move them to a pregnancy-related eligibility group if they need specific benefits that are not available under the adult group benefit package. However, if a woman indicates on the application that she is pregnant, and is therefore enrolled in Medicaid coverage as a pregnant woman, the state will receive federal funds at the normal match rate (CMS 2012).

Pregnant women with incomes above 138 percent FPL. Under the ACA, states have considerable discretion as to how they will cover pregnant women above 138 percent FPL. For example, a state might provide full Medicaid benefits for pregnant women up to 185 percent FPL and provide only pregnancy-related coverage through the pregnant women group for those who have incomes up to a higher state-defined level. Alternatively, a state might provide full Medicaid

for pregnant women with incomes at or below 138 percent FPL and CHIP waiver coverage for those with incomes up to 200 percent FPL. In this scenario, premium tax credits and cost-sharing reductions associated with private coverage available through health insurance exchanges may be accessible to eligible women above 200 percent FPL and below 400 percent FPL.

Concerns related to churning. Churning occurs when individuals enroll and disenroll in different health insurance programs, or to uninsured status, often within a relatively short period of time. Because separate eligibility pathways based on pregnancy will continue, the possibility of churning still exists as women gain and lose eligibility based on their pregnancy status and cycle between Medicaid, CHIP, and private coverage available through health insurance exchanges, or to uninsured status. This could create challenges as enrollees may experience discontinuity of care and changes in what they must pay for care if provider networks or benefits differ among programs. States, providers, and health plans could also experience administrative burdens as women change insurance status based on their pregnancy status.

Covered Benefits for Maternity Services

Depending on the eligibility group, as described above, pregnant women may qualify for different levels of coverage.

- ▶ **Full Medicaid or CHIP coverage.** Full Medicaid coverage includes all medically necessary hospital and physician services, as well as family planning, nurse midwife, and freestanding birth center services. Full CHIP coverage for pregnant women could consist of a Medicaid look-alike package, or benchmark or benchmark-equivalent coverage.

- ▶ **Pregnancy-related services only.** For Medicaid, pregnancy-related services are only services related to pregnancy, labor and delivery, and any complications that may occur during pregnancy, as well as prenatal and postpartum care.
- ▶ **Services for an unborn child.** State CHIP programs may cover the unborn children of pregnant women. In this instance, services related to prenatal care and other care to ensure a healthy baby and safe delivery are covered (CMS 2002).
- ▶ **Medicaid emergency medical services.** This includes labor and delivery, but not any prenatal or postpartum care.

This section discusses what services are included in pregnancy-related benefits in current Medicaid programs, and what will be required under the ACA. It also discusses some enhanced benefits that states offer and additional benefits required by the ACA that will be relevant for pregnant women.

Pregnancy-related benefits through 2013

Federal law permits states to limit coverage to pregnancy-related services for women with family incomes above the May 1, 1988, AFDC levels. Women below the 1988 AFDC levels must receive full Medicaid benefits; above this level, it is a state option whether to cover only pregnancy-related benefits or full benefits.

Pregnancy-related services are those that are necessary for the health of the pregnant woman and fetus, including:

- ▶ prenatal care;
- ▶ delivery;
- ▶ postpartum care;
- ▶ family planning services; and

- ▶ services for other conditions that might complicate the pregnancy, threaten carrying the fetus to full term, or create problems for the safe delivery of the fetus (42 CFR 440.210).

For eligibility groups entitled to only pregnancy-related services, most states define such services broadly enough to equal full Medicaid coverage (42CFR 435.116(d)(1); CMS 2012). It is not clear how many states define pregnancy-related services more narrowly and whether this has any impact on maternal or birth outcomes. Box 1-1 provides an example: Texas' CHIP perinatal coverage for unborn children through its state plan amendment (SPA).

Across all births covered by Medicaid in 2008, about 1.1 million (69 percent) were to women with full Medicaid benefits, while about 174,000 (11 percent) were to women categorized as having only pregnancy-related benefits (Table 1-2).

Pregnancy-related benefits under the ACA

Federal regulations issued under the ACA clarify that states can continue to choose to provide full Medicaid benefits to all pregnant women in Medicaid (42 CFR 435.116(d)(1)). As mentioned above, for eligibility groups entitled to only pregnancy-related services, most states define such services broadly enough to equal full Medicaid coverage, and the assumption is that full Medicaid coverage is the default for these groups (42 CFR 435.116(d)(1)). However, if a state chooses to limit coverage to pregnancy-related services, CMS will require a SPA that explains the state's basis for determining which services are not pregnancy-related, and the rationale for not covering them (CMS 2012).

This creates a situation in which women who are pregnant may be eligible for fewer Medicaid benefits than women of the same or higher income

BOX 1-1. Texas CHIP Perinatal Coverage

The Texas CHIP perinatal program pays for care to unborn children of pregnant women with household income up to 200 percent of the federal poverty level (FPL) and who are not eligible for Medicaid. Once born, the child will receive benefits that are similar to the traditional CHIP benefits for the duration of the 12-month coverage period.

Benefits for the unborn child include:

- ▶ up to 20 prenatal visits
 - during the first 28 weeks of pregnancy: one visit every four weeks;
 - during 28 to 36 weeks of pregnancy: one visit every two to three weeks;
 - from 36 weeks to delivery: one visit per week;
 - additional prenatal visits allowed if medically necessary;
- ▶ some laboratory testing, assessments, planning services, education, and counseling;
- ▶ prescription drug coverage based on the current CHIP formulary; and
- ▶ hospital facility charges and professional services charges related to the delivery.

False labor and preterm labor that does not result in a birth are not covered benefits.

For families with income from 186 to 200 percent FPL:

- ▶ qualifying hospital facility charges paid through the CHIP perinatal health plan; and
- ▶ qualifying professional service charges paid through the CHIP perinatal health plan.

For families with income at or below 185 percent FPL (the majority of CHIP perinatal clients):

- ▶ hospital facility charges paid through Emergency Medicaid; and
- ▶ professional service charges paid through CHIP.

Source: Texas HHSC 2013.

levels. While women in the new adult group or in exchange coverage will have coverage for 10 broad categories of essential health benefits specified in the ACA, poverty-related pregnant women may have coverage for only pregnancy-related care.³

The ACA mandates that both Medicaid and exchange plans cover a number of preventive health services that the Institute of Medicine identifies as critical, including several related to healthy pregnancy and birth. No copayment,

coinsurance, or deductible can be charged for maternity care or the following additional services:

- ▶ smoking cessation;
- ▶ screening for gestational diabetes;
- ▶ human papillomavirus (HPV) DNA testing for women 30 years and older;
- ▶ sexually transmitted infection counseling;

- ▶ Food and Drug Administration-approved contraception methods and contraceptive counseling;
- ▶ HIV screening and counseling;
- ▶ domestic violence screening and counseling;
- ▶ well women visits; and
- ▶ breastfeeding support and supplies (CMS 2011).⁴

The ACA also requires that Medicaid cover services provided in freestanding birth centers. States have discretion over the specific types of practitioners that can perform services at these birth centers.

Coverage for enhanced benefits during pregnancy

Some states offer benefits to pregnant women that are not offered to other Medicaid enrollees. While they are not mandated as pregnancy-related services, states have sought to improve pregnancy and birth outcomes with these enhanced benefits.

Dental services. Recent studies have reported an emerging link between periodontal disease and an increased risk for preterm birth and LBW infants. Some studies indicate that treatment for periodontal disease during pregnancy can improve birth outcomes. Other studies disagree; however, there appears to be an emerging consensus that preventive dental care during pregnancy is desirable (Boggess et al. 2013, Albert et al. 2011, Detman et al. 2010, Offenbacher et al. 2006). In 2004, data from the Pregnancy Risk Assessment Monitoring System showed that pregnant women covered by Medicaid prior to their pregnancy were significantly less likely to have had a dental visit (73 percent) during their pregnancy than privately insured women (85 percent) (D’Angelo et al. 2007).

Dental services for adults (age 21 and over) are an optional Medicaid benefit; most states provide

limited, or no, coverage of adult oral health services. However, several states extend dental coverage only to pregnant women. In recent years, due in part to budget constraints, there has been considerable activity in state legislatures to either add or remove dental coverage for this group. For example, Louisiana removed dental coverage for pregnant women effective January 31, 2013 (Louisiana DHH 2012).

Other enhanced benefits. Enrollment in Medicaid or CHIP does not guarantee that pregnant women will receive recommended maternity care, such as early prenatal care. Most states cover some enhanced benefits for pregnant women that are designed to improve compliance with early prenatal care, encourage healthy behavior and nutrition in both the preconception period and during pregnancy, and to screen for, diagnose, and treat conditions that may complicate pregnancy (Johnson and Witgert 2010).

The extent of enhanced benefits coverage offered by states has changed over time. More states provided prenatal risk assessments, nutritional counseling, home visiting programs, health education, targeted case management, and preconception counseling in the 1990s than in 2007. However, other pregnancy benefits were more prevalent in 2007, including smoking cessation, transportation services, psychosocial counseling, dental coverage, and substance abuse treatment (Hill et al. 2009).

Access to Maternity Care

Having coverage for maternity services does not guarantee access to care. Access to obstetricians and gynecologists (OB/GYNs), who provide a majority of maternity care, is a significant issue in many areas of the country, possibly due to falling numbers of practicing maternity care providers (Anderson et al. 2008). Many OB/GYNs have

either stopped delivering babies or plan to stop in the near future (Loafman and Nanda 2009).

In 2010, nearly 50 percent of U.S. counties had no OB/GYNs providing direct patient care (ACOG 2013). As another indication that OB/GYNs are not well distributed, 15 percent of counties have above-average concentrations of OB/GYNs relative to their population, while 85 percent of counties are below the national average. Relative to population, non-metropolitan counties have fewer than half as many OB/GYNs as metropolitan counties (1.4 versus 3.3 per 10,000 females 15 years of age and over). Almost all (93 percent) of the counties that had no OB/GYNs also had no certified nurse midwives in 2003 (NCHS 2008).

Shortages of OB/GYNs can result in long waiting times for appointments or long travel times to appointments. Obstetrics and gynecology have become particularly prone to workforce challenges due to concerns surrounding professional liability, unpredictable working hours, declining medical student interest, reductions in the numbers of OB/GYN residency programs, and increasing subspecialization by graduating residents. These factors have contributed to inadequate access to maternal and reproductive care, especially in underserved communities (Anderson et al. 2008).

The number of hospitals offering obstetric services has also been declining over time, particularly in non-metropolitan counties that may already have a shortage of OB/GYNs (Zhao 2007). Forty-four percent of non-metropolitan counties lacked hospital-based obstetric services in 2002, compared with 24 percent in 1985. In the mid-1980s, residents in about half of these counties had access to obstetric services in a local hospital; by the early 2000s, only about one-fifth of the most rural counties had at least one hospital providing obstetric services.

As the number of practicing OB/GYNs has declined, other practitioners are providing maternity care. In areas with few obstetricians, much of this care is delivered by family physicians and by nurse midwives or nurse practitioners. However, fewer family physicians have been providing maternity care over time (Tong et al. 2012). The trend is reversed for nurse midwives; in 2010, 8.4 percent all U.S. births were midwife-attended, up from 7.8 percent in 2000 and 1 percent in 1975 (Martin et al. 2012a, 2002). However, nurse midwives face potential barriers, including lower Medicaid payments relative to OB/GYNs in many states, restricted hospital privilege policies regarding non-physician practitioners practicing in inpatient settings, and state scope of practice laws (Brassard and Smolenski 2011, Reed and Roberts 2000).

Some states have implemented programs to increase access to obstetric providers in underserved areas for their Medicaid and CHIP enrollees. For example, New York's Medicaid Obstetrical and Maternal Services Program provides complete pregnancy care services (medical and health supportive) in areas of the state without prenatal care health centers. Medical services are provided in private physicians' offices. Health supportive services such as nutrition and psychosocial services, health education, HIV counseling and testing, and assistance with the Medicaid and Special Supplemental Nutrition Program for Women, Infants, and Children applications are provided by approved providers.

Utilization and Expenditures for Medicaid Maternity Services

In 2010, there were about 1.8 million births in community hospitals to women enrolled in Medicaid (or in some cases CHIP) at the time

of their delivery. (See Chapter 1 Appendix for a description of data sources used and data limitations.) Almost half (46 percent) of all deliveries were paid by Medicaid in 2010 (Table 1-3). States varied in the percentage of total births paid by Medicaid from a low of 20 percent in Minnesota to a high of 61 percent in Oklahoma.

Medicaid spending

Medicaid spent about \$11 billion on health care for women who delivered a baby in a hospital while enrolled in Medicaid in 2008 (Table 1-2). This includes all Medicaid costs billed for the mother for the 12 months before and 2 months following delivery, which could include costs not associated with the pregnancy. Sixty-nine percent of total spending was for women with full Medicaid benefits.⁵ Using Healthcare Cost and Utilization Project (HCUP) data, which estimates costs based on charges for the hospitalization during which the deliveries occurred, the estimated cost of deliveries to Medicaid-covered women in 2010 was approximately \$7.1 billion.

Cost and prevalence of cesarean deliveries

In general, cesarean deliveries are more expensive than vaginal deliveries. Comparing the most common types of deliveries, which do not have complicating conditions, the average cost of a hospitalization with a cesarean delivery paid by Medicaid was \$5,162 in 2010 compared to \$3,081 for a vaginal delivery with no complicating conditions (Table 1-4). Cesarean deliveries with complications also generate higher costs than vaginal deliveries with complications.

Cesarean deliveries also have more adverse outcomes than do vaginal deliveries, including complications of anesthesia and surgery, as well as infections (Risser and King 2010). Despite the risks and costs of cesarean deliveries, the percentage

of births by cesarean rose nearly 60 percent from 1996 through 2011. However, the percentage of cesarean deliveries has stabilized over the past few years, remaining unchanged at 32.8 percent since 2009 (Martin et al. 2012a).

Almost one-third of Medicaid deliveries (31 percent) were by cesarean section (Table 1-3), though rates vary by state. For example, 21 percent of Medicaid deliveries in New Mexico were by cesarean whereas 36 percent of Medicaid deliveries in Florida were by cesarean. Medicaid cesarean rates did not differ from the total cesarean rate by more than a few percentage points in any of the reporting states.

Programs to Improve the Effectiveness of Maternity Care

State Medicaid programs have implemented a large number of initiatives designed to help women enroll into prenatal care programs as early as possible, to increase compliance with prenatal care protocols, and to increase access to needed services, as well as other interventions designed to improve maternal and infant outcomes while constraining costs.

Programs to enhance and increase use of prenatal care services

Research has shown that receiving prenatal care, especially during the first trimester, is a critical step toward having a healthy pregnancy and baby. Early prenatal visits can identify babies or mothers at risk for complications and give health care providers the opportunity to educate pregnant women. Early prenatal care also allows for appropriate first trimester screening tests that cannot be done at later stages of gestation. Women who receive prenatal care have consistently shown

TABLE 1-2. Medicaid Spending 12 Months before and 2 Months after Delivery for Women with a Hospital Delivery in 2008

	Number of Medicaid Deliveries	Percent of Medicaid Deliveries	Total Medicaid Spending for 12 months before and 2 Months after Delivery	Percent of Total Medicaid Spending for Women with Delivery in 2008	Average Medicaid Spending per Woman for 12 Months before and 2 Months after Delivery
Total Medicaid Deliveries	1,577,433	100%	\$11,483,587,674	100%	\$7,280
Benefit Status¹					
Full benefit package	1,096,044	69 ²	8,395,765,887	73 ²	7,660
Pregnancy-related coverage only	174,151	11 ²	1,282,625,186	11 ²	7,365
Emergency coverage only, due to non-citizen status	294,508	19 ²	1,707,259,262	15 ²	5,797

Notes: Total federal and state spending. Includes spending on behalf of Medicaid-expansion CHIP enrollees. Excludes deliveries and spending in the territories. Medicaid Statistical Information System spending has not been adjusted to match totals in CMS-64 accounting data. Births may be undercounted in states whose managed care encounter data are incomplete, or whose inpatient hospital claims or encounter records have missing or non-standard diagnosis and procedure codes. See Chapter 1 Appendix for additional methodological information.

¹ Columns do not sum to 100 percent because a small number of women (about 13,000) with deliveries classified as having other types of restricted benefits are not included here.

² As noted above, managed care births may be undercounted in this analysis. Given that women with emergency coverage are unlikely to be enrolled in managed care, their shares of Medicaid deliveries (19 percent) and spending (15 percent) may be overestimates. Conversely, the Medicaid deliveries and spending for women with full or pregnancy-related coverage may be underestimates.

Source: MACPAC analysis of Medicaid Statistical Information System (MSIS) data.

better outcomes than those who did not receive prenatal care (Alexander and Kotelchuck 2001, McCormick 2001).

At the federal level, the Strong Start for Mothers and Newborns initiative is a joint effort between CMS, the Health Resources and Services Administration (HRSA), and the Administration on Children and Families. With the goals of reducing preterm births and improving outcomes for newborns and pregnant women enrolled in Medicaid and CHIP, this initiative will test four evidence-based maternity care service approaches. These include:

- ▶ prenatal care in group settings that incorporates peer-to-peer interaction in a facilitated setting for health assessment, education, and psychosocial support;
- ▶ comprehensive prenatal care facilitated by teams of health professionals, including peer counselors, with services such as collaborative practice, intensive case management, counseling, and psychosocial support; and
- ▶ enhanced prenatal care, including psychosocial support, education, and health promotion. Services provided will expand access to care, improve care coordination, and provide a broader array of health services.

TABLE 1-3. Medicaid Births in Community Hospitals, by Type of Delivery, 2010

State	Medicaid Births	Medicaid Births as Percent of Total Births	Total Cesareans as Percent of Singleton Births	Medicaid Cesareans as Percent of Singleton Births
United States	1,812,129	46%	32%	31%
Arizona	43,505	51	28	26
Arkansas	20,763	56	35	34
California	244,358	49	32	31
Colorado	23,761	39	26	23
Florida	115,145	55	38	36
Hawaii	6,609	42	27	27
Illinois	67,524	43	30	28
Iowa	15,282	40	29	28
Kansas	12,023	31	30	30
Kentucky	24,900	50	35	34
Maine	5,322	43	30	30
Maryland	29,638	44	34	31
Massachusetts	23,573	33	32	30
Michigan	51,630	46	32	30
Minnesota	12,454	20	27	25
Missouri	35,750	48	31	30
Nebraska	9,710	38	30	29
Nevada	12,922	38	35	32
New Jersey	25,444	25	37	32
New Mexico	15,037	60	23	21
New York	104,641	44	34	31
North Carolina	59,800	52	31	28
Oklahoma	29,590	61	34	33
Oregon	19,851	46	29	28
Rhode Island	5,341	45	32	29
South Carolina	25,102	46	34	33
Tennessee	38,462	52	35	32
Texas	191,496	52	36	34
Utah	17,581	34	22	23
Vermont	2,594	46	27	26
Washington	31,482	40	30	28
West Virginia	11,653	59	35	34
Wisconsin	24,954	38	25	23
Wyoming	2,045	33	28	29

Notes: Singleton births are defined as delivering one baby, meaning not twins or other multiple births. In the 2010 Healthcare Cost and Utilization Project (HCUP), states reported 48,981 Medicaid multiple births in community hospitals. Statistics are based in ICD-9-CM V30 codes that indicate delivery type for the newborn. Only liveborn singleton infants are counted in the percentages. All deliveries (including multiple births and non-liveborn infants) are counted in the total number of deliveries and the percentage of Medicaid deliveries. As discussed in Chapter 1 Appendix, Medicaid births may also include CHIP births. Not all states provide public use data for HCUP, however, the U.S. total reflects data for all states.

Source: MACPAC analysis of 2010 Healthcare Cost and Utilization Project (HCUP), Nationwide Inpatient Sample and State Inpatient Databases.

TABLE 1-4. Cost of Medicaid Births in Community Hospitals, by Type of Delivery, 2010

Delivery Type (DRG)	Number of Medicaid Deliveries	Average Length of Stay (days)	Average Cost
Cesarean Deliveries	548,006		
Without comorbidities or major complications (766)	345,667	3.0	\$5,162
With comorbidities or major complications (765)	202,339	4.3	\$7,018
Vaginal Deliveries	1,195,450		
Without complicating diagnoses (775)	987,770	2.1	\$3,081
With complicating diagnoses (774)	159,046	2.8	\$4,126

Notes: Healthcare Cost and Utilization Project (HCUP) converts total charges into costs using cost-to-charge ratios based on hospital accounting reports from the Centers for Medicare & Medicaid Services. In general, costs are less than charges. For each hospital, a hospital-wide cost-to-charge ratio is used because detailed charges are not available across all HCUP states. The costs presented here are estimates of the costs to the hospital of producing the entire hospital stay and not the amount billed to the Medicaid program or costs to the Medicaid program. DRGs 767 (Vaginal delivery w sterilization &/or d&c) and 768 (Vaginal delivery w O.R. proc except steril &/or d&c) are not included here; total vaginal deliveries include these cases.

Source: MACPAC analysis of 2010 Healthcare Cost and Utilization Project (HCUP).

The fourth approach to prevent preterm births, currently being evaluated, is enhanced prenatal care through home visiting. This approach is being evaluated as part of the evaluation of evidence-based models under the Maternal, Infant, and Early Childhood Home Visiting program, Nurse Family Partnership, and Healthy Families America programs.

To date, CMS has made 27 Strong Start program awards using the first three models to organizations such as universities, health care authorities, health plans, and associations that coordinate the program for participating health care providers. Awardees in total can spend up to \$41.4 million and cannot use grant funds to supplement or supplant any funding sources, including Medicaid and CHIP reimbursement.

Many states have their own programs to increase use of prenatal care services, or they contract with

health plans that have prenatal care initiatives. For example, Washington State’s First Steps program, run by the Washington State Health Care Authority, is designed to promote healthy birth outcomes, increase access to early prenatal care, and reduce infant morbidity and mortality. Horizon Health, a managed care organization that contracts with the New Jersey Medicaid program, created Moms Getting Early Maternity Services (GEMS) to ensure that expecting mothers get proper prenatal care and education regarding having a healthy pregnancy and baby. Boxes 1-2 and 1-3 describe programs in place in North Carolina and Florida to improve pregnancy outcomes.

Programs to target high-risk women

Many state Medicaid programs, often in partnership with other state, federal, or private organizations, have implemented programs to

BOX 1-2. North Carolina’s Pregnancy Medical Home Model

North Carolina’s Pregnancy Home Model is a three-way partnership between Community Care of North Carolina, North Carolina’s Medicaid program, and the North Carolina Division of Public Health to improve the quality of perinatal care given to Medicaid recipients, thereby improving birth outcomes and reducing Medicaid spending. First implemented in 2011, the partnership oversees a combined network of 14 regional networks that recruit and support participating providers. These providers agree to complete a risk assessment for each pregnant enrollee, collaborate with a care manager assigned to high-risk pregnancies, adhere to certain process and performance standards, and designate a practice champion. Participating primary care practices receive per member per month payments from Medicaid (in addition to standard fee-for-service payments). The partnership’s central office supports the networks through analysis of claims, birth certificates, and care management data; technical assistance; and quality improvement support. The initiative has enhanced access to comprehensive care for pregnant Medicaid enrollees, including access to care coordination for those facing high-risk pregnancies. Preliminary data suggest the program has also increased provider adherence to evidence-based care standards and has begun to have a positive impact on the incidence of low birth weight and rates of primary cesarean sections. Providers participating in the Pregnancy Medical Home will receive the following:

- ▶ exemption from prior approval on ultrasounds;
- ▶ \$50 for completing a high-risk screening tool at initial visit;
- ▶ \$150 incentive for a postpartum visit for each woman; and
- ▶ higher payment rates for a vaginal delivery.

Source: AHRQ 2013.

BOX 1-3. Florida’s Healthy Start Legislation

Florida’s Healthy Start program provides for universal risk screening of all pregnant women and newborns in the state to identify those at risk of poor outcomes. Healthy Start includes targeted support services that address identified risks. The range of Healthy Start services available to pregnant women, infants, and children up to age three include:

- ▶ information and referral;
- ▶ comprehensive assessment of service needs in light of family and community resources;
- ▶ ongoing care coordination and support to assure access to needed services;
- ▶ psychosocial, nutritional, and smoking cessation counseling;
- ▶ childbirth, breastfeeding, and parenting support and education; and
- ▶ home visiting.

Source: Florida DOH 2013.

target women at greatest risk of premature delivery and poor birth outcomes. These programs include identifying high-risk women in areas with high rates of infant mortality, out-of-wedlock births, late or no prenatal care, teen pregnancies and births, and births to low-income women. They may also identify high-risk populations by conducting risk assessments at initial prenatal care visits.

The prenatal risk assessment is often considered an integral part of care coordination and case management because it provides the mechanism by which states target high-risk mothers to receive additional services (Johnson and Witgert 2010). Targeted case management (called care coordination in some settings) is central to many states' enhanced prenatal benefits programs and typically determines a woman's needs by assessing risk factors, developing a plan of care to address those needs, coordinating referrals to appropriate service providers, and ensuring that the woman receives services (Hill and Breyel 1989).

Targeted case management may target high-risk women based on multiple socioeconomic, health, or behavioral risk factors, or women with a specific condition or risk factor. Programs can target pregnant women with specific diseases, including sexually transmitted diseases (STDs) and HIV; women with multiple risk factors; or women with specific health behaviors such as smoking, alcohol or drug abuse, or obesity. Counseling for smoking cessation, now a required health benefit in Medicaid under the ACA, must be provided with no cost sharing to women.

Programs focused on preconception care

Preconception care is defined as evidence-based risk screening, health promotion, and interventions that enable women to enter pregnancy in optimal health (Johnson et al. 2006). The American Congress of Obstetricians and Gynecologists

(ACOG), the American Academy of Pediatrics, and the American College of Nurse-Midwives (ACNM) identify four key categories of preconception care interventions:

- ▶ maternal assessment (e.g., family history, behaviors, obstetric history, general physical exam);
- ▶ vaccinations (e.g., rubella, varicella, and hepatitis B);
- ▶ screening (e.g., HIV, STD, genetic disorders); and
- ▶ counseling (e.g., folic acid consumption, smoking and alcohol cessation, weight management) (Atrash et al. 2006).

Clinical practice guidelines have been developed based on evidence demonstrating the effectiveness of certain preconception practices, such as provision of folic acid; treatment of diabetes, HIV/AIDS, maternal phenylketonuria, epilepsy, and STDs; and counseling for smoking, alcohol use, and obesity.

Medicaid does not recognize preconception care services as a defined category of covered services, and only a handful of states include many of the elements of preconception care in family planning services. In a survey of 44 responding states and the District of Columbia, 26 of the states covered preconception counseling in 2007, but only 7 states routinely consider it to be a family planning service, in contrast to contraceptive counseling (29 states and the District of Columbia) and reproductive health education (20 states) (Ranji et al. 2009).

Programs to reduce non-medically indicated deliveries

Recently, policymakers and payers have begun focusing on the impact of non-medically indicated deliveries prior to 39 weeks gestation on health outcomes and costs. Early non-medically indicated deliveries include both inductions of labor and cesarean births scheduled before 39 weeks of gestation. These types of deliveries are associated with an increase in premature births, respiratory problems of the infant, and admissions to NICUs (Smith et al. 2012, Tita et al. 2009, NIH 2006). Although it is difficult to determine from administrative data whether deliveries are elective or not, a study conducted in 27 hospitals found that 71 percent of planned deliveries via labor induction or cesarean section occurred for no clear medical reason (Clark et al. 2009).

Although there is substantial literature that non-medically indicated early deliveries are associated with several adverse outcomes (King et al. 2010; Risser and King 2010), little available literature focuses on the Medicaid population or the specific initiatives being undertaken by state Medicaid agencies to reduce the number of these deliveries. In June 2012, MACPAC convened an expert roundtable to discuss the issue of early elective deliveries in Medicaid and commissioned a background paper on ongoing and proposed Medicaid programs to reduce non-medically indicated deliveries. Meeting participants and the background paper analysis concluded that this apparent gap in the current literature is likely due to analytic limitations of Medicaid administrative data and to the procedure coding system with respect to measuring maternity care processes, procedures, and outcomes, as well as to challenges associated with obtaining timely vital records data and linking these data to Medicaid data. In addition, several of the programs designed

to reduce early elective deliveries have been implemented relatively recently and have yet to be evaluated. The large shifts in mode of delivery and use of obstetric procedures in the United States over the last two decades have significant implications for Medicaid.

ACOG, ACNM, the March of Dimes, CMS, and others have all called for reducing rates of non-medically indicated deliveries (both cesareans and medically induced deliveries) prior to 39 weeks gestation. In addition, these organizations also call for approaches to reduce non-medically indicated elective cesarean sections at any time. States have begun to respond to this call by changing payments and educating providers.

Payment initiatives

Several types of state Medicaid payment reforms are being proposed and tested to reduce or eliminate financial incentives for potentially unnecessary and costly procedures during childbirth (Table 1-5). One approach involves using penalties to discourage—or payments to reward—use of certain clinical procedures. Such an approach may involve offering additional payments or higher reimbursement rates to providers that meet a benchmark indicating provision of high-quality care. Another payment reform approach involves providing one blended payment for all deliveries, where the payment is set at a level greater than the current payment rate of a vaginal delivery and less than that for a cesarean delivery. A third approach involves providing bundled payments that encourage care coordination and discourage unnecessary use of services. Bundled payments may take the form of a single, combined payment for both hospital and provider services, a single payment for both maternal and infant care, or a single payment for all care provided during pregnancy.

TABLE 1-5. Selected State-Based Payment Reform Initiatives to Reduce Induction, Cesarean Section, and Early Elective Deliveries

State	Description of Initiative
Georgia	Starting July 1, 2013, the initiative eliminates Medicaid payments for elective cesarean deliveries and induced deliveries before 39 weeks (Williams 2013).
Minnesota	Minnesota’s Medicaid program offers a single blended payment for all deliveries, whether vaginal or cesarean. The program intends to lower the cesarean delivery rate by 5 percent.
Nevada	As of March 2012, Nevada Medicaid pays the lower vaginal delivery payment rate for elective cesarean section.
South Carolina	As of January 1, 2013, South Carolina no longer provides payment to hospitals and physicians for elective inductions or non-medically indicated deliveries prior to 39 weeks gestational age. This applies to both inductions of labor and cesarean sections.
Texas	Texas Medicaid no longer pays providers (physicians or hospitals) for elective inductions and cesarean deliveries prior to 39 weeks of gestation (Texas Human Resources Code §32.0313).
Washington	Washington state offers a 1 percent Medicaid quality incentive payment to hospitals that maintain a rate of elective deliveries prior to 39 weeks below a given benchmark (7 percent).

Source: Smith et al. 2012.

Several states have undertaken payment reforms aimed at improving the quality of perinatal care. For example, Medicaid programs in South Carolina and Texas no longer pay for early non-medically indicated elective deliveries. Other states are relying on provider and enrollee feedback and education in an attempt to reduce these rates.

Quality improvement initiatives

Quality improvement initiatives generally establish health care processes and procedures to discourage elective inductions and cesarean deliveries, with many initiatives focused primarily on deliveries before 39 weeks of gestation (Table 1-6). Common elements of these initiatives include internal audit and feedback procedures, patient and provider education, policies limiting circumstances under which elective deliveries prior to 39 weeks can take place (for example, only when medically indicated

or after peer review), and changes in delivery scheduling processes. Quality improvement initiatives have been implemented by statewide collaboratives, state agencies (including Medicaid), and health systems, with some supported by state legislation or occurring within a learning network, where hospitals or other organizations learn from their peers while implementing systems changes at the same time (Main et al. 2010). The Louisiana Institute for Healthcare Improvement, for example, is working with 28 of the state’s 58 maternity hospitals to engage providers in quality improvement programs.

Performance measurement and public reporting

Performance measurement and public reporting of perinatal health clinical quality measures is another

TABLE 1-6. Selected State-Based Quality Improvement Initiatives to Reduce Induction, Cesarean Section, and Early Elective Deliveries

State and Initiative	Description of Initiative	Evidence of Effects
Louisiana 39-Week Initiative	<p>In this initiative, which is led by the Institute for Healthcare Improvement Perinatal Improvement Community Collaborative, hospitals establish quality improvement policies to end early elective deliveries. The program uses the Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age toolkit created by the California Maternal Quality Care Collaborative, the March of Dimes, and the California Department of Public Health. As of January 2012, all 58 of Louisiana’s birthing hospitals were involved. The state medical society and the state chapter of the American Congress of Obstetricians and Gynecologists (ACOG) are also partners on the project.</p>	<p>Program participation has been associated with decreases in the rates of neonatal intensive care unit admissions.</p>
Minnesota	<p>Beginning January 1, 2012, Minnesota requires hospitals to implement policies and processes to minimize inductions prior to 39 weeks without a medical reason and to report labor induction data for all births covered by Minnesota Health Care Programs, including Medical Assistance (Minnesota’s Medicaid program) and MinnesotaCare (another publicly subsidized program for those without access to affordable health coverage). Obstetric providers will not need to submit additional information with delivery claims if the following are included in hospital policies and quality improvement programs:</p> <ul style="list-style-type: none"> ▶ “hard stop” policies restricting elective inductions prior to 39 weeks; ▶ policy encouraging documentation of final estimated date of delivery by 20 weeks of gestation and sharing that information with the patients; ▶ policy encouraging patient education about elective inductions with documentation of that education; and ▶ ongoing quality improvement review of facility-level data, with required audits if the rate of elective deliveries between 37 and 39 weeks is higher than 25 percent, and required peer review of labor inductions prior to 39 weeks. 	<p>Unknown</p>

TABLE 1-6, Continued

State and Initiative	Description of Initiative	Evidence of Effects
North Carolina Pregnancy Medical Home (PMH) Initiative	<p>In this Medicaid-based program, PMHs (physician practices and health clinics) employ care managers (nurses and social workers) from local health departments to provide case management for high-risk pregnant Medicaid enrollees in the practice. The provided services include a comprehensive assessment on each enrollee who screens as high risk for poor birth outcomes and follow-up or referral for necessary services. To qualify for participation as a PMH, providers must agree to: (1) ensure that no elective deliveries (induction and cesarean section) are performed before 39 weeks of gestation, (2) use 17 alpha hydroxyprogesterone to prevent recurrent preterm birth, and (3) maintain a primary (first birth) cesarean section rate at or below 20 percent. PMHs, in turn, receive a higher rate of payment for vaginal deliveries to equal that of cesarean deliveries.</p>	Unknown
Ohio Perinatal Quality Collaborative's (OPQC) 39-Week Project	<p>Under the 39-Week Project, the collaborative (which includes state government, providers, and other policymakers and leaders in perinatal health) works to reduce elective deliveries prior to 39 weeks by ensuring hospital access to best methods of care, increasing hospital collaboration, and providing research and evidence to leaders and providers. From September 2008 to June 2010, OPQC worked with 20 maternity hospitals to implement quality improvement activities to reduce early elective delivery. Strategies included: documenting reasons for a scheduled delivery prior to 39 weeks, discussing with patients the risks of delivery earlier than 39 weeks, and implementing a form for scheduled deliveries to reduce scheduled births. Additional strategies included: pregnancy dating with an ultrasound before 20 weeks of gestation; producing peer reviewed guidelines and criteria about when deliveries can be scheduled; recruiting physician champions for the program's new policies; and publicly sharing hospital-level data on the prevalence of scheduled deliveries less than 39 weeks.</p>	<p>A recent study suggests that OPQC's 39-Week Project led to a decline in the rate of early elective deliveries from 25 percent to less than 5 percent over a 14-month period from 2008 to 2009.</p>

TABLE 1-6, Continued

State and Initiative	Description of Initiative	Evidence of Effects
Washington State Perinatal Collaborative: Reducing Elective Delivery Before 39 Weeks	The collaborative (which includes state government, hospitals and other providers, the March of Dimes, and other organizations) is conducting several initiatives, including the Reducing Elective Delivery Before 39 Weeks initiative. The goal of the program is to reduce elective deliveries before 39 weeks to 7 percent or less. Participating hospitals are provided with support as they establish various policies to decrease early elective deliveries. The policies vary by hospital, but include requiring documentation of medical reason when scheduling a delivery prior to 39 weeks, requiring approval of the chief of obstetrics prior to scheduling a delivery, and physician and patient education about risks from elective deliveries prior to 39 weeks. In addition, hospitals submit performance measurement data consistent with the Leapfrog Group and the Joint Commission submission requirements.	Project reports indicate that from the third quarter of 2010 to the fourth quarter of 2011, the rate of early elective deliveries decreased by 65 percent from 15.3 percent to 5.4 percent.*
West Virginia Elective Delivery Quality Collaborative	The collaborative was developed to reduce the rate of elective deliveries prior to 39 weeks of gestation. In 2009, 14 of the state's 30 hospitals participated in a 6-month learning collaborative that involved monthly reporting on quality measures, technical assistance, and web-based and face-to-face sessions to share lessons learned with other participants. Participating hospitals were provided with evidence-based change packets that included communication and education materials for patients, providers, administrators, and the broader community, as well as best practices for quality improvement policies, procedures, and documentation. Partners included the WV Health Care Authority, the WV Health Improvement Institute, the WV Perinatal Partnership, and the March of Dimes.	At the end of the 6-month initiative, there was a 50 percent decrease in the rate of non-medically indicated elective deliveries prior to 39 weeks, and the rate had been maintained one year after the collaborative ended.

Notes: * The rate is calculated by dividing number of patients with elective deliveries between 37 and 39 weeks by number of patients who delivered babies between 37 and 39 weeks. This rate does not include births for most medical exclusions (Washington SHA 2013).

Sources: Smith et al. 2012; Louisiana DHH 2012; Minnesota DHS 2011; North Carolina DHHS 2011; OPQC 2012a, 2012b, and 2010; Washington SHA 2013; West Virginia HCA 2011.

TABLE 1-7. Performance Measurement and Public Reporting Initiatives to Reduce Induction, Cesarean Section, and Early Elective Deliveries

Organization and Initiative	Description of Initiative
California Maternal Quality Care Collaborative (MQCC)	<p>The California MQCC is rolling out a statewide data center initiative to create rapid-cycle performance measures about maternity services and outcomes. The project is supported by the Centers for Disease Control and Prevention and the California HealthCare Foundation, and is overseen by a multistakeholder collaborative. Partnering agencies include state government, public groups, professional groups, health systems, and universities. Participating hospitals will submit performance data, and the collaborative envisions that some performance measures will be publicly reported in the future. There are currently six reporting sets, including elective deliveries prior to 39 weeks. The Joint Commission's measure of cesarean deliveries (see row below) is an updated version of a similar measure created by the California MQCC.</p>
Centers for Medicare & Medicaid Services (CMS), Core Set of Children's Health Care Quality Measures	<p>The Children's Health Insurance Program Reauthorization Act required the Secretary of the Department of Health and Human Services to identify an initial core set of recommended pediatric quality measures for voluntary use by state Medicaid and CHIP programs. The 25 measures include one on the percentage of women who had a cesarean section among women with first live singleton births (also known as nulliparous term singleton vertex (NTSV) births) at 37 weeks of gestation or later.</p>
The Joint Commission, Perinatal Care Core Quality Measures	<p>The Joint Commission has a core set of five perinatal care core quality measures endorsed by the National Quality Forum (NQF). This set includes a measure of elective deliveries between 37 and 39 weeks of gestation and a measure of cesarean deliveries for NTSV births. Beginning in 2010, Joint Commission-accredited hospitals could choose to report on the Perinatal Care Core set of measures to meet accreditation requirements.</p>
The Leapfrog Group, Public Reporting on Early Elective Deliveries	<p>The Leapfrog Group, a non-profit organization that compares hospitals on national standards of safety and quality, collects and publicly reports hospital performance data on early elective deliveries using the NQF-endorsed measure. In 2010, Leapfrog became the first national organization to make hospital-specific information about early elective deliveries available to the public. In addition, Leapfrog is partnering with the Institute for Healthcare Improvement, Childbirth Connection, Catalyst for Payment Reform, and employer and regional business coalition members to educate healthcare consumers, employers, health plans, hospitals, and policymakers about this issue. Rates of early elective delivery among reporting hospitals improved in the second year of reporting, from 17 percent in 2010 to 14 percent in 2011.</p>

Sources: Smith et al. 2012; California MQCC 2013; Leapfrog Group 2013, 2012.

strategy payers and providers can use to facilitate and monitor reductions in labor inductions, cesarean deliveries, and early elective deliveries. While the use of quality measures in health care has expanded rapidly, there are still relatively few valid measures of labor and delivery care processes and outcomes. In addition, performance reporting on maternity care remains relatively limited and inconsistent across the country and among various entities, including health plans, health systems, and facilities.

However, some notable efforts have been made in recent years to develop and promote reporting on measures of elective deliveries (Table 1-7). The National Quality Forum endorses a set of 14 clinical quality measures related to perinatal care, including a measure of elective delivery between

37 and 39 weeks of gestation and a measure of the cesarean delivery rate in low-risk, first-birth women. One or both of these measures has been adopted by the Joint Commission, the Leapfrog Group, and CMS (as part CMS’s Core Set of 25 Children’s Health Care Quality Measures). In August of 2012, ACOG convened the reVITALize conference to assist in clarifying existing data definitions and in streamlining measurement for obstetrical outcomes nationwide (ACOG 2013).

Provider and patient education

Many organizations are funding, conducting, and disseminating research to increase knowledge and use of evidence-based maternity care (Table 1-8). Recent efforts include disseminating tools that providers can use for quality improvement

TABLE 1-8. Provider and Patient Education Initiatives to Reduce Induction, Cesarean Section, and Early Elective Deliveries

Organization	Name of Initiative	Description of Initiative
California Maternal Quality Care Collaborative, California Department of Public Health, March of Dimes	Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age Quality Improvement Toolkit	This quality improvement toolkit aims to help groups decrease elective deliveries before 39 weeks and to identify and disseminate best practices related to preventing elective early deliveries.
March of Dimes	Healthy Babies are Worth the Wait	This initiative provides an implementation toolkit to states that aim to decrease preventable preterm birth. The implementation manual helps states think about the “Five P’s”: partnerships and collaborations, provider initiatives, patient support, public engagement, and measuring progress. The March of Dimes has been working with Kentucky on this initiative since 2006, and Texas and New Jersey more recently to implement prematurity prevention programs.

Sources: Smith et al. 2012; California MQCC 2011.

initiatives and reaching out to non-physician practitioners and allied health professionals to provide education and support to pregnant women. One recent study that examined childbirth-related outcomes for Medicaid enrollees who received prenatal education and childbirth support from trained doulas found that after controlling for clinical and sociodemographic factors, the odds of cesarean delivery were 40.9 percent lower for doula-supported births (Kozhimannil et al. 2013). Potential cost savings to Medicaid programs associated with such cesarean rate reductions are substantial but depend on states' payment rates, birth volume, and current cesarean rates.

Issues and Next Steps

Medicaid and CHIP pay for nearly half of all deliveries in the United States; therefore, both the states and the federal government have a strong interest in creating the proper incentives to provide high-quality maternity care in the most effective and cost-efficient manner possible. Doing so will likely require efforts that touch on eligibility and enrollment, benefit design, payment, and program monitoring. Activities that will inform MACPAC's future work in this area may include:

- ▶ conducting analyses that describe the experiences of pregnant women served by Medicaid and CHIP, including spending, use of different types of services, site of service, and financing arrangement (managed care versus fee for service);
- ▶ developing a more thorough understanding of the effectiveness of targeted case management and other efforts to reduce risks associated with poor birth outcomes;
- ▶ tracking federal, state, and private-sector efforts to reduce rates of elective cesarean

deliveries and non-medically indicated early-induced deliveries;

- ▶ examining how changes in eligibility under the ACA will affect pregnant women, including the potential for unnecessary churning among Medicaid, CHIP, and subsidized private coverage available through exchanges;
- ▶ tracking the number of states that reduce Medicaid eligibility levels for pregnant women due to the availability of exchange coverage; and
- ▶ better understanding the supply of providers available to serve pregnant Medicaid and CHIP enrollees and possible barriers to practice created by state and federal law and other regulations or licensing practices.

Moving forward, the Commission will track and document trends in utilization and expenditures, as well as programs and initiatives to improve care to almost two million women who receive maternity care through Medicaid and CHIP each year.

Endnotes

¹ Estimates of the number of Medicaid and CHIP births vary by data source, due to factors including non-reporting by hospitals, non-reporting or underreporting of managed care encounter data by states, and differential reporting of waiver and expansion program data. See Chapter 1 Appendix to this chapter for a comparison of estimates of the annual number of Medicaid births by state.

² Reporting hospitals are members of the National Perinatal Information Center/Quality Analytic Services, a non-profit organization which began in 1985 with a charter membership of major perinatal centers across the United States.

³ Essential health benefits include ambulatory services, emergency services, hospitalization, maternity and newborn care, mental health and substance abuse services, prescription drugs, rehabilitative and habilitative services and devices, laboratory services, preventive and wellness services and chronic disease management, and pediatric services, including oral and vision care (§1302(b)(1) of the ACA).

⁴ Covered preventive benefits include services for women established in health plan coverage guidelines supported by HRSA (45 CFR 147.130(a)(1)(iv)).

⁵ Women had an average of about seven months of pre-delivery Medicaid eligibility months. For women with multiple deliveries in the 14-month period, expenditures for both deliveries are included.

References

- Agency for Healthcare Research and Quality (AHRQ). U.S. Department of Health and Human Services. 2013. *Statewide medical home program for low-income pregnant women enhances access to comprehensive prenatal care and case management, improves outcomes*. Rockville, MD: AHRQ. <http://www.innovations.ahrq.gov/content.aspx?id=3778>.
- Albert, D.A., M.D. Begg, et al. 2011. An examination of periodontal treatment, dental care, and pregnancy outcomes in an insured population in the United States. *American Journal of Public Health* 101, no. 1: 151–156.
- Alexander, G.R., and M. Kotelchuck. 2001. Assessing the role and effectiveness of prenatal care: History, challenges, and directions for future research. *Public Health Reports* 116, no. 4: 306–316.
- American Congress of Obstetrics and Gynecology (ACOG). 2013. *The obstetrician-gynecologist distribution atlas*. Washington, DC: ACOG. http://www.acog.org/Resources_And_Publications/The_Ob-Gyn_Workforce.
- Anderson, B.L., R.W. Hale, et al. 2008. Outlook for the future of the obstetrician-gynecologist workforce. *American Journal of Obstetrics and Gynecology* 199, no. 1: 88.e1–88.e8.
- Atrash, H.K., K. Johnson, M. Adams, et al. 2006. Preconception care for improving perinatal outcomes: The time to act. *Maternal and Child Health Journal* 10, no. 1: S3–S11. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1592246/#CR17>.
- Bailey, B.A., and A.R. Byrom. 2007. Factors predicting birth weight in a low-risk sample: The role of modifiable pregnancy health behaviors. *Maternal and Child Health Journal* 11, no. 2: 173–179.
- Bogges, K., E.K. Berggren, V. Koskenoja, et al. 2013. Severe preeclampsia and maternal self-report of oral health, hygiene, and dental care. *Journal of Periodontology* 84, no. 2: 143–151.
- Brassard, A., and M. Smolenski. 2011. *Removing barriers to advanced practice registered nurse care: Hospital privileges*. Washington, DC: AARP. <http://assets.aarp.org/rgcenter/ppi/health-care/insight55.pdf>.
- Byrd, V., and A. Dodd. 2013. Assessing the usability of MAX 2008 encounter data for comprehensive managed care. *Medicare & Medicaid Research Review* 3, no. 1: e1–e19. http://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MMRR/Downloads/MMRR2013_003_01_b01.pdf.

California Maternal Quality Care Collaborative (MQCC). 2013. California Maternal Data Center (CMDc). http://www.cmqqc.org/california_maternal_data_center_cmdc.

California Maternal Quality Care Collaborative (MQCC). 2011. <39 weeks toolkit. http://www.cmqqc.org/_39_week_toolkit.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2013. *Questions and answers: Medicaid and the Affordable Care Act*. Baltimore, MD: CMS. <http://medicaid.gov/State-Resource-Center/FAQ-Medicaid-and-CHIP-Affordable-Care-Act-ACA-Implementation/Downloads/ACA-FAQ-BHP.pdf>.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2012. Medicaid program; Eligibility changes under the Affordable Care Act of 2010. Final rule. *Federal Register* 77, no. 57 (March 23): 17143–17217. <http://www.gpo.gov/fdsys/pkg/FR-2012-03-23/html/2012-6560.htm>.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2011. Group health plans and health insurance issuers relating to coverage of preventive services under the Patient Protection and Affordable Care Act. Interim final rules with request for comments. *Federal Register* 76, no. 149 (August 3): 46621–46625. <http://www.gpo.gov/fdsys/pkg/FR-200-08-03/pdf/2001-19684.pdf>.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2010. Letter from Cindy Mann to State Health Officials regarding “Medicaid and CHIP coverage of ‘lawfully residing’ children and pregnant women.” July 1, 2010. <http://downloads.cms.gov/cmsgov/archived-downloads/SMDL/downloads/SHO10006.pdf>.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2009. Letter from Jackie Garner to State Health Officials regarding “General information concerning the new option and guidance on amending your CHIP plan to reflect the coverage of pregnant women.” May 11, 2009. <http://downloads.cms.gov/cmsgov/archived-downloads/SMDL/downloads/SHO051109.pdf>.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2002. State Children’s Health Insurance Program; Eligibility for prenatal care and other health services for unborn children. Final rule. *Federal Register* 67, no. 191 (October 2): 61956–61974. <http://www.cms.gov/Regulations-and-Guidance/Regulations-and-Policies/QuarterlyProviderUpdates/downloads/cms2127f.pdf>.

Centers for Medicare & Medicaid Services (CMS), U.S. Department of Health and Human Services. 2000. Letter from Timothy M. Westmoreland to State Health Officials regarding “Guidance on proposed demonstration projects under Section 1115 Authority.” July 31, 2000. <http://www.cms.hhs.gov/smdl/downloads/sho073100.pdf>.

Children’s Hospital Association. 2013. Communication with MACPAC staff, April 17.

Clark, S.L., D.D. Miller, M.A. Belfort, et al. 2009. Neonatal and maternal outcomes associated with elective term delivery. *American Journal of Obstetrics and Gynecology* 200, no. 2: 156.e1–156.e4.

D’Angelo, D., L. Williams, B. Morrow, et al. 2007. Preconception and interconception health status of women who recently gave birth to a live-born infant—pregnancy risk assessment monitoring system (PRAMS), United States, 26 reporting areas, 2004. *MMWR Surveillance Summaries* 56, no. 10: 1–35. <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5610a1.htm>.

Detman, L.A., B.H. Cottrell, and M.F. Denis-Luque. 2010. Exploring dental care misconceptions and barriers in pregnancy. *Birth* 37, no. 4: 318–324.

Florida Department of Health (DOH). 2013. Florida’s Healthy Start Initiative. Tallahassee, FL: Florida DOH. <http://www.doh.state.fl.us/family/mch/hs/hs.html>.

Hamilton, B.E., J.A. Martin, and S.J. Ventura. 2012. *Births: Preliminary data for 2011*. National Vital Statistics Reports 61, no. 5. Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_05.pdf.

Hill, I.T., S. Hogan, L. Palmer, et al. 2009. *Medicaid outreach and enrollment for pregnant women: What is the state of the art?* Washington, DC: Urban Institute. http://www.urban.org/UploadedPDF/411898_pregnant_women.pdf.

Hill, I.T., and J. Breyel. 1989. Coordinating prenatal care. Washington, DC: National Governors Association.

Johnson, C.F., and K.E. Witgert. 2010. *Enhanced pregnancy benefit packages: Worth another look*. Washington, DC: National Academy for State Health Policy. <http://www.nashp.org/sites/default/files/PregBenefits.pdf>.

Johnson, K., S.F. Posner, J. Biermann, et al. 2006. Recommendations to improve preconception health and health care—United States. A report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. *MMWR Recommendations and Reports* 55, no. RR-6: 1–23.

- Kaiser Family Foundation (KFF). 2013. State health facts: Has presumptive eligibility for children in Medicaid and CHIP. Washington, DC: KFF. <http://statehealthfacts.org/comparetable.jsp?cat=4&ind=229>.
- King, V., R. Pilliod, and A. Little. 2010. *Rapid review: Elective induction of labor*. Portland, OR: Center for Evidence-based Policy. http://www.ohsu.edu/xd/research/centers-institutes/evidence-based-policy-center/med/upload/Elective-Induction-of-Labor_PUBLIC_RR_Final_12_10.pdf.
- Kozhimannil, K.B., R.R. Hardeman, L.B. Attanasio, et al. 2013. Doula care, birth outcomes, and costs among Medicaid beneficiaries. *American Journal of Public Health* 103, no. 4: e113–e121.
- Leapfrog Group. 2013. Hospital rates of early scheduled deliveries. Washington, DC: Leapfrog Group. <http://www.leapfroggroup.org/tooearlydeliveries>.
- Leapfrog Group. 2012. Hospitals make progress in eliminating early elective deliveries: Good news, but more work needs to be done. January 25, 2012, press release. http://www.leapfroggroup.org/policy_leadership/leapfrog_news/4827337.
- Loafman, M., and S. Nanda. 2009. Who will deliver our babies?: Crisis in the physician workforce. *American Journal of Clinical Medicine* 6, no. 2: 11–16. <http://www.aapsus.org/articles/10.pdf>.
- Louisiana Department of Health and Hospitals (DHH). 2012. Health department announces response to mid-year budget reductions. December 14, 2012, press release. <http://new.dhh.louisiana.gov/index.cfm/newsroom/detail/2727>.
- Main, E., B. Oshiro, B. Chagolla, et al. 2010. *Elimination of non-medically indicated (elective) deliveries before 39 weeks gestational age*. Developed under contract no. 08-85012 with the California Department of Public Health, Maternal, Child and Adolescent Health Division. Stanford, CA: California Maternal Quality Care Collaborative. <http://www.cdph.ca.gov/programs/mcah/Documents/MCAH-EliminationOfNon-MedicallyIndicatedDeliveries.pdf>.
- March of Dimes Perinatal Data Center (March of Dimes). 2011. *Special care nursery admissions*. White Plains, NY: March of Dimes. http://www.marchofdimes.com/peristats/pdfdocs/nicu_summary_final.pdf.
- Martin, J.A., B.E. Hamilton, S.J. Ventura, et al. 2012a. *Births: Final data for 2010*. National Vital Statistics Reports 61, no. 1. Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_01.pdf.
- Martin, J.A., B.E. Hamilton, S.J. Ventura, et al. 2012b. *Births: Final data for 2010. Supplemental Tables*. National Vital Statistics Reports 61, no. 1. Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_01_tables.pdf#102.
- Martin, J.A., M.J.K. Osterman, and P.D. Sutton. 2010. *Are preterm births on the decline in the United States? Recent data from the National Vital Statistics System*. National Center for Health Statistics Data Brief, no. 39. Hyattsville, MD: National Center for Health Statistics. <http://www.cdc.gov/nchs/data/databriefs/db39.htm>.
- Martin, J.A., B.E. Hamilton, S.J. Ventura, et al. 2002. *Births: Final data for 2000*. National Vital Statistics Reports 50, no. 5. Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50_05.pdf.
- Mathews, T.J., and M.F. MacDorman. 2013. *Infant mortality statistics from the 2009 period linked birth/infant death data set*. National Vital Statistics Reports 61, no. 8. Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_08.pdf.
- McCormick, M.C. 2001. Prenatal care—necessary but not sufficient. *Health Services Research* 36, no. 2: 399–403.
- Medicaid and CHIP Payment and Access Commission (MACPAC). 2013. *Report to the Congress on Medicaid and CHIP*. March 2013. Washington, DC: MACPAC.
- Minnesota Department of Human Services (DHS). 2011. Evidence-based Childbirth Program. St. Paul, MN: Minnesota DHS. http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_165841.
- National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. 2012. *Health, United States, 2011*. Hyattsville, MD: NCHS. <http://www.cdc.gov/nchs/hus.htm>.
- National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. 2008. *Health, United States, 2007*. Hyattsville, MD: NCHS. <http://www.cdc.gov/nchs/data/hus/hus07.pdf>.
- National Governors Association (NGA), Center for Best Practices. 2011. *2010 Maternal and child health update: States make progress towards improving systems of care*. Washington, DC: NGA. <http://www.nga.org/files/live/sites/NGA/files/pdf/MCHUPDATE2010.PDF>.

- National Governors Association (NGA). 1990. *State coverage of pregnant women and children—January 1990*. Washington, DC: NGA. <http://www.nga.org/files/live/sites/NGA/files/pdf/MCHUPDATE0190.pdf>.
- National Institutes of Health (NIH), U.S. Department of Health and Human Services. 2006. NIH state-of-the-science conference statement on cesarean delivery on maternal request. *NIH Consensus and State-of-the-Science Statements* 23, no. 1 : 1–29. Bethesda, MD: NIH. <http://consensus.nih.gov/2006/cesareanstatement.pdf>.
- North Carolina Department of Health and Human Services (DHHS). 2012. Pregnancy medical home. Raleigh, NC: North Carolina DHHS. <http://www.ncdhhs.gov/dma/services/pmh.htm>.
- Offenbacher, S., D. Lin, R. Strauss, et al. 2006. Effects of periodontal therapy during pregnancy on periodontal status, biologic parameters, and pregnancy outcomes: A pilot study. *Journal of Periodontology* 77, no. 12: 2011–2024.
- Ohio Perinatal Quality Collaborative (OPQC). 2012a. Welcome to OPQC. Cincinnati, OH: OPQC. <https://opqc.net/>.
- Ohio Perinatal Quality Collaborative (OPQC). 2012b. Ohio's 39-week project: Collaborating to deliver quality care and healthy babies. Cincinnati, OH: OPQC. https://opqc.net/webfm_send/277.
- Ohio Perinatal Quality Collaborative Writing Committee. 2010. A statewide initiative to reduce inappropriate scheduled births at 360/7-386/7 weeks' gestation. *American Journal of Obstetrics & Gynecology* 202, no. 3: 243.e1–243.e8.
- Osterman, M.J.K., J.A. Martin, T.J. Mathews, et al. 2011. *Expanded data from the new birth certificate, 2008*. National Vital Statistics Reports 59, no. 7. Hyattsville, MD: National Center for Health Statistics. http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_07.pdf.
- Ranji, U., A. Salganicoff, A. Stewart, et al. 2009. *State Medicaid coverage of family planning services: Summary of state survey findings*. Menlo Park, CA: Kaiser Family Foundation. <http://www.kff.org/womenshealth/upload/8015.pdf>.
- Ratcliffe, C., and S. McKernan. 2012. *Child poverty and its lasting consequence: Low-income working families*. Washington, DC: Urban Institute. <http://www.urban.org/UploadedPDF/412659-Child-Poverty-and-Its-Lasting-Consequence-Paper.pdf>.
- Reed, A., and J.E. Roberts. 2000. State regulation of midwives: Issues and options. *Journal of Midwifery & Women's Health* 45, no. 2: 130–149.
- Risser, A., and V. King. 2010. *Rapid review: Elective cesarean section*. Portland, OR: Center for Evidence-based Policy. http://www.ohsu.edu/xd/research/centers-institutes/evidence-based-policy-center/med/upload/Elective-Delivery-Elective-Cesarean_PUBLIC_Rapid-Review_Final_12_1_10.pdf.
- Smith, K., B. Natzke, and A. Christensen. 2012. Rising rates of labor induction and cesarean delivery: Issues, implications, and current initiatives to reduce rates. Unpublished white paper for MACPAC. Princeton, NJ: Mathematica Policy Research.
- Texas Health and Human Services Commission (HHSC). 2013. CHIP perinatal coverage: Provider fact sheet. Austin, TX: HHSC. <http://www.hhsc.state.tx.us/chip/perinatal/InfoForProvidersAndCBOs.htm#b1>.
- Tita, A.T., M.B. Landon, C.Y. Spong, et al. 2009. Timing of elective repeat cesarean delivery at term and neonatal outcomes. *New England Journal of Medicine* 360, no. 2: 111–120.
- Tong, S.T., L.A. Makaroff, I.M. Xierali, et al. 2012. Proportion of family physicians providing maternity care continues to decline. *Journal of the American Board of Family Medicine* 25, no. 3: 270–271.
- U.S. Census Bureau, U.S. Department of Commerce (DOC). 2011. Current Population Survey. 2010 poverty table of contents. Washington, DC: DOC. http://www.census.gov/hhes/www/cpstables/032011/pov/POV01_200.htm.
- Washington State Hospital Association (SHA). 2013. Quality indicators search page. Safe deliveries. Seattle, WA: Washington SHA. <http://www.wahospitalquality.org/>.
- West Virginia Health Care Authority (HCA). 2011. *West Virginia quality collaborative for eliminating non-medically indicated elective deliveries prior to 39 weeks gestation*. Charleston, WV: West Virginia HCA. <http://www.wvperinatal.org/downloads/OBCollaborative0211.pdf>.
- Williams, M. 2013. State to end Medicaid payments for elective early births. *Atlanta Journal-Constitution*. March 24, 2013. <http://www.myajc.com/news/news/state-regional-govt-politics/state-to-end-medicare-payments-for-elective-early-/nW2WM/>.
- Zhao, L. 2007. *Why are fewer hospitals in the delivery business?* Chicago, IL: Walsh Center for Rural Health Analysis, NORC at the University of Chicago. <http://www.norc.org/PDFs/Walsh%20Center/Links%20Out/DecliningAccessToHospitalbasedObstetricServicesinRuralCounties.pdf>.

Chapter 1 Appendix

Datasets Used to Count Annual Number of Births in the Medicaid Program

Data on births in the Medicaid program are available from multiple sources, and each source gives a somewhat different number of births for each state. This appendix provides information on Medicaid births from three sources: Healthcare Cost and Utilization Project (HCUP) data, the National Governors Association (NGA), and a MACPAC analysis of Medicaid Statistical Information System (MSIS) data (Table 1-A-1). The number of states with data available in each source varies, and we report the most recent year of data available when the analysis began.

Differences among the three data sources reflect a variety of factors, including how Medicaid and the State Children's Health Insurance Program (CHIP) are identified and defined, the underlying data used in each source (claims, vital statistics, or other source), and underreporting or non-reporting of data. For example, some states do not report Medicaid managed care encounter data in MSIS and some hospitals do not submit discharge data to states that can be used for HCUP.

Healthcare Cost and Utilization Project

The HCUP is a family of health care databases and related software tools and products developed through a federal, state, and industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). HCUP databases bring together the data collection efforts of state data organizations, hospital associations, private data organizations, and the federal government to create a national information resource of patient-level health care data. The Nationwide Inpatient Sample (NIS) contains data from approximately 8 million hospital stays from roughly 1,000 hospitals; this approximates a stratified sample of 20 percent of U.S. community hospitals. The State Inpatient Databases (SID) contains the universe of inpatient discharge abstracts from data organizations. Currently 44 states participate in the SID; not all allow their data to be made available to the public but estimates can be generated by AHRQ.

Insurance status information in HCUP is based on primary expected source of payment reported on the discharge abstract. Patients covered by CHIP may be included under Medicaid, private insurance, or other insurance, depending on the structure of the state program.

TABLE 1-A-1. Total and Medicaid Births Reported in Three Data Sources, 2008–2010

States	HCUP (2010)			NGA (2009)		MSIS (2008)
	Total births	Medicaid births	Percent Medicaid births	Medicaid births	Percent Medicaid births	Medicaid births
Alabama	–	–	–	–	–	27,570
Alaska	–	–	–	5,891	53%	3,609
Arizona	84,805	43,505	51%	49,538	54	52,137
Arkansas	37,235	20,763	56	25,337	64	20,125
California	495,252	244,358	49	–	–	215,704
Colorado	60,266	23,761	39	26,101 ¹	38	22,731
Connecticut	–	–	–	14,500 ²	–	5,822
Delaware	–	–	–	6,202	–	2,561
District of Columbia	–	–	–	–	–	1,771
Florida	209,525	115,145	55	–	–	69,570
Georgia	–	–	–	–	–	66,607
Hawaii	15,804	6,609	42	–	–	2,310
Idaho	–	–	–	–	–	9,618
Illinois	157,019	67,524	43	81,104	–	58,844
Indiana	–	–	–	41,793	–	36,861
Iowa	38,043	15,282	40	15,732	–	14,228
Kansas	38,951	12,023	31	–	–	14,429
Kentucky	50,343	24,900	50	24,604	44	28,739
Louisiana	–	–	–	–	–	37,722
Maine	12,463	5,322	43	5,400	40	6,252
Maryland	68,089	29,638	44	30,267	40	28,285
Massachusetts	71,810	23,573	33	12,913 ³	–	7,725
Michigan	112,481	51,630	46	–	–	28,197
Minnesota	63,563	12,454	20	31,209 ⁴	–	12,484
Mississippi	–	–	–	–	–	27,142
Missouri	75,278	35,750	48	31,326	48	34,994
Montana	–	–	–	12,076 ⁵	–	4,098
Nebraska	25,667	9,710	38	11,668	43	2,922
Nevada	34,458	12,922	38	17,753	48	6,602
New Hampshire	–	–	–	3,912	32	3,726
New Jersey	103,130	25,444	25	–	–	14,941
New Mexico	24,917	15,037	60	–	–	17,691
New York	239,999	104,641	44	–	–	116,913

TABLE 1-A-1, Continued

States	HCUP (2010)			NGA (2009)		MSIS (2008)
	Total births	Medicaid births	Percent Medicaid births	Medicaid births	Percent Medicaid births	Medicaid births
North Carolina	116,184	59,800	52%	64,439	51%	65,701
North Dakota	–	–	–	–	–	2,424
Ohio	–	–	–	–	–	10,391
Oklahoma	48,758	29,590	61	33,898	64	30,399
Oregon	43,538	19,851	46	19,664 ⁶	43	18,119
Pennsylvania	–	–	–	57,371	–	17,479
Rhode Island	11,815	5,341	45	–	–	3,947
South Carolina	54,510	25,102	46	–	–	26,467
South Dakota	–	–	–	4,662	39	4,459
Tennessee	73,816	38,462	52	43,000	49	36,277
Texas	369,475	191,496	52	–	–	216,452
Utah	51,941	17,581	34	15,045	34	15,615
Vermont	5,630	2,594	46	2,827	44	2,642
Virginia	–	–	–	28,047 ⁷	27	31,193
Washington	79,463	31,482	40	–	–	20,607
West Virginia	19,753	11,653	59	12,001	–	2,415
Wisconsin	66,037	24,954	38	–	–	19,031
Wyoming	6,234	2,045	33	3,401	43	3,222
U.S. Total	3,905,481	1,812,129	46%	–	–	1,529,770

Notes: See text for additional methodological information. In HCUP data, Medicaid is based on primary expected source of payment reported on the discharge abstract. Several states have non-reporting hospitals which makes their estimates underreports. States with the highest underreporting (compared to American Hospital Association data) are Minnesota (14.1%), Tennessee (8.5%), Kansas (6.3%), and Nebraska (4.6%). Although not all states provide public use data for HCUP, the U.S. total reflects data for all states because estimates from the Nationwide Inpatient Sample are weighted to reflect all discharges from community hospitals. Dashes indicate data that are not available or not provided.

NGA data are gathered from U.S. states and territories in an annual maternal and child health survey.

MSIS data include Medicaid-expansion CHIP enrollees and exclude separate CHIP program enrollees. Low numbers of births in some states may indicate that the state has incomplete reporting of managed care encounter data or has inpatient hospital claims or encounter records with missing or non-standard diagnosis and procedure codes.

¹ Colorado data are from the Inpatient Utilization Reports created by the Colorado Foundation of Medical Care. Colorado's total births are from the U.S. Census Bureau, State Population Estimates by Component of Change.

² Connecticut calendar year matches Department of Social Services claims data with Department of Public Health Vital Records. 2009 data is an estimate.

³ Massachusetts' birth data include CHIP births.

⁴ Medicaid births for Minnesota include births in Minnesota's 1115 Medicaid expansion program (MinnesotaCare).

⁵ Montana's definition of a Medicaid birth is any child that had a paid Medicaid claim indicating delivery or a paid Medicaid claim in the first month of life, or a child that has been matched to a mother eligible for Medicaid and the mother had a paid Medicaid claim indicating a delivery.

⁶ Oregon bases the number of Medicaid births on Medicaid claims data.

⁷ Virginia data is based on the state fiscal year and is derived from the Virginia Department of Health, Office of Vital Statistics.

Sources: MACPAC analysis of Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample and State Inpatient Databases; National Governors Association (NGA) Center for Best Practices 2010 Maternal and Child Health Update; and Medicaid Statistical Information System (MSIS) data.

Several states have non-reporting hospitals, which makes their estimates lower than they would be if full data were available. States with the highest number of hospital discharges that are underreported (compared to American Hospital Association data) are Minnesota (14.1 percent), Tennessee (8.5 percent), Kansas (6.3 percent), and Nebraska (4.6 percent). For statistics reported at the national level, available data in the NIS are weighted to obtain a nationally representative estimate of all discharges from community hospitals.

National Governors Association

NGA's 2010 Maternal and Child Health Update presents data for 2009 and prior years gathered from U.S. states and territories in an annual maternal and child health survey (NGA 2011). The survey was sent out to state governments; states report births at the state level. The number of states reporting data on Medicaid births varies from year to year and, as indicated in state-specific notes, sometimes includes separate CHIP-financed births.

Medicaid Statistical Information System

MSIS is a data source compiled by the Centers for Medicare & Medicaid Services (CMS) from detailed Medicaid eligibility and claims information reported on a quarterly basis by the 50 states and the District of Columbia since fiscal year 1999. These raw data are processed and made available by CMS in a number of formats including the online State Summary Datamart that provides state-level statistics for months, quarters, and fiscal years; Annual Person Summary files with person-level summary information for each fiscal year; and Medicaid Analytic eXtract (MAX) data files that have been enhanced for research purposes (e.g., through the creation of final

action claims by date of service that incorporate information from original submissions and any subsequent adjustments). For this analysis, MACPAC used a file similar to the MAX that was created by Acumen, LLC from raw MSIS data.

The analysis identified Medicaid births in the MSIS by the presence of specific procedure and diagnosis codes on an inpatient fee-for-service claim or inpatient encounter record with a date of service in calendar year 2008. The following specific codes, listed on inpatient claims and inpatient encounter records, were used to identify women with deliveries:

- ▶ ICD-9-CM codes 650, 651-659, 660-669, 669.5x-669.7x, V27.x;
- ▶ DRG codes 370-371, 372-375, 765-766, 767-768, 774-775; and
- ▶ CPT codes 59514, 59620, 59409, 59612, 59515, 59622, 59410, 59614.

Most states with managed care report at least some encounter data in MSIS, but births may be undercounted in states whose encounter data are incomplete or of low quality (Byrd and Dodd 2013). Births may also be undercounted in states whose inpatient hospital claims or encounter records have missing or non-standard diagnosis and procedure codes.

Total Medicaid spending in the 12 months before and 2 months after the birth date was obtained by summing the Medicaid paid amounts for claims with dates of service within this period surrounding and including the birth. Although a woman's length of Medicaid enrollment prior to giving birth may vary for a number of reasons, including her pathway to eligibility, all pregnant women remain eligible for Medicaid for at least 60 days postpartum.

The MSIS analysis includes Medicaid-expansion CHIP enrollees and spending, although other

MACPAC Medicaid analyses (e.g., most MACStats tables and figures where Medicaid and CHIP tend to be reported separately) may exclude them. It excludes separate CHIP enrollees and spending. Readers should note that MSIS data are known to undercount total U.S. Medicaid spending relative to CMS-64 data submitted by states to obtain federal matching funds, with variation by state and type of service. Medicaid spending amounts from MSIS presented in this chapter have not been adjusted to address this issue, as done in other MACPAC analyses.