

# Ready, Set, Go!

## Investing in Infants and Toddlers

### Ready: Prenatal Health and Care

“Prenatal Health and Care” is the first brief in the three-part series, *Ready, Set, Go: Investing in Infants and Toddlers*, published by the Colorado Children’s Campaign. The foundations for lifelong success start in the earliest stages of life, beginning with a healthy mother and continuing through early childhood. These briefs are intended to help frame discussion around children from the prenatal stage to age 3 and the importance of health, education and family and community supports in helping them grow into healthy and strong individuals. Each brief includes recommendations for policy makers and leaders to help ensure Colorado kids get the best start in life.



Healthy infancy and childhood begin with a healthy mom. To be healthy, women need access to a safe home and community environment, nutritious food, safe places to exercise and social support. They also need access to comprehensive health care that includes dental and mental health care. Investment in policies that promote health and wellness for all women sets the stage for healthy and productive Colorado kids.

### Preconception and Prenatal Health

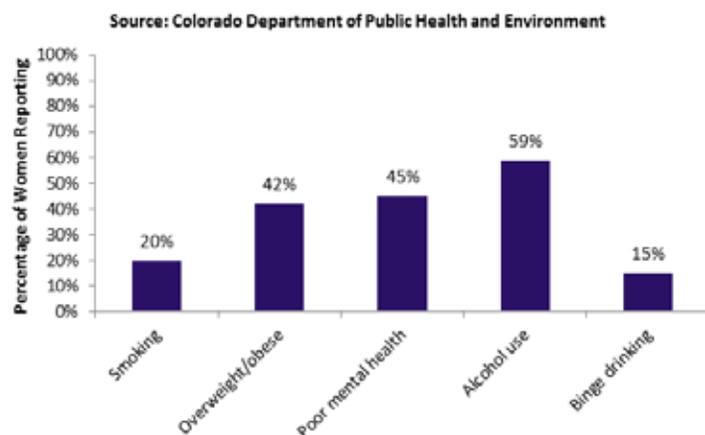
A healthy start for children begins even before conception. The status of a woman’s health before pregnancy has life-long implications for her child’s growth and development. A woman who suffers from poor health before pregnancy is more likely to deliver prematurely, placing the baby at risk for medical complications in every system in the body, but especially the lungs and heart.<sup>1</sup>

In Colorado, about 39 percent of all births are the result of unplanned pregnancy. Such pregnancies have been associated with an increased risk for late initiation of prenatal care, low infant birth weights, child abuse and behavioral problems in childhood. Because so many pregnancies are unplanned, efforts to promote protective preconception health behaviors are critical. Things like taking folic acid supplements and reducing harmful exposure to risks such as substance abuse, intimate partner violence, as well as adequate nutrition and eating habits among all women of childbearing age will contribute to healthy outcomes for their future children. As shown in the chart to the right, many Colorado women of childbearing age engage in unhealthy behaviors or face health challenges that could undermine a healthy pregnancy.

### Wellness

Wellness is the concept of holistic health beyond health care and the prevention of disease. Wellness includes physical, social, emotional, mental and spiritual well-being. Promoting wellness for women of childbearing age and women who are pregnant creates opportunities for better health for all children and families.

Preconception risk factors among Colorado women ages 18-44, BRFSS, 2004-2006



Chronic maternal health problems during the prenatal period such as obesity and diabetes have serious effects on child health throughout life.<sup>2</sup> Also significantly, a pregnant woman's exposure to stressful conditions, such as financial insecurity, poor nutrition, divorce and intimate partner violence, has been linked to risks for the mother's child that can have lasting effects. A child who experiences prolonged stress during the earliest stages of life can develop what is known as toxic stress syndrome. Exposure to short periods of adversity can produce longer-term elevations of the body's stress response but does not cause lasting damage to the brain or other organs if the child has responsive caregivers who help the child manage distress. In contrast, toxic stress involves exposure to prolonged adversity such as abuse, neglect or violence in the absence of consistent, loving adult support, which heightens a child's stress response over long periods of time and can irreversibly interfere with the development of the brain and other organs.<sup>3</sup>

The effects of toxic stress are intergenerational, contribute to the cyclical nature of poverty and fuel poor social and economic mobility. Poor physical, emotional and social health impacts not just the individual, but also families, communities and the state by increasing the costs of medical care and reducing workforce productivity.<sup>4</sup>

Preconception care improves chances for a healthy future pregnancy and good birth outcomes.<sup>5</sup> Health care before conception must address the current health needs of women and must also seek to promote wellness. Treating a woman's chronic conditions, such as obesity and diabetes, can yield positive impacts on her future child's health, as can lifestyle counseling regarding exercise and diet. Access to medical care and mental health support during pregnancy also leads to better health outcomes for both mother and child.<sup>6</sup> Prenatal care has been associated with fewer newborn deaths, healthy birth weights and a reduced risk of pre-term labor. The positive effects of prenatal care are particularly pronounced in medically complicated pregnancies.<sup>7</sup> Conversely, a lack of prenatal care has been linked to low infant birth weights, higher incidences of premature births and increased newborn, infant and maternal mortality. Quality prenatal care includes a full evaluation of the mother's physical and mental health, identification of patients at risk for complication and ongoing patient education and monitoring.



### **Policy Recommendations:**

- Connect women of childbearing age with information and resources to support preconception and prenatal health, starting with comprehensive health and sex education in the K-12 education system.
- Ensure women of childbearing age have the information and resources they need to make well-informed decisions about contraception and family planning in order to reduce the number of unintended pregnancies in Colorado.
- Encourage health care providers to have conversations with women of childbearing age regarding the importance of preconception health and wellness, including steps women can take to improve their own health to ensure healthier pregnancies and better birth outcomes.
- Invest in public health and community efforts to provide outreach and education to women about the importance of preconception and prenatal health.

## Nutrition

A nutritious diet before and during pregnancy contributes to the health of a woman and her future children. A nutritious diet is made up of high-quality foods with the appropriate amount of calories, protein, vitamins and minerals for a woman's height, weight and activity level. Eating patterns and appropriate weight gain during pregnancy influence birth and child development outcomes.

While obesity and hunger seem like unrelated issues, they are strongly linked. Families in poverty may eat low-cost meals that are calorie-dense but have little nutritional value. Estimates from the 2010 and 2011 Colorado Child Health Surveys indicate that nearly 35 percent of Colorado families with children between the ages of 1 and 14 often or sometimes rely on low-cost food to feed their children.<sup>8</sup> Malnutrition during pregnancy can severely impact the developing fetal brain by impairing cellular development and interfering with connections between brain cells. Insufficient nutrients, minerals or vitamins can cause birth defects in severe cases, and in milder cases can prevent a fetus from reaching its full genetic potential. Obesity during pregnancy can lead to a number of risks for both the mother and child including diabetes, stillbirth and preterm birth.<sup>9</sup>



Low pre-pregnancy body mass index and inadequate gestational weight gain are also associated with greater risk for fetal growth restriction and premature birth.<sup>10</sup> Additionally, iron deficiency during pregnancy can lead to anemia, which puts the baby at higher risk for pre-term birth and having a low birth weight. Anemia increases the risk of blood loss during delivery, which may compromise the mother's immune system and ability to fight infection. Folic acid plays a particularly important role in preventing defects in embryonic and nervous system development, which is why it is recommended that women of childbearing age and women who are pregnant take folic acid supplements on a consistent basis.

The majority of women in Colorado have access to affordable, high-quality food in their neighborhood that supports their health and nutritional needs. However some women do not have enough food for their family or experience uncertainty about having enough food for their family due to a lack of money and resources. In 2011, 10 percent of all pregnant women in Colorado experienced food insecurity. Among low-income pregnant women, that number was more than 22 percent.<sup>11</sup>

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the Supplemental Nutrition Assistance Program (SNAP—also known in Colorado as the Colorado Food Assistance Program and formerly called food stamps) reduce food insecurity among pregnant women, mothers, infants and young children by making nutritious foods more affordable. This improves their intake of nutrients key to healthy physical and cognitive development. Yet about 38 percent of those eligible for SNAP in Colorado are not receiving benefits. Efforts to increase outreach and enrollment in the SNAP and WIC programs would reduce food insecurity and improve access to nutritious food, enhancing the health of pregnant women and their developing babies.

### Policy Recommendations:

- Strengthen policies that promote access to nutritious food for Coloradans of all income levels and geographic areas.
  - o Increase outreach and enrollment efforts for SNAP and WIC to ensure pregnant women and young children can access high-quality, nutritious food.
  - o Continue efforts to connect food support to national nutrition standards.
- Invest in public health and community efforts to lower rates of obesity, particularly among Colorado women of childbearing age.

## Physical Activity

Physical activity is another key component of preconception and prenatal wellness. Exercise during pregnancy helps to reduce and prevent back pain, decrease swelling from fluid retention, decrease blood pressure and stress on the heart, increase oxygen flow and reduce weight gain and the risk for diabetes.<sup>12</sup> Furthermore, regular physical activity is one of the surest ways to prevent obesity. Research suggests that children of mothers who are overweight or obese before pregnancy have higher rates of obesity in childhood.<sup>13</sup>

The Centers for Disease Control and Prevention (CDC) recommends that all adults, including pregnant women, engage in 2.5 hours of moderate exercise each week, or about 20 minutes a day.<sup>14</sup> Colorado data for 2011 indicate that before pregnancy, approximately 45 percent of women exercised one hour or less per week, with 19 percent of women reporting no participation in any physical activity.<sup>15</sup> Pregnant women reported even less physical activity, with 63 percent of women reporting less than one hour of physical activity per week and 33 percent reporting no physical activity.

In low-income neighborhoods places to safely exercise may be few and far between, which limits the opportunity to be physically active and increases the risk for a sedentary lifestyle for women and children. Collaboration between government and business to expand access to more safe spaces and venues for exercise could promote a healthier population.



## Policy Recommendations:

- Increase access to safe environments in all Colorado communities so that women and families can be physically active.
- Expand outreach to women and families regarding the importance of physical activity and the benefits and safety of physical activity during pregnancy.

## Substance Use

Use of alcohol, tobacco or other drugs during pregnancy increases the risk of health problems and poor birth outcomes in infants. Beyond the immediate physical dangers substance use imparts to children, substance use in the home also contributes to toxic stress in children. Tobacco and alcohol are the most common substances used and abused during pregnancy. Alcohol use during pregnancy can stunt fetal growth and harm neural development. In 2011, 10 percent of pregnant Colorado women who were surveyed said they drank in the last trimester of pregnancy.<sup>16</sup> There is no evidence to support any safe level of alcohol consumption at any time during pregnancy because it can lead to fetal alcohol syndrome. Fetal alcohol syndrome has been associated with learning and developmental difficulties that can have negative repercussions throughout a child's life.

Babies born to women who smoke during pregnancy have a higher probability of being born prematurely, and are more likely to be born with low birth weights, increasing their risk for illness or death. Babies born to mothers who smoke also have a higher risk for Sudden Unexpected Infant Death (SUID), asthma and respiratory and ear infections. Unborn children can also be exposed to the same risks due to a mother's exposure to second-hand smoke. In Colorado, 23 percent of women reported smoking before pregnancy and 7.8 percent reported smoking in the last three months of pregnancy.<sup>17</sup> A number of resources are available to help women quit tobacco use during pregnancy and after birth, such as the Baby and Me Tobacco Free Program and the Colorado QuitLine. However there are fewer resources to support women seeking to give up other substances such as alcohol and illicit drugs. Many women feel stigmatized for drinking or using drugs during pregnancy, which can impede their willingness to seek help.

Illicit drug use can cause many physical and developmental delays in children. In Colorado, the detection of illicit substances during prenatal screening cannot be used against women in criminal proceedings. This is meant to encourage women to seek help during pregnancy to support the health of their child instead of creating barriers to care that would harm the health of the mother and fetus. Providing supports for women to change habits that might harm their children puts them on a path to a successful birth and motherhood.

### **Policy Recommendations:**

- Provide safe environments and support programs to help women abstain from substance use during pregnancy.
  - Strengthen investments in outreach for programs including Colorado QuitLine and Baby and Me Tobacco Free.
  - Expand state and local public health education and awareness campaigns on the dangers of substance abuse during pregnancy.
  - Provide outreach to women of childbearing age regarding the dangers of second-hand exposure to dangerous substances including drugs and smoking.

### **Physical Safety**

According to the CDC, as many as 324,000 pregnant women experience intimate partner violence (IPV) each year in the United States.<sup>18</sup> This pattern of behavior perpetrated against an individual by his or her partner can include physical injury, emotional and psychological abuse, sexual assault, isolation, stalking, intimidation and reproductive coercion.<sup>19</sup> The risk for IPV against women increases during pregnancy and may escalate throughout pregnancy and the postpartum period.<sup>20</sup> IPV affects women of every age, socio-economic status, race, religion, ethnicity and sexual orientation. Research links IPV to many pregnancy complications including: inadequate pregnancy weight gain, infection, anemia, substance abuse, stillbirth, preterm delivery and low newborn birth weights.<sup>21</sup> Continued IPV can lead to toxic stress and a multitude of other risks for children.

Health care providers have the unique opportunity to discuss IPV with patients and to offer resources for women experiencing IPV. Yet data from 2011 indicate that fewer than half of Colorado women discussed physical abuse with their health care provider during pregnancy. The U.S. Department of Health and Human services recommends that health care providers screen and counsel women for IPV as a part of standard preventive care. During pregnancy, women should be screened for IPV during the initial prenatal visit, at least once per trimester and at the postpartum checkup. Major barriers to IPV screening reported by health care workers include lack of knowledge regarding screening, insufficient time and lack of intervention and other resources for patients.<sup>22</sup> Health care workers also cite not wanting to offend their patients and non-disclosure by patients as further screening barriers. Education for health care providers regarding universal IPV screening and community resources can help prevent IPV and reduce attendant pregnancy complications.

### **Policy Recommendations:**

- Educate health care providers about the importance of routine screening for intimate partner violence and the heightened risk for IPV during pregnancy.
  - Connect providers with resources to give to patients seeking help for and information on IPV.
- Increase access to resources and intervention services for women experiencing IPV.

## Health Care Coverage & Access

The majority of Colorado women have private health insurance both before and during pregnancy—either employer-sponsored or individual. Thanks to a Colorado law passed in 2010, private insurance policies must provide coverage for pregnancy and delivery just as any other condition covered by the policy.

**Table 1. Preconception Insurance**

Insurance paid for by:	Percent of women:
Employment/Husband's employment	53.4
No Insurance	22.9
Medicaid	13.6
Someone else (not from a job)	4.6
TRICARE/Military	4.5
CICP	1.3
CHP+	0.7

Source: 2011 PRAMS data

**Table 2. Prenatal Care Insurance**

Insurance paid for by:	Percent of women:
Employment/Husband's employment	52.6
Medicaid	33.0
CHP+	5.1
TRICARE/Military	4.8
No Insurance	4.4
Insurance not from employment	3.8
CICP	0.7

Source: 2011 PRAMS data

In addition to private insurance, pregnant women and children can access coverage through Medicaid and Colorado's child health insurance program, Child Health Plan Plus (CHP+), if they meet income and other eligibility criteria. Together, these two programs cover children and pregnant women up to 250 percent of the Federal Poverty Level (FPL). Despite these public programs, some women in Colorado still lack access to medical care. The annual number of uninsured women of childbearing age in Colorado for the period from 2006 to 2008 was 213,000 or 21 percent. The national rate was 20 percent; by these numbers, Colorado ranks 34<sup>th</sup> in the nation.<sup>23</sup>



The Colorado Department of Public Health and Environment (CDPHE) reports that in 2011 more than 18 percent of Colorado women surveyed did not have access to prenatal care until after the first trimester of pregnancy. About 15 percent of women did not receive prenatal care as early as they would have liked. Among those in this category, the most common barriers to care were lack of money to pay for care and lack of insurance (refer to Table 3).<sup>24</sup> Another 29 percent of women reported they were unable to access care because they did not have a Medicaid card despite being eligible for the program.<sup>25</sup> Timely access to prenatal care for women eligible for Medicaid has improved with presumptive eligibility—a program that offers immediate, temporary coverage for pregnant women who meet income requirements. However, many providers remain hesitant to treat patients without the proper Medicaid documentation.<sup>26</sup>

**Table 3. Barriers to Timely Prenatal Care**

Barrier	Percentage of women experiencing barrier
Not enough money/no insurance	41.6
Couldn't get earlier appointment	30.6
Didn't have Medicaid card	28.5
MD/Health plan would not start earlier	21.9
Too many other things going on	16.2
Didn't want anyone to know she was pregnant	11.0
Couldn't take time off from work	9.0
No transportation	8.0
No one to take care of children	4.8

Source: 2011 Colorado PRAMS Data

\* Barriers to care among the 15 percent of Colorado women who did not get prenatal care as early as they wanted.

National health reform under the Patient Protection and Affordable Care Act (PPACA) will increase access to affordable health care for many women of childbearing age. Most notably, the law creates a new type of financial assistance that will make private health coverage more affordable for individuals and families who earn too much to qualify for public coverage such as Medicaid or Medicare and do not have access to affordable coverage through an employer. Through Connect for Health Colorado, an online health insurance marketplace, Coloradans will be able to see if they qualify for this new assistance in the form of a tax credit that will lower the cost of insurance premiums and reduce co-payments and deductibles. Connect for Health Colorado will launch in October 2013 with coverage beginning in January of 2014.<sup>27</sup>

Also thanks to PPACA, all health plans must cover a range of services for well-woman checks and prenatal care, such as screening for intimate partner violence, substance use and providing folic acid supplements and breastfeeding support without co-pays. By 2014 all individual and small business plans, including those purchased through Connect for Health Colorado, will cover pregnancy and newborn care. Beginning in 2014 women cannot be charged more for pre-existing conditions including pregnancy, and many women may qualify for subsidies to help pay for insurance.

Although expansions in coverage are key to improving access to health care for all Colorado women, coverage does not guarantee access. In many medically underserved rural and urban areas of Colorado accessing a health provider can be problematic. Medically underserved areas have low ratios of providers for the population. In urban settings, medically underserved areas are typically in low-income neighborhoods where health care providers may encounter difficulties being reimbursed at sustainable rates. Many patients in these communities are insured through Medicaid, which offers lower reimbursement rates than those paid through private insurance and Medicare. In response, many health care providers limit the number of Medicaid clients they see or choose not to participate in the program.

In rural Colorado communities, 83 percent of residents have a regular source of care, as opposed to 85 percent of those living in urban areas.<sup>28</sup> There are 672 rural Colorado residents for every physician, in contrast to the 426 urban residents for every physician.<sup>29</sup> In addition, 16 Colorado counties do not have a hospital.<sup>30</sup> All of these barriers make health care more difficult to access in rural communities, even for those who are insured. Removing the barriers to care for rural and urban Colorado women living in medically underserved areas will ensure better health care outcomes for these women and their children.

## Policy Recommendations:

- Ensure that women who qualify for public coverage through Medicaid and CHP+ and new subsidized coverage that will be available through Connect for Health Colorado are aware of and able to access that coverage.
  - o Increase provider reimbursement rates for Medicaid and CHP+ to encourage provider participation in the programs.
  - o Support loan forgiveness and other programs that incentivize providers to practice in medically underserved areas of Colorado to decrease provider-to-patient ratios.

## Undocumented Immigrants

Undocumented immigrants face consistent barriers to health care. Legal status is a requirement for coverage in Medicaid and other public insurance programs. However, if born in the United States, the children of undocumented immigrants are U.S. citizens. Low-income undocumented immigrant women can have their labor and delivery covered by emergency Medicaid. However, they often do not have adequate resources to access prenatal care, which we know has a substantial impact on the early development of children. Sixteen states and the District of Columbia provide prenatal care for undocumented women, primarily through utilizing federal CHIP funds.<sup>31</sup> While Colorado has sought to provide prenatal care for undocumented expectant mothers in the past, these efforts have not been implemented and large barriers to accessing this vital support for a child's healthy birth remain for many women. While tracking access to care for this population is difficult, safety net clinics are known to provide many of the necessary services to this population on a sliding scale fee structure. Improved access to care for these mothers would improve health outcomes for more Colorado children.



## Oral Health

Hormonal changes during pregnancy increase a woman's risk for a number of oral health complications including gingivitis and periodontal disease. Poor oral health in mothers during pregnancy is associated with negative pregnancy outcomes such as preterm birth, pregnancy-induced high blood pressure and low newborn birth weights.<sup>32</sup> A mother's prenatal oral health has lifelong effects on her child's oral health. The bacteria associated with poor oral health can pass from mother to baby with the potential to cause dental caries (also known as tooth decay) in infancy and early childhood. Read more about young children's oral health in part two of this series, "Set: Birth and Healthy Development."

Dental care during pregnancy is safe and effective in reducing periodontal disease, and should be a routine component of prenatal care.<sup>33</sup> Health experts recommend that pregnant women see a dentist early in pregnancy. Yet in 2011 only 46 percent of Colorado mothers reported visiting a dentist while pregnant, and just 54 percent reported having their teeth cleaned during the 12 months before pregnancy.<sup>34</sup>

A major barrier to accessing dental care is lack of dental insurance because dental health coverage is often beyond the scope of private and public health insurance plans. In 2011, approximately 40 percent of all Coloradans did not have dental insurance.<sup>35</sup> Low-income, minority and rural Coloradans are more likely to be uninsured. A new Colorado law passed by the legislature in 2013 will improve access to dental care for pregnant women by creating a limited dental health benefit for low-income adults in Medicaid.

Access to oral health services is an essential component of preconception and prenatal care, and is as important as basic health care coverage. Primary care providers can serve a critical role in screening for the need for oral health services. Yet because oral health is often considered to be separate from health care, many health care providers do not discuss oral care with their patients during pregnancy. From 2000 to 2010, 53 percent of Colorado women reported that they did not receive information about how to care for their teeth and gums during pregnancy.<sup>36</sup> Many oral health professionals have reported that they will not perform dental care on pregnant women for fear of harming the mother or fetus.<sup>37</sup> Education to advise providers about the safety of dental care during pregnancy, such as Colorado's Cavity Free at Three campaign, promote better oral health in pregnant women and young children.

## Policy Recommendations:

- Encourage businesses to include dental coverage as a part of employee benefits to improve the health of women of childbearing age in the workplace.
- Encourage physical and dental health care providers to educate patients about the importance of dental care both before and during pregnancy, as well as health implications for unborn babies.

## Emotional and Mental Health

Becoming a mother can be an exciting and overwhelming life event. The enormity of the experience and changing hormones associated with pregnancy can affect a woman's mental health. About one in eight new mothers in Colorado experiences depression related to pregnancy every year.<sup>38</sup> Hormones associated with stress and depression during pregnancy can interfere with fetal brain and immune system development.<sup>39</sup> Children of depressed mothers can suffer in their physical, emotional and language development, all of which contribute to a child's success in early learning settings and beyond.

Depression impairs a woman's ability to care for herself, which during the prenatal period may translate into missed doctor appointments, poor nourishment, self-harm and substance abuse. Depression can also interfere with the ability to provide a stable and healthy environment for a baby post-partum. Providing women with the resources and tools they need to access mental health support is crucial.

Women are 50 percent more likely to experience an episode of major depression following childbirth than at other times in their life. Young, minority and low-income women suffer the greatest rates of depression among Colorado mothers.<sup>40</sup> Twenty-eight percent of black women in Colorado surveyed between 2005 and 2007 were affected by post-partum depression, compared to 13 percent of Hispanic women and 11 percent of non-Hispanic white women.<sup>41</sup> Furthermore, 20 percent of women receiving Medicaid benefits reported experiencing postpartum depression versus 9 percent of those not on Medicaid. Colorado's Prenatal Plus Program offers mental health screening and referral services for Medicaid-eligible pregnant women. The program includes education on pregnancy-related depression and regular depression screening throughout pregnancy and up to 60 days after birth.<sup>42</sup>



In 2011, about 77 percent of women reported that their health care provider spoke with them about depression during pregnancy, and about 88 percent of women reported that they received information about post-partum depression after giving birth. These rates are encouraging, yet all health care providers must be aware of the importance of screening for depression and the risks of prenatal depression to young children throughout the prenatal period and after birth.

## Policy Recommendations:

- Support and expand access to mental health services for pregnant women and new mothers.
  - o Ensure that employer-sponsored health coverage includes access to mental health services.
  - o Encourage providers and community organizations to educate patients about pregnancy-related depression and the importance of screening.
  - o Support efforts underway in Colorado to integrate behavioral health services in primary care settings.

A healthy woman is more likely to experience a healthy pregnancy and give birth to a healthy baby. Creating policies that promote health, wellness and access to comprehensive care for women of childbearing age is a vital part of creating a healthy, strong start for all Colorado's kids and setting the foundation for successful infancy and toddler experiences.

## Recent Policy Successes

- House Bill 09-1353 (Miklosi/Foster)—**Coverage for Moms & Kids:** Eliminated the 5-year waiting period and provided benefits under Medicaid and CHP+ to pregnant women and children who are legal immigrants.
- House Bill 10-1021 (Franga/McCann/Foster)—**Required Coverage for Reproductive Services:** Requires individual health insurance policies to provide coverage for pregnancy and delivery and group and individual health insurance policies to provide coverage for contraception.
- Senate Bill 11-250 (Boyd/Ferrandino/Summers)—**Supporting Healthy Beginnings:** Helps ensure Colorado's public insurance program could continue providing important prenatal care services to low-income mothers by moving pregnant women with incomes between 134 percent and 185 percent of the federal poverty level from CHP+ to Medicaid.
- Senate Bill 13-242 (Nicholson/Primavera)—**Adult Dental Medicaid Benefit:** Improves oral health of pregnant women and the health of their babies by creating a new dental health benefit for adults in Medicaid.

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# End Notes

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