

2010 Results



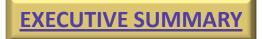
Next Steps

TIPPING THE SCALES:

Weighing in on Solutions to the Low Birth Weight Problem in Colorado

Update 2011







ACKNOWLEDGEMENTS



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<u>Interventions</u>

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What Can I Do?

?

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USING THIS DOCUMENT



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Using This Document



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What Can I Do?

References and Definitions:

Throughout this document, you will occasionally find shaded text. When you hover your mouse cursor over these shaded areas, you can see a note pop up. These notes contain definitions and reference information for certain terms and abbreviations.



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If you have any problems using this document, please contact Linda Archer, RN at (303) 692-2487 or linda.archer@state.co.us.







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Get Started





TWELVE YEARS LATER



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What Can I Do?

In 2000 the Colorado Department of Public Health and Environment published a report, Tipping The Scales: Weighing In on Solutions to the Low Birth Weight Problem in Colorado. The report used Population Attributable Risk (PAR) analysis to determine which risk factors were associated with the most low weight births.





2000 Results

In 2010, the PAR analysis was repeated to find out if previous risk factors for low birth weight in Colorado changed.



2010 Methods



2010 Results

What is the Problem?

Comparison of the Results





THE LOW BIRTH WEIGHT PROBLEM



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What Can I Do?

Low birth weight (LBW) is defined as an infant weighing 5 pounds 8 ounces or less at birth.

LBW infants have a higher mortality rate than normal weight infants.

LBW infants can incur high health care costs through neonatal intensive care, repeated hospitalizations and increased illnesses throughout life.

LBW infants are at increased risk of obesity in childhood and adulthood.



NEXT

Low Birth Weight Rates

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Interventions

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What Can I Do?

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2008 US LBW Rate

8.2 percent¹

2008 CO LBW Rate

8.9 percent²

Healthy People 2020 Goal

 $7.8 \, \text{percent}^{3}$





Leading Contributors to LBW



2010 Results

Interventions

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What Can I Do?

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Modifiable Risk Factors

- Inadequate weight gain
- Smoking
- Short interval between pregnancies
- No prenatal care
- Alcohol use

Non-modifiable Risk Factors

- Premature rupture of membranes
- Eclampsia/Pregnancy induced hypertension
- Maternal black race
- Less than 18 years of age
- Hydramnios
- Abruptio placenta
- Placenta previa
- Altitude greater than 10,000 feet above sea level
- Incompetent cervix



2010 Methods & Results

NEXT

2000 TIPPING THE SCALES METHODOLOGY (1995 – 1997 BIRTH DATA)



2010 Results

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What Can I Do?

Analysis of 161,491 birth certificates of singleton births between 1995 and 1997.

Used information from birth certificates on maternal height, weight gain and smoking status during pregnancy.



See the Results



2000 TIPPING THE SCALES RESULTS

(1995 - 1997 BIRTH DATA)

2010 Results	<u>Interventions</u>	Next Steps	What Can I Do?

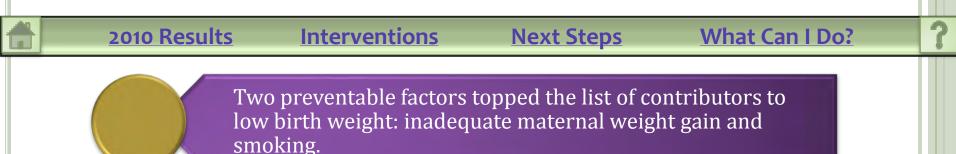
Factor (Risk)	Population Attributable Risk	Percent of Mothers with the Risk Factor (Prevalence)	Interpretation	
Inadequate maternal weight gain	12.8 %	25.7 %	1 in 8 low weight births	
Smoking (any time during pregnancy)	11.9 %	11.6 %	1 in 8 low weight births	
Combined inadequate weight gain and/or smoking	34.4 %	34.0 %	1 in 3 low weight births	



Understand the Results

2000 TIPPING THE SCALES RESULTS

(1995 - 1997 BIRTH DATA)



One in every 8 low weight births could be attributed to mothers not gaining enough weight during pregnancy.

One in every 8 low weight births could be attributed to mothers smoking during pregnancy.

One in every 3 low weight births could be attributed to mothers who do not gain enough weight and/or smoke during pregnancy.



2010 Methods

2010 Results



2010 PAR ANALYSIS METHODOLOGY

(2007 - 2009 BIRTH DATA)



2010 Results Interventions

Next Steps

What Can I Do?

?

Analysis of 202,498 birth certificates of singleton births between 2007 and 2009.

Used information from a revised birth certificate containing new data on maternal height, prepregnancy weight, weight gain and smoking status during pregnancy.



See the Results



2010 PAR ANALYSIS RESULTS

(2007 - 2009 BIRTH DATA)

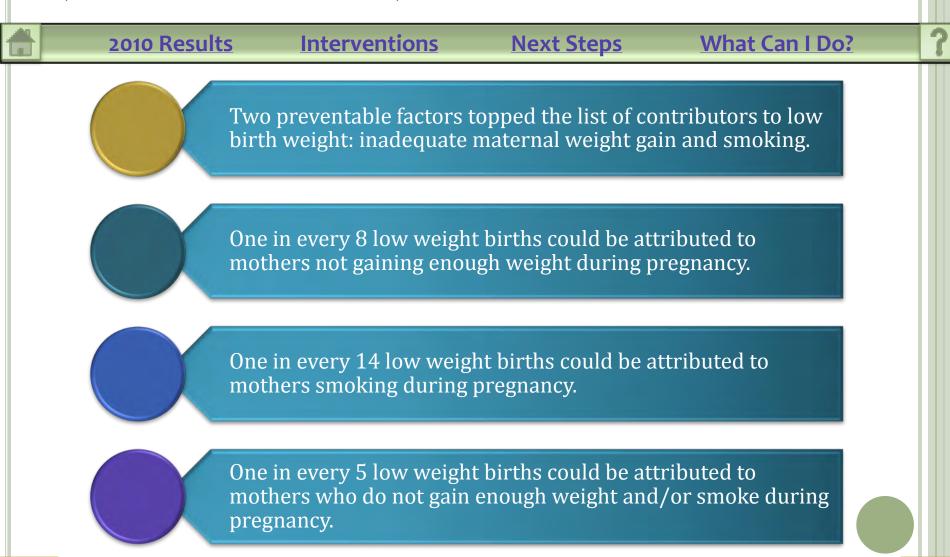
1	2010 Results Inter	<u>ventions</u> <u>N</u>	Next Steps	What Can I Do?	3
	Factor (Risk)	Population Attributable Risk	Percent of Mothers with the Risk Factor (Prevalence)	Interpretation	
	Inadequate maternal weight gain	12.9 %	18.7 %	1 in 8 low weight births	
	Smoking (any time during pregnancy)	7.1 %	8.7 %	1 in 14 low weight births	
	Combined inadequate weight gain and/or smoking	19.4 %	26.2 %	1 in 5 low weight births	





2010 PAR ANALYSIS RESULTS

(2007 - 2009 BIRTH DATA)



BACK

NEXT

(2007 - 2009 COMPARED WITH 1995 - 1997 BIRTH DATA)

Next Steps

Interventions

<u> 2010 Results</u> <u>litter veritions</u> <u>Next Steps</u> <u>writat Carri Do;</u>						<u> </u>
Factor (Risk)	Population Attributable Risk		Percent of Mothers with the Risk Factor (Prevalence)		Interpretation	
	2000	2010	2000	2010	2000	2010
Inadequate maternal weight gain	12.8 %	12.9 %	25.7 %	18.7 %	1 in 8 low weight births	1 in 8 low weight births
Smoking (any time during pregnancy)	11.9 %	7.1 %	11.6 %	8.7 %	1 in 8 low weight births	1 in 14 low weight births
Combined inadequate weight gain and/or smoking	34.4 %	19.4 %	34.0 %	26.2 %	1 in 3 low weight births	1 in 5 low weight births

BACK

2010 Results

Understand Comparison



What Can I Do?

(2007 - 2009 COMPARED WITH 1995 - 1997 BIRTH DATA)



2010 Results

Interventions

Next Steps

What Can I Do?





The population attributable risk (PAR) of inadequate weight gain was the same in 2010 as in 2000: 1 out of 8 low weight births could be attributed to inadequate maternal weight gain.



The percentage of mothers who did not gain adequately appears to have dropped from 25.7% to 18.7%. The decline may be due to improved BMI measurement available from birth certificates revised in 2007 rather than to a decrease in prevalence.



Understand Tobacco Comparison

Understand Combined Comparison



(2007 - 2009 COMPARED WITH 1995 - 1997 BIRTH DATA)



2010 Results

Interventions

Next Steps

What Can I Do?





The PAR of smoking declined 40% between the two analyses. In the 2000 study, 1 out of 8 low weight births was attributable to smoking. In 2010, 1 out of 14 low weight births was attributable to smoking.



The percentage of mothers who smoked during pregnancy dropped 25% from the 2000 to 2010 study.



<u>1</u>

(2007 - 2009 COMPARED WITH 1995 - 1997 BIRTH DATA)

2010 Results Interventions

Next Steps

What Can I Do?





When both inadequate weight gain and smoking were considered, the PAR fell from 34.4% in the earlier study to 19.4% in the later study. In the 2000 analysis, 1 in every 3 low weight births could be attributed to smoking and/or inadequate prenatal weight gain. In the 2010 analysis, 1 in every 5 low weight births was attributable to one or both factors.



The percentage of mothers with either inadequate weight gain or smoking as a risk factor, or both, fell from 34.0% in the 2000 results to 26.2% in the 2010 results.



Over a 12-year period inadequate weight gain remained the largest contributor to the number of low weight births in Colorado, while smoking dropped dramatically as a contributing factor.

Conclusion



CONCLUSION (2007 – 2009 BIRTH DATA)



2010 Results

Interventions

Next Steps

What Can I Do?

If all women with singleton births during 2007-2009 had gained an appropriate amount of weight during pregnancy, the low birth weight rate could have been decreased from 7.0% to 6.1%.

If all women with singleton births during 2007-2009 had not smoked during pregnancy, the low birth weight rate could have been decreased from 7.0% to 6.5%.

If all women with singleton births during 2007-2009 gained an appropriate amount of weight AND did not smoke, the low birth weight rate could be decreased from 7.0% to 5.6%.

Learn About Healthy
Weight Interventions

<u>Learn About Tobacco</u> <u>Interventions</u>





PROGRAM INTERVENTIONS ADDRESSING INADEQUATE WEIGHT GAIN SINCE 2000



2010 Results

Interventions

Next Steps

What Can I Do?

?

Healthy Baby Campaign

Program Interventions

Social Marketing Campaign

• Website created



- <u>Campaign materials developed</u>
- 815 providers received education about prenatal weight gain counseling.
- 32 health care practices incorporated prenatal weight gain counseling protocol into clinic practice.
- 5,000 consumers received weight gain education materials.
- 10 local health agencies incorporated Healthy Baby campaign concepts into public health programs.



More Interventions



PROGRAM INTERVENTIONS ADDRESSING INADEQUATE WEIGHT GAIN SINCE 2000



2010 Results

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What Can I Do?

?

Healthy Baby Campaign

Program Interventions

Healthy Baby Campaign Evaluation

- The Impact of the Healthy Baby campaign 2004 pilot program on Inadequate Maternal Weight Gain Among Colorado Women report evaluated the Healthy Baby campaign pilot program.
- The study found a statistically significant decrease in the state inadequate weight gain rate that occurred in 2005.
- There was a significantly steeper drop in the inadequate weight gain rate for the nine counties participating in the 2004 campaign pilot program compared to the drop in the inadequate weight gain rate for the 55 Colorado counties where no formal provider training took place.



Tobacco Interventions

Next Steps



PROGRAM INTERVENTIONS ADDRESSING TOBACCO CESSATION SINCE 2000



2010 Results

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Next Steps

What Can I Do?

7

Tobacco Cessation

Program Interventions

Policy Advancement

- In 2004, Colorado voters approved a tax increase on cigarettes and other tobacco products. The tax began in January 2005, and included a 64 cent increase on a pack of cigarettes to a total of 84 cents and a 20 percent increase on other tobacco products.
- In July 2006, the Colorado Clean Indoor Air Act was enacted, prohibiting smoking in nearly all public establishments in Colorado.
- In September 2009, the Medicaid tobacco cessation medication benefit was expanded from once per lifetime to twice per year.



More Interventions



PROGRAM INTERVENTIONS ADDRESSING TOBACCO CESSATION SINCE 2000

	2010 Res	<u>ults</u>	<u>Interventions</u>	Next Steps	What Can I Do?	3
	Tobacco Cessation	Prog	gram Intervention	ıs		
F	Client and Provider Education	produced pro	mplete smoking cessoride monitoring dure stpartum. November 2009, Smegnant and Postparte May 2010, the Colorate a specialized tobathe needs of pregnar October 2010, a sociocus on tobacco cessorialized cessorializ	free diapers to love ation classes and pring pregnancy and oking Cessation Clam Women were deado QuitLine (1-80 cco cessation count women. al marketing campation intervention including referrals	w-income women who participate in carbon d up to one year inical Guidelines for leveloped. 00-QUIT-NOW) began to useling program tailored baign was launched with as for Medicaid clients to the Colorado QuitLine	

BACK

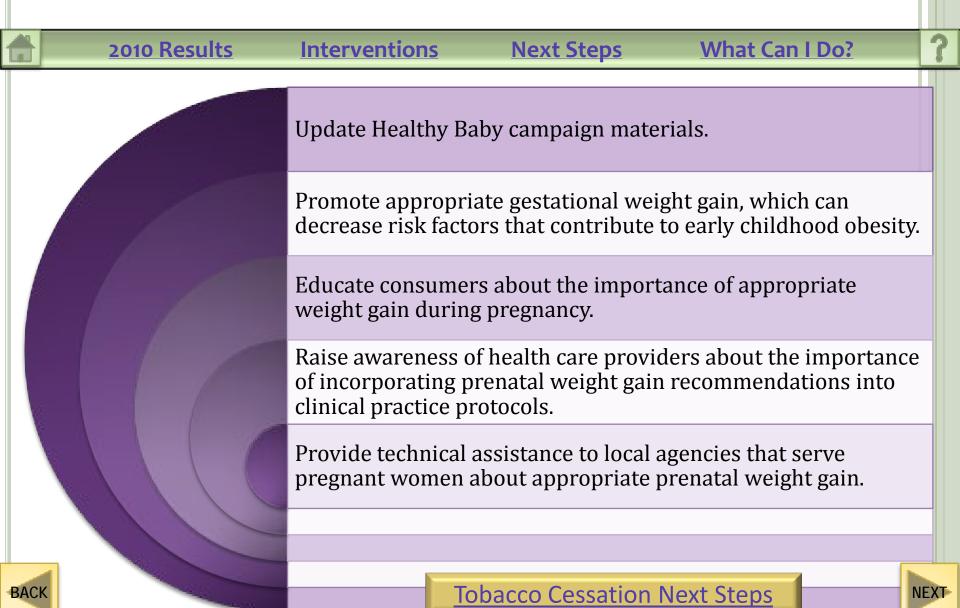


Weight Gain Interventions

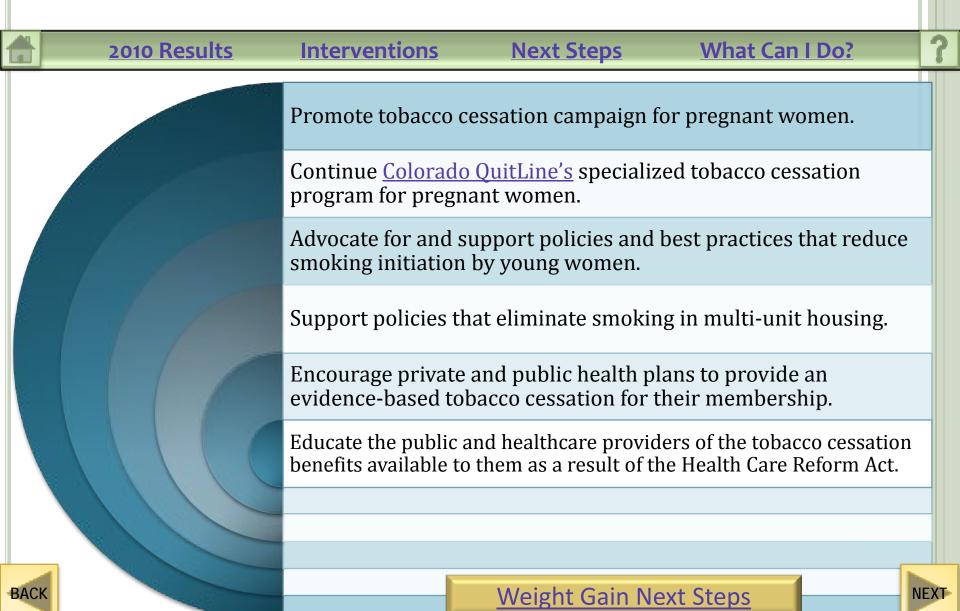
Next Steps

NEXT

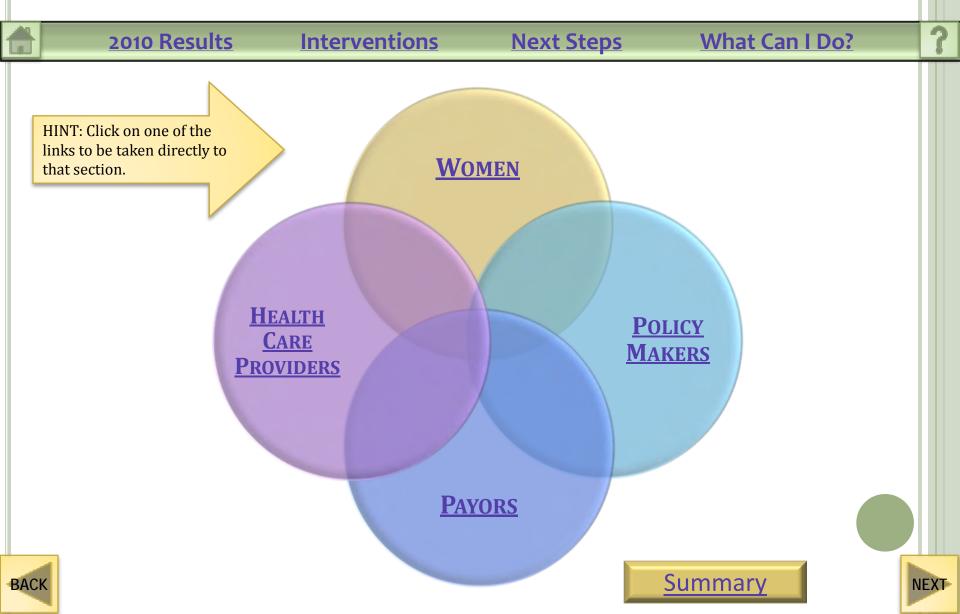
HEALTHY BABY CAMPAIGN NEXT STEPS



TOBACCO CESSATION NEXT STEPS



WHAT CAN I DO?



WHAT HEALTH CARE PROVIDERS CAN DO TO ADDRESS APPROPRIATE WEIGHT GAIN



2010 Results Interventions **Next Steps**

What Can I Do?

Counsel women about nutrition and weight issues prior to pregnancy.

Counsel all pregnant women, using culturally appropriate messages, about nutrition and appropriate weight gain during pregnancy.

Use the <u>Preconception and Interconception care clinical practice guidelines</u> to improve the health of women before and between pregnancies.

Use the 2009 Institute of Medicine's recommendations for prenatal weight gain.

Calculate a pregnant woman's BMI and discuss target weight gain range during pregnancy, with special attention to teens and women who are underweight at the initial visit.

Follow a woman's rate of weight gain and total amount of weight gained during pregnancy.

Refer women who are underweight or who do not gain appropriately to a registered dietitian or nutrition educator early in pregnancy.



WHAT HEALTH CARE PROVIDERS CAN DO TO ADDRESS TOBACCO USE



BACK

Providers – Address Weight Gain



WHAT POLICY MAKERS CAN DO TO PROMOTE APPROPRIATE WEIGHT GAIN



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Next Steps

What Can I Do?

Advocate for and support the use of <u>Colorado preconception and interconception care clinical practice guidelines</u>.

Promote positive messages about weight and body image among adolescents.

Promote the use of the <u>Institute of Medicine (IOM) recommendations</u> as the standard for prenatal weight gain.

Support the development of community education/social marketing campaigns to inform consumers about the importance of appropriate weight gain during pregnancy.

Advocate and support multidisciplinary approaches to prenatal care.

Promote and support prenatal care for all women.



WHAT POLICY MAKERS CAN DO TO PROMOTE TOBACCO CESSATION



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What Can I Do?

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Advocate for and support the use of <u>Colorado</u> <u>preconception and interconception care clinical</u> practice guidelines.

Support and direct the development of community education and social marketing campaigns to inform consumers about the risks of smoking during pregnancy and exposure to tobacco smoke.

Support smoking cessation hotlines to provide 24-hour, 7 day-per-week assistance and support for smokers trying to quit.

Support tobacco cessation counseling and treatment reimbursement to health care providers.

Support and promote the use of Best Practice recommendations for smoking cessation during pregnancy.

Support policies that eliminate smoking in outdoor common areas and expand smoke-free perimeters around building entrances to protect people from exposure to secondhand tobacco smoke.

Support and advocate for multidisciplinary approaches to smoking cessation during pregnancy.

Support policies that reduce tobacco advertising to young women and communities of color.

Support policies that raise the price of tobacco products.



Policy Makers – Promote Weight Gain



WHAT WOMEN CAN DO ABOUT APPROPRIATE WEIGHT GAIN

<u>2010 Results</u> <u>Interventions</u>

Next Steps

What Can I Do?

Work to develop a healthy weight before pregnancy.

Be knowledgeable about body mass index (BMI) and the amount of weight gain that is appropriate during pregnancy.

Commit to eating a healthy diet during pregnancy.

Access prenatal care early in pregnancy.



Women - Tobacco Use



WHAT WOMEN CAN DO TO QUIT TOBACCO USE



Women - Weight Gain

BACK

NEXT

What Payors Can Do to Promote Appropriate Weight Gain



<u>2010 Results</u> <u>Interventions</u> <u>Next Steps</u> <u>What Can I Do?</u>

Encourage providers to use and reimburse for services related to the <u>Colorado preconception clinical practice guidelines</u> and reimburse for preconception care interventions.

Encourage and reimburse multidisciplinary approaches to preconception and prenatal care, including nutrition counseling services.

Provide reimbursement for all contraceptive methods.

Emphasize the importance of pregnancy planning and the need to begin a pregnancy at a normal weight.



WHAT PAYORS CAN DO TO PROMOTE TOBACCO CESSATION



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Encourage providers to use and reimburse for services related to the Colorado preconception clinical practice guidelines and reimburse for preconception care interventions.

Inform enrollees about the risks of smoking and encourage cessation for all reproductiveage women.

Provide reimbursement to providers for smoking cessation counseling and follow-up.

Provide reimbursement for prescription and non-prescription smoking cessation aids.





SUMMARY



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What Can I Do?

The population attributable risk analysis could be done only with information collected on the birth certificate. Therefore, it does not provide information on every possible factor that affects low birth weight. The value of the analysis, however, lies in what it does reveal, and what it can suggest as public health interventions. Interventions can focus on helping pregnant women to understand the importance of adequate weight gain during pregnancy and on encouraging women to be nonsmokers, either before or during pregnancy.

Continued on next page...





SUMMARY



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What Can I Do?

Indeed, if all women can gain adequately and none smoke during pregnancy, the state's singleton low birth weight rate has the potential to drop significantly, and a serious health problem in Colorado can be greatly reduced.



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