

## Smoking Cessation for Prenatal Women

### *Tools to Help Pregnant Women Quit Smoking: Motivational, Pharmacological, and Behavioral Strategies*

**Dr. Heather LaChance**  
Licensed Clinical Psychologist  
Acting Division Chief of Psychosocial Medicine  
National Jewish Health

## Health Risks of Smoking in Pregnancy

- Prenatal Health Risks:
  - Pregnancy complications (placental problems)
  - Growth retardation (low birth weight risk is doubled, length, head circumference lowered)
  - Higher risk for ectopic pregnancy, miscarriage, stillbirth, and premature delivery

## Prenatal/Postnatal Health Risks

- Health Risks for Infants:
  - Infants of smokers appear to experience withdrawal-like symptoms (jittery, difficulty being soothed)
  - Smokers are 2-3x more likely to have low birth weight babies (less than 5 lbs, 8 oz)
  - Cerebral palsy risk
  - Respiratory and sensory problems
  - Negative long-term effects on children's cognitive development (ADHD 3-9x, learning disabilities, MR)
  - Birth defects (cleft lip/cleft palate is 50-70% more likely, congenital heart defect risks increase with more cigarettes smoked)
  - Negative effects on children's growth (height)
  - SIDS is 3x more likely
  - Difficulty arousing from sleep (related to SIDS)

## Maternal Smoking and Obesity

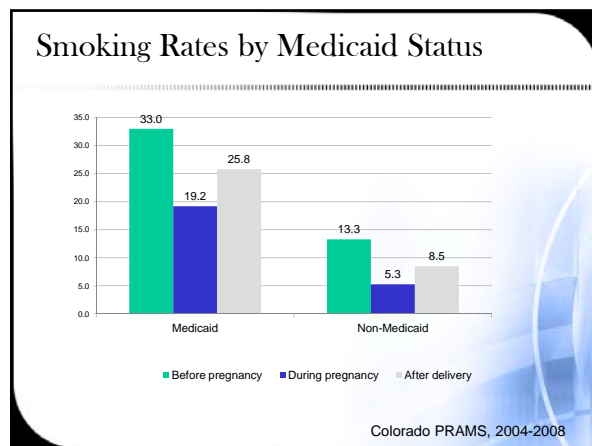
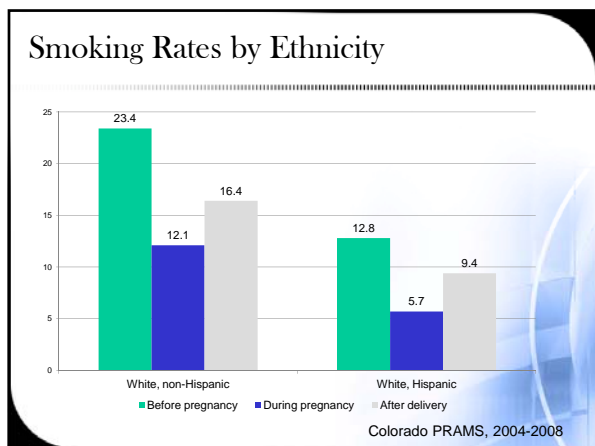
- Studies have linked maternal prenatal smoking to offspring obesity and hypertension
- Compared to nonsmokers, children of mothers who smoked during early pregnancy were twice as likely to be overweight at age three
- These children also had elevated levels of systolic blood pressure.  
Oken et al., (2005) Obesity Research, 13, 2021-2028.
- Children whose mothers smoked throughout the pregnancy also have an elevated risk of asthma in the first five years of life
- Childhood asthma increases the risk of obesity

## Secondhand Smoke

- Infants whose mothers smoke are 50% more likely to be hospitalized with a respiratory infection (bronchitis and pneumonia) during their first year of life
- There is a 73% higher risk of hospitalization if mothers smoke while holding their infants and a 95% higher risk if mothers smoke while feeding their infants
- Once a child has asthma, secondhand smoke increases the frequency of episodes and the severity of symptoms
- Children who are exposed to cigarette smoke during the first three years of life have double the risk of frequent or persistent ear infections

## How many women smoke during pregnancy?

- Rate of smoking among Colorado women during last three months of pregnancy changed little between 2000 - 2007 (about 10 percent), but dropped to 8.1 percent in 2008
- Decrease is likely due to a significant drop in the percentage of women smoking before pregnancy during 2008 (20.6% down to 16.9%)
- Pregnant women are about half as likely as non-pregnant women to be smokers



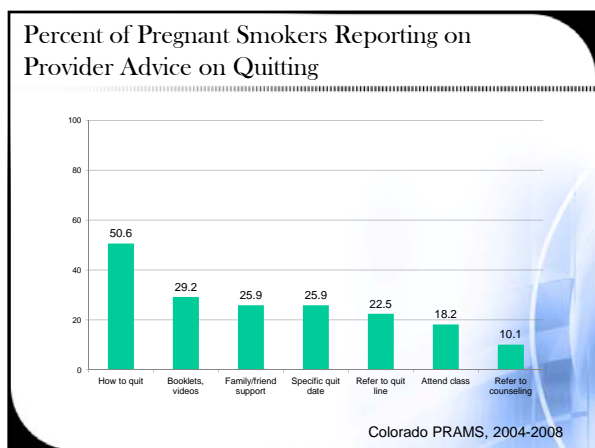
### Who is most likely to smoke during pregnancy?

- **Low socioeconomic status (SES) (20% vs. 5%):**
  - *Least educated:* high school or less
  - *Lowest income:* women on Medicaid
  - *Low status jobs:* of employed women, those with the lowest status jobs are 5X more likely to smoke than those with highest status jobs
- **Other factors:**
  - High levels of pregnancy-related anxiety
  - High job stress
  - Low social support
  - Partner smokes
  - Exposure to physical/sexual violence

### Who is most likely to quit?

- 25% of women quit when they become pregnant (spontaneous quitters)
- Lighter smokers
- Older smokers
- Those having their first baby
- Those smoking for a shorter amount of time
- More highly educated
- Higher income
- Have a partner who is a nonsmoker

**15-30% relapse during pregnancy**



### Smoking during Pregnancy as a Health Care Crisis for the Underserved

- In clinics serving only disadvantaged populations, up to 50% of pregnant women smoke.
- Only half of these are being directed on how to quit
- Reducing smoking during pregnancy by 1% in U.S. over 7 years would prevent 57,000 LBW infants and save \$572 million in direct medical costs.

## What are the reasons for smoking? What motivates quitting?

- Main reasons for smoking:
  - Deal with stress (55%)
  - Addiction (40%)
  - Social or other (5%)
- Main reasons for quitting :
  - Baby's health (84%)
  - My health (9%)
  - Save money (2%)
  - Break the addiction (3%)
  - Other (2%)

## The Role of Providers in Cessation

### Providers in Public Clinics:

1. access to population at highest risk
2. focus on prenatal health and nutrition
3. long-term relationships with women, children, and families
4. women may feel more safe, supported

## Limits for Providers

- Time constraints
- Competing obstacles, goals, and demands
- High volume, difficult to develop long-term relationships

## Intervention Strategies

- Pharmacologic
- Brief Intervention Approaches
  - Ask, Advise, Refer
  - Understanding Stages of Change
  - Basic Motivational Intervention Skills
- Quitline Stories

## Interventions: Pharmacologic

- In a large sample of pregnant smokers interested in quitting, only 29% reported their obstetric providers discussed a smoking cessation medication with them.
- Research also shows pregnant smokers are more likely to actually use a cessation medication if their prenatal provider discussed medications in advance.

*Rigotti, N. (2008) Obstetrics & Gynecology: v 111 - Issue 2, Part 1 - pp 348-355.*

## Interventions: Pharmacologic

- Nicotine Replacement Therapy
- Using a cessation medication doubles to triples the likelihood of successful quitting
- Upon review of recent literature, researchers have concluded that the risk of cigarette smoking during pregnancy is potentially greater than the risk of exposure to pure nicotine\* ..... However, research is needed
- Because pregnancy substantially accelerates the metabolism and clearance of nicotine, the usual doses of NRT for non-pregnant smokers may be inadequate for pregnant smokers

\* Melvin C. Gallies C. Treating nicotine use and dependence of pregnant and parenting smokers: An update; Nicotine & Tobacco Research Vol 6, Suppl 2 (April 2004) S107-S124.

## Interventions: Pharmacologic

- Quitting Medications
- Physicians should consider recommending quit smoking medicines for:
  - women who smoke heavily (> 1 pack per day)
  - those who have been unable to quit with counseling alone
  - others for whom the benefits outweigh the risks of medication use

## Interventions: Pharmacologic

### Medication Options:

- Nicotine gum (2 mg and 4 mg doses OTC)
- Nicotine lozenges (2 mg and 4 mg doses OTC)
- Nicotine patch (21 mg, 14 mg, 7 mg doses OTC or 5 mg / 22 mg by prescription)

### *Expensive:*

- Nicotine nasal spray (.5 mg by prescription)
- Nicotine inhaler (13 mg doses by prescription)

## Medicaid Benefit for Tobacco Cessation Medications

- Medicaid patients are eligible for two 90-day treatments of tobacco cessation medications each year
- All FDA-approved medications can be prescribed
  - Nicotine patches, gum, nasal spray, inhalers, {bupropion (Zyban)}
- Provider must write a prescription and obtain prior authorization from Medicaid

## Interventions: Pharmacologic

- Current suggestions based on available data:
- Once it is clear that behavioral therapy alone is not effective, consider adding NRT
- Begin NRT treatment as early as possible during pregnancy
- Use the lowest dose of nicotine that is effective for achieving cessation (gum or lozenges)
- Using NRT prn for cravings is the **preferred initial therapy** because the daily dose of nicotine is usually less than with a patch
- The nicotine patch may be preferred if the woman has nausea; use the patch for **16 hours** rather than for 24 hours
- Monitor cotinine levels as recommended in the guidelines

(cotinine is a nicotine metabolite that can be measured via saliva or urine. NicAlert saliva strips, for example)

## Interventions: Behavioral

Use the Brief Model:

- Ask = Ask every pregnant patient
- Advise = Advise pregnant smokers not to smoke and educate them on the risks
- Refer = Refer the pregnant smoker to talk with her provider and the Quitline. Give some details of the prenatal program.

## Interventions: ASK

- **ASK** at every visit; on intake forms:
  - I have never smoked or have smoked fewer than 100 cigarettes in my lifetime.
  - I stopped smoking before I found out I was pregnant and am not smoking now.
  - I stopped smoking after I found out I was pregnant and am not smoking now.
  - I smoke some now, but I have cut down.
  - I smoke regularly now, about the same as before I found out I was pregnant.

### Interventions: ASK

- “How much do you smoke?”  
-brief, open, direct question
- How much is better than “Do you smoke?” -
- “Do you smoke?” makes it easy for the embarrassed participant to simply say “no”

### Interventions: ADVISE

- ADVISE pregnant smokers to quit:
- Be gentle and non-judgmental.  
Use questions rather than lecture:
- “What do you know about smoking during pregnancy?”
- *Would you like to know more?*
- *Smoking can lead to problems with your pregnancy. It can lead to lower birth weight, birth defects (like cleft lip, cerebral palsy) and long term problems for your child like learning disabilities, obesity, or asthma.”*

### Interventions: REFER

- REFER pregnant women to:
  1. Talk with her medical provider about cessation medications
  2. Call the Quitline: 1- 800- QUIT-NOW
    - Also [www.myquitpath.org](http://www.myquitpath.org)
    - Fax-to-Quit Program
      - Provider submits Fax Referral Form to QuitLine and staff contact patient directly to initiate coaching sessions

### Prenatal/Postpartum Quitline Program

- Quitline offers women a FREE individualized program:
- Each caller is assigned a designated, trained coach
- Receive rewards per call:
  - \$5 per completed call during pregnancy (up to \$25)
  - \$10 per completed post-partum call (up to \$40)
- Callers can receive supportive text messages to their cell phone during the post partum phase
- Pending a doctor’s consent, pregnant participants may receive 4 weeks of NRT and highly addicted participants may receive 8 weeks of NRT
- Participants may also be eligible for postpartum NRT

### Interventions: Behavioral

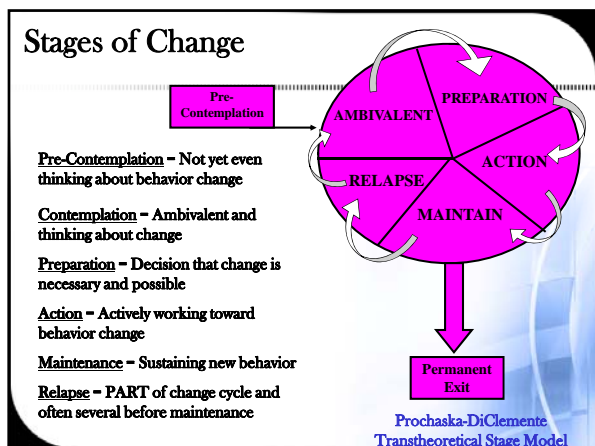
What do you do if the conversation goes a little longer?

- 1. Identify Stage of Change
- 2. Use Motivational Intervention skills

### Interventions: Behavioral

- Stages of Change Model
- In 1984, Prochaska and DiClemente shifted the focus away from the view that underlying cause of addictions is because people lack determination or are morally deficient.
- Theorized that change is a *process THAT TAKES TIME* and that all people move through stages as they change.
- Transtheoretical Model of Change (TTM) or Stages of Change (1984-present).

\*<http://www.uri.edu/research/cprc/transtheoretical.htm>



### Interventions: Behavioral

#### Health Behavior Change by Rollnick, Mason, & Butler

TWO core Motivational Intervention Strategies:

- 1. Reflective Listening
- 2. Open versus Closed Questions

### Interventions: Behavioral

#### REFLECTIVE LISTENING:

- Validate the person's feelings **FIRST** before giving feedback and suggestions.
- Acknowledge both sides of their ambivalence
- Don't argue for change; allow the woman to argue for change
- Once the person is validated, you will notice they become more open to *hearing your ideas*, feedback and suggestions.

### Interventions: Behavioral

#### Confrontation-Denial Trap:

- P - It's really important that you quit... for you and your baby.
- W - I know, but I am sick of trying and failing. Besides, I've cut down a lot.
- P - That's good, but your baby's health is very important. You've got to do this for yourself and for your baby.
- W - I know. I really have tried. I just can't do it. I have too much stress in my life.
- P - Each day you smoke your baby gets more and more chemicals from tobacco. This is the most important thing you can do as a new mother. It's important to try as hard as you can...
- W - Look, I'm doing my best. You don't understand. *(looks down and stops talking)*

*You feel stuck. Client is talking herself out of changing.*

### Interventions: Behavioral

#### Use Reflective Listening to Avoid Argumentation:

- P - Sounds like you've tried to quit many times before.
- W - Yes, but I am sick of trying and failing. Besides, I've cut down a lot.
- P - That's great! That tells me this is really important to you.
- W - Yeah, it is important to me. It's just have so much stress.
- P - Stress does make it hard. You want the best for your baby, clearly. So you keep trying again and again to quit.
- W - Yeah, I'm worried about my baby. I wish it was easier...
- P - There may be some things you haven't tried yet. Sometimes it takes new strategies to get it right. There are coaches at the Quiltline who know a ton of different strategies and maybe could help.
- W - Ok.

*Goal is to collaborate, rather than defend or argue.*

### Interventions: Behavioral

- **REFLECTIVE LISTENING:**
- Form a reasonable guess as to the underlying or unspoken **FEELINGS** and meaning and **REFLECT** it back.
- Find positives and encourage.
- Rephrase what the person has said, in a statement, not a question.
- Reflect back to the person what you hear them saying.
  - “Sounds like you are feeling...”
  - “Sounds like you are feeling motivated but unsure...”
- You know your reflection is right when the person says “Yes” “Exactly” “Yeah” “Right” etc.
- Look for the **SILVER LINING!**

## Interventions: Behavioral

- Reflective Listening
- Here are a few key listening statements that go a long way to build motivation!
  - Sounds like this really matters to you.*
  - You wish it was easier to quit. I appreciate your honesty.*
  - You want the best for your baby, clearly.*
  - The fact that you are here today tells me you want a healthy pregnancy.*
  - It is hard to quit. There are coaches at the Quitline who can help you develop a quit plan.*
  - Sounds like you've done some thinking about this.*

## Interventions: Behavioral

- OPEN QUESTIONS are open-ended...Evoke thought.
- They start with WHAT, HOW, WHEN, TELL ME MORE...
- Early on, open questions encourage clients to think about what they are feeling and/or want:
  - ✓ *What do you think about it?*
  - ✓ *What are your concerns?*
  - ✓ *How might you change that?*
  - ✓ *How are things different now?*
  - ✓ *How would you want to work on this skill more?*
- Open questions invite exploration.
- Open questions are VITAL to building motivation.

## Interventions: Behavioral

- CLOSED QUESTIONS force a yes or a no answer.
- Closed questions are usually about making decisions or judgment.
- Closed questions begin with:  
ARE YOU, DO YOU, DON'T YOU, WHY are you, WHY aren't you?
- Some closed questions are fine for information gathering:  
"Do you have a history of high blood pressure?"
- When coaching, closed questions can shut down the conversation, lead to defensive answers, or are leading.
  - *Aren't you concerned about that?*
  - *Are you ready to set a quit date?*

## Practice: Open vs. Closed?

- Do you want to quit?
- What are your thoughts about quitting?
- How would it feel if you were completely smoke free?
- Why do you feel that way?
- What do you think will be obstacles?
- Do you think your partner would quit with you?
- What do you know about smoking during pregnancy?

## Interventions: ADVISE

- ADVISE pregnant smokers to quit:
- Be gentle and non-judgmental.  
Use OPEN questions rather than lecture:
- "*What do you know about smoking during pregnancy?*"
- *Would you like to know more?*
- *Smoking can lead to problems with your pregnancy. It can lead to lower birth weight, birth defects (like cleft lip, cerebral palsy) and long term problems for your child like learning disabilities, obesity, or asthma."*

## Interventions: Behavioral

### DEVELOP CONCERN:

- How much does smoking concern you?
- What have you heard about how smoking affects your baby?
- What worries you if you don't make a change?
- What do you suppose are the worst things that could happen if you keep on this track?

## Postpartum Issues - Relapse

- Research suggests that more than 60% of women who gave up smoking during pregnancy resume smoking in the months following birth;
- 50% relapse by approximately four months postpartum.
- Most who begin smoking have a partner who smokes and are less likely to breastfeed for more than six weeks (Mullen 1997).
- Adjustment to motherhood: sleeplessness/exhaustion, hormone changes, uncertainty, financial strain, less time for self
- Shift of quitting motivation from baby to self
- Lack of social support

## Postpartum Issues - Nursing

### Breastfeeding and Smoking:

- American Academy of Pediatrics recommends women continue to breastfeed, even if they smoke
- One study reported that, among women who continue to smoke throughout breastfeeding, the incidence of acute respiratory illness was decreased among their infants, compared with infants of smoking mothers who were bottle fed

## Postpartum Issues - Nursing

- Use SENSITIVITY and COMPASSION.
- Women may feel tremendous guilt about smoking and breastfeeding. This likely plays a big role in early weaning.
- Studies are inconclusive and do not suggest that light/moderate smoking lowers production or milk quality.
- Breastfeeding is always more protective and nutritious than artificial feeding.

## Postpartum Issues - Nursing

- Smoke away from the baby, outside or in a separate room.
- Women should not smoke while nursing.
- Women should smoke immediately after feeding, not an hour before feeding.
- Half-life of nicotine in milk/blood is 95 minutes.
- Smoke as few cigarettes as possible. The risks to the baby increase if a mother smokes more than 20 cigarettes a day.
- With heavy smoking, there can be a reduction in milk supply, inhibition of the let-down reflex, and potentially physical symptoms in the baby, such as nausea, abdominal cramps, vomiting, and/or diarrhea.

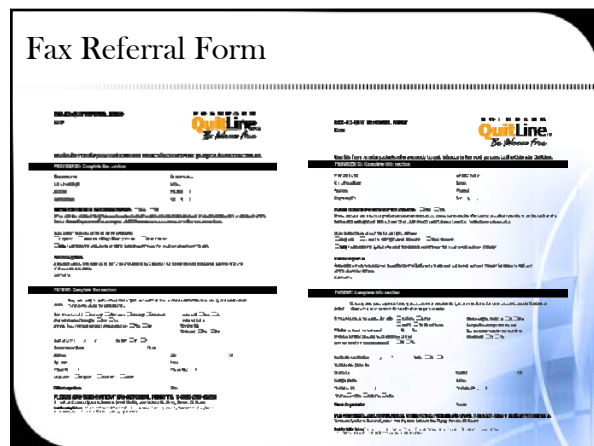
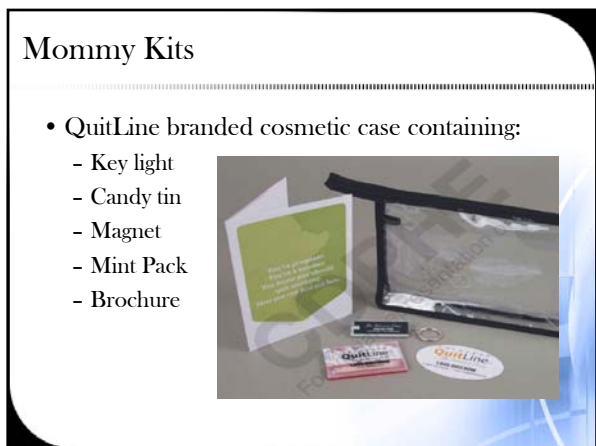
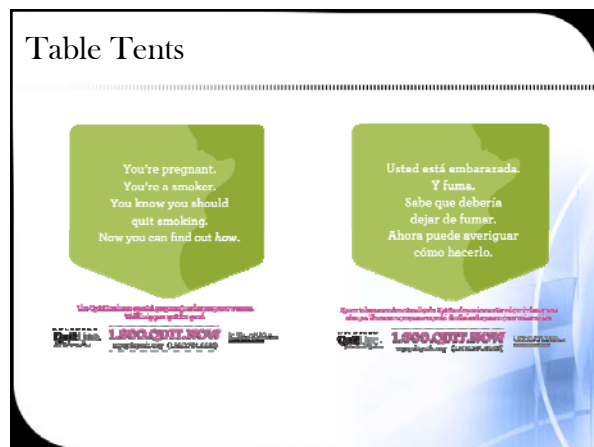
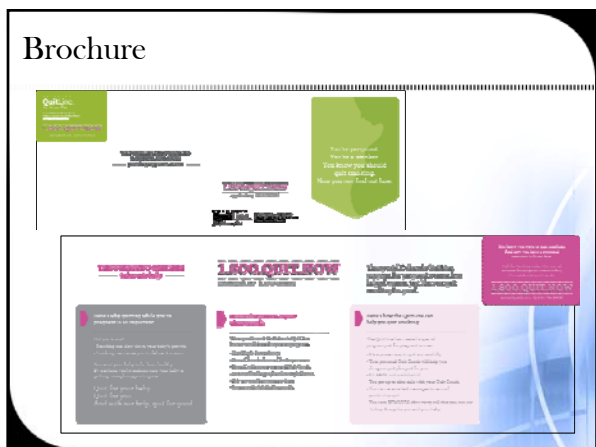
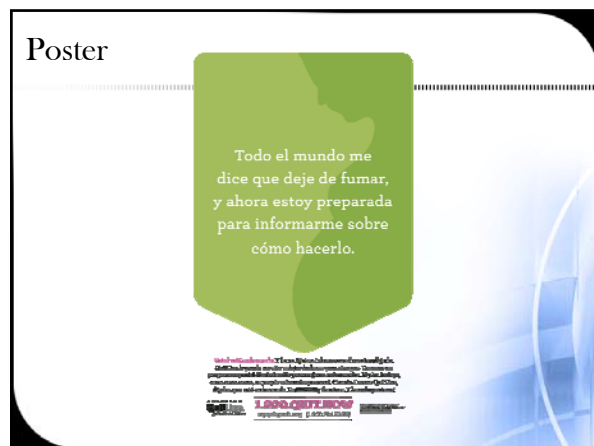
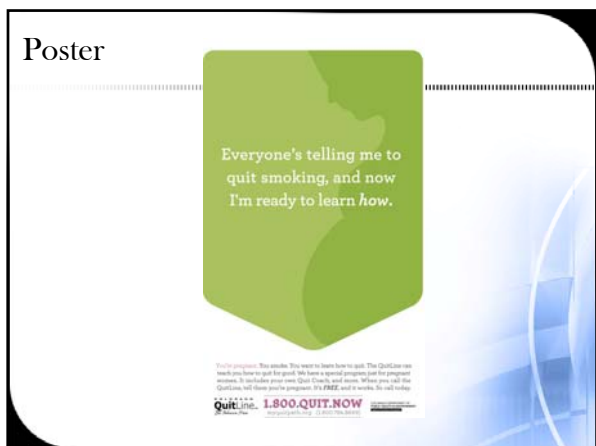
## Quitline

- Success Stories

## PREGNANCY OUTREACH MATERIALS

Materials designed to inspire smokers to engage in smoking cessation

Mandy Bakulski, RD  
Maternal Wellness Director  
Women's Health Unit  
Colorado Department of Public Health and Environment



### Accessing Resources

---

-Campaign materials are available for **FREE** at [www.cohealthresources.org](http://www.cohealthresources.org)

QUESTIONS?

### Contact Information

---

- Heather LaChance, PhD  
Acting Division Chief/National Jewish Health  
Private Practice 303.990.8363
- Mandy Bakulski, RD  
Maternal Wellness Director - CDPHE  
303.692.2495  
[mandy.bakulski@state.co.us](mailto:mandy.bakulski@state.co.us)