

Best Practices for Identifying and Intervening with Pregnant Smokers

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Objectives

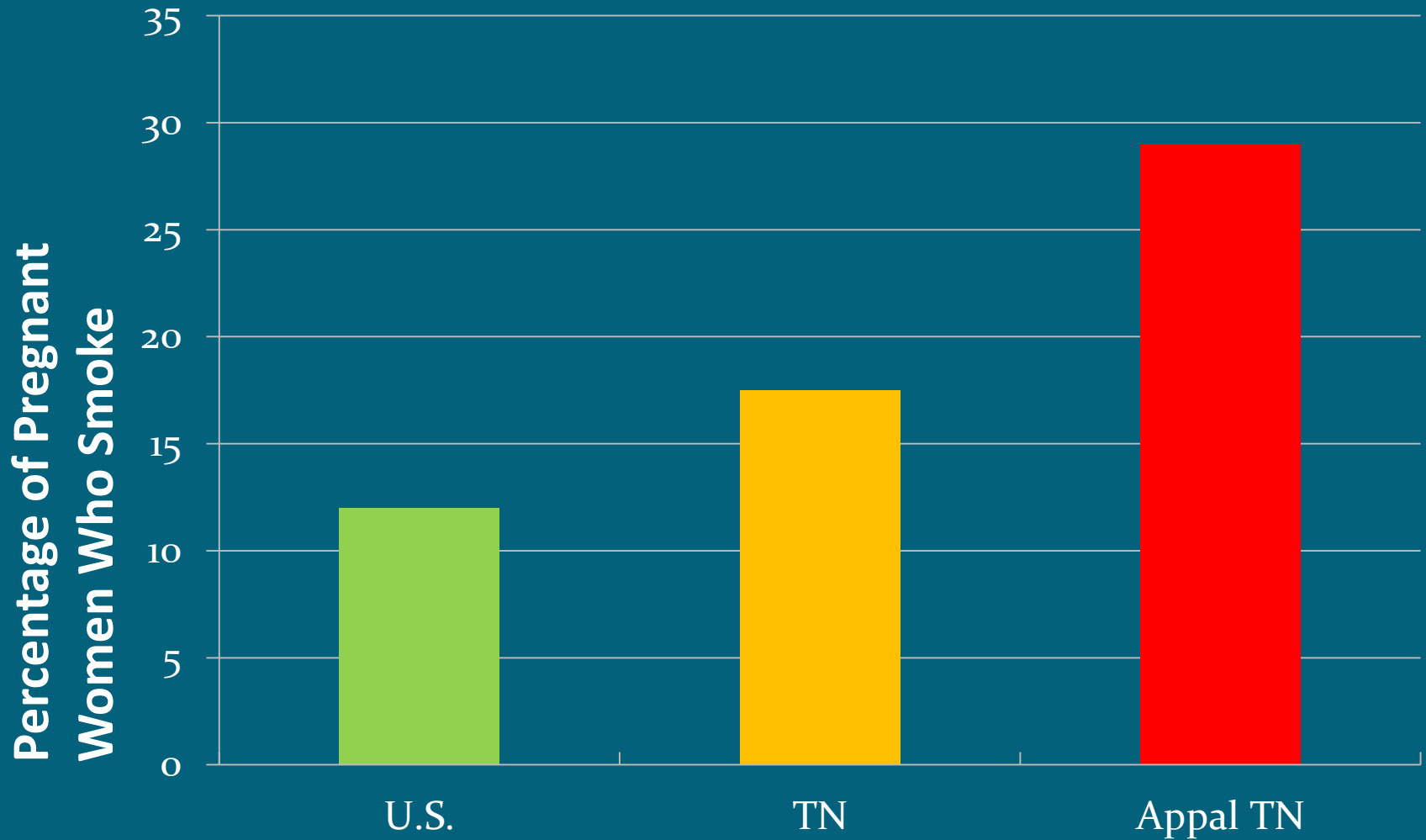
Following the session, participants should be able to:

- ✓ Describe the child health and developmental outcomes associated with pregnancy smoking
- ✓ Implement the best practices for screening pregnant women for smoking
- ✓ Identify the best practices for effectively intervening with pregnant women who smoke



Smoking During Pregnancy

Pregnancy Smoking in TN



Who Smokes During Pregnancy?

- Overall, pregnancy smoking is not exclusive in certain “types” of women
- However, some racial differences and socioeconomic risks
- Pregnancy substance use tends to co-occur
- Further, women with fewer risk factors are more likely to falsely deny use



Effects of Pregnancy Tobacco Use

- When pregnancy substance use is discussed, tobacco does not always come immediately to mind
- However, tobacco is the most commonly used substance during pregnancy
- Consequently, it also has the greatest potential for negative effects given its substantially greater known effects and higher rate of use



How Does Smoking Affect the Fetus?

- Smoking during pregnancy has the following effects:
 - Decreased placental function
 - Decreased nutrient and oxygen transfer
 - Decreased protein metabolism
- Carbon monoxide from smoking binds to fetal hemoglobin, while nicotine causes vasoconstriction of placental blood vessels
- These effects result in abnormal gas exchange across the placenta, and decreased fetal oxygen level
- We also know that fetal neuroendocrine development is negatively impacted



Effects of Pregnancy Tobacco Use

EFFECTS ARE SEEN DURING:

Gestation

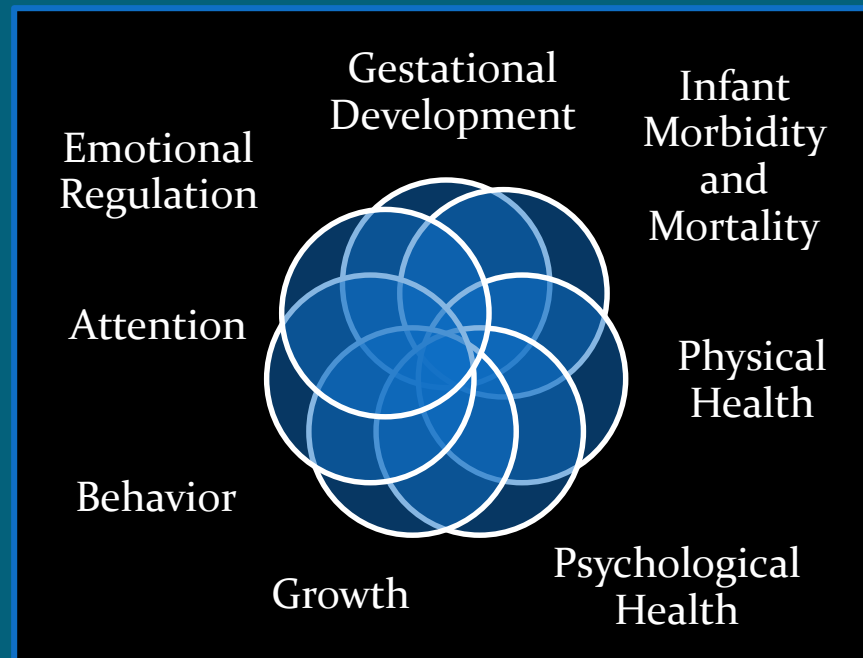
Infancy

Childhood

Adolescence

Adulthood

**SMOKING
NEGATIVELY
AFFECTS:**



Effects of Prenatal Tobacco Exposure

- Intrauterine growth restriction/low birth weight (250-400gm deficit)
- Spontaneous abortion/miscarriage/preterm delivery
- Growth deficits and health problems into childhood
 - Still an inch or more shorter than peers at age 7
 - Increased risk for SIDS
 - Substantially increased rates of asthma, allergies, respiratory and ear infections



Health Care Costs – 1st Year of Life

Premature Baby

\$41,610

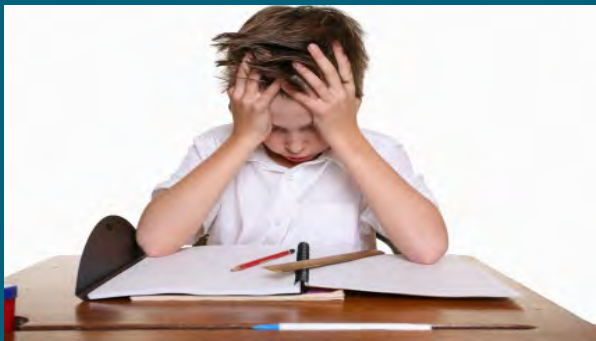
Healthy Baby

\$2,766



Longer Term Effects of Exposure

- Decrease in overall IQ and language delays
- Attention problems in early and middle childhood
- Elevated levels of depression and anxiety disorders
- Conduct /behavior problems and encounters with juvenile authorities
- Adolescent and adult smoking and substance use, and increased likelihood of addiction



A Few Final Notes About Smoke Exposure

- Second Hand Smoke is smoke that smokers breathe out and the smoke that comes from a burning cigarette
- Third Hand Smoke is tobacco smoke contamination that remains in the air and on surfaces after a cigarette is extinguished
- Together called Environmental Tobacco Smoke (ETS) - BOTH of these are harmful to the developing fetus and developing child – causing effects much like what are seen due to primary prenatal exposure



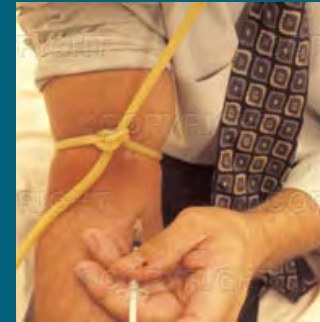
A Few Final Notes About Tobacco Exposure

- Amount and timing of cigarette exposure are important
- No real threshold –effects with as few as 2 cigarettes per day, however, greatest effects seen at a half a pack/day or more
- Also, effects on growth and health in particular occur mostly with exposure in the second half of pregnancy
- So, quitting smoking, or even cutting down on smoking by the second trimester may lead to significant health benefits



Smoking vs Other Substance Use

- So, what is the relative importance that should be placed on smoking vs other substance use in prenatal care?
- Other drug and alcohol use is often the priority
- However, the effect of pregnancy smoking on birth weight and newborn health is double the impact of any other substance
- **So, pregnant women should be encouraged to eliminate all substance use, INCLUDING the use of tobacco**



A Few Final Notes About Smoke Exposure

Substance Use Group Differences on Birth Weight

	Birth Weight Decrease
Effect of marijuana use*	- 1gm
Effect of hard illicit drug use	- 163 gm
Effect of cigarette smoking	-317 gm
Effect of both hard illicit drug and cigarette use	-352 gm

N=265 newborns with meconium drug testing at delivery

Effect for birth weight controlled for significant confounders (education, preeclampsia, race): $F=4.55$, $p=.004$

* This is the effect beyond the effect of already smoking cigarettes, as most marijuana smokers in this sample also smoked cigarettes

What About Marijuana Use During Pregnancy?



- Prenatal marijuana exposure does not appear to carry the same risks as exposure to harder illicit drugs
- Earlier studies – no consistent effects other than some evidence that prenatal marijuana exposure increases the risk for delays in specific aspects of cognitive development, attention problems, and later substance use problems
- Things may be different now, though...

What About Prescription Opioid Use During Pregnancy?

- Increasing abuse of prescription drugs in pregnancy
- Longer term effects just being discovered due to recent emergence
- Do know the use of Rx opioids and MAT drugs is linked to: increased risk of pregnancy complications, low birth weight, preterm delivery, and NAS
- One important finding – combination of opioid AND tobacco use especially detrimental in terms of fetal and newborn outcomes (doubles length of NICU stay)
- VERY important to include tobacco interventions as part of addressing other substance use during pregnancy!

Quitting Smoking During Pregnancy

- Does quitting smoking during pregnancy cause too much stress for the fetus?
- NO, the harm of continuing to smoke FAR OUTWEIGHS any small risk associated with the potential chemical stress from quitting
- According to ACOG and AAP, a woman should **NEVER be told not to quit smoking during pregnancy**
- Quitting casual use of other drugs, including alcohol, should also be recommended and women can do this on their own
- However, for *some substances* (especially opiates), or for heavy abuse of any substance, quitting should be recommended but also medically supervised

What About Electronic Cigarettes?

- Newer product – less is known about harms to exposed fetus and young children
- Larger scale NIH funded efforts to look at short and long term effects when used during pregnancy
- Recent smaller study – birth weight
- At this point, **not known to be safe**, so generally should treat as you would smoking reduction – probably better than smoking traditional cigarettes, but still target with cessation intervention during pregnancy

Screening for Pregnancy Tobacco Use and Intervening with Those Identified

Does Intervention Work?

- A woman is more likely to quit smoking/using drugs during pregnancy than at any other time in her life
- Even simple provider efforts have produced quit rates for all types of drug use of up to 10%
- Use of a Smoking Quit Line has also produced quit rates of 10%+
- 5 A's quit rates are up to 20%+ depending on intensity (model to cover today)



Does Intervention Work?

- Quitting smoking in pregnancy leads to improved birth outcomes, including a 25% reduction in preterm delivery
- Even cutting down leads to a 20% reduction in preterm delivery and a 44% reduction in NICU admissions
- Efforts must be regular and consistent to have a significant impact



5 A's Approach to Smoking Cessation*

When, Where, Who, How

- When – early in pregnancy
- Where – prenatal care; other avenues...
- Who – medical professionals, community workers, others...
- How – standardized screening questions, structured intervention model



The 5 A's

1. *ASK* about tobacco use

2. *ADVISE* to quit

3. *ASSESS* willingness to make a quit attempt

4. *ASSIST* in quit attempt

5. *ARRANGE* follow-up

Evidence-Based *Tobacco Use* Questions

1) WHICH STATEMENT BEST DESCRIBES YOU NOW?

- a. You smoke regularly now – about the **SAME** amount as before you found out you were pregnant
- b. You smoke regularly now, but **MORE THAN** before you found out you were pregnant
- c. You smoke some now, but have **CUT DOWN** since you found out you were pregnant
- d. You stopped smoking **AFTER** you found out you were pregnant, and are not smoking now
Weeks Quit: _____
- e. You stopped smoking **BEFORE** you found out you were pregnant, and are not smoking now
Weeks/Years Quit: _____
- f. You have **NEVER** smoked, or smoked fewer than 100 cigarettes in your life

2) IF YOU CURRENTLY SMOKE:

CIGARETTES/DAY: Current _____ Pre-Pregnancy _____ # YEARS SMOKED: _____

3) WHICH OF THE FOLLOWING BEST DESCRIBES YOUR EXPOSURE TO OTHER PEOPLE SMOKING?

- a. You do not have regular contact with anyone who smokes
- b. You have regular contact (but do not live) with other people who smoke, but they **DO NOT** smoke when you are around
- c. You have regular contact (but do not live) with other people who smoke, and they **DO** often smoke when you are around
- d. You live with at least 1 smoker, but they **DO NOT** smoke when you are around
- e. You live with at least 1 smoker, and they **DO** often smoke when you are around

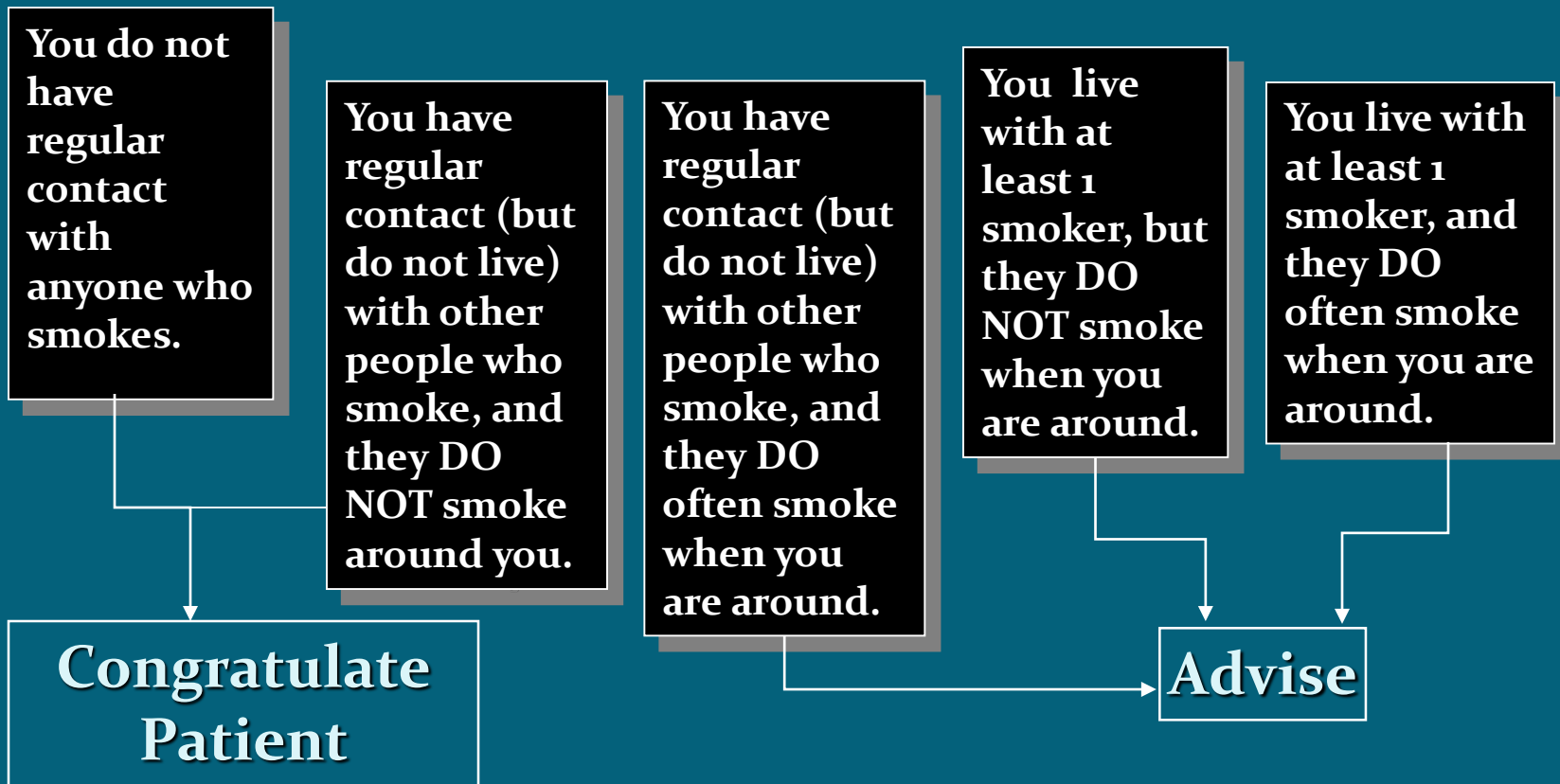
ASK — 1 Minute

Which of the following statements best describes YOUR current smoking habits?
(pregnancy specific)



ASK — 1 Minute (SHS)

Which of the following best describes your exposure to OTHER people smoking?
(pregnant woman specific)



ASK – ADDITIONAL CONSIDERATIONS

- Denial of smoking occurs – even with best questions
- Trust your instincts, but respect your clients
- Possible role of biologic testing?
- ECO monitors are useful as interactive tools, or confirmation of quitting when incentives are involved
- BUT – can interfere with trust and rapport – use carefully!



ADVISE — 1 Minute

- Clear, strong, personalized advice to quit:
 - **Clear & Strong:** “As your health care provider, my best advice for you and your baby is for you to quit smoking and eliminate your (and your baby’s is parenting) secondhand smoke exposure. I need you to know that quitting is one of the most important things you can do to protect your baby and improve your own health.”
 - **Personalized:** Impact of smoking on the baby, the family, and the patient’s well being

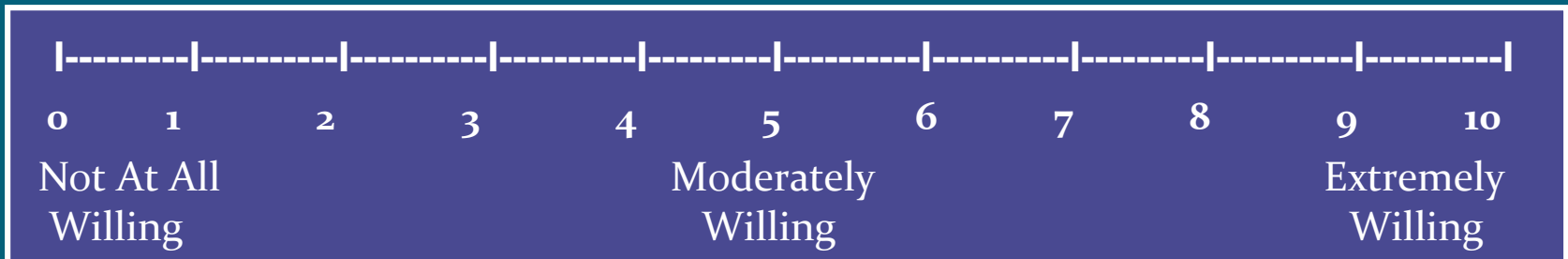


ASSESS — 1 Minute

Assess the patient's willingness to quit in the next 30 days

ASK:

“How WILLING are you to quit smoking in the next 30 days?”



ASK:

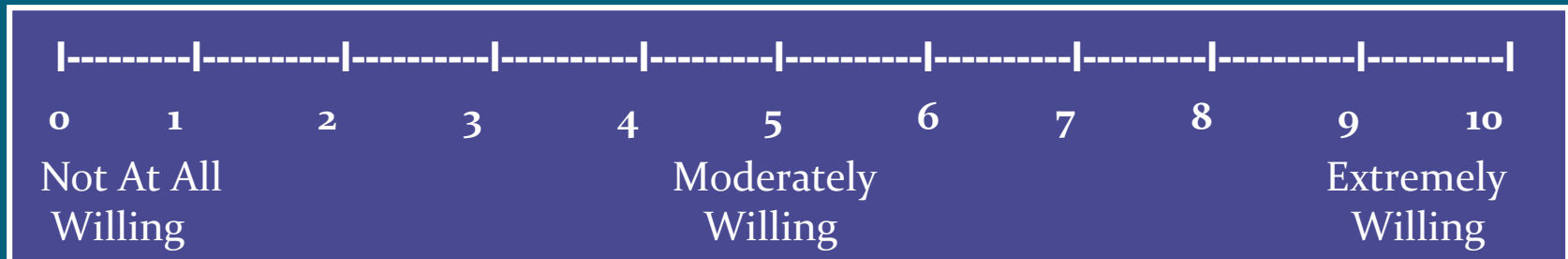
“What would it take to make you more willing to quit, to get you to move from your score to a score 3 pts higher?”

ASSESS — 1 Minute

Assess patient's willingness to eliminate SHS in next 30 days

ASK:

“How WILLING are you eliminate SHS in the next 30 days?”



ASK:

“What would it take to make you more willing, to get you to move from your score to a score 3 pts higher?”

Why Assess Readiness to Change?

- To be effective in assisting behavior change – need to **meet patients where they are**
- Changing behavior is a process – figure out where patient is in the process to best support them
- **Goal should be to move patient toward more advanced stage** of readiness/action – difference in framing
- **Stages:**
 - Precontemplation
 - Contemplation
 - Preparation
 - Action
 - Maintenance
 - Relapse

ASSESS — 1 Minute

- If a patient responds that she would like to try to quit within the next 30 days, move on to the *ASSIST* step
- If the patient does not want to try to quit, try to increase her motivation via education and personalizing the issue

ASSIST — 3+ Minutes

Initial Considerations

- Addiction has both PHYSICAL & BEHAVIORAL components
- Both factors must be addressed for successful cessation
- Recognize your own biases regarding smoking during pregnancy



ASSIST — 3+ Minutes

Initial Considerations (continued)

- Take into account the emotional experience of pregnant smokers:
 - Guilt
 - Fear
 - Self-doubt
- Your efforts should help mitigate these, NOT make them worse!



ASSIST: Smoking Personalized

Ask open-ended questions (Why? When?):

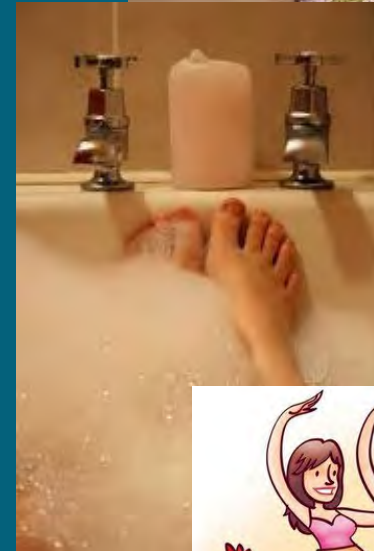
- Determine the role that smoking plays in her life
- Discuss her motivations for quitting or continuing
- Talk about her past attempts to quit
- Talk about the health benefits for her and her child and how these are important to her
- Talk about the cost savings from not buying cigarettes and other uses for that money

36 **Build on positives – reinforce them!**



ASSIST: Coping Techniques

- Identify triggers & roadblocks
- Determine what she can do in situations in which she usually smokes
- Discuss alternative behaviors to smoking
- Plan ways to relieve stress and cope with difficult emotions
- Recognize the withdrawal symptoms that will occur and how to deal with them



ASSIST: Techniques to Eliminate SHS

- Ask people not to smoke around you
- Identify roadblocks and possible need to quit
- Determine who needs to buy in
- Discuss alternative locations for smoking and why THS makes smoke-free zones important
- Plan ways to deal with difficult situations
- Go places where smoking is not allowed; avoid places where it is
- Discuss smoking in the car!



ASSIST: Getting Ready to Quit/Change

- Identify & arrange social support
- Determine quit date & sign contract
- Provide self-help materials
- Quit Line information
- Contracts are also good for SHS elimination!

**YOUR PERSONAL
SMOKING CESSATION CONTRACT**

I, _____
AGREE TO STOP SMOKING ON

DATE



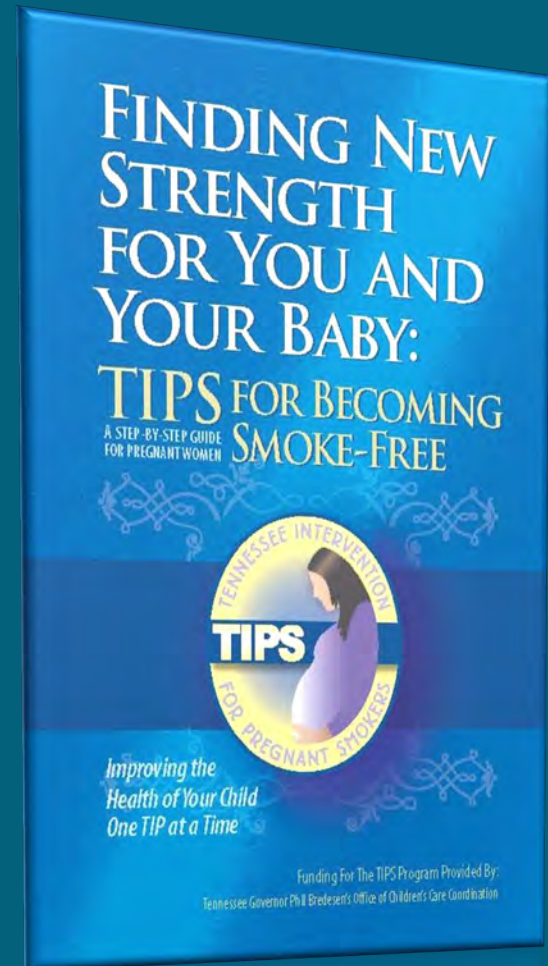
I understand that stopping smoking is the single best thing
I can do for my health and the health of my unborn baby!
I am committed to staying SMOKE-FREE and I know I can do it!

Patient's Signature

Professional's Signature

ASSIST: Provide Self-Help Materials

- Health benefits
- Health benefits timeline
- Withdrawal symptoms:
Cravings and coping skills
- Cost savings & personal rewards
- Alternative ways to cope
& manage stress
- How to quit without gaining
weight
- Dealing with others smoking
around you
- Preparing to quit



ASSIST: Additional TIPS

- Keep Hands and Mouth Busy

- Doodle
- Squeeze a stress ball
- Decorate the baby's room
- Sew or other crafts
- Chew on a straw/toothpick/gum
- Keep a journal
- Drink water



- Assistance for quitting without gaining weight

- Keep a food diary
- Stay busy and physically active— read, walk, call a friend, exercise
- Drink lots of water
- Snack healthy on fruits and veggies
- Good nutrition/avoid high-fat & high-sugar foods



ASSIST: Addressing Difficult Questions

- You may hear:
 - “I smoked with my first child and s/he was OK!”
 - “My mom smoked with me and I turned out OK!”
- How to handle this: Circumstances that vary between pregnancies may significantly impact the degree to which the fetus will be harmed by smoking:
 - Overall amount of primary & secondary smoke exposure
 - Stress
 - Nutrition
 - Increased age during pregnancy
 - Environmental factors
 - Overall health

ASSIST: Pharmacologic Intervention

- Behavioral intervention is the first-line treatment for pregnant women
- Pharmacotherapy can be considered for heavy smokers unable to quit via behavioral interventions alone; or for post-partum women
- Very limited data on the safety or efficacy of pharmacologic treatments in pregnant women; nicotine gum if needed for smokers (NO nasal sprays; patches not first choice)
- Consider risk/benefit ratio for breastfeeding women



ARRANGE — 1+ Minute

- Follow-up to monitor progress
- Ask about concerns or difficulties
- Express a willingness to help
- Consider involving other family members
- Offer referrals to the Smoking Quit Lines, or other local programs or professionals



Helpful Tips when Using the 5A's

- Encourage patients to be smoke-free but counsel them to cut down if they are unwilling to quit completely
- Praise any quit attempt-even if its only for an hour!
- Acknowledge how difficult behavior change can be



Scenario

- Pregnant patient reports that she smokes 1 pack per day and has 2 previous quit attempts. In one attempt she was able to remain smoke free for 36 hours while avoiding others smoking. She reports that she might consider quitting now that she is pregnant, but really doesn't think she can.
- How can you assist her?



Scenario Response Suggestions

- “Wow, you were able to stay smoke free for 36 hours! How’d you do that?”
- “It sounds like _____ was really helpful, what do you think kept you from making it past 36 hours?”
- “What do you enjoy doing that might help during this next quit attempt?”
- The key is to personalize your advice, drawing from what the patient tells you about issues related to **her** smoking

Post-Delivery/Post-Quitting Assistance

- The majority of people who quit smoking will resume within 6 months; 75% of pregnant women who quit resume within 6 months of delivery
- Encourage women to remain quit or continue cutting down – be sure to follow up with those who quit!!
- Remind the patient of the health benefits of quitting or remaining smoke free (especially that the baby will be introduced to a smoke free environment)
- Continue to monitor and provide intervention for any relapse
- Be sure resources are in place. Be positive!!

Supporting Publications

- Osborne JA, Bailey BA. Does it matter when I quit? Couldn't I just cut down some? Links between trimester specific smoking amount, preterm birth, and low birth weight. *Birth Defects Research*. 2022;114(1):5-12. <https://doi.org/10.1002/bdr2.1958>.
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- Bailey B. Factors predicting pregnancy smoking in Southern Appalachia. *American Journal of Health Behavior*. 2006;30(4):413-21. [PMID: 16787131](https://pubmed.ncbi.nlm.nih.gov/16787131/)