

## Helping Those Who Need it Most



Tailoring Interventions for Women with Mental Health and Substance Abuse Disorders

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Rutgers-Robert Wood Johnson Medical School

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## Objectives

- Describe the prevalence and trends in mental health and SUD among women, specifically in perinatal period
- Describe the impacts that mental health and SUD have on women, pregnant women and their families
- Describe the unique challenges and opportunities when working with women with SUD
- Describe strategies, promising practices and/or recent research that speaks to tailoring and integrating tobacco and alcohol interventions for women with SUD

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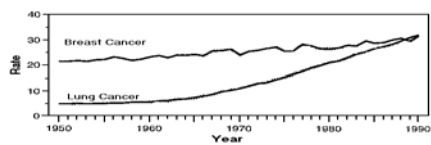
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## Women and Smoking

Rates men ~ women  
Highest in those living below the poverty level  
Lung cancer # 1 cancer death

Cancer Death Rates in Women after 1950



MMWR 1993

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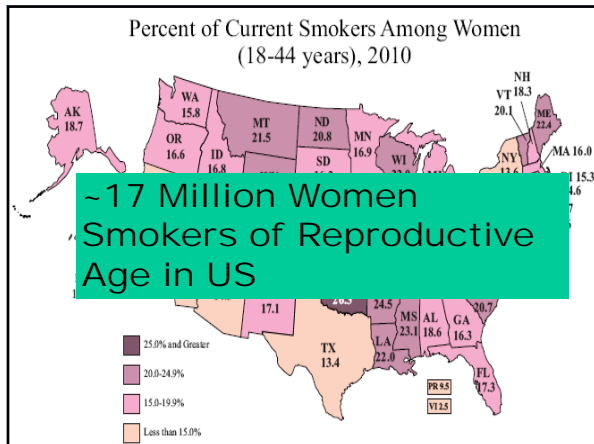
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Smoking and Pregnancy Themes

- Continuing to smoke during pregnancy is associated with ↓SES and mental illness/ SUD
- Continuing to smoke during pregnancy is associated with ↓SES and mental illness/ SUD
- Lacking necessary data**
- Fewer studies of gender** quit without it, although its efficacy is uncertain.
- The use of NRT in pregnancy is likely to be less harmful than continuing to smoke.
- Women should be encouraged to quit smoking before becoming pregnant.

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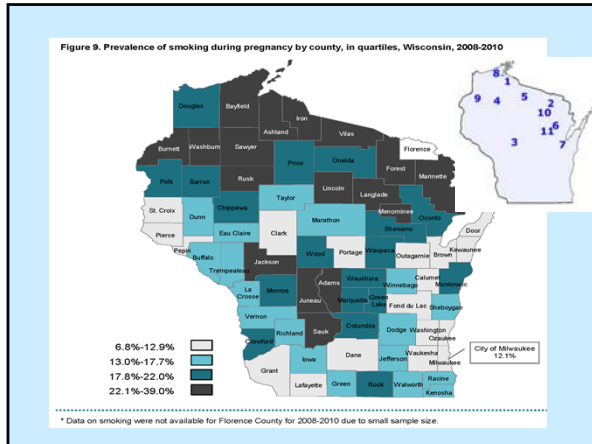
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Spontaneous Quitters  
~up to half of women smokers quit before first visit  
\*Higher SES, non smoking partner, lower nic dependence

Continuing Smokers  
~ half of smokers continue  
14% smoking rate  
\*Lower SES, more mental illness/ SUD, uninsured/Medicaid

Post Partum Relapse  
~ 2/3 in first year  
Smoking partner, lower SES, higher dependence, MI/ SUD

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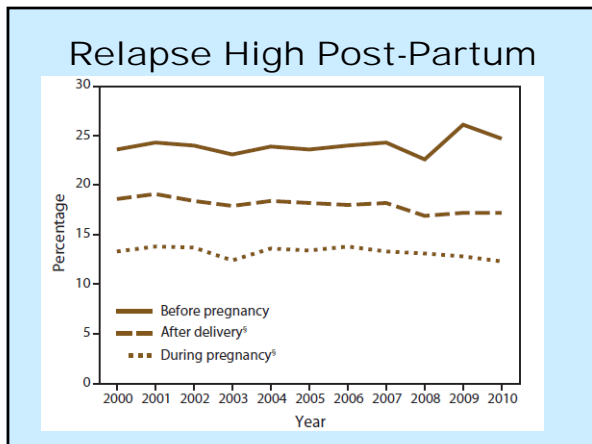
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## Healthy People 2020 Goals

- 1) Reduce the prevalence of women smoking prior to pregnancy to 14%
- 2) Reducing the prevalence of cigarette smoking among pregnant women to 1%
- 3) Increase the percentage of pregnant smokers who stop smoking during pregnancy to 30%

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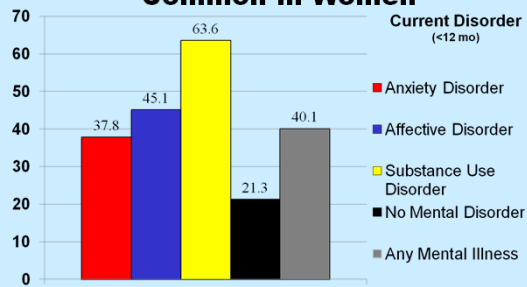
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## Higher Smoking Rates in Mental Illnesses/ SUD Common in Women



NCS-R 2001-2003; Diagnoses using CIDI  
Lawrence et al, BMC Public Health 2009, 9:285

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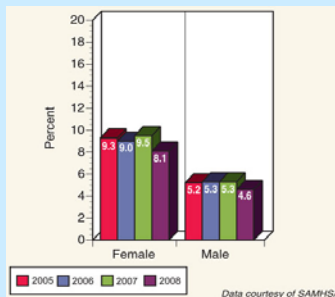
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Women are 70% More Likely than Men to Experience Depression in their Lifetime



12-month Prevalence of Depression Among U.S. Adults by Gender  
Data courtesy of SAMHSA

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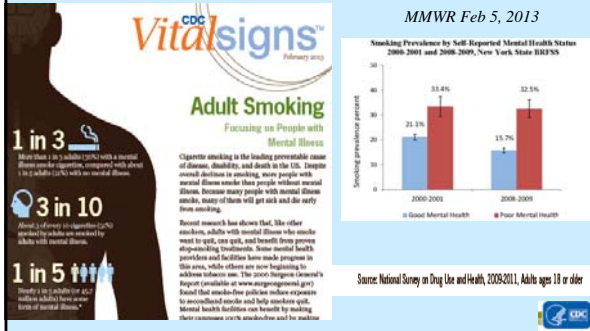
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## Smoking is much more common in adults with mental illness than other adults.




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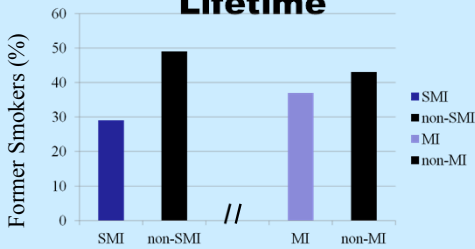
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## Smokers with MI or SMI Reduced Quitting over Lifetime



mental illness = anxiety, MDE, PTSD, psychoses, bipolar, drug dependence

SMI= measured by K6

Hagman 2007; McClave 2010; Lasser 2000; Pratt & Brody 2010

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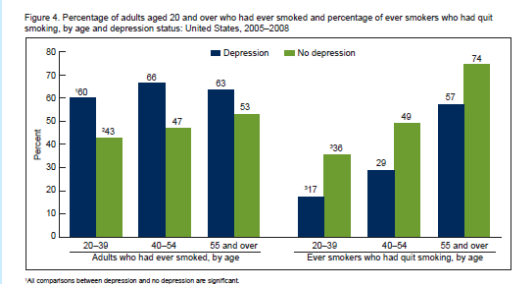
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## Smokers with Depression were less likely to quit



fewer former smokers

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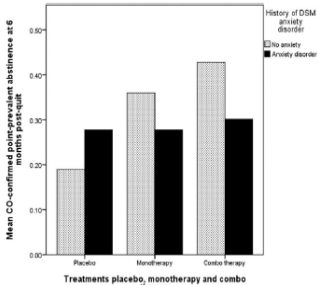
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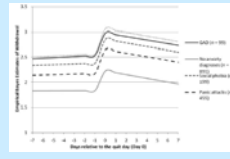
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## Reduced Success Quitting in Smokers with Anxiety Disorders



**More withdrawal symptoms**



panic, social anxiety or GAD

Piper et al., 2010

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## Heaviness of Smoking Index = Measure of Dependence

Number of cigarettes per day (cpd)

AM Time to first cigarette (TTFC)

- ≤ 30 minutes = moderate
- ≤ 5 minutes = severe

(Heatherton 1989)

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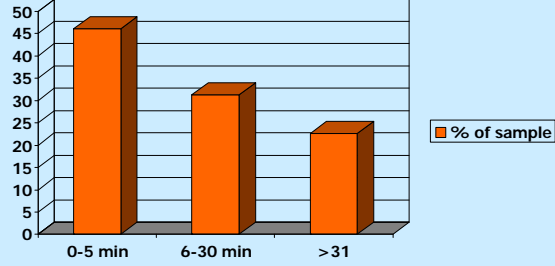
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## Smokers in NJ Addiction Treatment are Moderately to Severely Addicted to Nicotine



N=1882 smokers in NJ addictions treatment, 2001-2002;

Williams et al., 2005

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## Smoking cessation in outpatient SA treatment

- Part of CTN, included methadone sites
- N=225 smokers
  - SC adjunct or treatment-as-usual (TAU)
  - 9 weeks group counseling plus NP
- **No difference in SC vs TAU**
  - on rates of retention in SA tx
  - abstinence from primary substance
  - craving for primary substance.

Reid et al., 2008

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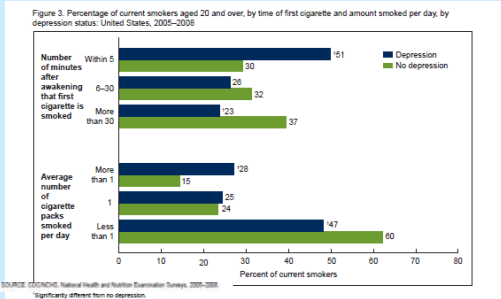
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## Smokers with depression smoke more cpd and are more dependent




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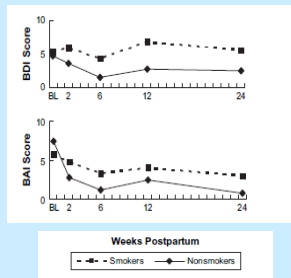
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## Depression Predicts Smoking Relapse

- N=65 women quit during pregnancy
- 47% resumed smoking by 24 weeks postpartum
- Depression/ anxiety assoc with relapse
  - Depression/ anxiety pregnancy or ever depression



Park et al., NTR 2009

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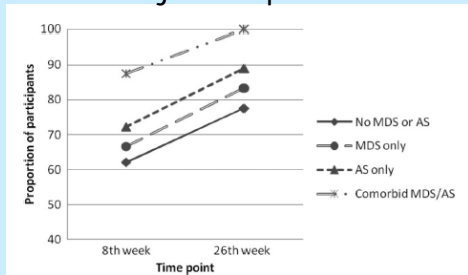
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## Higher Smoking Relapse Rates Postpartum in Women with Anxiety and Major Depression



Correa-Fernandez et al., JCCP, 2012

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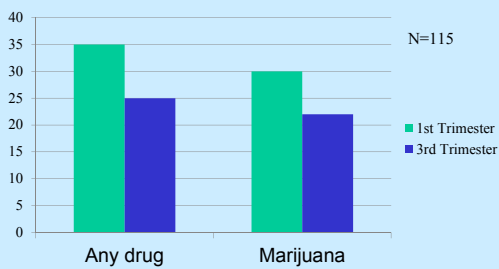
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## One Third of Pregnant Smokers Using Illicit Drugs



Results of Urine Toxicology; Excluded those on methadone maintenance

Gaalema et al., NTR 2013

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### Smoking in Pregnant Women with SUD

- 66% of women smoked in the three months before pregnancy
- 42% of pre-pregnancy smokers achieved abstinence before delivery
- 60% of the baseline cohort smoked postpartum
- Depression did not matter in smoking/relapse

Forray et al., Addictive Behaviors 2014

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### Pregnant Smokers with SUD had More Mental Health Diagnoses

|  | Smoked in Pregnancy (N=122) | Did not Smoke (N=54) |
|--|-----------------------------|----------------------|
| Alcohol  | 19%                         | 56%                  |
| Marijuana  | 48%                         | 42%                  |
| Cocaine  | 24%                         | 2%                   |
| MDD or Dysthymia                                   | 28%                         | 17%                  |
| Panic/Agoraphobia                                  | 23%                         | 8%                   |
| GAD  | 15%                         | 6%                   |
| PTSD   | 16%                         | 4%                   |
| Didn't differ in age, education, prior pregnancies |                             |                      |

Forray et al., Addictive Behaviors 2014

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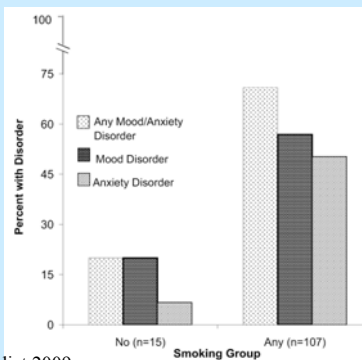
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### Pregnant Methadone Users

>80% smoke  
 Young, unmarried, low SES  
 Smokers more likely to have mood or anxiety



Chisolm et al, Am J Addict 2009

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## Hard to Quit Without Treatment

70% of smokers report wanting to quit someday  
Few people quit successfully without treatment  
Only 1/3 of quitters (without treatment) remain abstinent for 2 days

**< 5% ultimately successful on a given quit attempt**

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## Pharmacological Treatment

### Nicotine Replacement

Patch

Gum

Lozenge

Inhaler

Nasal Spray

**Bupropion**

**Varenicline**

Counseling +  
Medications =  
Best treatment  
plan

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## Pharmacotherapy for Smokers with MI and SUD

- First line treatment/ Recommended all smokers
- Comfortable detox for temporary abstinence
- Higher levels of nicotine dependence
- All safe and well tolerated
- Psychiatric inpatients **not** given NRT were > 2X likely to be discharged from the hospital AMA

Fiore 2008; Prochaska 2004

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**Nicotine Safety**

**Smokers misinformed about safety/efficacy of nicotine**

- ✓ Not a carcinogen
- ✓ Not a significant risk factor for cardiovascular events

**Risk-benefit ratio supports nicotine medications over using tobacco**

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**Nicotine Medications**

- **Not a carcinogen**
- Use high enough dose
- Scheduled better than PRN
- Use long enough time period
- Can be combined with bupropion
- Can be combined with each other
- Have almost no contraindications
- Have no drug-drug interactions
- Effective current/ past depression
- Effective h/o alcohol dependence

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**NRT and Pregnancy**

- Not sufficiently evaluated for safety and efficacy
- Conflicting evidence if it ↑ abstinence
- Risk benefit ratio support NRT > smoking if unable to quit with behavioral support alone
- Minimal effective dose
- Intermittent forms
- Use with supervision

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## Bupropion SR

Zyban/ Wellbutrin

- Start 150mg/day to dose of 150mg bid
- Nonsedating, activating antidepressant with effects on NE and DA systems
- Start 10-14 days prior to quit date
- Side effects- headache, insomnia
- Contraindicated in h/o seizures or bulimia
- Noncompetitive nicotinic receptor antagonist
- Effect independent of depression
- Effective in schizophrenia
- Effective in h/o in alcohol dependence

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## Bupropion and Pregnancy

- No known risks of fetal anomalies or adverse pregnancy effects
- Risk of seizure
- Transmitted to breast milk

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## Varenicline

Partial Agonist

- Partially stimulates receptor
- Some DA release at NAcc
- Prevents withdrawal

“Antagonist”

- Blocks nicotine binding  $\alpha 4\beta 2$

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## Varenicline and Suicide

- 80,660 smokers prescribed NRT (~63k), varenicline (~11k), and bupropion (~6k); UK, primary care
- Compared with NRT, the hazard ratio for self harm among people prescribed varenicline was 1.12 (95% CI 0.67 to 1.88), and it was 1.17 (0.59 to 2.32) for people prescribed bupropion.
- **No clear evidence that varenicline was associated with an increased risk of fatal (n=2) or non-fatal (n=166) self harm**
- **No evidence that varenicline was associated with an increased risk of depression or suicidal thoughts**

*Gunnell et al., 2009; BMJ*

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## Review of Studies for Neuropsychiatric Adverse Events

- 17 Pfizer-sponsored studies (N=8027)
  - 1004 with psychiatric
- DOD (N=35,800) VAR vs NRT
  - No ↑ in hospitalizations for AE
  - Prior to FDA warning: gen pop sample
- Depression, aggression/agitation, suicidal events and nausea

*Gibbons et al., AJP, 2013*

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## Review of Studies for Neuropsychiatric Adverse Events

- VAR **not** significantly associated with suicidal thoughts or behavior (OR=0.57)
- VAR **not** significantly associated with depression (OR=1.01)
- VAR **not** significantly associated with aggression/ agitation (OR=1.27)
- Rates of NPAE 2.28% VAR vs 3.16% for NP

*Gibbons et al., AJP, 2013*

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## Varenicline- Major Depression

- 525 past h/o or stable, treated MDE;  $\geq 10$  cpd
- MADRS, HAM, C-SSRS, SBQ
- 73% on antidepressants (SSRI or SNRI)
- VAR More effective vs placebo
- Week 12 CAR: 35.9% vs 15.6% for placebo (OR 3.35;  $p < 0.001$ )
- 24 and 52 week outcomes also significant

Anthenelli et al., Ann Int Med, 2013

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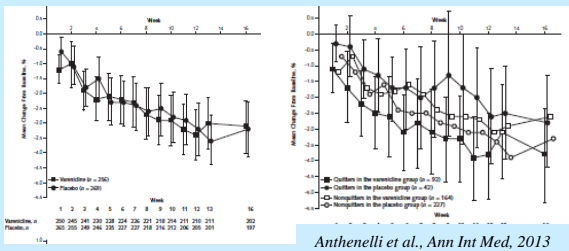
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## No Worsening of Depression Scores

No difference in AEs (abnormal dreams, anxiety, agitation, restlessness, SI)




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## Varenicline and Pregnancy

- Not recommended
- No information about the safety in pregnancy
- Transmitted to breast milk

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## Psychosocial Treatments

- Best when combined with medications
- Timed before or very soon after the quit date
- Different techniques work
- Dose-response relationship
  - ↑minutes and ↑ success
- Provider discipline not important

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## Intensive Treatments

- Skills training ✓Change cognitions about smoking
- Relapse prevention
- Problem solving ✓Reinforce nonsmoking
- Coping skills
- Stress management ✓Avoid high risk situations
- Contingency management ✓Develop healthy coping skills
- Cognitive-behavioral

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## Benefits of Group

- Cost and time effective
  - Additional support
  - Accepted treatment in MH and addiction treatment settings
  - Modeling
    - Seeing success
    - Using NRT
    - Effective coping
- May facilitate culture change; norms**

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## Quitline



- Toll-free telephone counseling
- State funded
- Scheduled calls from tobacco specialist
- Good for transportation issues
- Assessment
- 4 Follow up calls
- High success rate in smoking cessation

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## Mood Management

- Psychosocial mood management in smokers with current depression improved smoking cessation rates compared with control (RR 1.47, 95% CI 1.13 to 1.92; p=0.005)
- Psychosocial mood management also increased smoking cessation rates in smokers with past depression (RR 1.41, 95% CI 1.13 to 1.77, p=0.003).

van der Meer, Cochrane 2013

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Language is Important

**Tobacco Dependence Treatment vs.**

“Smoking Cessation”

“Quitting”

“Stop Smoking”

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## Reduced Access to Tobacco Treatment in Behavioral Health Settings

- Nicotine dependence documented in 2% of mental health records
- Less than 2% of patients seeing a psychiatrist received treatment for smoking



Peterson 2003; Montoya 2005

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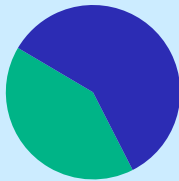
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## Substance Abuse Treatment

National survey of 550 OSAT units (2004–2005)  
– 88% response rate

41% offer smoking cessation counseling or pharmacotherapy



38% offer individual/group counseling  
17% provide quit-smoking medication

Friedmann et al., JSAT 2008

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I didn't survive depression and suicide attempts only to die from lung cancer.  
I had to stop smoking.

1-800-QUIT-NOW

Research shows that tobacco use and nicotine addictions actually increase anxiety and exacerbate existing mental health conditions. There is help for tobacco users living with mental health and substance abuse disorders. Call the Montana Tobacco Quit Line today.

QUIT LINE  
1-800-QUIT-NOW

Courtesy of Clare Lemke, Livingston Health & Montana Tobacco Use Prevention Program

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## Perinatal SUD Treatment

- 95% smoking rate
- Half want to quit “now”
- **Staff under-rated** smoker desire to quit
- Patients and staff lacked basic information
- 25% staff smoke
- Organizational intervention needed

Chisolm et al., 2010

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## A Comprehensive Strategy Will have the Best Effect



Williams et al, Administration & Policy in Mental Health and Mental Health Services Research, 2010

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Staff shall not use alcohol, tobacco or illegal drugs during working hours or when representing the treatment facility.

8:42A-3.5 (b) 1

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### Policy for Assessment and Treatment of Tobacco in NJ State Hospitals

- Training for staff
- Assessment (FTND)
- Psychiatrists primary responsibility for tobacco treatment meds
- Pre-printed orders and floor stock (NRT)
- LAHL or other groups
- Tobacco on discharge plan

*Williams et al., 2010*

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### Advantages of Addressing Tobacco During Early Substance Recovery

- Structured environment focused on recovery
- Staff and peer support readily available
- Patients may be more motivated, believing this is the best time to quit
- Smoking quit rates in early substance recovery are the same as when treatment is delayed 6 mos (Joseph et al.,2003).
- Financial advantages if clients lack insurance

*Joseph et al., 1990; Irving et al., 1994; Sees and Clark, 1993; Saxon et al., 1997; Seidner et al., 1996; Foulds & Doverty, 2003; Joseph et al., 2002*

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### Patients Resistant to Tobacco Treatment

- Two-thirds of smokers wanted to stop (41%) or cut down on tobacco use (24%) at time of admission to residential addictions treatment

*Williams et al, 2005*

- Patients highly interested in treatment and believe inpt treatment is best time

*Orleans & Hutchinson, 1993; Shoptaw et al., 2002; Richter et al, 2001; Nahvi, et al, 2006; Sees & Clark, 1993; Clemmey et al, 1997; Frosch et al, 1998; Clarke et al 2001; Joseph et al., 1990; Saxon et al., 1997; Joseph et al., 2002*

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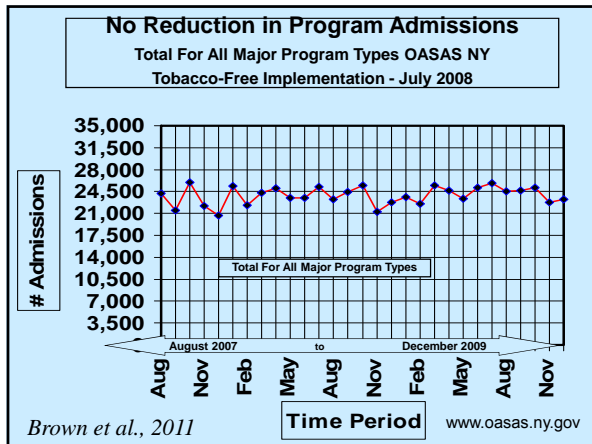
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Patients with SUD Can't Quit Smoking

- H/o ETOH Just as likely to succeed in quitting smoking as other smokers
- Usual treatments effective
- Smokers learned skills in recovering from alcohol that helped them quit smoking

Hughes & Kalman, 2006

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Jeopardizes Recovery from other Substances

- Several studies show no adverse effects on abstinence

Bobo et al. 1996, 1998; Hurt et al., 1994; Cornelius et al. 1997, 1999; Prochaska et al. 2004; Lemon et al, 2003; McCarthy et al, 2002; Shoptaw et al., 2002

- Quitting smoking may help with long-term abstinence from alcohol and other drugs

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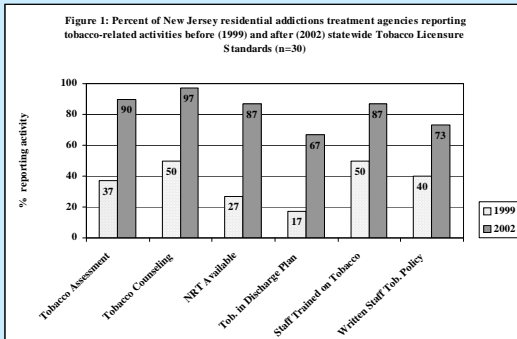
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## NJ Policy Resulted in Increased Tobacco Treatment



Foulds et al., 2006

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## Smoking and Pregnancy Themes

- Continuing to smoke during pregnancy is associated with ↓SES and mental illness/ SUD
- **Lacking necessary data**
- **Fewer studies of gender** quit without it, although its efficacy is uncertain.
- The use of NRT in pregnancy is likely to be less harmful than continuing to smoke.
- Women should be encouraged to quit smoking before becoming pregnant.

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## Next Steps

- Reductions in Women's Smoking will Require a Improved Understanding and Awareness of Mental Health and Substance Abuse Issues

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