MAT: A Psychiatric and Primary Care Perspective

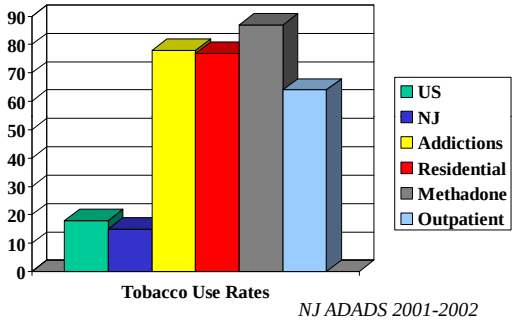
Tobacco
Treatment Medications

Jill Williams, MD

Professor of Psychiatry and Director of the Division of Addiction Psychiatry

UMDNJ-Robert Wood Johnson Medical School

Tobacco Use Rates in NJ Addictions Treatment Settings



NJ ADADS 2001-2002

Tobacco Treatment Availability in SATP

- 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
- More likely : **inpatient; medically oriented (MD), more comprehensive services, recognize the health burden of smoking**

Friedmann et al., JSAT 2008

Assessment

- **Level of Nicotine Dependence**
- **Motivation to Quit**
- First age smoked
- Years smoked
- Current amount
- Tobacco types (pipes, cigars, smokeless)
- Smokers in household
- Consequences of use- health or other

Nicotine Dependence

Most tobacco users meet dependence criteria

- withdrawal
- tolerance
- desire or efforts to cut down/ control use
- great time spent in obtaining/using
- reduced occupational, recreational activities
- use despite problems
- larger amounts consumed than intended

Nicotine Withdrawal

Depressed mood
Insomnia
Irritability, frustration or anger
Anxiety
Difficulty concentrating
Restlessness
Decreased heart rate
Increased appetite or weight gain

Heaviness of Smoking Index=

Measure of Dependence

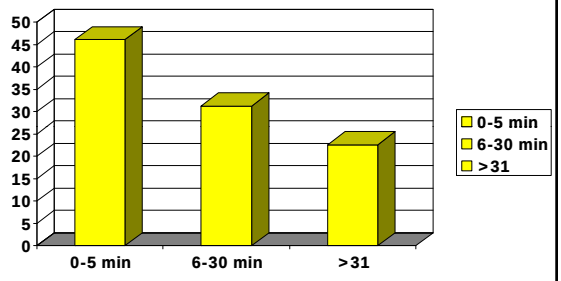
Number of cigarettes per day (cpd)

AM Time to first cigarette (TTFC)

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

Heatherton 1991

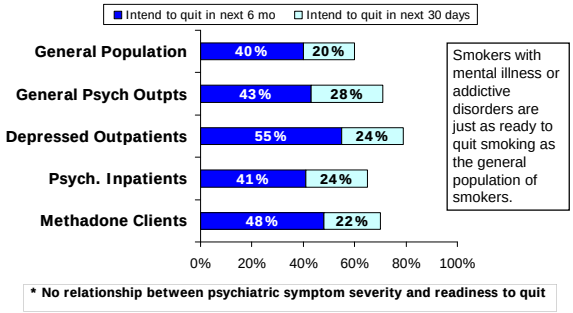
Smokers in NJ Addiction Treatment are Moderately to Severely Addicted to Nicotine



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

Williams et al., 2005

READINESS to QUIT in SPECIAL POPULATIONS



Smokers with mental illness or addictive disorders are just as ready to quit smoking as the general population of smokers.

*** No relationship between psychiatric symptom severity and readiness to quit**

Slide Courtesy J Prochaska; Acton 2001; Prochaska 2004; Prochaska 2006; Nahvi 2006

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

Pharmacological Treatment

Rationale

- Reduce or eliminate withdrawal
- Block reinforcing effects of nicotine
- Manage negative mood states
- Unlearn smoking behaviors
- Cost-effective treatment
- Lessen/delay weight gain

Pharmacological Treatment

Nicotine Replacement

- **Patch**
- **Gum**
- **Lozenge**
- **Inhaler**
- **Nasal Spray**

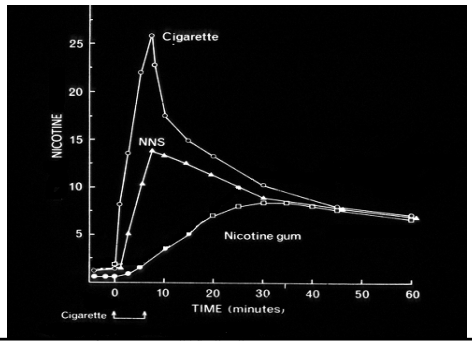
Bupropion

Varenicline

Nicotine Medications

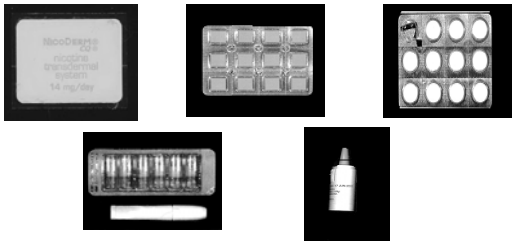
- **Not a carcinogen**
- Use high enough dose
- Scheduled better than PRN
- Use long enough time period
- Can be combined with bupropion
- Can be combined with each other
- Have almost no contraindications
- Have no drug-drug interactions
- Little to no dependence liability
- Double chances of successfully quitting vs placebo

Nicotine pharmacology depends on delivery route



Nicotine Replacement

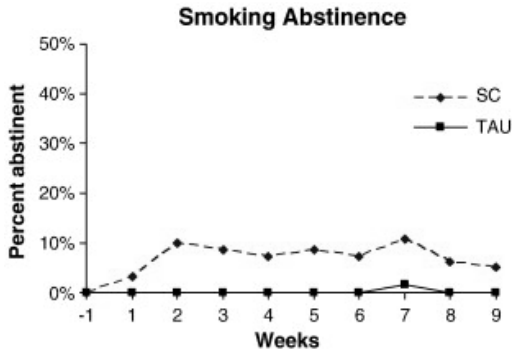
- **Smokers misinformed about safety/efficacy**
- **Risk-benefit ratio nicotine > tobacco**



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



Reid et al., 2008

First-line Treatments
(FDA Approved)

- **Nicotine Replacement**
- **Bupropion**
  Zyban/ Wellbutrin
- **Varenicline**
  Chantix

Bupropion SR

- 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 bulemia
- Noncompetitive nicotinic receptor antagonist

Slemmer 2000

Varenicline Summary

- Selective a4B2 nicotinic receptor partial agonist
- No drug-drug interactions
- Precaution in ESRD
- Dosed with food to reduce nausea
- More effective than other monotherapies

Varenicline: a selective a4B2 nicotinic receptor partial agonist

Partial Agonist

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

"Antagonist"

- Blocks nicotine binding a4B2

**Don't use as combination

Varenicline Labeling Updates

- Warning (Reported with Chantix)
  - Observe patients for serious neuropsychiatric symptoms including changes in behavior, agitation, depressed mood, suicidal thoughts or behavior
  - Worsening of preexisting psychiatric illness
- Causal relationship not established
- Clinical trials (N>5000; SI rate = placebo)
- Sleep disturbance/ vivid dream

www.PfizerPRO.com/chantix

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

Bupropion Adverse Effects

- French dataset: 700,000 patients
- 1682 cases of adverse reactions were reported
  - ~ 1/3 of these involved SAR
  - Allergic reactions (31.2%), including angioedema and serum sickness-like reactions.
  - Serious neurological reactions were frequent (22.5%), mostly comprising seizures; almost half of these patients had history seizures or other risk factors.
  - Serious neuropsychiatric adverse events reported (17.3%), suicide attempts/suicides were a cause for concern, although risk factors (history of depression, suicide attempts, etc.) were described for 66% of patients experiencing these events.

Beyens et al., 2008

Conclusions

- Behavioral health professionals should increase efforts to provide treatment to smokers with SUD
- Smokers with SUD have high levels of nicotine dependence
- No contraindication to NRT for smokers with other addictions
- Varenicline more effective than other medication treatments