Tobacco Addiction

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Presentation Overview

- Tobacco Use: The Realities
- Nicotine Addiction
- Pharmacological Treatments
Tobacco Use: Assessing CA’s Progress

- The adult prevalence rate in CA was 17.4% in 2001 & it is 13.3% in 2008.
- Since 1988, the adult prevalence rate has decreased 25%.
- Which age group has the highest prevalence of tobacco use?
Adult Tobacco Use in California

- Prevalence rates among males and females have declined.
- African Americans and Non-Hispanic Whites have the highest smoking rates, followed by Hispanics and Asians/Pacific Islanders.
- Smoking rates among Asian/Pacific Islander and Hispanic females were less than half that of their male counterparts.
Other Tobacco Use Trends

- Average daily consumption reported by everyday smokers was 18.0 per day in 1994. This decreased steadily to 15.1 cigarettes per day in 2001.
- Declines in consumption were seen across gender and racial groups.
- Decreased consumption has been shown to lead to significant reductions in the incidence of heart disease and lung cancer.
Other Tobacco Use Trends (continued)

- CA smokers who report a lower average daily consumption also are more likely to report that they work in smokefree workplaces.
- The proportion of current smokers who are light or non-daily smokers has steadily increased in CA.
- Nearly 45% of the adults in the US who still smoke have a psychiatric illness.
What’s In Cigarette Smoke
4,000 Chemicals—Partial Listing

- Arsenic – used in rat poison
- Acetone – found in paint & nail polish remover
- Ammonia – a typical household cleaner
- Benzene – rubber cement
- Cadmium – found in batteries & artist’s oil paint
- Carbon Monoxide – poison
- Formaldehyde – used to embalm dead bodies
- Hydrogen Cyanide – poison in gas chambers
- Polonium – radiation dosage=300 chest X-rays in 1 yr.
- Styrene – found in insulation material
- Vinyl Chloride – ingredient found in garbage bags
Health/Mental Care Intervention is Critical

- More than 70% of U.S. smokers see a health professional once a year.
- If only 1/2 the providers gave brief advice to their patients, and 10% of them quit, there would be 2 million new nonsmokers annually.
- 75% of physicians think it is a good idea to tell patients to quit smoking.
Intervention is Critical (continued)

- Smokers’ view their physicians as the authority on tobacco use and health issues.
- Brief advice has been shown to increase the percentage of smokers who successfully quit.
- If the patient is not asked about their smoking status, and counseled at every visit, they feel they are “off the hook”.
Smokers’ Intention to Quit

- Smoking cessation is a complex and often extended process.
- More than 3 out of 4 CA smokers say they would like to stop smoking.
- In CA, 38% of smokers said they plan to quit within the next 30 days.
- While 72% plan to quit in the next 6 months.
Smokers’ Quitting Outcomes

- 61.5% of smokers made a quit attempt in 1999 that lasted one day or longer.
- The rate of successful quitting* (23.7%) has not changed between 1990 and 1999.
  *Quitting is defined as abstinence at 90 days.

WHY IS QUITTING SO HARD?
This is not the goal of over-replacement!
Nicotine Addiction

- There is no argument that tobacco use is addictive. This evidence was known by the tobacco industry in 1963, although the industry still denies this fact.
- The addictive agent is all tobacco products is NICOTINE.
- Research shows that nicotine is as addictive as heroin and cocaine, causing dependency in 60-75% of those who try it.
The Neurochemistry of Addiction

- Nicotine effects neurotransmitters and is one of the most potent stimulants of the midbrain dopamine reward pathway.
- Nicotine use increases levels of dopamine and norepinephrine in the brain.
- Nicotine also increases levels of GABA, serotonin, and suppresses mono-amine oxidase-A.
- Nicotine is dual-acting. It can reduce anxiety or arousal or function as a stimulant increasing performance and minimizing depression.
The Neurochemistry of Addiction (continued)

Smokers smoke for many reasons:

- Their brain chemistry dictates they have to
- To increase their perception of “pleasure”
- To enhance performance
- To avoid withdrawal
- Out of habit
- To alter or maintain their psychological state(s)
- To handle something
Treatment Protocols & Options

- Tobacco dependence is a chronic condition that often requires repeated intervention.
- Effective treatments are available.
- Every patient who uses tobacco should be offered the appropriate treatment. *This bullet should be specific to SBCC???*
Research shows there is a strong dose-response relationship between the intensity of tobacco dependence counseling and its effectiveness.

Behavioral therapies that work include:

- Practical counseling (skills/problem solving)
- Social support in treatment (i.e., buddy system)
- External social support (family, peers, work, etc.)
- Providing follow-up
Pharmacological Treatment (Tx) Options

The FDA-approved pharmacotherapies approved to treat nicotine dependence are:

- **Nicotine Replacement Therapy (NRT)**
  - nicotine patch
  - nicotine gum
  - nicotine lozenge
  - nicotine inhaler
  - nicotine nasal spray

- **Sustained-release bupropion hydrochloride (Wellbutrin)**

- **Varenicline (Chantix)**
Pharmacological Tx Options (continued)

- Pharmacological aids should be offered to every patient, unless contraindications exist:
  - Contraindications for Bupropion include:
    - History of seizures
    - History of eating disorders
  - Contraindications for NRT include:
    - Some heart disease
    - Pregnant or breast feeding women
    - Smokers who use <10 cigarettes per day
    - Follow closely any patients with hyperthyroidism, pheochromocytoma, insulin-dependent diabetes, peptic ulcer, and advanced hypertension.
Pharmacological Tx Options (continued)

- The benefits of using NRT are:
  - Breaks the habit of “lighting up” or “chewing” tobacco.
  - Replaces peaks and troughs of nicotine use.
  - Reduces withdrawal symptoms.

- Advise patients to stop use of ALL other tobacco products while using NRT.
Pharmacological Tx Options (continued)

- Specific directions for use of each of the NRT products can be found in Table 4 of the JAMA reprinted article in your packet.

- NRT dosage correlates with use patterns.
- 1 cigarette = 1 mg of NRT
- Use beyond three-four months is discouraged.
- Relapse risk is increased when NRT is discontinued, thus increased support is needed.
Pharmacological Tx Options (continued)

- Bupropion Hydrochloride (SR) - Wellbutrin SR or Zyban
  - First non-addicting agent approved for nicotine dependency treatment.
  - Limits the fluctuations in dopminergic and noradrenergic neurotransmitters.
  - Decreases intensity and frequency of cravings, loss of pleasure in smoking, and improved mood.
Pharmacological Tx Options
(continued)

- Bupropion Hydrochloride (SR) - Wellbutrin SR or Zyban (continued)
  - Requires a doctor’s prescription.
  - Must taken 10 days to 2 weeks prior to quit date.
  - Can be used in depressed patients in combinations with other anti-depressants (SSRI’s).
  - 3-4 month course of treatment recommended.
  - Alcohol use is should be minimized when on bupropion.
Pharmacological Tx Options (continued)

- **Vareniclin - Chantix**
  - Requires a doctor’s prescription.
  - Must taken 10 days to 2 weeks prior to quit date.
  - Acts as an agonist & an antagonist
    - Blocks nicotine from binding to cells (ruins the “high”)
    - Works in on the dopamine receptor cites, though only about 2/3 as well as Wellbutrin
  - 3-6 month course of treatment recommended.
  - Common side effects are stomach upset.
  - FDA warns that suicidal ideations… *Take details from our fact sheet*
Pharmacological Tx Options
(continued)

- Other pharmacotherapies include:
  - Clonidine
  - Nortriptyline

- New research is showing that the following medications may show promise in treating nicotine addiction:
  - Topiramate-Topamax used to treat epilepsy.
  - Bromocriptine used to treat Parkinson’s disease.
Expected Quit Outcomes

- 3-5% of smokers quit on their own.
- 7-10% quit with a counseling program.
- 10-15% quit with nicotine replacement therapy (NRT) and counseling.
- 16-30% with NRT and bupropion and counseling support.
- *Add Chantix findings here*
- A study published in the JAMA (9/11/02) suggests that NRT may not be effective at increasing long-term cessation.
The Reality of Relapse

- Most smokers need 4-5 quit attempts to quit permanently.
- Encourage repeated quit attempts.
- By the end of the first week over 60% of smokers have relapsed.
- Roughly 10-15% more clients relapse by the 30-day point.
- Programs to treat smokers must have intensive interventions and follow-up.
- At one year, relapse risks decrease.
Cessation Issues for Women

- Women are more predisposed to depression (3 times more likely), which is also a precursor of tobacco use.
- Concerns about weight gain prevent initiation of quit attempts.
  - 79% of quitters gain weight but only an average of 4.6 lbs.
  - Teach and plan for healthy replacements
- Women’s quit are more successful quit after menses.
- Women may need higher doses of NRT.
Social Norm Changes

- Changes in public policy affect the entire community.
- Smokers are more motivated to quit!
Conclusions

- There are resources in the community to help tobacco users when they are ready to quit.
- You are not alone in supporting and motivating your client’s to change this behavior.
  - Motivate them if they are not ready.
  - Support and congratulate their behavior change, if they quit.
  - Reinforce the need to “stay quit”!