

NICOTINE USE, MENTAL ILLNESS, & ADDICTION

Presentation to the New Mexico Tobacco Settlement Revenue Oversight Committee August 15, 2022



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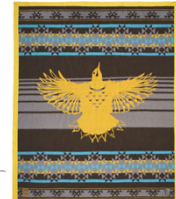
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Today's Conversation

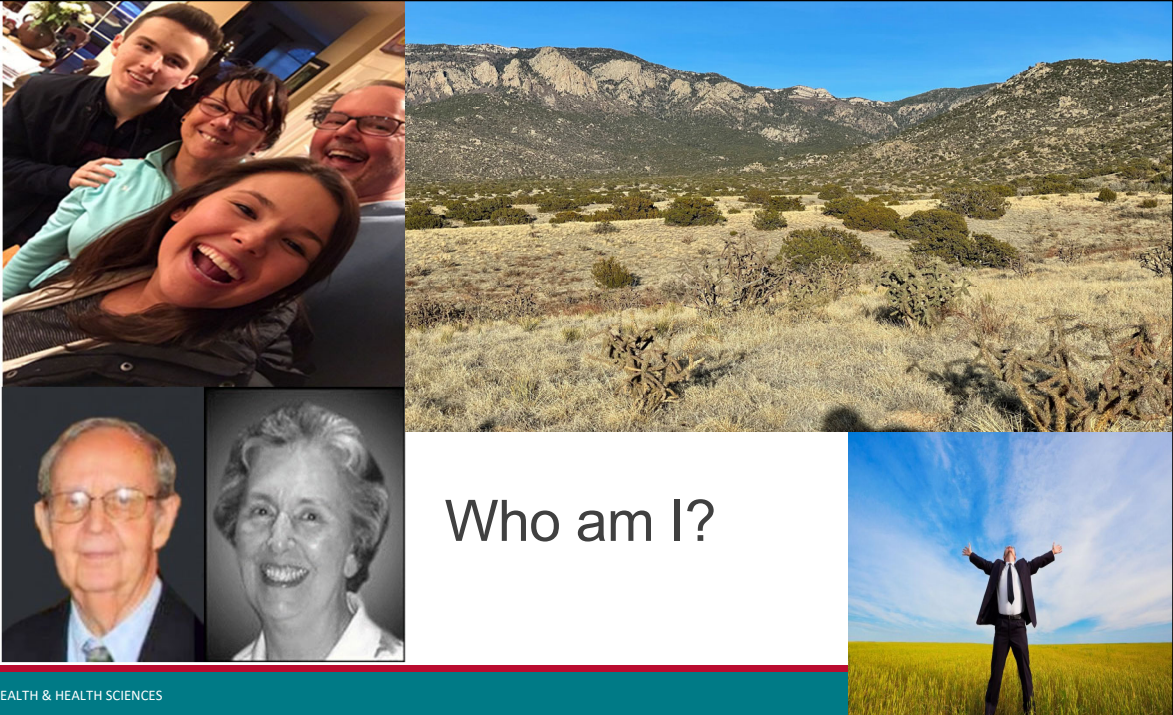


- Short Introduction
- Tobacco & Nicotine Use: Mental Illness & Addiction
 - Gateway Drug
 - High Rates and Big Impacts on Health & Costs
 - Research & Dissemination of Evidence Based Practices
- Clinical Treatment & Public Health / Prevention
 - Adolescents
 - Health Care System & Agency Level Organizational Change




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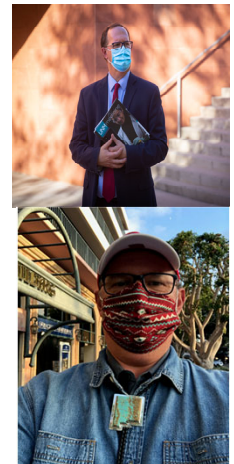
Who am I?

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Past Experiences

- Tobacco & Nicotine Clinical, Research, Training, and Public Health throughout my career – state, national, and global impacts
- Faculty at Yale, Rutgers, UMass, UCSD, & UNM in Schools of Medicine, Nursing, Public Health, and Biomedical Science
- Clinical & Public Health Roles: Addiction Psychiatrist, Division, Chair, Service Line, Population Health, President UMMBHS, BOT Hospital, Executive Governing Board for UCSD Health, Government Resources Centers
- Academic Roles – Associate Vice Chancellor, Chief Academic Officer, Chair, Center Director, and research focus on co-occurring mental illness & addiction
- Partnerships with Federal; NA Tribes, Nations, and off-reservation Native communities; Veterans Affairs; State; County; City; & Global Initiatives



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Major Areas of Focus

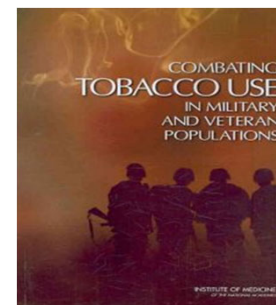
- Behavioral Health - Addiction
- Health Care Systems
- Diversity, Equity, Inclusion
- Patient experience and quality
- Education & Workforce Development
- Career Development & Mentoring
 - Leadership Development
- Research & Economic Development
- Public Health – MPH & Leader in new Schools of Public Health



Addressing Tobacco Through Organizational Change Projects

- NJ Statewide Addiction Programs & Prisons
- NIDA R01 Study - Community Residential
- Legacy Foundation - Club House Model (Consumers / Peer Specialists)
- CT Specialized Tobacco Cessation
 - Outpatient providers, State Network
- MA State Hospitals & Residential Facilities
- Veterans Affairs Health Care
- International – China, Latvia
- PA Philadelphia BH Settings – R01 NCI

Led Related Initiatives: SAMHSA, CDC, RWJ Foundation (Fighting Back, Tobacco Initiatives), NIH (NIMH, NIDA, NCI), Royal College of Psychiatrists / Physicians, etc



Intro Thoughts

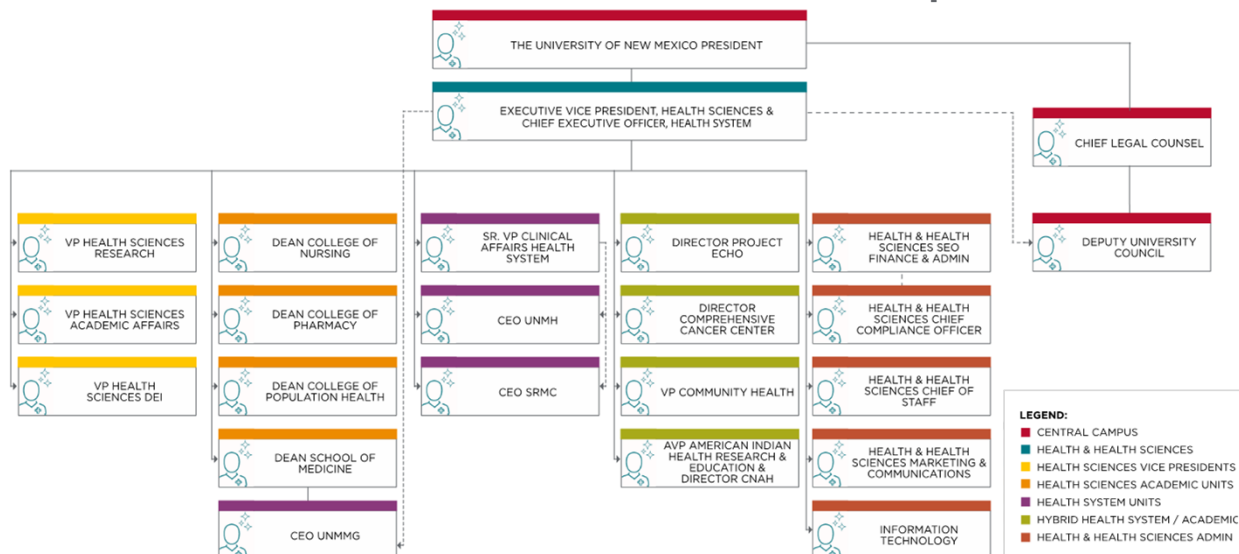
GRATITUDE for Our UNM Workforce



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Intro Thoughts

Gratitude to Health & Health Sciences Leadership



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UNM is **GRATEFUL** for ongoing support from TSROC and the entire New Mexico Legislature and Governor

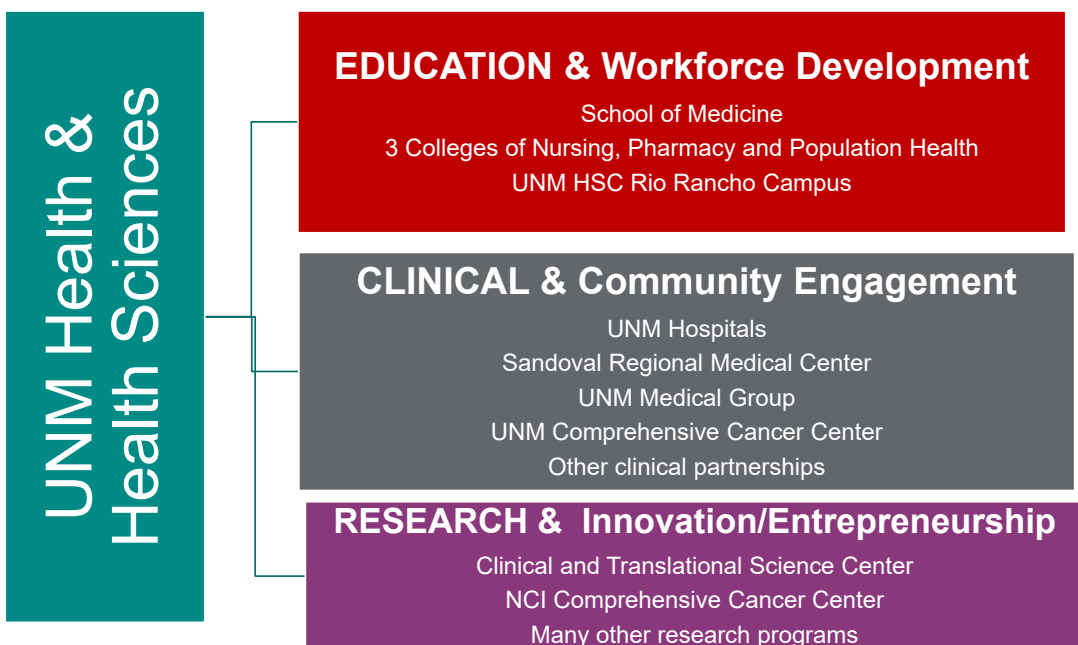


Including but not limited to:

- Tobacco Settlement Program Fund Appropriations

(952) University of New Mexico HSC	FY21	FY22	FY23
Instruction and general purposes	\$563.2	\$398.7	\$581.5
Research in genomics and environmental health	\$907.9	\$642.9	\$937.4
Poison control center	\$571.6	\$404.9	\$590.2
Pediatric oncology program	\$242.0	\$171.3	\$250.0
Specialty education in trauma	\$242.0	\$171.3	\$250.0
Specialty education in pediatrics	\$242.0	\$171.3	\$250.0
	\$2,768.7	\$1,960.4	\$2,859.1

- The construction of the UNM Comprehensive Cancer Center (UNM CCC) as it exists today was funded by revenue bonds issued pursuant to SB 804 (2003) and helped UNM CCC become one of the nation's premier NCI-designed Comprehensive Cancer Centers, a very small group of the nation's best centers.
- The new cancer center radiation vault was funded by SB223 (2021) (extending the cigarette tax bonding authority for UNM CCC)



Intro Thoughts

My Daily Three Critical Questions

1. How might we “improve the health of all New Mexicans in New Mexico?”
 - * Community based, public health, and clinical settings
2. How might we increase and retain the New Mexico workforce in health care & health sciences?
3. How might we increase Health Science research and research collaborations across UNM & NM to enhance health discoveries and further economic development?



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Diversity & Inclusive Excellence: A core value & critical in all missions

Native American Community

- Office of Native American Affairs SRMC & 638 Partnerships
- UNMH Native American Healthy Services
- Center for Native American Health (CNAH)
 - AVC & Director Dr. Tassy Parker and Tribal Relations Liaison Norman Coeoyate

Hispanic Community

African American Community

Asian American Pacific Islanders Community

LGBTQIA+

Ableism

Rural Community Background

Veterans

Many others



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Health Equity Summit

Health Equity & Health Inequities:

- Have the opportunity to attain your full health potential & not be disadvantaged because of social position or other socially determined circumstances.
- Inequities in length of life; quality of life; rates of disease, disability & death; severity of disease & access to treatment.

Terrific Leaders for Summit & Other Initiatives

Addressing Individual and Community Social Determinants of Health

- SDOH, ACEs, Multi-generational Traumas, links to other areas in society (education, etc.)
- Prevention & Public Health
- CERNER EHR, Social Referral Teams & Social Referral Technology

Enhancing the Patient Experience

- Cultural Humility & Navigating the Health System
- Community Health Workers, Virtual Health, Peer Support & Other Strategies



UNM 2040 Strategic Plan

UNM 2040: Opportunity Defined

Five key goals areas were identified:

- 1) Advance New Mexico
- 2) Student Experience & Educational Innovation
- 3) Inclusive Excellence
- 4) Sustainability
- 5) One University

- **Next Step: UNM Health Sciences | UNM Health Strategic Plan Initiative**

Many opportunities for engagement (starts in September 2022)



opportunity.unm.edu

Tobacco & Nicotine as Gateway Drug

* Prevention Critical

- Are we spending enough in New Mexico? CDC recommends about \$30M for NM
- Vaping has increased dramatically and opens the door to new cocktail combinations

* Public Health Strategies

- Population Based
- High Risk Groups
- Of a secondary disorder

* Access to clinical treatment options

- Nicotine extremely addictive and leads to brain changes like any addiction
- Co-occurring disorder treatment (especially with mental illness and other Substance Use Disorders)
- Training of Staff
- Required activities in clinical settings – tobacco and related product free health care settings, universities, etc



Tobacco Use in New Mexico

16% of New Mexico adults smoke cigarettes

- 26% use any tobacco product
 - 5% use smokeless tobacco
 - 8% vape
 - 7% smoke cigars or cigarillos
 - 1% use hookah

260,000 adult smokers



New Mexico High School Youth & Tobacco and Nicotine Use

- 32.2% of New Mexico high school youth reported currently using tobacco products, including e-cigarettes.
- Among New Mexico high school youth, 11.4% reported currently smoking cigarettes.
- In 2017, 10.6% of high school students in New Mexico smoked cigarettes on at least one day in the past 30 days. Nationally, the rate was 8.8%.

CDC, Youth Risk Behavior Surveillance System, 2017



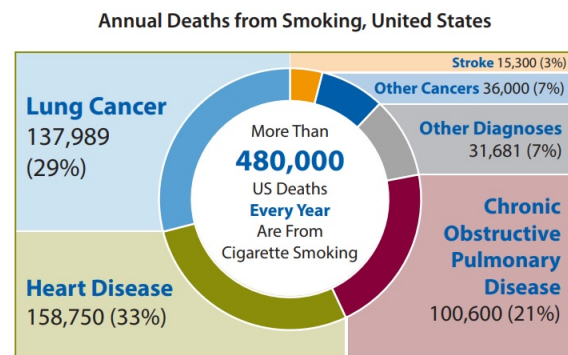
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Single Largest Preventable Cause of Disease and Disability

The stakes:

- According to the New Mexico Department of Health, commercial tobacco use remains the single largest preventable cause of disease, disability, and death in New Mexico
- 2,878 smoking-related deaths in New Mexico annually



Note: Average annual number of deaths for adults aged 35 or older, 2005–2009.
Source: 2014 Surgeon General's Report, Table 12.4, page 660.

Source: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm



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Need to Address Tobacco Amongst Individuals with Mental Illness & Addiction (Behavioral Health & All Settings)

Very high rates of tobacco use disorders (TUD)

- USA: 50 to 95% in clinical settings
 - Consume 44% of all cigarettes
- Globally: 42 studies / 20 nations; OR 1.9 – 6

Increased Morbidity & Mortality

- Health Disparities (Cardiac Disease, Lung Cancer)
- Higher risk of poor outcome with COVID
- 25 years shorter life span in public sector

Other impacts:

- Finances (25% of discretionary funds), housing, employment, insurance, relationships, etc

Fight Stigma and Health Disparities

- Promote Wellness and Recovery



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Schizophrenia and Tobacco

70-90% are tobacco dependent (setting specific)

Early age of onset of tobacco dependence (pre-schizophrenia) & subgroup later onset: prevention?

Heavy smoking associated with:

- Increased positive symptoms (hallucinations, delusions, etc)
- Decreased negative symptoms (social connection, facial expressions, etc)
- More other substance use disorders
- Increased Medication Dosages
- More frequent psychiatric hospitalizations
- Fewer parkinsonian EPS medication side-effects
- Increased suicide risk
- Poly-dipsia



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Tobacco Smoke & Psychiatric Medication Blood Levels

Smoking induces the P450 1A2 isoenzyme secondary to the polynuclear aromatic hydrocarbons

Smoking increases metabolism of:

- Haloperidol, fluphenazine, olanzapine, clozapine, thioridazine, chlorpromazine, etc
- Caffeine is also metabolized through 1A2

Check for medication side effects

Nicotine use alone (vs tobacco smoking) does not change medication blood levels (2A6, 2B6, 2D6)

- Nicotine replacement therapy (NRT) does not affect medication blood levels



Schizophrenia Health Outcomes: Reduced life expectancy

- 20% shorter lifespan vs general pop. (Brown et al 2000)
 - 26 years shorter life span (Foti et al 2007)
- BH drives medical care costs
 - Poor health care and links to health services
- Rates of Tobacco caused medical diseases 3 times greater in schizophrenia vs general pop.
- Obesity secondary to illness, nutrition, atypical medications, life style, limited activities, etc



NAMI Position Statement

People with mental illness and in recovery have the right to be smoke free and tobacco free.

Effective prevention and treatment, including withdrawal should be part of effective mental health care treatment and recovery.

Smoking has been inappropriately accepted in therapeutic settings. Access to smoking is sometimes used as a form of coercion or reward. NAMI encourages smoke-free environments and we call upon health care providers to help put in place cessation programs

Smoking and other tobacco use also increase stigma.

NAMI supports and encourages smoke free and tobacco free environments in treatment and other health care facilities, group centers and common areas...including prohibiting smoking and other tobacco use by health care providers.

www.nami.org



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Many Research Opportunities: Funding opportunities focused on NM concerns

Many unanswered questions

Understanding the Problem

- basic, translational, & clinical research strategies
- Human Laboratory, Surveys, etc

Psychosocial Therapy Development

- Counseling, Apps, Online, etc

Medication Clinical Trials

HSR / Implementation Science

- Organizational Change



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Tobacco Use Disorders (Nicotine) and Behavioral Health Disorders: Better Understanding & Treatment

- **Why are the rates so high?**
 - Biological, psychological, and social factors
 - Motivational levels
- **What is the impact of tobacco use?**
 - On health and wellness?
 - On psychiatric symptoms & outcomes? QOL?
 - On other addictions?
 - On medication levels, side effects, & effectiveness?
- **Are there beneficial aspects?**
 - Self-medication & Addiction (dependence / withdrawal)
- **Does this group use tobacco differently?**



Nicotine and Behavioral Health

- **Does Usual TUD Treatment Work?**
 - Does treatment need to be adapted to the unique features of other Behavioral Disorders?
 - What medications? (addiction & psychiatric)
 - What psychosocial treatments? (motivation based)
- **It's been "normal" to not address tobacco in mental health and addiction treatment settings**
 - How change the culture?
 - How change treatment program & system?
 - What is the impact of public policy and tobacco control on individuals with serious mental illness?



Psychosocial Treatment Research Issues:

- How modify treatment to specific disorder?
- What medication platform?
- What intensity and length of intervention?
- How integrate into current treatment context?
 - Adjunct Service OR Integrate
- Involvement of significant others?
- Component analysis of EB treatments



The problem is also MH & Addiction Treatment System & Culture

What do you see as the system and cultural barriers?

- Examples of how tobacco is ingrained in our culture?
- What assumptions & rationalizations remain for tobacco use?
 - Self-medication AND Addiction
 - Individual AND Group Rights AND Stigma
- What are the barriers to addressing tobacco?

We must change the current culture

- Co-dependency: rationalizing, minimizing, and denial

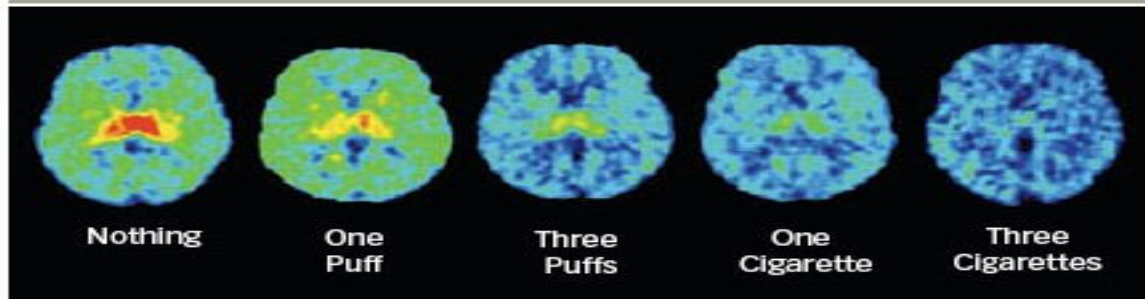
Many agencies don't use evidence-based treatments and psychiatrists often don't treat TUD

- Limited Training of BH clinicians



Why Do We Smoke?

SMOKING SATURATES RECEPTORS As nicotine from a cigarette attaches to the $\alpha 4\beta 2^*$ -nACh nicotinic receptors in the brain, it displaces a radiolabeled tracer (red and yellow indicate high levels of the tracer, green indicates intermediate levels, and blue indicates low levels). The nicotine from three puffs displaced 75 percent of the tracer from study participants' receptors, and the nicotine from three cigarettes, nearly all.



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Nicotine Pharmacology

- ▶ When a person inhales smoke from a cigarette, nicotine is distilled from the tobacco and is carried via smoke particles into the lungs, where it is absorbed rapidly into the pulmonary venous circulation.
- ▶ The nicotine then enters the arterial circulation and moves quickly to the brain, where it binds to $\alpha 4/\beta 2$ nicotine cholinergic receptors, which are ligand-gated ion channels.
- ▶ When a cholinergic agonist binds to the outside of the channel, the channel opens, allowing the entry of cations, including sodium and calcium.
- ▶ These cations further activate voltage-dependent calcium channels, allowing further calcium entry.
- ▶ This process enhances dopamine, glutamate, and gamma-aminobutyric acid release in the brain.
- ▶ The release of dopamine = pleasurable sensations experienced during smoking, including relaxation and release of tension.

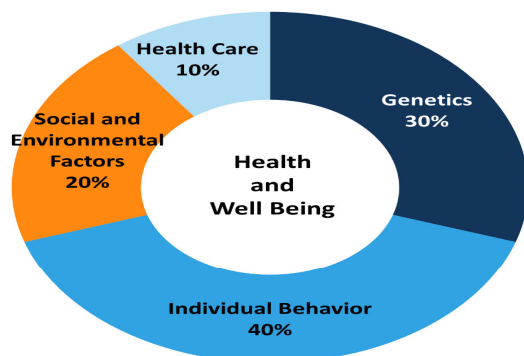


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“Fixing health care and fixing the economy are two sides of the same coin.”
 Sen. Ron Wyden of Oregon

Impact of Different Factors on Risk of Premature Death



Individual behaviors, social, economic, & environmental factors are a key drivers of health

SOURCE: Schroeder, SA. (2007). We Can Do Better — Improving the Health of the American People. *NEJM*. 357:1221-8.



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Figure 2

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education			
Support	Walkability				

Health Outcomes
 Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

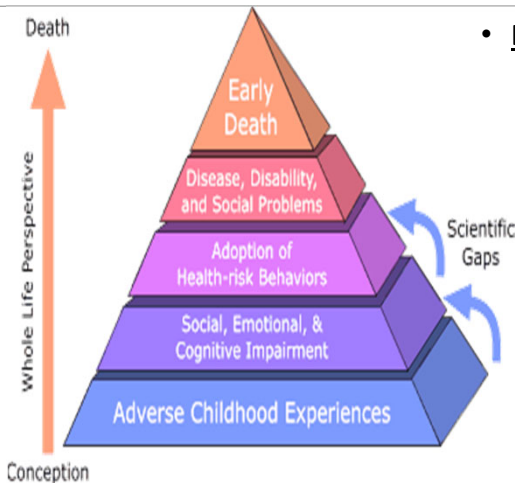


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ACES: Adverse Childhood Experiences

What are ACEs?

- **Abuse & Neglect**
 - physical, emotional, sexual
- **Household Dysfunction**
 - Mother treated violently
 - Substance Abuse
 - Mental Illness
 - Incarcerated relative
 - Divorce



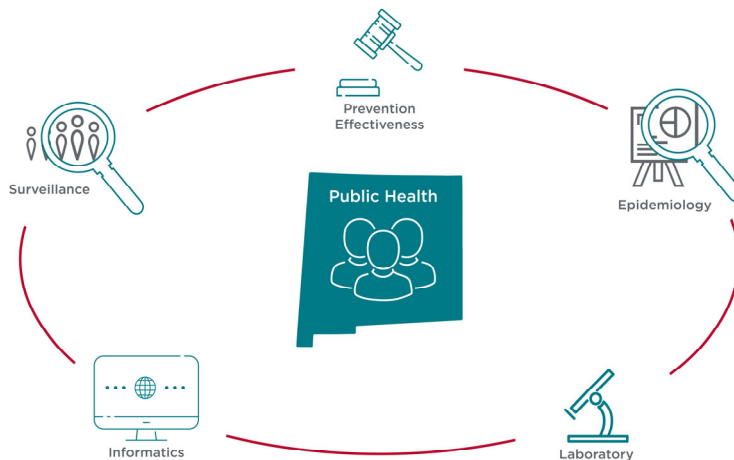
What is the impact of ACEs?

- **Dose-Response Relationship:**
 - With 4 ACEs: 7X alcoholism, 2X Cancer, 4X COPD
- **More risky health behaviors**
 - limited physical activity, **smoking**, alcohol misuse, drug use, missed work, etc
- **More physical and mental health problems**
 - Severe obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones

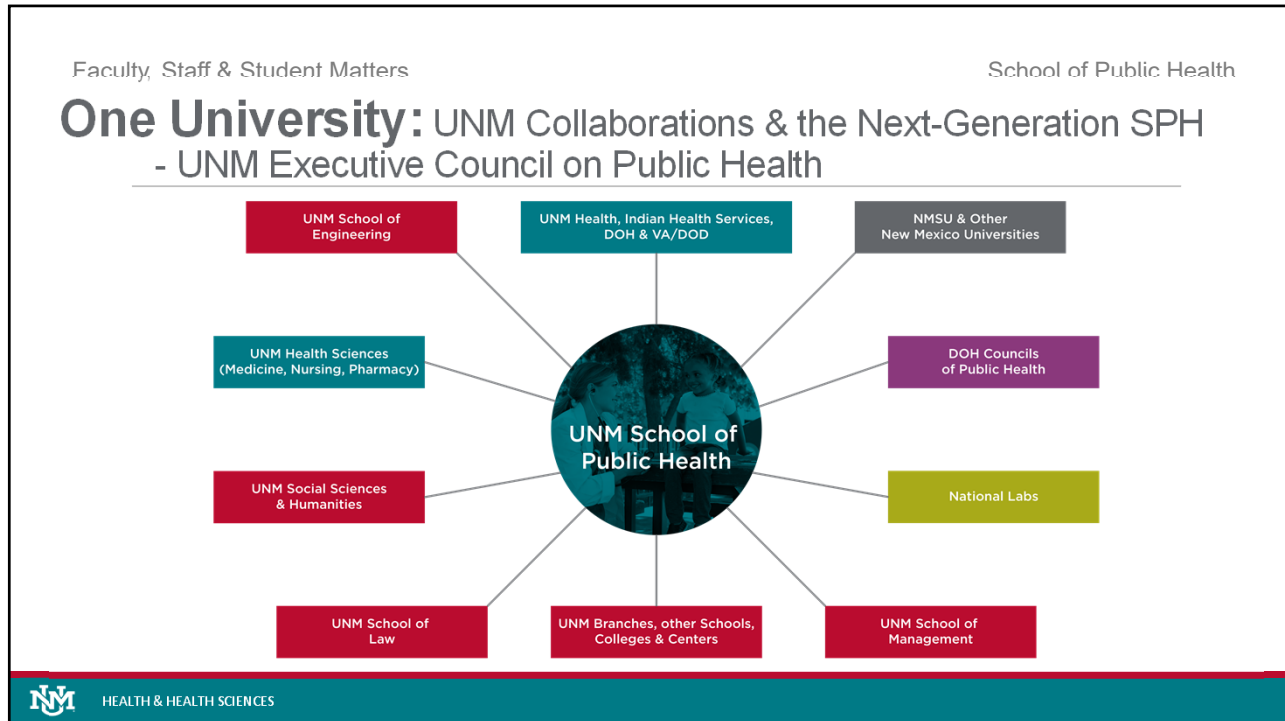


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Focus on the Public Health of New Mexico



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How can a population health perspective and public health strategy on nicotine & tobacco use improve health outcomes?

Educational Activities

Treatment activities

Regulatory Efforts

- Advertising and Promotion
- Product Regulation / Price
 - Taxes, Flavored products
- Clean indoor air
 - Health Care and Schools & Colleges
- Minor's Access to Tobacco
 - Age 21 minimum age
- Retailer Licensure System & Regulations
- Litigation
- Advertising and Point of Sales Marketing

**HANDBOOK
ON
DRUG ABUSE
PREVENTION**

A Comprehensive Strategy to
Prevent the Abuse of
Alcohol and Other Drugs

Robert H. Coombs
Douglas Ziedonis
Editors

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Other Strategies:

- Mass media/communications strategies to inform the public of tobacco and nicotine dangers and alert them to available options for cessation
- Building effective partnerships with health authorities (NMDOH, HSD etc.) and private-sector partners (health plans, employers)
- Building authentic relationships with disadvantaged communities and local community leaders and influencers



Smoking Topography: science on what you can observe when people are smoking

Evaluate inhalation process:

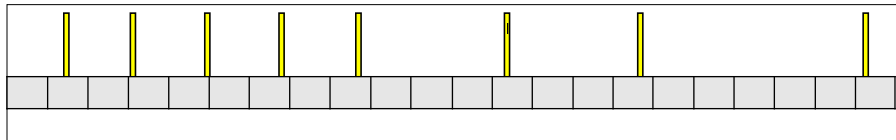
- Puffs per cigarette, puff volume and duration, inter-puff interval, and latency to smoke
- Date, time, start and end of smoking

Portable and Lab Versions

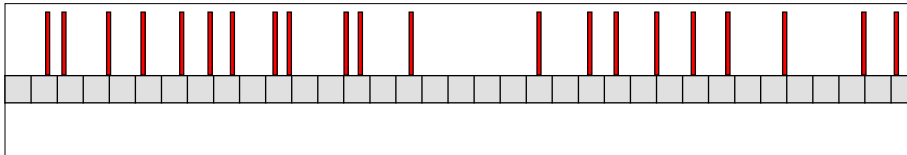


Topography Measures

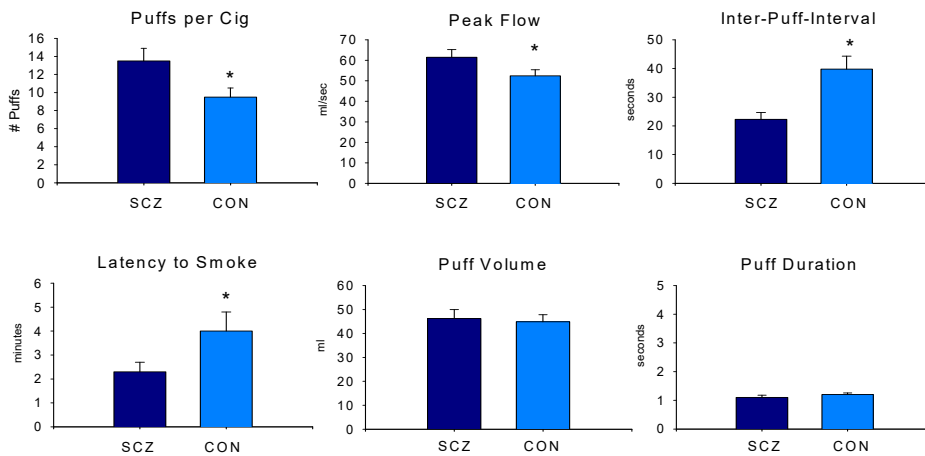
Control Smoker 8 puffs; Total time= 221.4 s



Smoker with Schizophrenia 21 puffs; Total time= 329.8 s



Effective & Efficient Tobacco Users: Smoking Topography Research Schizophrenia vs Controls (Tidey, et al)



Increased Intake per Cigarette

- Higher Carbon monoxide (CO) than controls
- Higher cotinine and nicotine levels (1.5X)
- No differences in metabolism
 - same 3HC/cotinine ratios
- Implications:
 - higher levels dependence, harder to quit, activates low affinity $\alpha 7$ nicotinic receptor
 - (Williams et al)



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Craving Lab Studies

Craving is a state (now a DSM diagnostic criteria)

- Nicotine Craving measures (Shiffman; Tiffany)
- Biofeedback measures
 - Heart rate variability, HR, BP, Skin Galvanic Response, respiratory rate, & temperature

Best studied by induction

- Video, audiotape, & pictures
- Handling drug paraphernalia
- Guided imagery



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Drug Craving in Schizophrenia

Cocaine

- More post-cue subjective cocaine craving ($p < .001$)
- More cue-reactive (97% vs. 47%) (Smelson et al)

Nicotine

High subjective baseline nicotine craving (7.11 vs 3.91)

Creates a ceiling effect for measuring changes

Biofeedback measures

- HR Variability: high sympathetic response at baseline goes up with craving
- Blunted response: 1/2 intensity & longer to react (Williams et al)



Treatment can work for these populations

- Many Patients are interested in quitting
 - Motivation Based Treatments
- Adapt for most being “heavy” smokers
- Adapt for individual issues
 - Impact of mental illness & mental health system
 - Stress management & Weight Management
- Adapt for limited support for quitting
 - Family / SOs, Financial, Housing / Living with smoker, Employment
- Monitor psychiatric medication blood levels



Strategies for Lower-Motivated

- Feedback Tools & MET
- Wellness and Recovery Groups
 - Learning About Healthy Living Groups
- 5 R's (from PHS)
 - Relevance, Risk, Rewards, Roadblocks, Repetition
 - www.healthteamworks.biz/tobacco/webinars/8-5-08.asp
- Behavioral Disconnects
- Nicotine Anonymous
- Discuss NRT options



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MI with Personalized Feedback Increases motivation to quit at one week and one month:

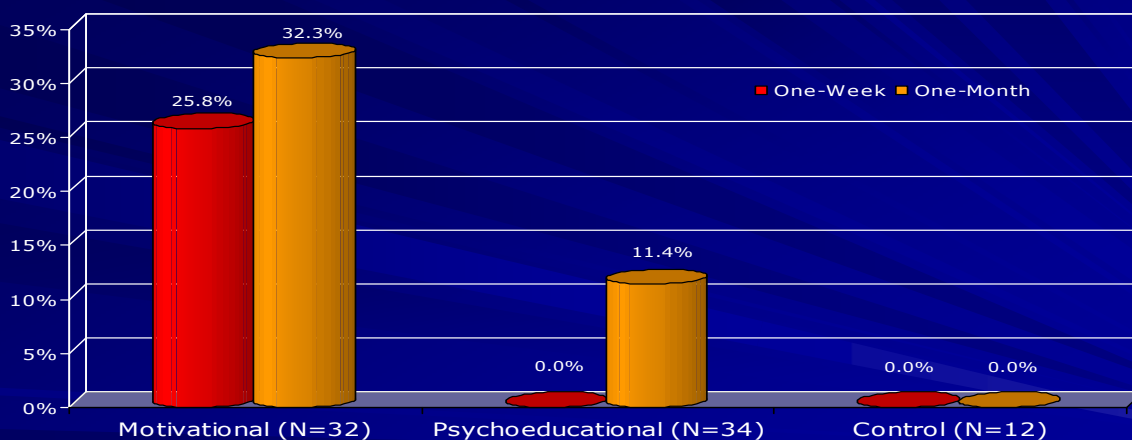


Figure 1. Percentage of participants receiving each intervention following up on referral to tobacco dependence treatment at one-week and one-month post-intervention

Steinberg ML, Ziedonis DM, Krejci JA, Brandon TH.
Journal of Consulting & Clinical Psychology, 2005.

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Personalized feedback: what mattered

- Carbon Monoxide Meter score and feedback
 - Big impact on patients
 - Short & long term benefits to quit
- Yearly Cost of Cigarettes
- Medical conditions affected by tobacco
- Links with other substance abuse & relapses



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**Free
On-line Resource**

LAHL Manual

**For Lower & Higher
Motivated**



Learning About Healthy Living

TOBACCO AND YOU

Written in 2004, Contributors:

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*Edited & Revised February 2012
RWJMS Division of Addiction Psychiatry*

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A Wellness Approach to Addressing Tobacco in Mental Health Settings: Learning About Healthy Living

- American Journal of Psychiatric Rehabilitation 12:4, 352-369, 2009
- Williams, J.M., Ziedonis, D.M., Vreeland, B., Speelman-Edwards, N., Zechner, Michelle R., Williams, M.T., Rahim, R., Karmi, L., Molnar, M., and Eilers, R.

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Strategies for Higher Motivated

7 FDA approved Medications

- Five NRTs
 - patch, gum, spray, lozenge, inhaler
- Bupropion
- Varenicline

Psychosocial treatments

- Cognitive-Behavioral therapies
- Mindfulness Based Interventions
- Social Support

Community Resources

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NRT Replacement Pharmacology Considerations

Each cigarette contains about 13 mgs nicotine

- About 1 – 3 mgs of nicotine are absorbed per cigarette

People with Serious Mental Illness tend to absorb the 2 to 3 mgs nicotine per cigarette

- Higher CO and cotinine levels than expected

Consider NRT dosing implications:

- Example: 3 packs per day = 20 cigarettes times 2 mgs per cigarette times 3 packs per day = 120 mgs nicotine



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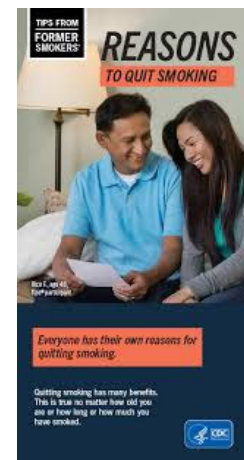
How is nicotine addiction and tobacco dependency best treated clinically?

Combining Treatments:

- Counseling and medication are effective on their own but using them together can more than double the chances of quitting.
- Combining long-acting NRT (patch) with short-acting NRT (e.g., gum, lozenge) also increases the chances of quitting

Source: [https://www.cdc.gov/tobacco/patient-care/care-settings/clinical/index.html#:~:text=Nicotine%20Replacement%20Therapy%20\(NRT\)%20reduces,agonist%20available%20only%20by%20prescription.](https://www.cdc.gov/tobacco/patient-care/care-settings/clinical/index.html#:~:text=Nicotine%20Replacement%20Therapy%20(NRT)%20reduces,agonist%20available%20only%20by%20prescription.)

Access is a determinant for whether current tobacco and nicotine users pursue quitting and “stay quit” – this must include *barrier-free access* to the full range of options for cessation medication and counseling.



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Real progress on insurance coverage for tobacco cessation benefitting the New Mexico Medicaid population: Assure Standardized Approach for each successful Medicaid Vendor (in RFP and monitored in contract)

Medicaid Coverage of Cessation Treatments (In effect as June 30, 2022 (n=51))

State	Individual Counseling	Group Counseling	Nicotine Patch	Nicotine Gum	Nicotine Lozenge	Nicotine Nasal Spray	Nicotine Inhaler	Bupropion	Varenicline	Comprehensive Coverage
New Mexico	Varies	Varies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

- As of 2020, all three of New Mexico HSD's accountable managed care organization partners – Western Sky, Blue Cross Blue Shield and Presbyterian – offer tobacco cessation medications and counseling services under this program for Medicaid recipients enrolled with them.
- The smoking cessation coverage includes medications such as: varenicline (CHANTIX®), bupropion, nicotine lozenges, nicotine patches, nicotine gums, nicotine sprays and nicotine inhalers. It also includes individual counseling, group counseling, and a Cessation Quitline.
- The services do not require prior authorization and do not have any limits on the length of treatment or quit attempts per year. The program also allows participants to try multiple treatments and does not impose any requirement to enroll into counseling.

Source: https://www.hsd.state.nm.us/wp-content/uploads/PressRelease/2f473c14ee654f68b5a25b3cfd15a6d/PR_Smoking_Cessation_1_28_20.pdf



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SELECTED EARLY MEDICATION STUDIES IN SCHIZOPHRENIA

		Treatment	Outcomes
Ziedonis/George, 1997	Schizophrenia or SA Disorder	10 week group +/- 21mg patch	13% abstinent at 12 weeks
Addington et al., 1998	Schizophrenia or SA Disorder	7 week group +/- 21mg patch	16% at 12 weeks
George, Ziedonis et al., 2000	Schizophrenia or SA Disorder	21 mg/day patch and 2 group conditions	56% on atypical abstinent 22% on typicals
Weiner et al., 2001	Schizophrenia or SA Disorder	Bupropion 300 ACS group	None abstinent Reduced CO
Evins et al., 2001	Schizophrenia	Bupropion 150 and CBT group	11% at 12 weeks
George et al., 2002	Schizophrenia or SA Disorder	Bupropion 300 vs. placebo	50% at 1week; <15% long-term abstinence
Williams, Ziedonis, et al., 2004	Schizophrenia or SA Disorder	21 vs. 42 mg/ patch plus individual	16% abstinent at 8 weeks; Doses no difference

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Atypicals versus Typical Antipsychotics

- Schizophrenia and TUD
- Clozapine helps spontaneously reduce tobacco use (especially heavy smokers)
 - George, Ziedonis et al, 1995; Marcus et al, 1995; McEvoy et al, 1995
- Better tobacco dependence outcomes with atypical versus traditional antipsychotic medications (George, Ziedonis, et al 2000)

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EAGLES Study

The EAGLES trial is the first:

- To compare safety and efficacy of all 3 FDA approved smoking cessation therapies in large samples of patients with and without a history of psychiatric disorder
- To allow for comparison of safety and efficacy of smoking cessation aids in smokers with different mental illnesses
- Study population is representative of patients seen in primary care and in community mental health settings

EAGLES is a Confirmatory Trial for Efficacy

EAGLES Quantifies Neuropsychiatric symptoms Risk Across Treatment and Cohort

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Implication of EAGLES: Offer Treatment to All Smokers, Including Those with Stable Mental Illness

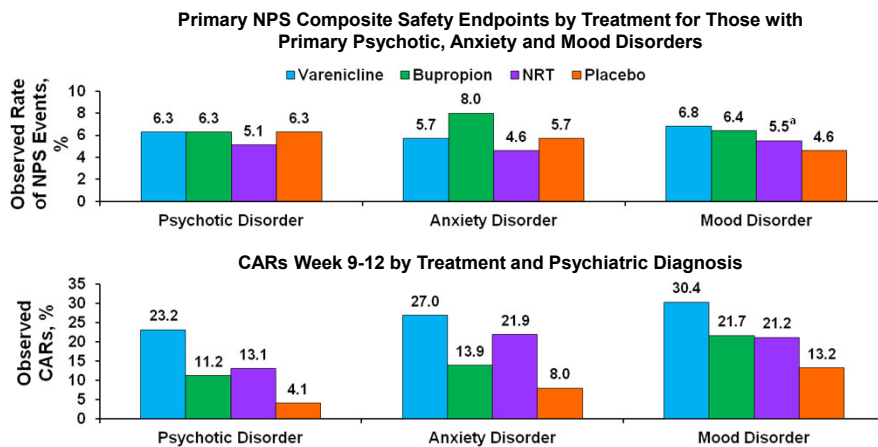
EAGLES trial shows Neuropsychiatric Symptom safety and efficacy of smoking cessation treatments for smokers with mental illness, a group that is:

- More likely to smoke, to smoke heavily, and be dependent
- Less likely to quit without a cessation aid
- More likely to relapse after discontinuation of cessation aids
- Likely to benefit from maintenance treatment
- Less likely to receive advice to quit from a medical provider
- Less likely to receive cessation aid



EAGLES Allows Comparison of Neuropsychiatric Safety and Efficacy in Those with Psychiatric Illness

Is2



Slide 58

Is2 Change the y-axis of the top graph to 0-35%, like the lower graph to properly put the comparison in perspective.

samuels, 9/5/2016

NM Pharmacists Prescriptive Authority Protocol Highlights

- ▶ Counseling x 90 minutes/patient
 - ▶ Can charge for each visit
- ▶ Must get some work-up of patient (PMH, SH)
- ▶ Approved training (RX For Change curriculum)
 - ▶ 2 Live CE's Q 2 yrs
- ▶ Prescribe FDA approved medications
 - ▶ Informed Consent w/ approval to notify PCP in 15 dys of Rx if identified
- ▶ Patient follow-up
 - ▶ Group sessions are allowed



Barriers to Increased Pharmacist Intervention

- ▶ Lack of federal provider status
- ▶ Lack of third party payer coverage for products or visits
- ▶ Lack of federal funds
- ▶ Lack of corporate support from employers without payers
- ▶ Workload difficult to manage without corporate support
- ▶ F/u difficult with patients (e.g. phone numbers disconnected, no-shows)
- ▶ Pharmacists may not be comfortable prescribing to children <18 years of age
- ▶ Pharmacists have limited information to other PMH, lab values, etc.



Comparing lower versus higher intensity psychosocial treatments & NRT for TUD and Schizophrenia by MH Clinicians (NIH study)

- MH Counselors can be trained to effectively integrate tobacco addiction into their work
- 21% continuous abstinence 3 months post quit date (n = 87)
- 9 outpatient treatment sessions helpful
 - Treatment dose mattered
 - Therapeutic Alliance matters
- 46% quit on quit date
- CO scores / # cigarettes reduced
- MH symptoms stable
 - no worsening on PANSS or BDI
- Williams, et al JSAT 38: 384 – 393, 2010



Peer Support Specialists

- Consumer involvement on leadership committees, treatment, and engagement
- Genesis Club House
- www.NJChoices.org
- www.Rxforchange.org
- Wellness & Health Fairs



Community Resources

- Quit lines (phone)
 - 1-800-QUIT-NOW
- Online (internet / apps)
 - www.becomeanex.org
 - www.quitnet.com
 - www.ffsonline.org
- Local treatment groups
- Nicotine Anonymous
 - In person, Telephone, & Internet meetings



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New Mexico's Quitline Can Make A Difference (1-800-Quit-Now)

- In New Mexico, while 9% of cigarette smokers are Spanish-speaking, they make up only 5% of the state's quitline users.
- The state observed that cessation services were effective for Spanish speakers who received them, but culturally appropriate education campaigns were critical to reach this population.
- The state developed a Spanish-language campaign, DEJELO YA, featuring US Olympic Silver Medalist Leo Manzano.
- The campaign included television, radio, and supportive print and outdoor advertising, which produced a 31% increase in Spanish-speaking enrollees to the state's quitline.

<https://www.cdc.gov/tobacco/about/osh/program-funding/pdfs/new-mexico-508.pdf>



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Do Quit Lines or Quit Net Services work for Psych Patients?

- Disconnect between Tobacco Control and Mental Health & Addiction
- Do quit lines work for our patients?
- Would / do they use the internet?
- What else can the NM Quitline do to support this population?

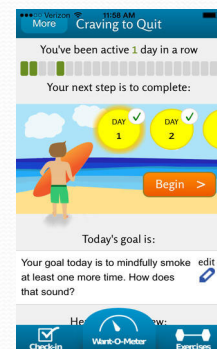


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Alternative Methods: App and Web-based

- RECOGNIZE
 - “I’m feeling anxious”
 - ACCEPT/ALLOW
 - See if you are resisting the experience
 - INVESTIGATE
 - “What’s happening in my body right now?”
 - NOTE
 - Label or mentally note the body sensations from moment to moment
- Judson Brewer, MD, PhD – UMass Medical School – Medicine & Psychiatry
- Brewer JA, et al. Psychol Addict Behav. 2013 Jun;27(2):366-379.
 - **Craving to Quit app**



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The Vaping Epidemic, Emergency Situation!

- There is a vaping epidemic in this country, especially among teens.
 - Every day, over 3,500 youths start vaping.
 - In 2018 the number of high school students who vape nearly doubled.
- The American Heart Association is very concerned about vaping.
- Vaping is a broad term, and there are many types of vaping: CBD, DMT, THC, Hash, E-cigarette, K2, Heroin, and Methamphetamine



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Heart.org

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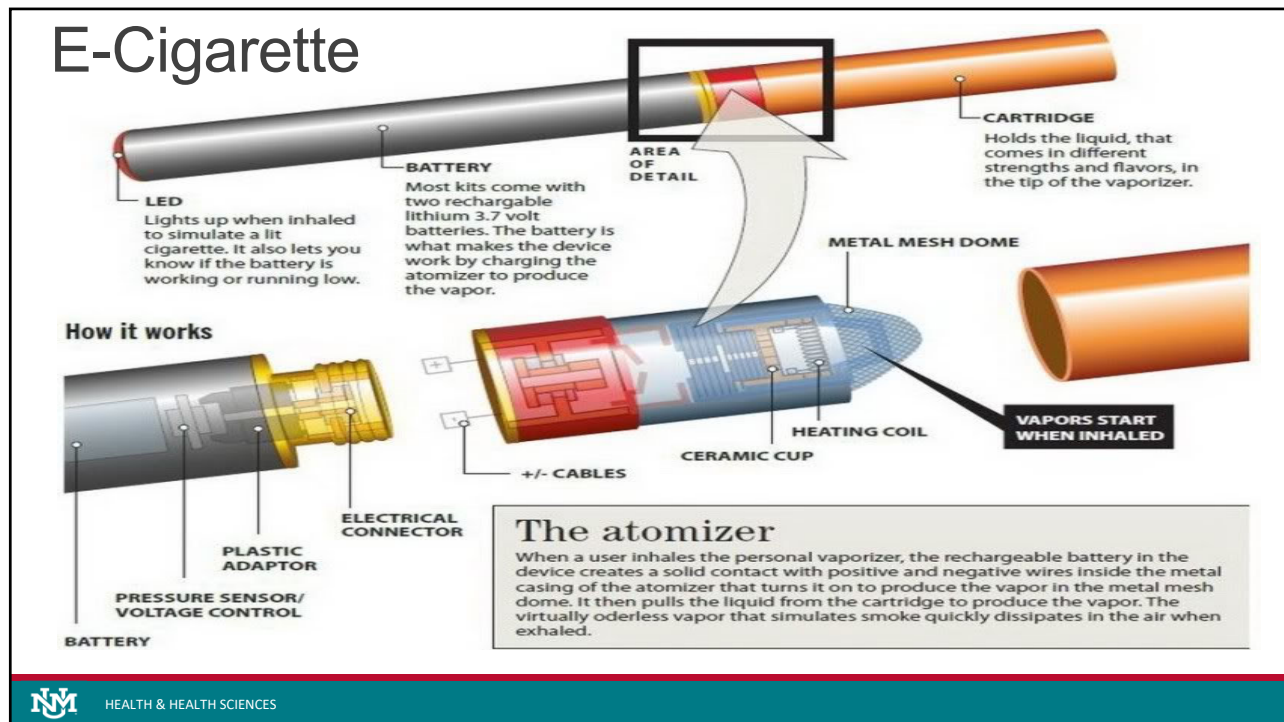
Electronic Nicotine Delivery Systems (ENDS)



Electronic Cigarettes (E-Cigs)



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The Use of Substances Other Than Nicotine in Electronic Cigarettes Among College Students

(Keene, et al. Substance Abuse Research and Treatment. 2017)

- ▶ Nearly 7% (6.94%) of students reported using an e-cigarette to vaporize and inhale a substance other than nicotine
 - ▶ Open and Closed Vaping Units (open means anything can be added).
 - ▶ What opportunities for taxing these products like tobacco?
- ▶ Current tobacco cigarette smokers were significantly more likely to report other substance use in e-cigarettes (51.0%) as compared with never (33.7%) and former (15.4%) smokers.
- ▶ Among respondents reporting other substance use in e-cigarettes, the primary reason for e-cigarette use was “safer than cigarettes” (21.7%), followed by “experimentation” (18.9%) and “friends use” (17.0%).
- ▶ Most (77.9%) reported using cannabis or some derivative of cannabis in an e-cigarette.

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Other Types of Tobacco Products

- Hookahs and water pipes
- Little cigars



Hookah pipe used to smoke Shisha



Bidis



Kreteks

<https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/hems/tobacco/tobaccoproducts.pdf>

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Snus: Unfiltered

- Teabag-like pouch of dry snuff originating in Sweden
- ↑ snuff use is on the rise in men aged 18-44 and daily cigarette smokers
- From 2002-2007
 - 37-53% of smokeless tobacco users also smoked
- Cross-promotion with other tobacco products
 - Dual use and addiction
- Steam cured vs. air cured
 - Less harmful, not harmless



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Snus: Unfiltered

- 20 pouches for \$2.50-\$5.00
→ 8 mg nicotine/pouch
- All major tobacco companies have recently purchased smokeless tobacco companies
- Not advisable as a harm reduction or cessation aide
- American Snus vs. Swedish Snus
→ Strong manufacturing, marketing, regulation differences



Snus for sale at local airport terminal

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Cigar Products: Unfiltered

- Cigars, cigarillo, and little cigars
- Single cigars or packs
→ Ex. Double Diamonds
→ \$1.50 / pack of 20
→ Ex. Black and Milds
→ 65 cents for a single
→ \$5-7 / pack of 5
- Flavors still permitted
- Just as harmful and addictive
→ More puffs, nicotine, CO, tar
- Alternating between cigarettes and cigars
- Many do inhale
→ Falsely believed less harmful



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RYOs (Roll-Your-Owns): Unfiltered

- From 2007-2008
 - Cigarettes ↓ 4.2%
 - RYO ↑ 14.9%
- Sold as “pipe tobacco” to be cheaper
 - RYO ↓ 61%
 - “pipe” tobacco ↑ 233%
- Higher levels of
 - Carbon monoxide
 - Nicotine
 - Tar



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Emerging Tobacco Products: Smokeless Tobacco Products

- Dissolvables

Orbs



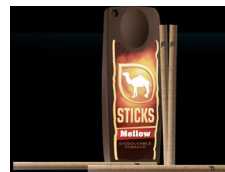
Lozenges



Strips



Sticks



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Dissolvable: Unfiltered



- Finely milled tobacco, flavorings, etc.
 - \$3-4 each
 - 4 types of ground tobacco
- Strips (20)
 - .6mg nicotine in 3 minutes
- Sticks (10)
 - Resemble toothpicks in dippers pouch
 - 3.1mg nicotine in 10-30 minutes
- Orbs (Small pellets, 15)
 - 1mg nicotine in 15 minutes
- Lozenges

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Public Health Service (PHS) Clinical Practice Guidelines: 5 Evidence Based Systems Strategies

1. Create tobacco-user identification system
2. Staff training, resources, & feedback to ensure consistent delivery of quality services
3. Identify staff to provide TUD treatment & assess delivery in performance evaluations
4. Promote policies that support provision of TUD services (& tobacco free environment)
5. Integrate meds & psychosocial treatments in insurance-reimbursable services

- PHS System Change: Strategies (2012 update)*

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Health System and Agency Level Organizational change solutions are being implemented

- Addressing Tobacco Through Organizational Change (ATTOC)
- Wellness & Recovery Orientation
- Provide staff with:
 - New information & resources
 - Evidence that the intervention will make a difference
 - Support to make the changes
 - Clear goals and leadership
 - Opportunity to share their ideas



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Systemic and Cultural Barriers & Possible Solutions

	<u>Barriers</u>	<u>Solution</u>
<u>Systemic</u>	Lack of resources to treat to smoking and patients with limited resources	Integrated treatment within Wellness Programs, linkage to other systems, psychosocial only
	Lack of knowledge for treating smoking	Provision of expert training program
	Agency allows smoking at facility, limited formulary, etc	Assistance with establishment of smoke-free site and expand formulary
	Staff Tobacco use	Education about effects of staff smoking & help with staff cessation
	Lack of systems to identify smokers and track provision of treatment	Modify existing electronic medical record to assess, track, and treat tobacco use
<u>Cultural</u>	Provider beliefs: patients are low motivated or not interested	Education concerning quit motivation, quit rates, and recognition of the benefits of quitting
	Provider beliefs: smoking ensures mental stability & cessation worsens outcomes	Education about evidence that smoking cessation does not worsen functioning
	Provider beliefs: treating smoking is not their responsibility	Site leadership to make provision of tobacco use treatment a responsibility

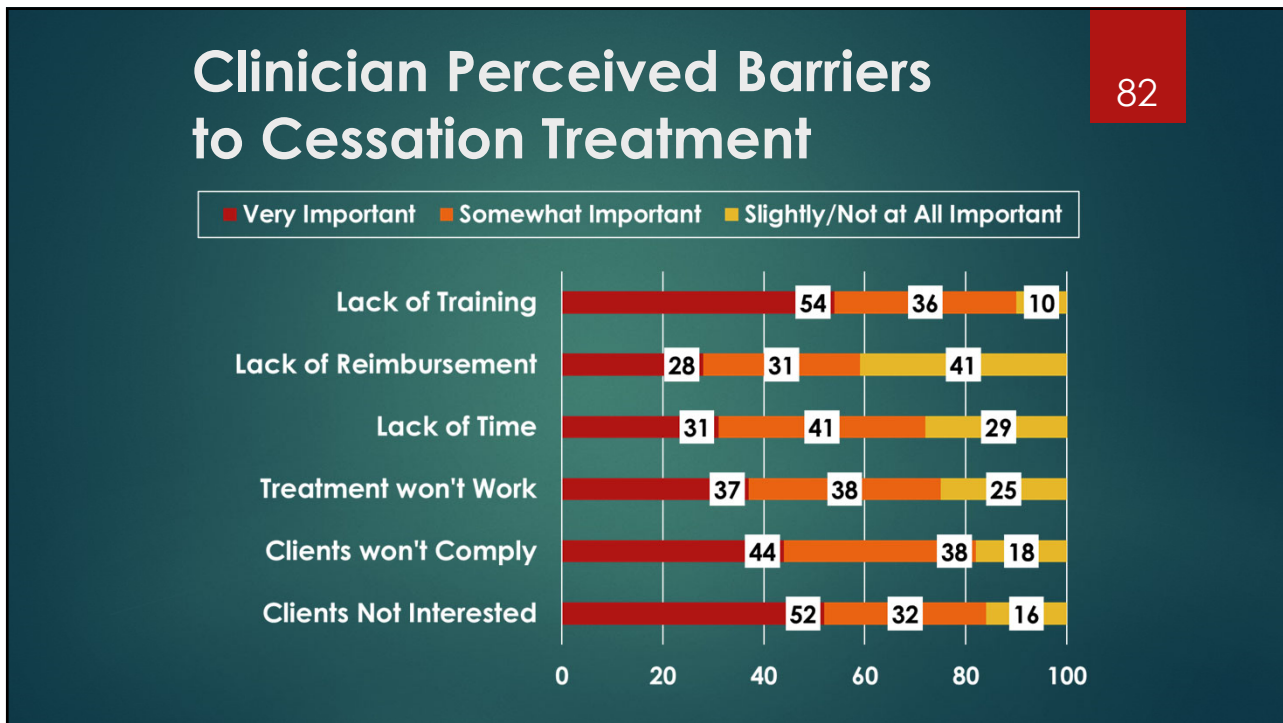
80

Addressing Tobacco Through Organizational Change (ATTOC)

- Patient, Staff, and Environmental Goals
- Organizational Change Strategies
 - 10 Step Model
 - Plan, Implement, & Sustain
- Leadership: Vision and Support
- Communication
- Monitoring Change Process & Outcomes
- QI Technical Assistance & Training

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Helping Staff who smoke: Adverse Employment Outcomes with Smoking

- Involuntary turnover
- Accidents
- Injuries
- Discipline problems
- Mean Absence Rates
- 17 workdays dedicated to smoke-breaks per year



Economic Benefits to Employers

- Reduced Absenteeism
- On-the-Job Productivity
- Reduced Life Insurance
- Reduced Medical Expenditures
 - workers, retirees, medicare, other
- Benefit to Cost Ratio
 - 1:1 3rd year & 5:1 10th year



ATTOC 10 Steps for Change

Planning Phase:

- Step 1: Establish a Sense of Urgency & Preliminary Organizational Goals
- Step 2: Establish a Leadership group and Prepare for Change
- Step 3: Assess Organizational Readiness to Address Tobacco
- Step 4: Develop Written Change Plan & Realistic Time-Line
- Step 5: Develop Written Communication Plan & Materials to Disseminate

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ATTOC 10 Steps for Change

Implementing Phase:

- Step 6: **Implement Patient Goals:
Assessment, Treatment, and
Empowerment**
- Step 7: **Implement Staff Goals:
Training & Staff Recovery**
- Step 8: **Implement Environmental Goals:
End or Restrict Tobacco Use**

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ATTOC 10 Steps for Change

Sustaining Phase:

Step 9: Document Changes in Policies & Standard Operating Procedures

Step 10: Support, Encourage, and Sustain Organizational Change

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Patient Care Policy Issues

Screen all patients for tobacco use on admission as part of the initial assessment

Tobacco abstinence required of patient population

Incorporate tobacco dependence into the Addiction treatment plan using PHS 2000 guidelines

Integrate tobacco education into existing programming

Pharmacotherapy is offered

Document all tobacco interventions in patient chart

Prioritize referral to tobacco-free facilities and 12-Step meetings as part of continuing care recommendation

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Policy Items for Consideration

Environmental Policy

- Tobacco-free facility (and other tobacco / nicotine products), grounds and vehicles. Ban sales of cigarettes and tobacco paraphernalia

Employment Policy

- Tobacco dependence training is required of all staff
- Staff is prohibited from smoking at the facility, having tobacco paraphernalia in their work environment, or show evidence of tobacco use during working hours
- Policy communicated during orientation and annual employee performance review



Lessons Learned:

A Process of Engagement & Adaptation

Needed Adaptations Vary:

- Resources / Finances
- Structure / Organization / Leadership
- Treatment Orientation / Values
- Culture – of Area, Agency, & Programs
- Role of Peers and Physicians

Changes on organizational, clinical & personal levels



Tobacco & Nicotine as Gateway Drug

- * Prevention Critical
 - Are we spending enough in New Mexico? CDC recommends about \$30M for NM
 - Vaping has increased dramatically and opens the door to new cocktail combinations
- * Public Health Strategies
 - Population Based
 - High Risk Groups
 - Of a secondary disorder
- * Access to clinical treatment options
 - Nicotine extremely addictive and leads to brain changes like any addiction
 - Co-occurring disorder treatment (especially with mental illness and other Substance Use Disorders)
 - Training of Staff
 - Required activities in clinical settings – tobacco and related product free health care settings, universities, etc



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Thank you and Questions

Reach out anytime!



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