Disparities Amongst Individuals With Mental Illness & Addiction: Impact of Smoking and Obesity

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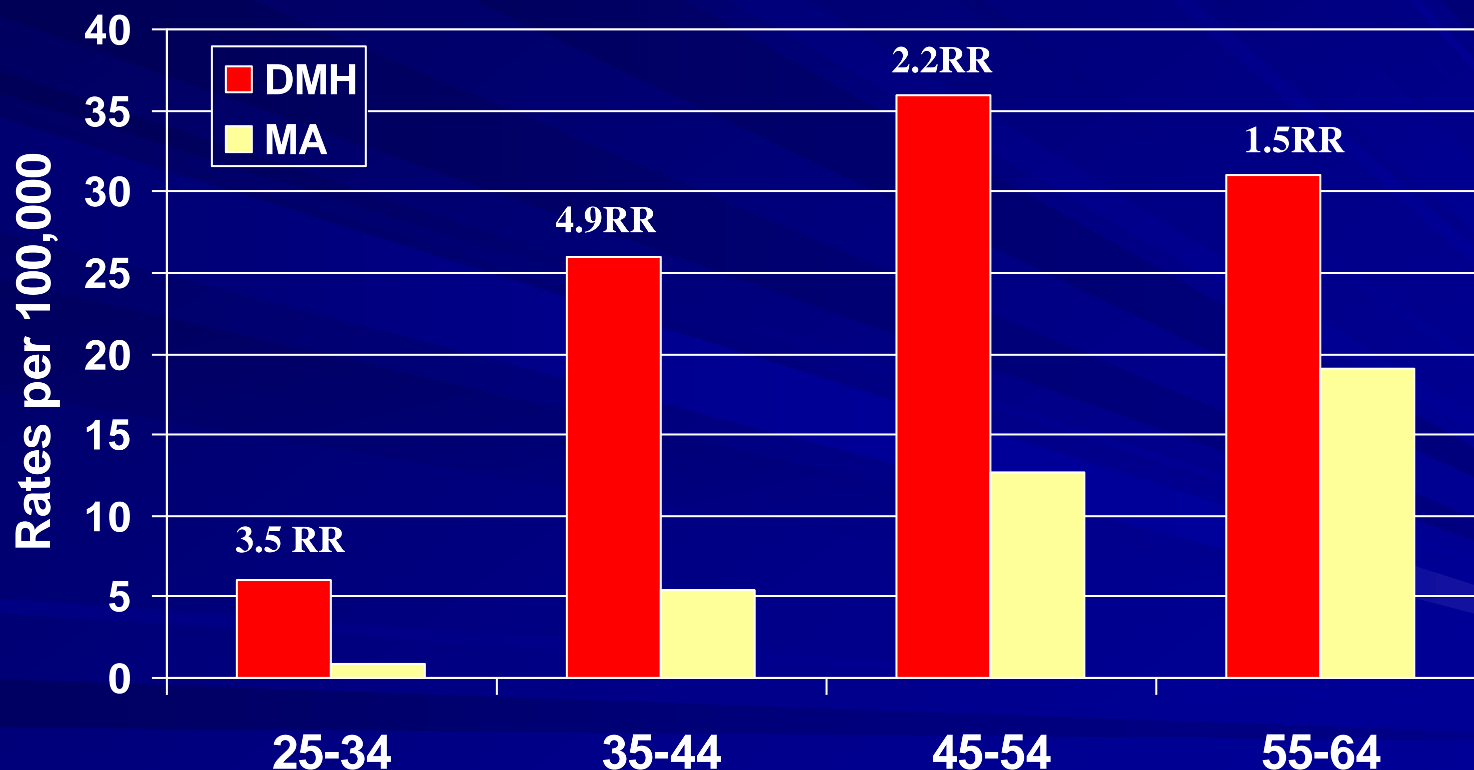
Many Thanks

- **UMass Addiction Center of Excellence**
- **National Association of State Mental Health Program Directors**
- **Massachusetts Department of Mental Health**

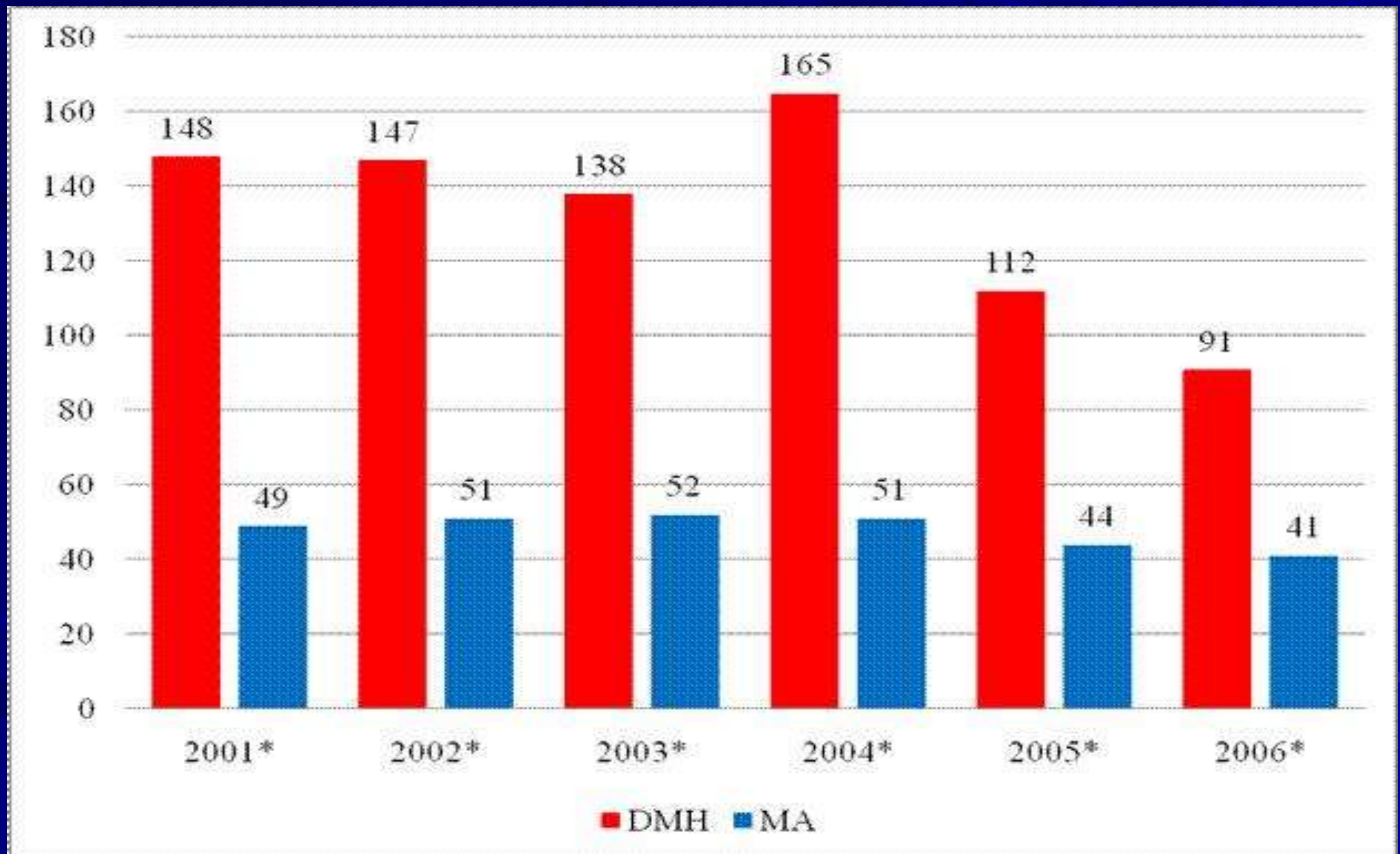
Overview: THE PROBLEM

- Increased Morbidity and Mortality Associated with Serious Mental Illness
  - **25 Years Shorter Life than the General Population**
- Cardiovascular disease associated with the largest number of deaths
  - 2.3 times more than the general population
- Due to Preventable Medical Conditions
  - High Prevalence of Modifiable Risk Factors
    - Obesity, Smoking . . Other Addictions
  - Epidemics within Epidemics (e.g., Obesity, Metabolic Disorders, Diabetes)
  - **www.cdc.gov/pcd/issues/2006/apr/05_0180.htm**

Massachusetts Study: Deaths from Heart Disease by Age Group/DMH Enrollees with SMI Compared to Massachusetts 1998-2000



Cardiovascular Disease Death Rate: Mental Health patients are 3-fold higher compared to Massachusetts General Population (2001-2006)



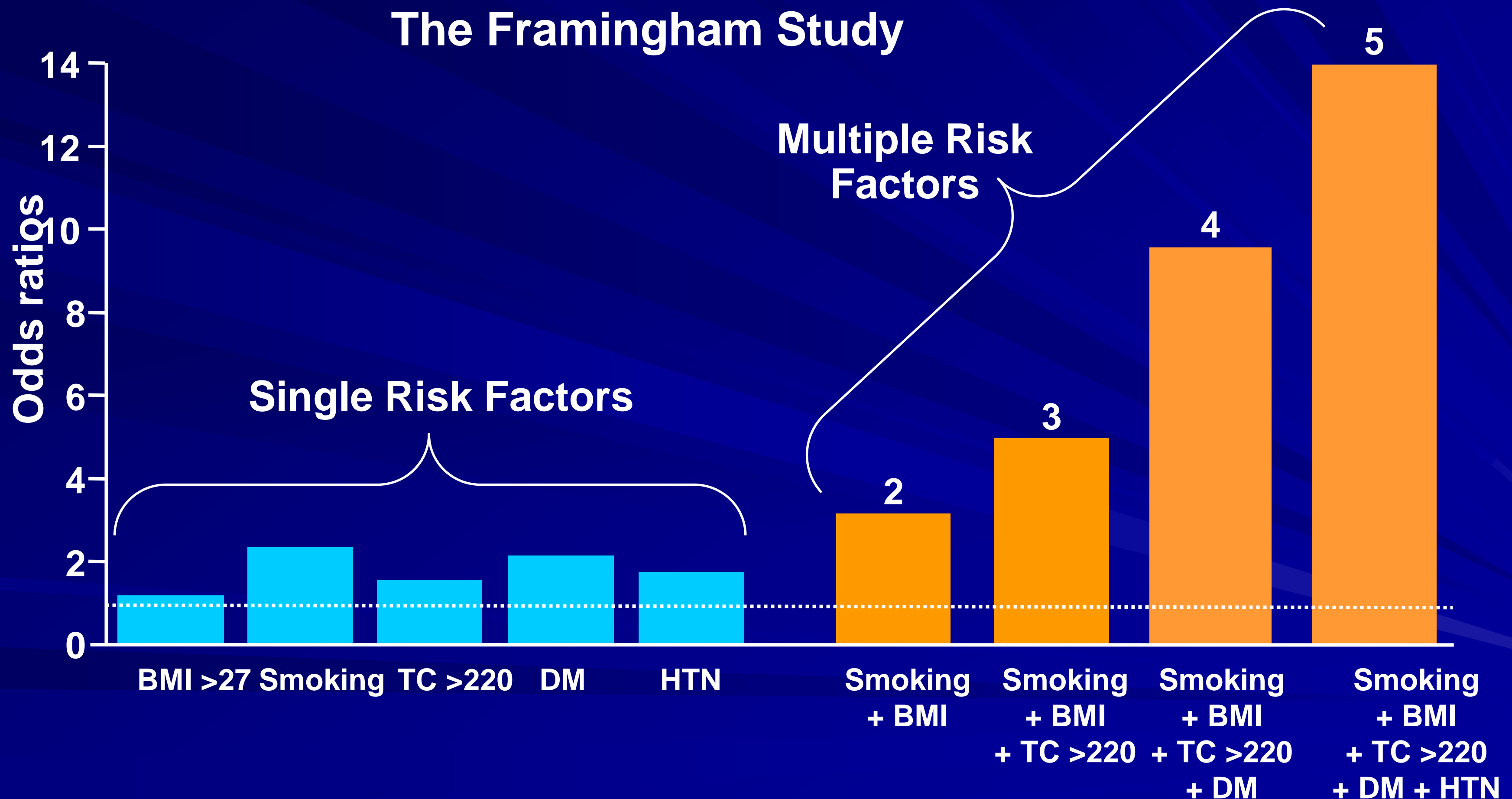
Rates per 100,000 * p ≤ .05 **Age-Adjusted**

Cardiovascular Disease Risk Factors

Modifiable Risk Factors	Estimated Prevalence and Relative Risk (RR)	
	Schizophrenia	**Bipolar Disorder**
Obesity	45–55%, 1.5-2X RR[1]	26%[5]
Smoking	60–80%, 2-3X RR[2]	75%
Diabetes	10–14%, 2X RR[3]	10%[7]
Hypertension	≥18%[4]	15%[5]
Dyslipidemia	Up to 5X RR[8]	

1. Davidson S, et al. *Aust N Z J Psychiatry*. 2001;35:196-202. 2. Allison DB, et al. *J Clin Psychiatry*. 1999; 60:215-220. 3. Dixon L, et al. *J Nerv Ment Dis*. 1999;187:496-502. 4. Herran A, et al. *Schizophr Res*. 2000;41:373-381. 5. MeElroy SL, et al. *J Clin Psychiatry*. 2002;63:207-213. 6. Ucok A, et al. Psychiatry Clin Neurosci. 2004;58:434-437. 7. Cassidy F, et al. *Am J Psychiatry*. 1999;156:1417-1420. 8. Allebeck. Schizophr Bull. 1999;15(1)81-89.

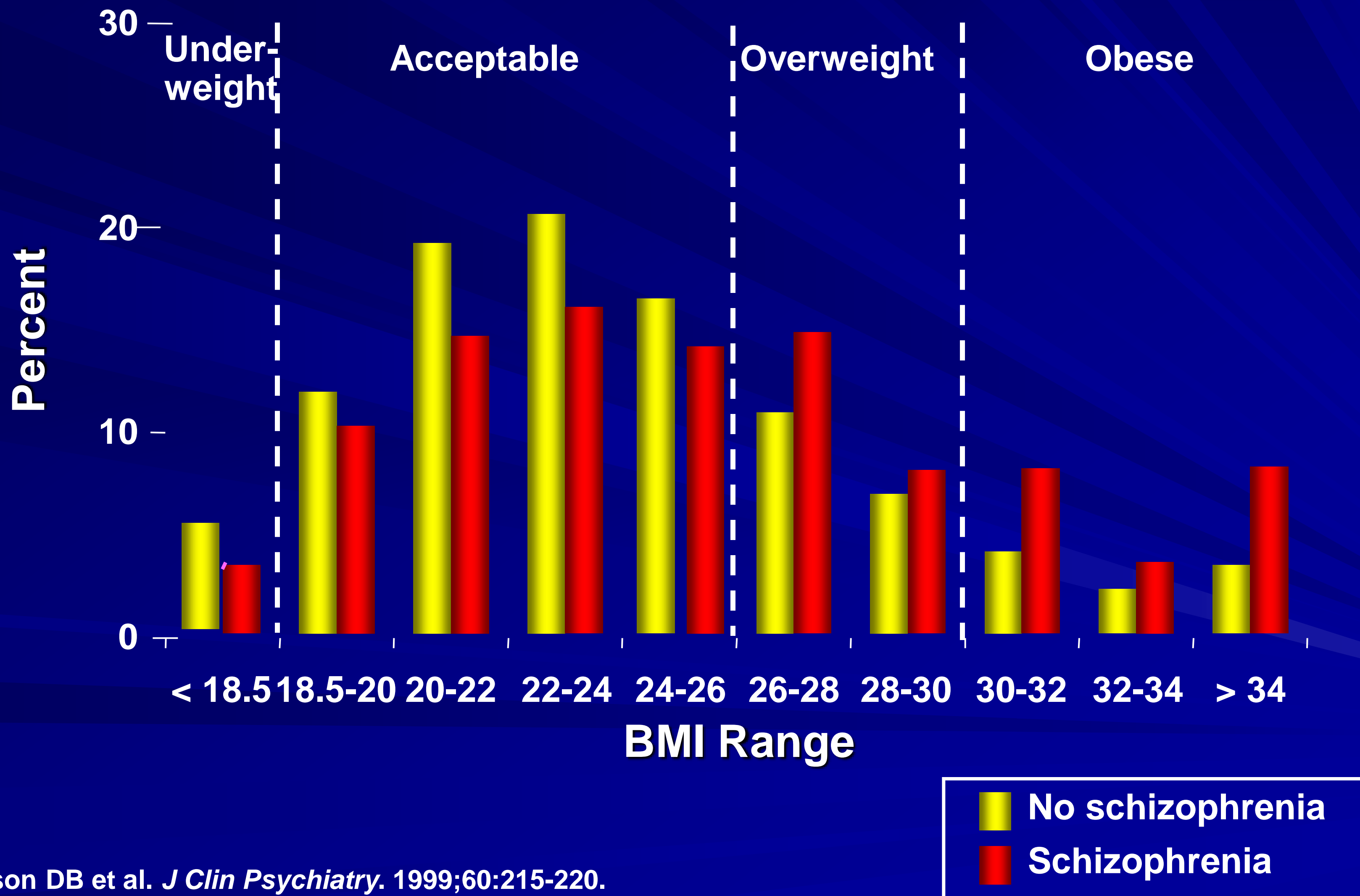
Cardiovascular risk factors – overview



BMI = body mass index; TC = total cholesterol; DM = diabetes mellitus; HTN = hypertension.

Wilson PWF *et al. Circulation.* 1998;97:1837–1847.

BMI Distributions for General Population and Those With Schizophrenia (1989)



Allison DB et al. *J Clin Psychiatry*. 1999;60:215-220.

Prevalence of Diagnosed Diabetes in General Population Versus Schizophrenic Population

Diagnosed Diabetes, General Population
Diagnosed Diabetes, Schizophrenic Patients

Percent of population

30
25
20
15
10
5
0

Schizophrenic: 50-59 y
General: 50-59 y

60-69 y
60-74 y

70-74 y
75+ y

Harris et al. *Diabetes Care*. 1998; 21:518.
Mukherjee et al. *Compr Psychiatry*. 1996; 37(1):68-73.

Factors Associated with Premature Mortality

- Reduced Use / Inefficient Use of Medical Services
- Systemic Barriers to Ideal Health Care
  - Healthcare systems and financing
- Not receiving monitoring & treatment to lower risk
- Fewer routine preventive services
  - Druss 2002
- Worse diabetes care
  - Desai 2002, Frayne 2006
- Lower rates of cardiovascular procedures
  - Druss 2000

Other Factors

- Individual health habits & addictions
  - Inactivity
  - poor nutrition
  - smoking
- Some Psychiatric Medications Contribute to Risk
- Poverty

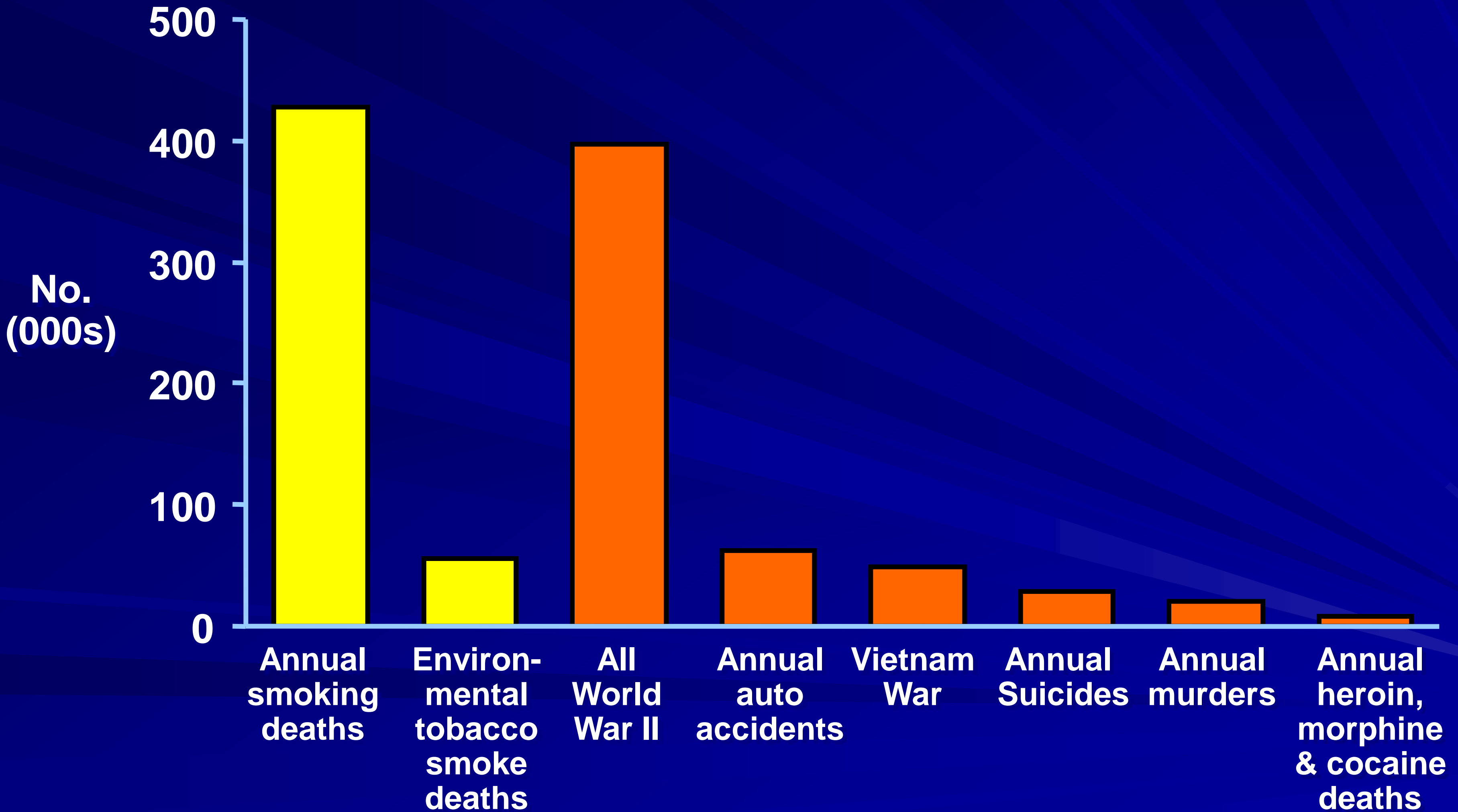
Tobacco Addiction & Mental Illness or Addiction

- 44% of all cigarettes consumed in the US are by smokers with a psychiatric disorder
- Most clients smoke (50 to 95%)
- Most will die because of tobacco-caused medical diseases
- Increased other costs - discretionary, housing, employment, insurance, etc
- Smoking alters psychiatric medication blood levels – non-smokers need less medication

Tobacco smoke effects

- Cardiovascular effects = largest killer
- Pulmonary damage
  - COPD, Asthma, Bronchitis
- Vascular damage
  - Vasoconstriction and endothelial damage
- Carcinogenesis - DNA damage
  - Lung Cancer
  - Nearly one-third of all cancer deaths: Cervix, Bladder, Kidney, Mouth, Larynx, Esophagus, Pancreas, etc

Cigarette Death Epidemic in Perspective



Other Medical Concerns

- Trigger for other Substance Use
- Respiratory infection susceptibility
- Osteoporosis
- Impotence and decreased fertility
- Macular degeneration/cataracts
- Ulcer/reflux disease
- Poor wound healing
- Anesthesia / post-operative complications
- Wrinkles and Bad Breath

Impact on Others Through Environmental Tobacco Smoke

- **Developmental**
  - **Low birth weight (10-20,000 cases/year)**
  - **Sudden Infant Death Syndrome (3000 deaths/year)**
- **Respiratory**
  - **Childhood infections (bronchitis, ear) (>1 mill / yr)**
  - **Asthma (up to 1 million exacerbations/year)**
- **Cardiovascular**
  - **Coronary artery disease (35-62,000 deaths/year)**
- **Cancer**
  - **Lung cancer (3000 deaths/year)**
  - **Sinus, ? Cervix**

US DHHS www.surgeongeneral.gov/library/secondhandsmoke/

Overview - PROPOSED SOLUTIONS

- Prioritize the Public Health Problem
  - Target Providers, Families and Clients
  - Focus on Prevention and Wellness
- Track Morbidity and Mortality in Public Mental Health Populations
- Implement Established Standards of Care
  - Prevention, Screening and Treatment
- Improve Access to and Integration of Physical Health and Mental Health Care

What are the Clinical, Program, & System Issues?

- What are the ongoing barriers?
- What are the innovations?
- How do we change our work to better address tobacco use and dependence?
  - Clinical - screen, assessment, treatment
  - Program - training, QI, program integrity
  - System - collaboration, networks, financial

UMass Department of Psychiatry Wellness Initiative

- 5 Key areas:
  - Physical Activity / Exercise
  - Nutrition / Healthy Eating
  - Smoking Cessation
  - Stress Management / Mindfulness Meditation
  - Primary Care & Health Promotion
- Wellness & Mindfulness Research Day
- Wellness Academic Interest Group
  - Program Director
  - Tool Kit
- For patients, staff, faculty, and trainees

DMH Healthy Changes Initiative

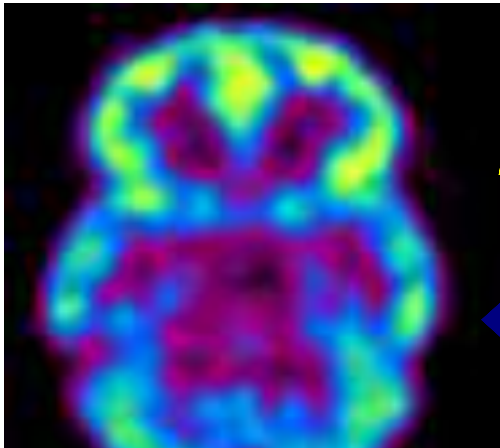
- Choosing
- Healthy
- Activities
- Nutrition
- Getting
- Exercise
- Smoking Cessation

UMass Addiction Center of Excellence

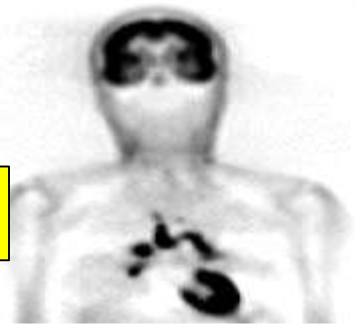
- **Many substances – usually poly-drug**
- **Legal, illicit, prescription, OTC**
  - Nicotine / tobacco
  - Alcohol / Sedatives
  - Cocaine / Amphetamines
  - Opiates / Opioids
  - Marijuana
  - Club Drugs – Ecstasy, PCP, GHB, etc
  - Inhalants, anticholinergics, Steroids
  - OTC medications - whatever around

Community-Based Participatory Research

- Academic Interest Groups
- Mental Health Agency Research Network
- Central Massachusetts Addiction Consortium
- Veterans Affairs Network – VISN 1


Compulsivity
loss of control
Consequences

Addiction


Medical
AIDS, trauma, pain,
Neurotoxicity,
Cancer, liver,
Mental illness,
Suicide, Cardiac

DRUGS

Social
Homelessness
Crime / Violence
Family crisis

Economic
Health care
Productivity
Unemployment
Accidents

ADDICTION IS A DEVELOPMENTAL DISEASE
Starts in adolescence and childhood

% in each age group who develop first-time cannabis use disorder

1.6%
1.4%
1.2%
1.0%
0.8%
0.4%
0.2%
0.0%

5 10 15 18 25 30 35 40 45 50 55 60 65 70

Age

Age at cannabis use disorder as per DSM IV

NIAAA National Epidemiologic Survey on Alcohol and Related Conditions, 2003

Addressing Tobacco Through Organizational Change (ATTOC)

- **Organizational Change & Training**
  - Staff Training & Improving Clinical Services
  - Program Development
  - Supporting Staff Recovery
  - Implement Policies for Tobacco-Free grounds
- **3 Phase Model with 10 Steps: Planning, Implementation, & Sustaining Process**
- **Leadership: Resiliency During Change**
- **Project Management, Tobacco Addiction Expertise & MH / SA System Knowledge**

Adverse Employment Outcomes Associated with Tobacco Use Amongst Staff

Higher Rates of . . .

- Involuntary turnover
- Accidents
- Injuries
- Discipline problems
- Absence Rates

- 17 workdays per year dedicated to time taking smoke-breaks

Economic Benefits to Employers to Help Staff Quit Tobacco

- Reduced Absenteeism
- Increased On-the-Job Productivity
- Reduced Life Insurance & Health Insurance Costs
- Reduced Medical Expenditures
  - workers, retirees, Medicare, other
- Benefit to Cost Ratio (to pay for treatment)
  - 1:1 3rd year & 5:1 10th year

Provide Treatment Assistance for Staff

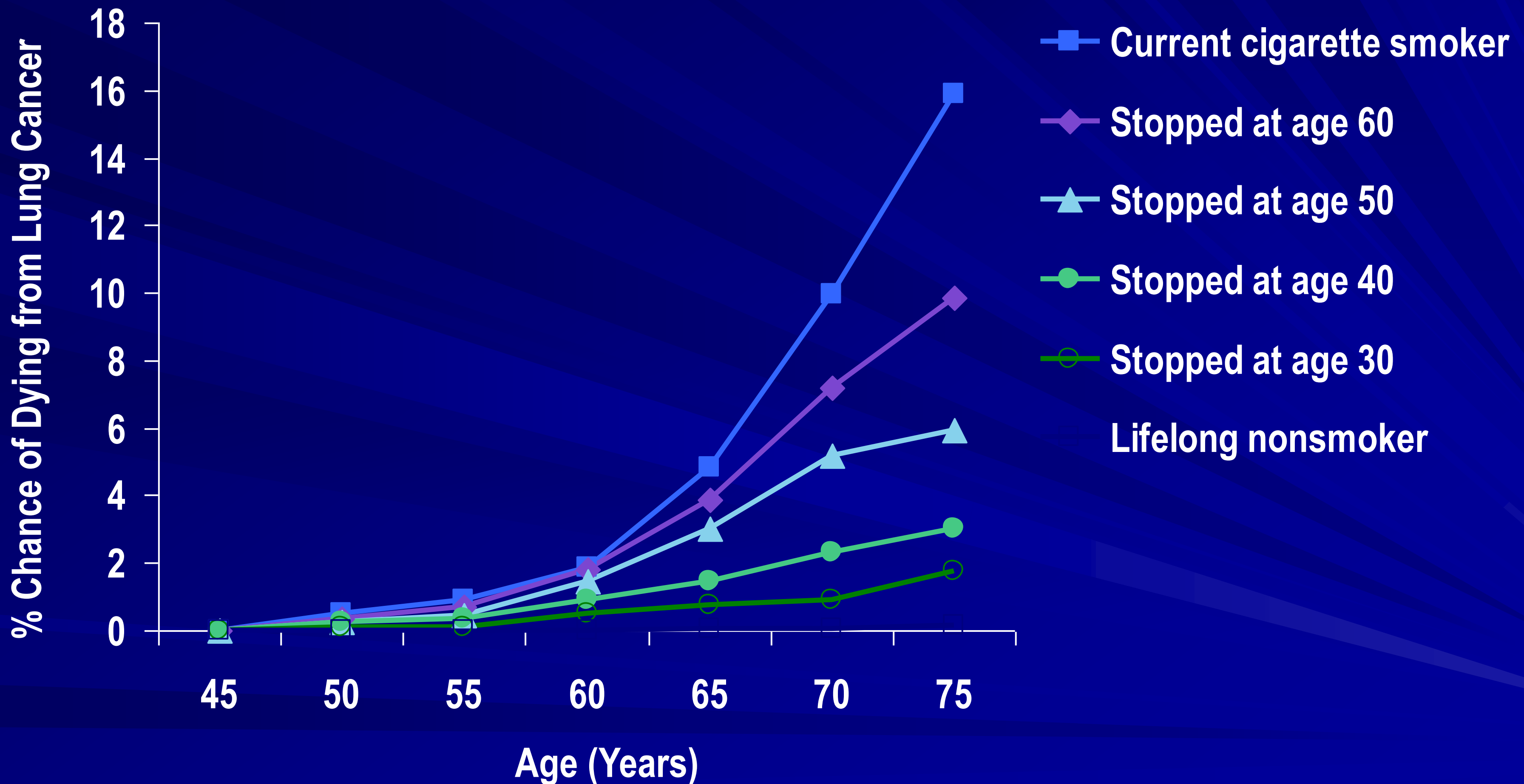
- Staff who smoke are often ambivalent about providing tobacco dependence treatment and ATTOC
- Provide information
- Provide medication, psychosocial treatment, and social supports
- Sensitivity to staff's nicotine dependence is important in training

Many Personal Health Benefits of Quitting Tobacco Use

- For all smokers
  - Men and women
  - Young and old (it's never too late to quit)
  - With smoking-related health problems
- People who quit after having a heart attack
  - Reduce chance of another heart attack by 50%
  - Reduce their risk of dying prematurely by 50%
- The sooner you quit the better, but there are always benefits to quitting

NSW Health. Available at: http://www.health.nsw

Benefits to Quitting at Any Age

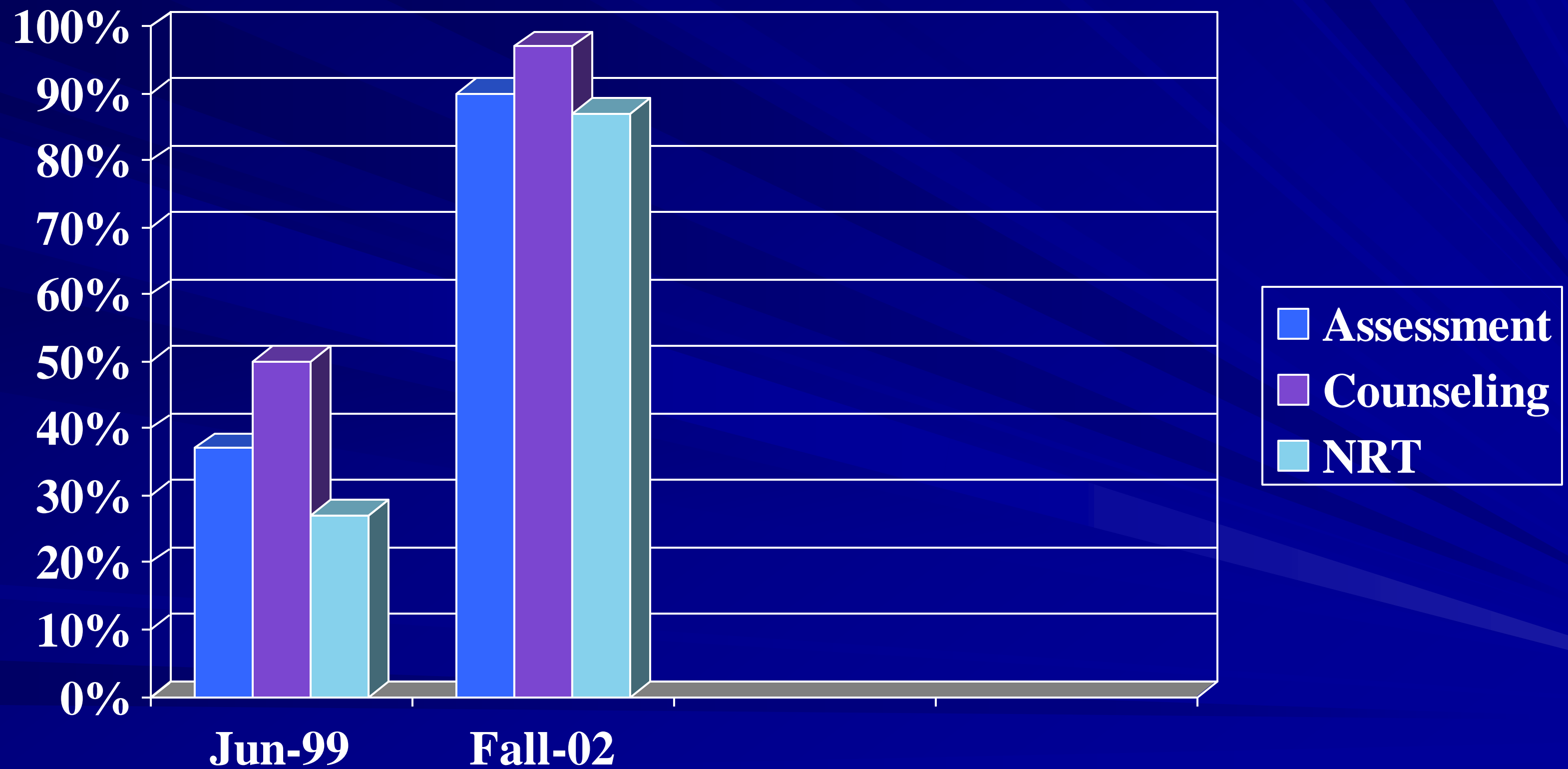


Peto R, et al. *BMJ.* 2000 5;321(7257):323-329.

Benefits to quitting begin day one:

- At 24 hours - chance of a heart attack decreases
- At 48 hours - nerve endings start regrowing & ability to smell and taste is enhanced
- At 2 weeks to 3 months - circulation improves, walking becomes easier, lung function increases
- 1 to 9 months - coughing, sinus congestion, fatigue, shortness of breath decreases
- At 1 year - excess risk of coronary heart disease is decreased to half that of a smoker

NJ Addiction Program OC Intervention: % facilities reporting implementation



National Wellness Summit Wellness Pledge

- ***We Envision:***
  a future in which people with mental illnesses pursue optimal health, happiness, recovery, and a full and satisfying life in the community via access to a range of effective services, supports, and resources.

- ***We pledge:***
  to promote wellness for people with mental illnesses by taking action to prevent and reduce early mortality by 10 years over the next 10 year time period.

Recommendations

NATIONAL LEVEL

1. **Seek federal designation of people with SMI as a distinct at-risk health disparities population.**

2. **Establish coordinated mental health and general health care as a national healthcare priority.**

3. **Establish a committee at the federal level to recommend changes to national surveillance activities that will incorporate information about health status in the population with SMI.**
   - **Consider representation from SAMHSA, Medicaid , the Centers for Disease Control and Prevention, state MH authorities / NASMHPD, and experts**
   - **This may include the IOM project and other national surveys.**

5 key areas of recommendations to help Smokers with Psychiatric Disorders

1. **Raise Awareness**
2. **Train staff** in many fields
3. **Integrating smoking cessation** into mental health & addiction settings
4. **Develop Tobacco Control Strategies** that considers and targets this population
5. **Increase funding for research & innovative services** on this topic

Recommendations

STATE LEVEL

1. Seek state designation of people with SMI as BOTH an at-risk and a health disparities population.

2. Establish coordinated mental health and general health care as a state healthcare priority.

3. Education and advocacy
   - policy makers
   - funders
   - providers
   - individuals, family, community

Recommendations

STATE LEVEL

4. Require, regulate and lead Behavioral Health provider systems to screen, assess and treat both mental health and general health care issues. Provide for
   - staffing
   - time
   - record keeping
   - reimbursement
   - linkage with physical healthcare providers

5. Funding

6. Promote coordinated and integrated mental health and physical health care for persons with SMI.
   See 11th NASMHPD Technical Paper: *Integrating Mental Health and Primary Care.*

State Level - Tobacco

- **Encourage State Departments of Mental Health and Addictions to establish policies for addressing tobacco in all state-funded mental health and substance abuse treatment facilities**
  - **Support state clean-air legislation in all public facilities without exemptions for mental health or addiction facilities**
  - **Eliminate the sale of tobacco in state mental health or addictions treatment facilities**
  - **Monitor Facilities / Part of Licensure**
- **Require state tobacco control programs to increase surveillance and assess whether their interventions are impacting smokers with mental health disorders or addictions**

Tobacco Control Techniques Targeting Smokers with Psychiatric Disorders

Prevention	✓ None
Treatment	✓ State-level, minimal
Advocating for and Allocating Resources	✓ Limited: American Legacy, NIDA
Surveillance and Research	✓ Limited: NSDUH/ NCS
Counter Advertising	✓ None
Litigation against Tobacco Industry	✓ None- None of MSA Funds

Recommendations
LOCAL AGENCY / CLINICIAN

1. BH providers shall provide quality medical care and mental health care
   - Screen for general health with priority for high risk conditions
   - Offer prevention and intervention especially for modifiable risk factors (obesity, abnormal glucose and lipid levels, high blood pressure, smoking, alcohol and drug use, etc.)
   - Prescribers will screen, monitor and intervene for medication risk factors related to treatment of SMI (e.g. risk of metabolic syndrome with use of second generation anti-psychotics)
   - Treatment per practice guidelines, e.g heart disease, diabetes, smoking cessation, use of novel anti-psychotics.

LOCAL AGENCY / CLINICIAN Recommendations

2. Care coordination Models

- Assure that there is a specific practitioner in the MH system who is identified as the responsible party for each person's medical health care needs being addressed and who assures coordination all services.

- Routine sharing of clinical information with other providers (primary and specialty healthcare providers as well as mental health providers

- Care integration where services are co-located

LOCAL AGENCY / CLINICIAN RECOMMENDATIONS

3. Support consumer wellness and empowerment to improve personal mental and physical well-being

- educate / share information to make healthy choices regarding nutrition, tobacco use, exercise, implications of psychotropic drugs
- teach /support wellness self-management skills
- teach /support decision making skills
- motivational interviewing techniques
- Implement a physical health Wellness approach that is consistent with Recovery principles, including supports for smoking cessation, good nutrition, physical activity and healthy weight.
- attend to cultural and language needs