Morbidity and Mortality in People with Serious Mental Illness

National Association of State Mental Health Program Directors

Medical Directors Council

July 2006

Overview- THE PROBLEM

- Increased Morbidity and Mortality Associated with Serious Mental Illness (SMI)
- Increased Morbidity and Mortality Largely Due to Preventable Medical Conditions
  - Metabolic Disorders, Cardiovascular Disease, Diabetes Mellitus
  - High Prevalence of Modifiable Risk Factors (Obesity, Smoking)
  - Epidemics within Epidemics (e.g., Diabetes, Obesity)
- Some Psychiatric Medications Contribute to Risk
- Established Monitoring and Treatment Guidelines to Lower Risk Are Underutilized in SMI Populations

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

Why Should we be Concerned About Morbidity and Mortality?

- **Recent data from several states have found that people with serious mental illness served by our public mental health systems die, on average, at least 25 years earlier that the general population.**

Recent Multi-State Study Mortality Data: Years of Potential Life Lost

Year	AZ	MO	OK	RI	TX	UT	VA (IP only)
1997		26.3	25.1		28.5		
1998		27.3	25.1		28.8	29.3	15.5
1999	32.2	26.8	26.3		29.3	26.9	14.0
2000	31.8	27.9		24.9			13.5

- Compared to the general population, persons with major mental illness typically lose more than 25 years of normal life span

Lutterman, T; Ganju, V; Schacht, L; Monihan, K; et.al. Sixteen State Study on Mental Health Performance Measures. DHHS Publication No. (SMA) 03-3835. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, 2003.

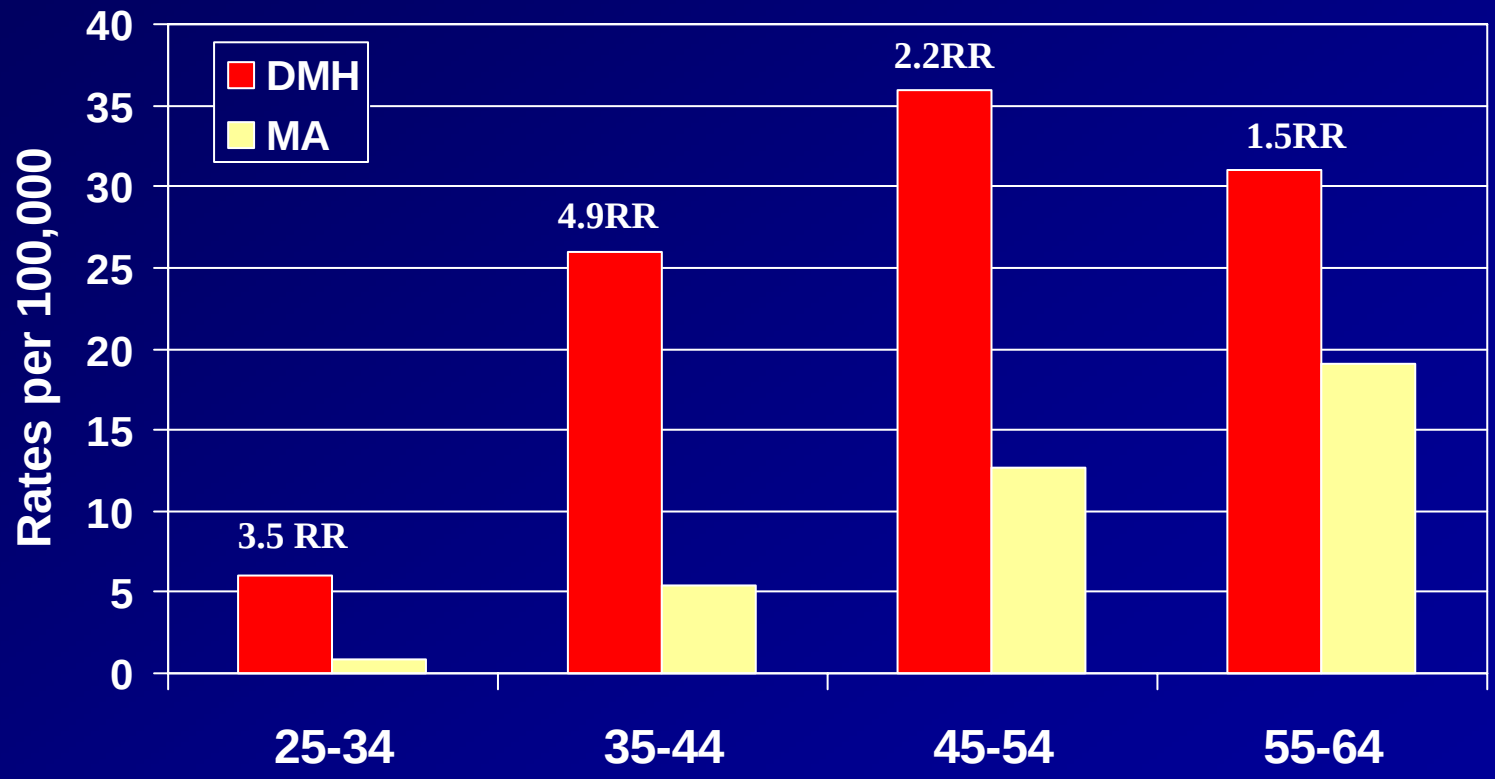
Ohio Study-1998-2002

Mean Years of Potential Life lost

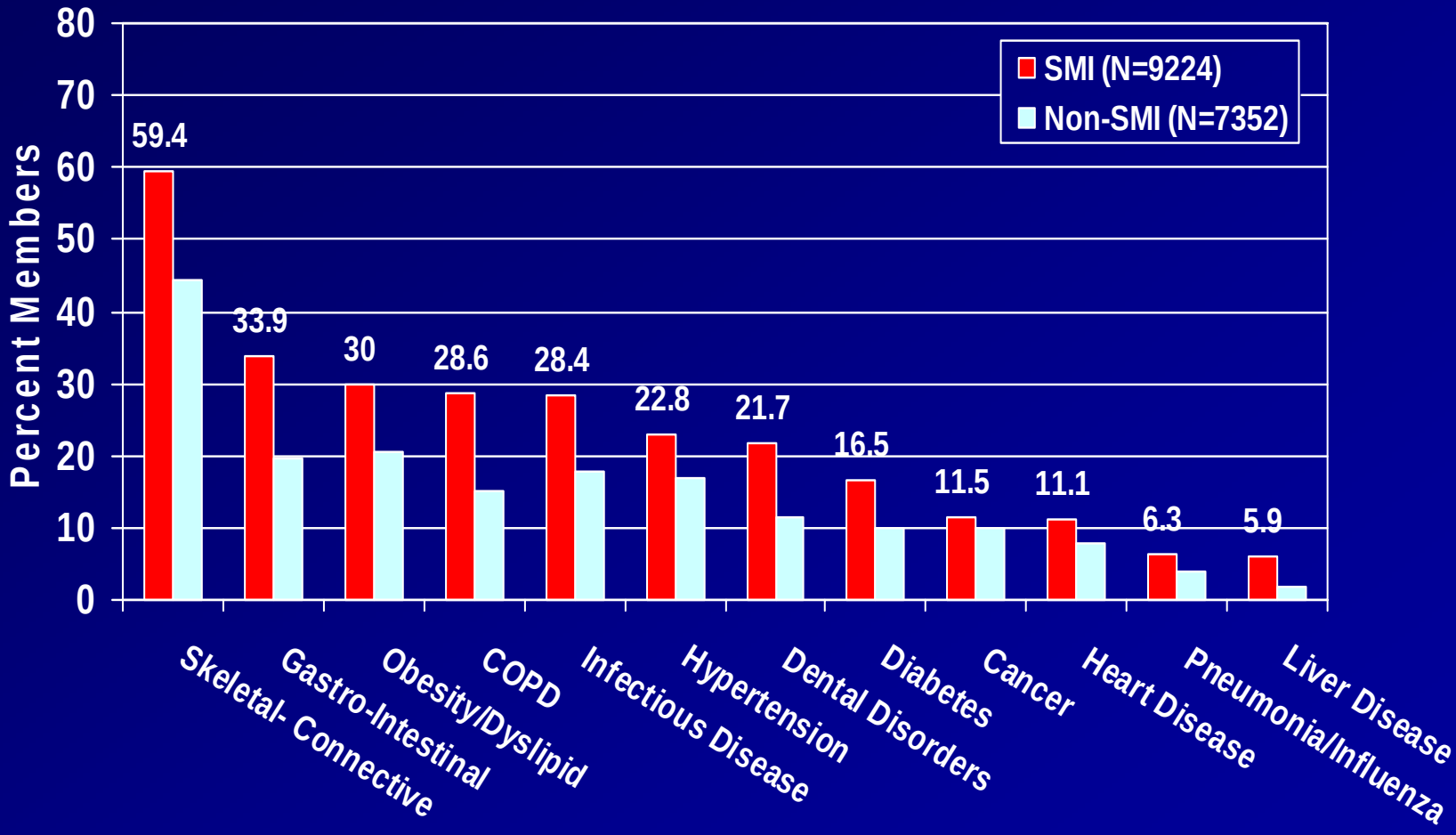
20,018 persons discharged, 608 deaths

Cause	M	F	N
All	31.8	32.5	32.0
Intentional self-harm (suicide)	41.4	42.7	41.7
Assault (homicide)	42.3	35.8	41.6
Accidents (unintentional injuries)	39.5	43.1	40.4
Symptoms, signs, & abnormal clinical & laboratory findings, NEC	32.8	35.0	33.4
Diabetes mellitus	25.8	37.2	30.2
Pneumonia & Influenza	29.4	25.0	28.3
Diseases of heart	27.7	26.6	27.3
Cerebrovascular diseases	20.7	32.8	25.5
Malignant neoplasms (cancers)	24.3	26.9	25.3
Chronic lower respiratory diseases	18.6	24.1	21.1

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



Maine Study Results: Comparison of Health Disorders Between SMI & Non-SMI Groups



Ohio Study
Leading Causes of Death

Cause	ICD-9 Codes	ICD-10 Codes	M	F	N	%
Diseases of heart	390-398, 402, 404, 410-429	I00-09, I11, I13, I20-51	83	43	126	20.7
Intentional self-harm (suicide)	E950-959	X60-84, Y87.0	84	24	108	17.8
Accidents (unintentional injuries)	E800-869, E880-929	V01-X59, Y85-86	61	22	83	13.7
Malignant neoplasms (cancers)	140-208	C00-C97	27	17	44	7.2
Symptoms, signs, & abnormal clinical & laboratory findings, NEC	780-799	R00-99	23	9	32	5.3
Chronic lower respiratory diseases	490-494, 496	J40-J47	17	14	31	5.1
Diabetes mellitus	250	E10-14	11	7	18	3.0
Pneumonia & Influenza	480-487	J10-18	12	4	16	2.6
Cerebrovascular diseases	430-434, 436-438	I60-69	6	4	10	1.6
Assault (homicide)	E960-969	X85-Y09, Y87.1	9	1	10	1.6

Ohio Study
Standardized Mortality Ratios

Cause	Overall	
	N	SMR
All causes of death	608	3.2†
Intentional self-harm (suicide)	108	12.6†
Symptoms, signs, & abnormal clinical & laboratory findings, NEC	32	9.7†
Pneumonia & Influenza	16	6.6†
Chronic lower respiratory diseases	31	5.5†
Accidents (unintentional injuries)	83	3.8†
Diseases of heart	126	3.4†
Diabetes mellitus	18	3.4†
Assault (homicide)	10	1.7
Cerebrovascular diseases	10	1.5
Malignant neoplasms (cancers)	44	0.9

† P<0.001

What are the Causes of Morbidity and Mortality in People with Serious Mental Illness?

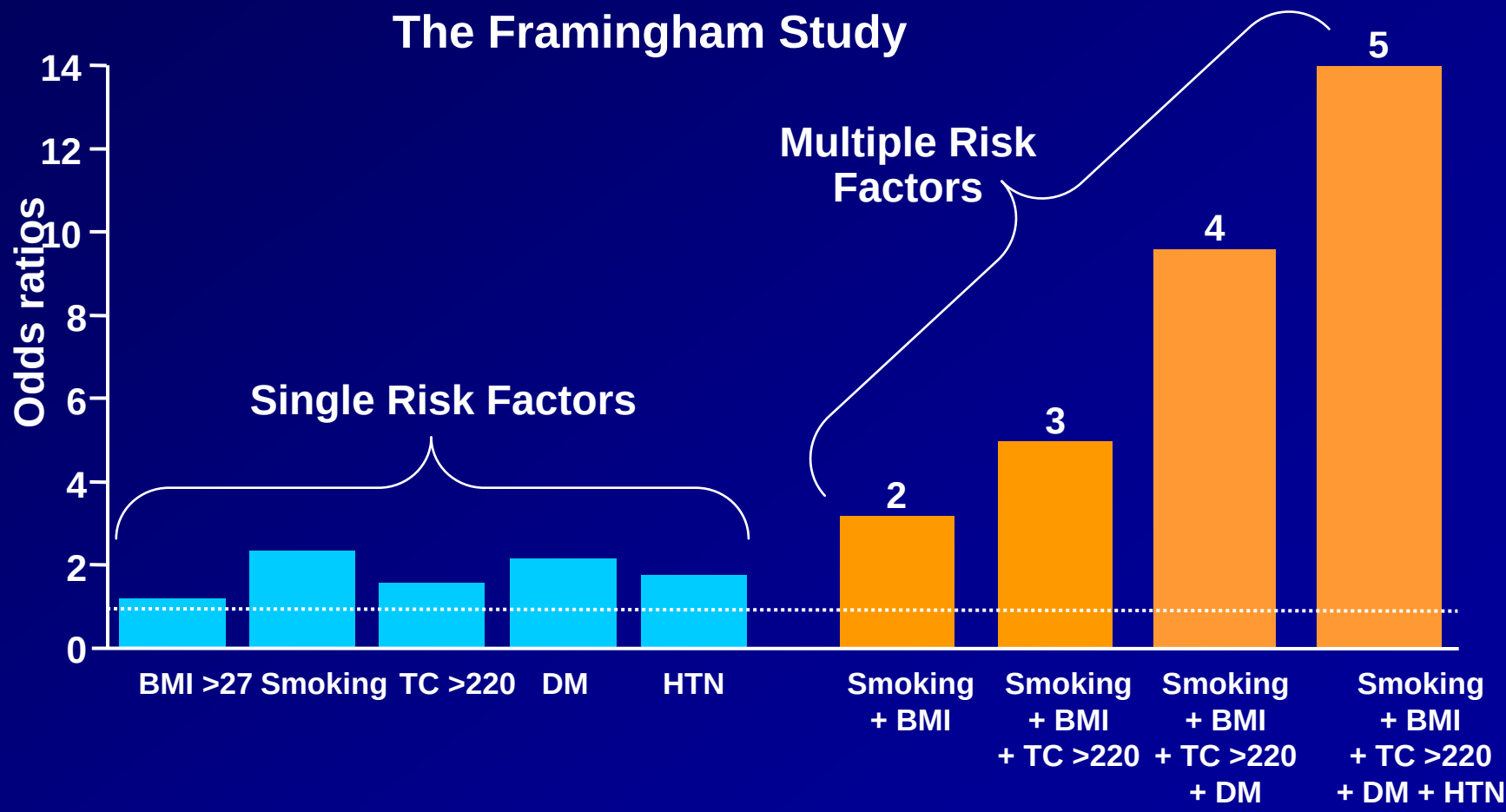
- *While suicide and injury account for about 30-40% of excess mortality, about 60% of premature deaths in persons with schizophrenia are due to "natural causes"*
  - Cardiovascular disease
  - Diabetes
  - Respiratory diseases
  - Infectious diseases

Schizophrenia: Natural Causes of Death

- Higher standardized mortality rates than the general population from:
  - Diabetes 2.7x
  - Cardiovascular disease 2.3x
  - Respiratory disease 3.2x
  - Infectious diseases 3.4x
- Cardiovascular disease associated with the largest number of deaths
  - 2.3 X the largest cause of death in the general population

Osby U et al. *Schizophr Res*. 2000;45:21-28.

Cardiovascular risk factors – overview



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

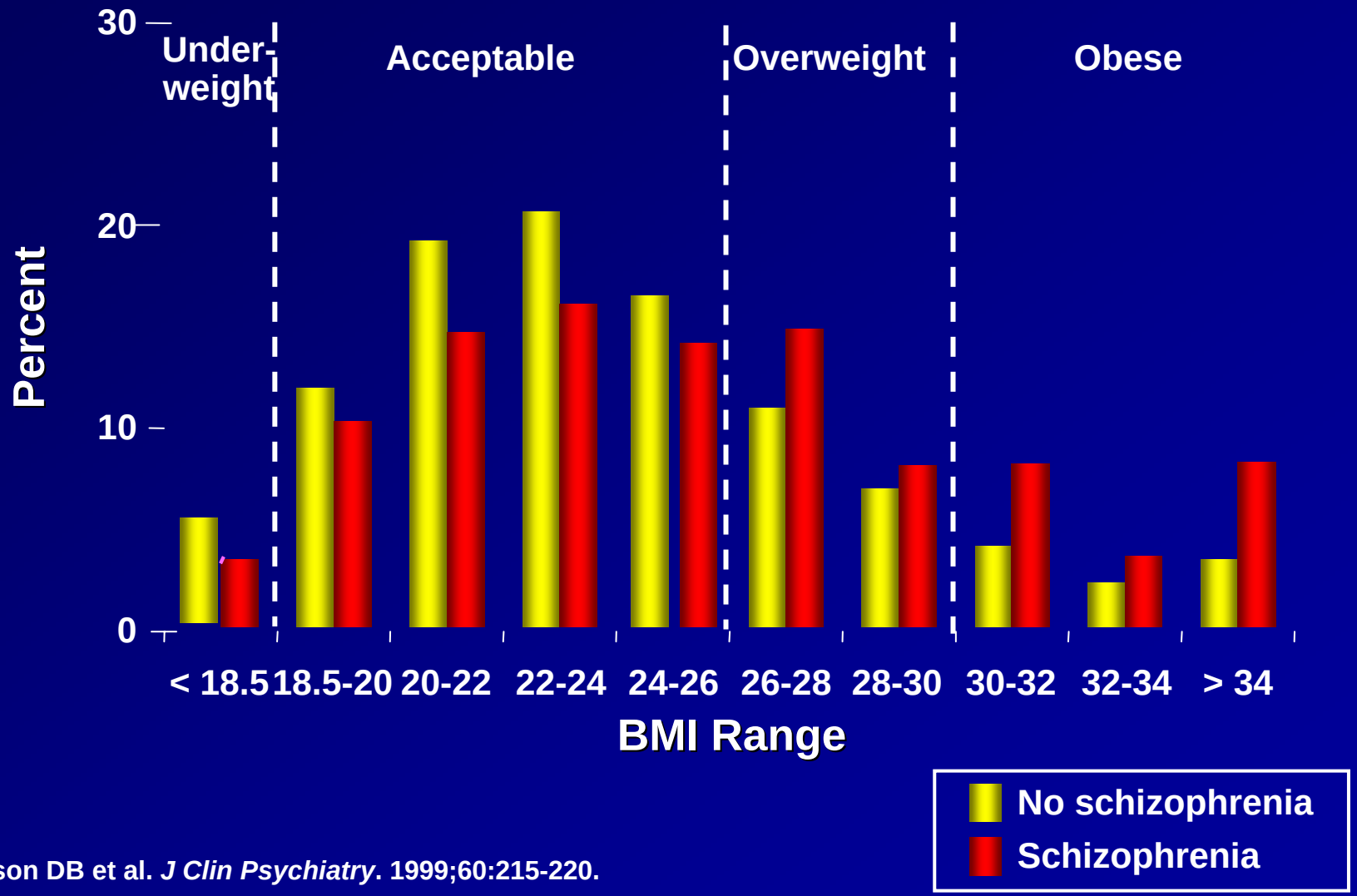
Wilson PWF *et al*. *Circulation.* 1998;97:1837–1847.

Cardiovascular Disease (CVD) 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	50–80%, 2-3X RR[2]	55%[6]
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.

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



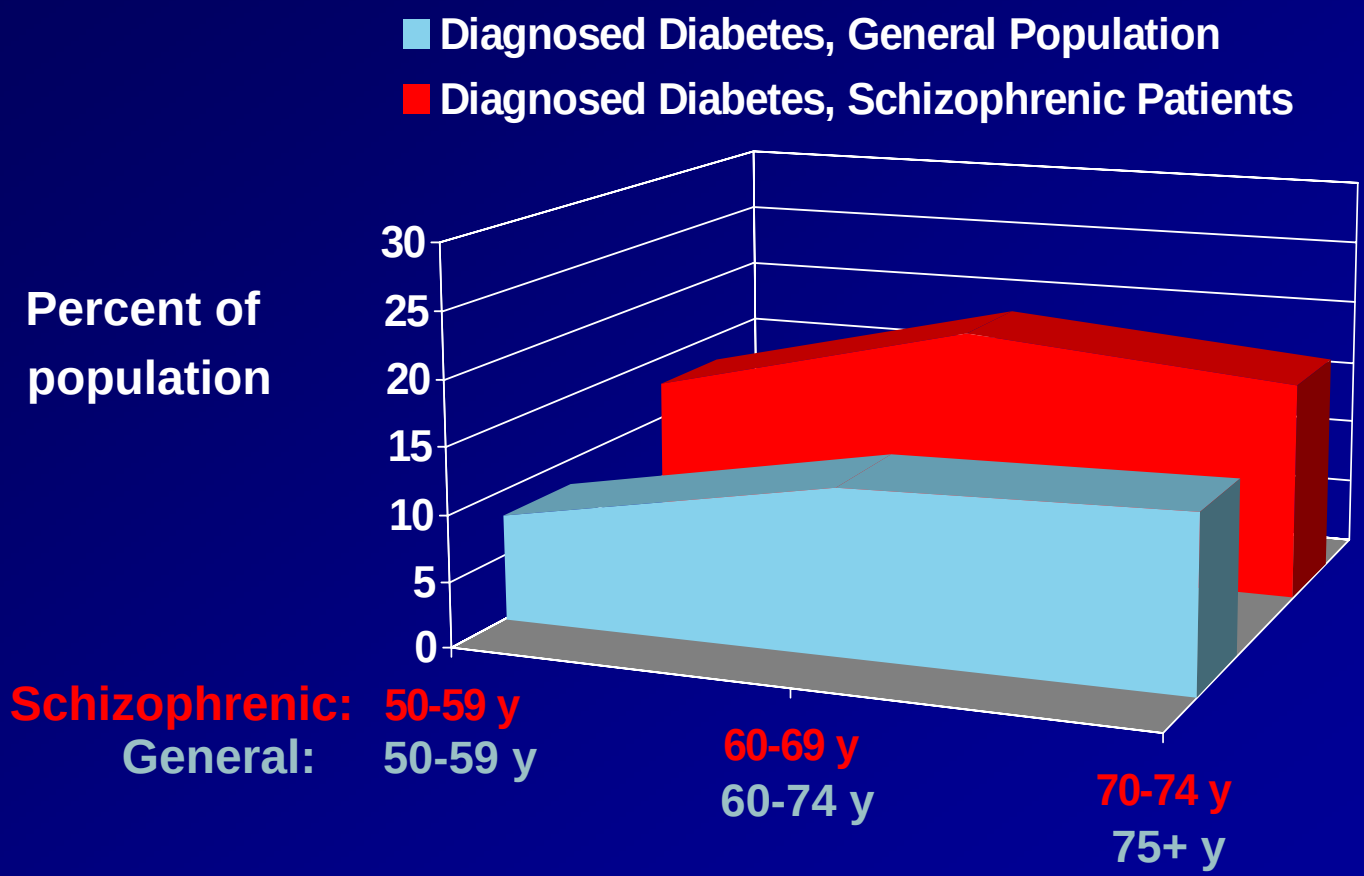
Allison DB et al. *J Clin Psychiatry*. 1999;60:215-220.

Mental Disorders and Smoking

- Higher prevalence (56-88% for patients with schizophrenia) of cigarette smoking (overall U.S. prevalence 25%)
- More toxic exposure for patients who smoke (more cigarettes, larger portion consumed)
- Smoking is associated with increased insulin resistance
- Similar prevalence in bipolar disorder

George TP et al. Nicotine and tobacco use in schizophrenia. In: Meyer JM, Nasrallah HA, eds. Medical Illness and Schizophrenia. American Psychiatric Publishing, Inc. 2003; Ziedonis D, Williams JM, Smelson D. Am J Med Sci. 2003(Oct);326(4):223-330

Prevalence of Diagnosed Diabetes in General Population Versus Schizophrenic Population



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

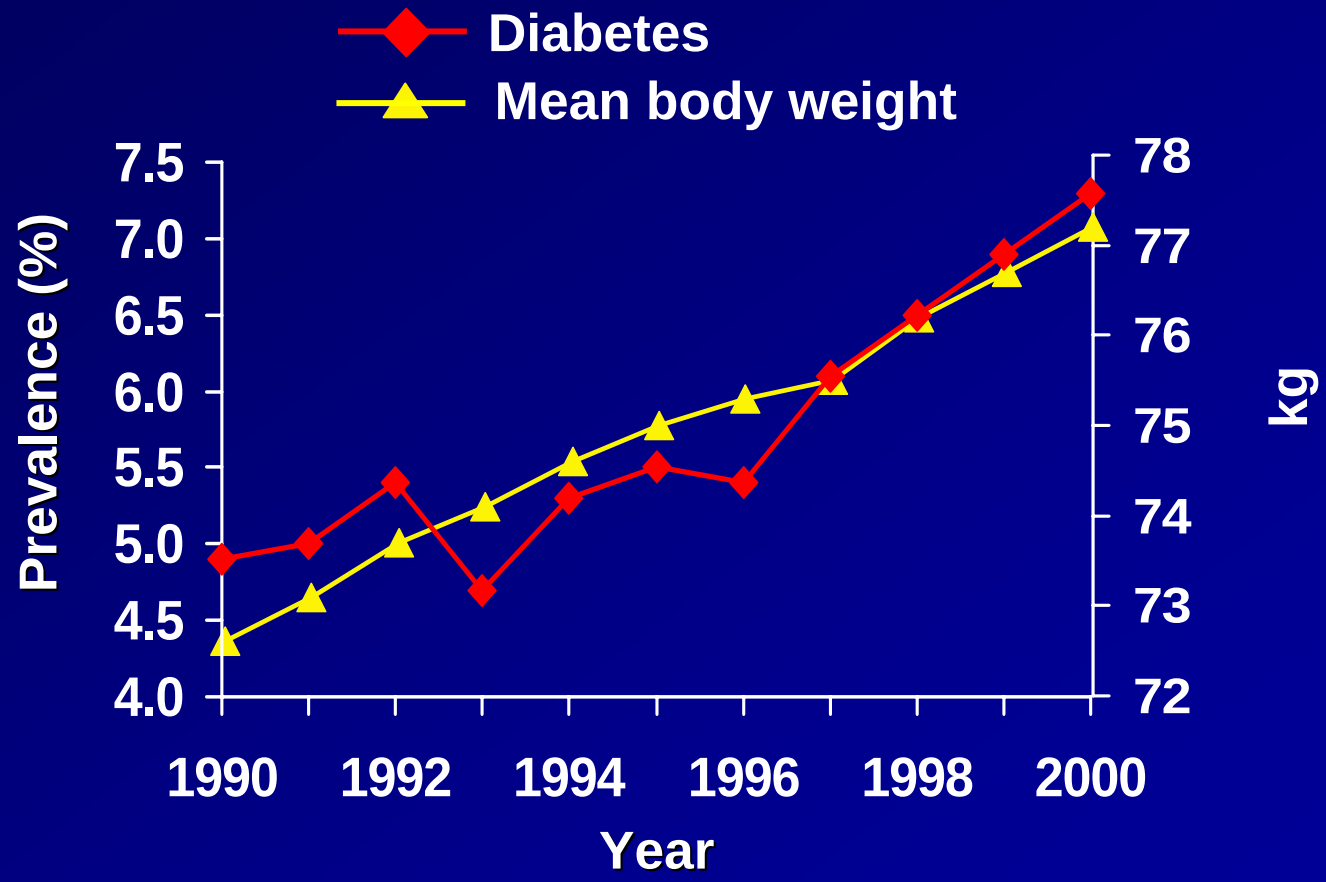
Hypothesized Reasons Why There May Be More Type 2 Diabetes in People With Schizophrenia

- Genetic link between schizophrenia and diabetes
- Impact of lifestyle
- Medication effect increasing insulin resistance by impacting insulin receptor or postreceptor function
- Drug effect on caloric intake or expenditure (obesity, activity)

How Does This Relate to What is Happening in the General Population?

- *There is an "epidemic" of obesity and diabetes, increasing risk of multiple medical conditions and cardiovascular disease.*
  - Obesity
  - Diabetes
  - Metabolic Syndrome
  - Cardiovascular Disease

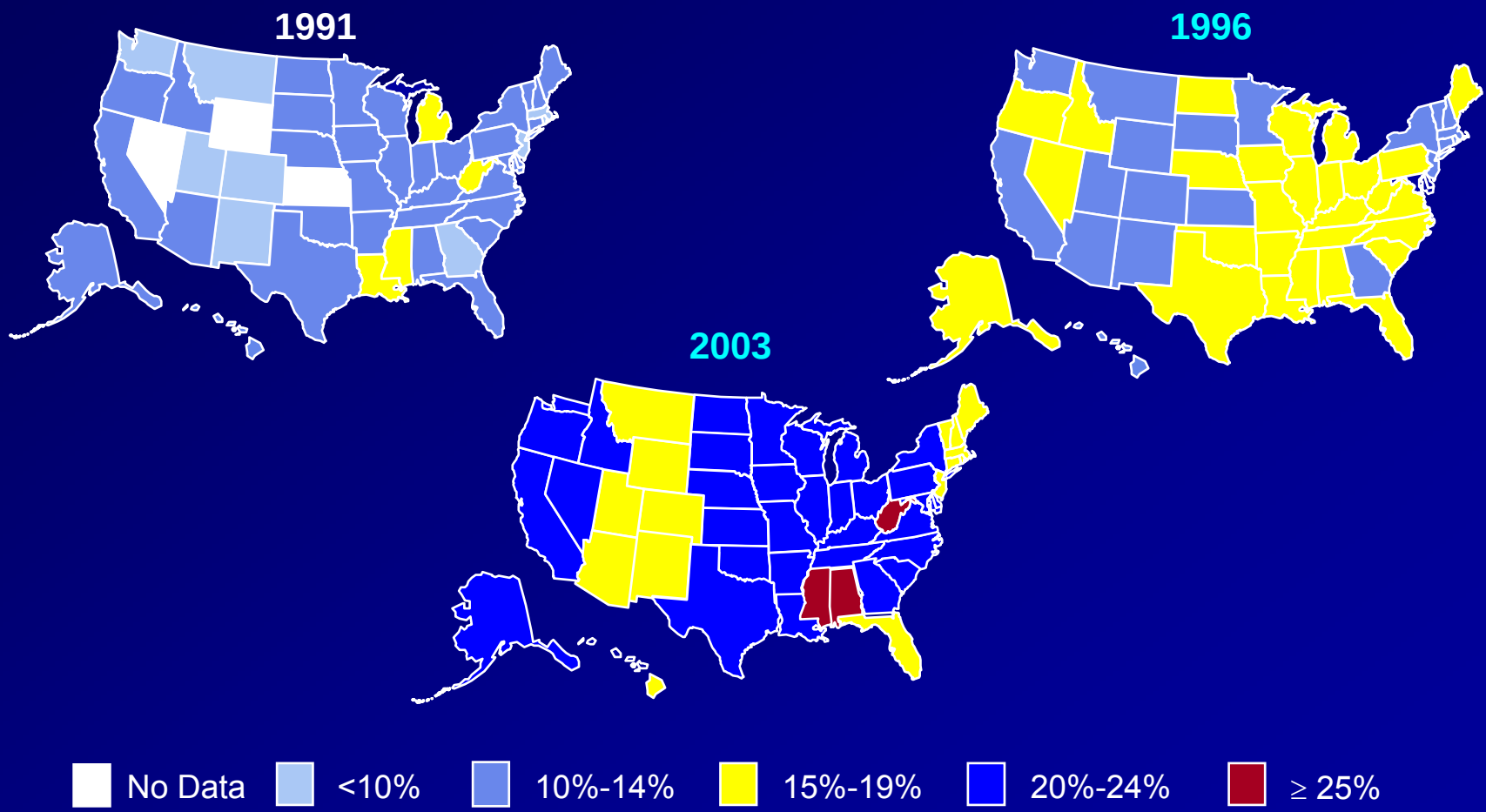
Diabetes and Obesity: The Continuing Epidemic



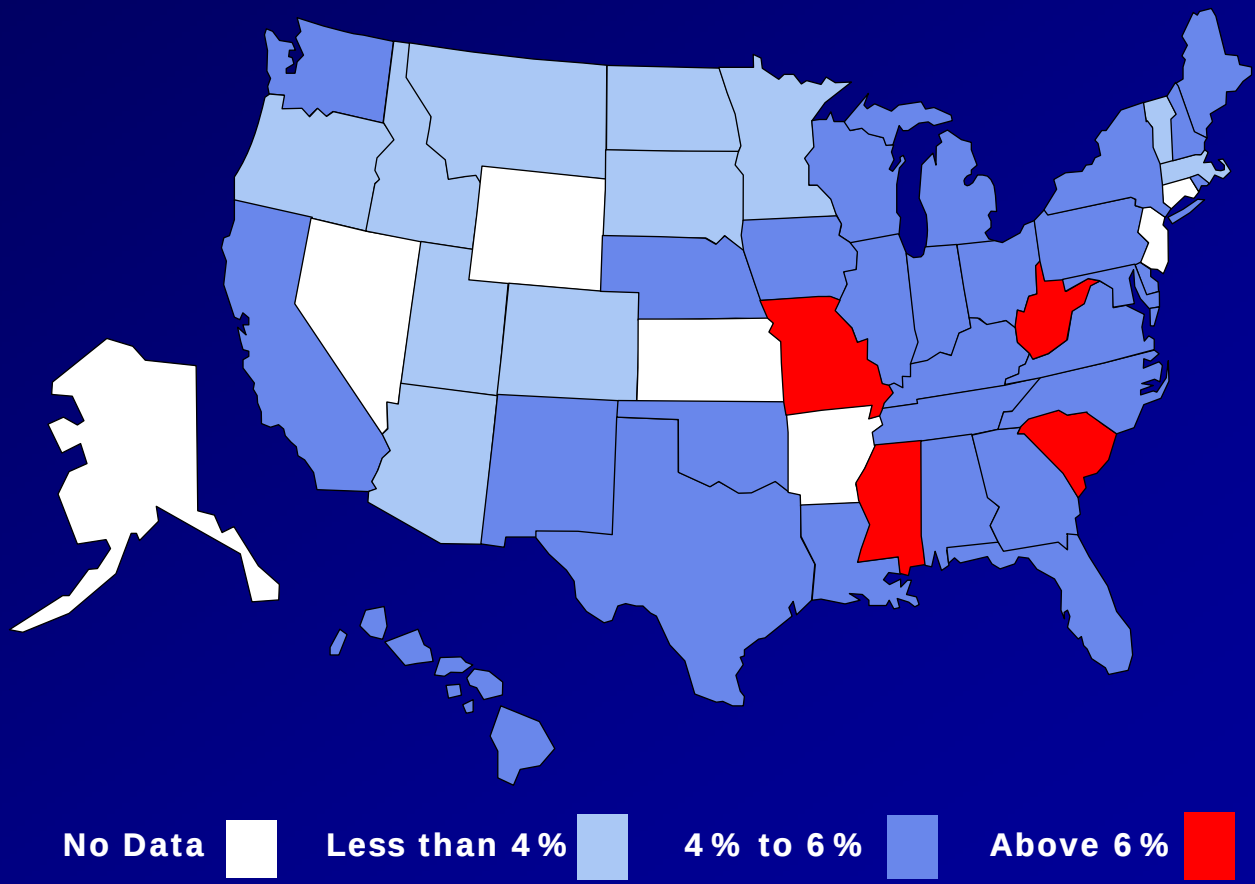
Mokdad et al. *Diabetes Care*. 2000;23:1278.
Mokdad et al. *JAMA*. 1999;282:1519.
Mokdad et al. *JAMA*. 2001;286:1195.

Obesity Trends* Among US Adults BRFSS, 1991, 1996, 2003

(*BMI ≥30, or about 30 lbs overweight for 5'4" person)

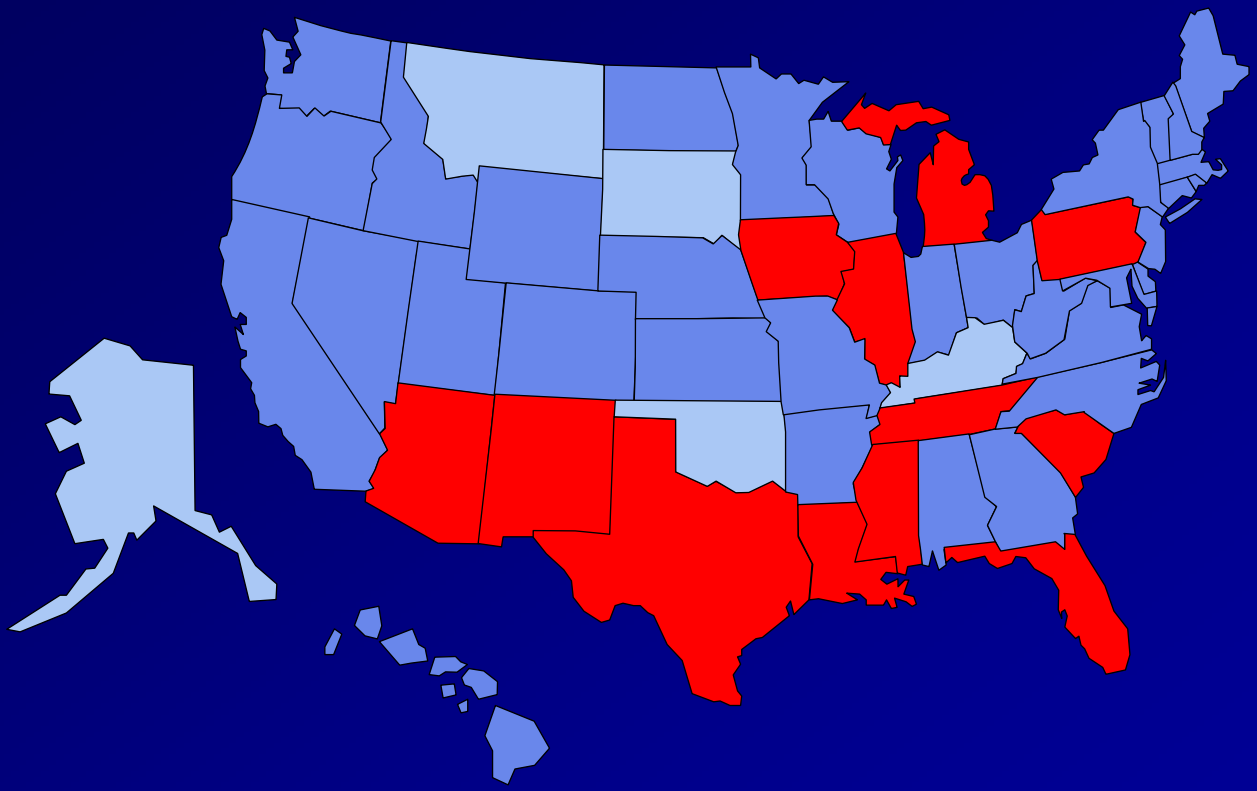


Diabetes and Gestational Diabetes Trends: US Adults, BRFSS 1990



Mokdad et al. *Diabetes Care.* 2000;23:1278-1283.

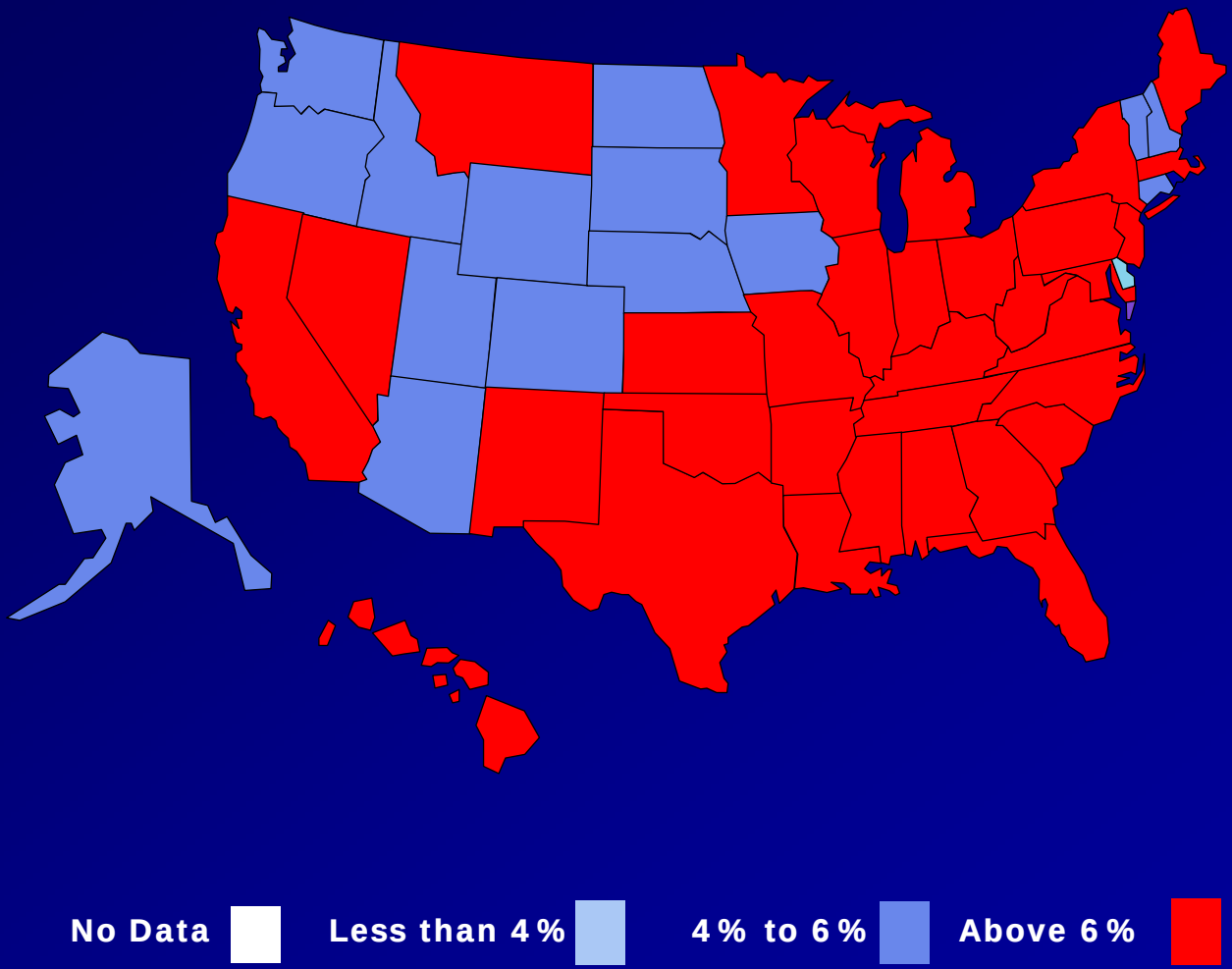
Diabetes and Gestational Diabetes Trends: US Adults, BRFSS 1995



No Data | Less than 4% | 4% to 6% | Above 6%

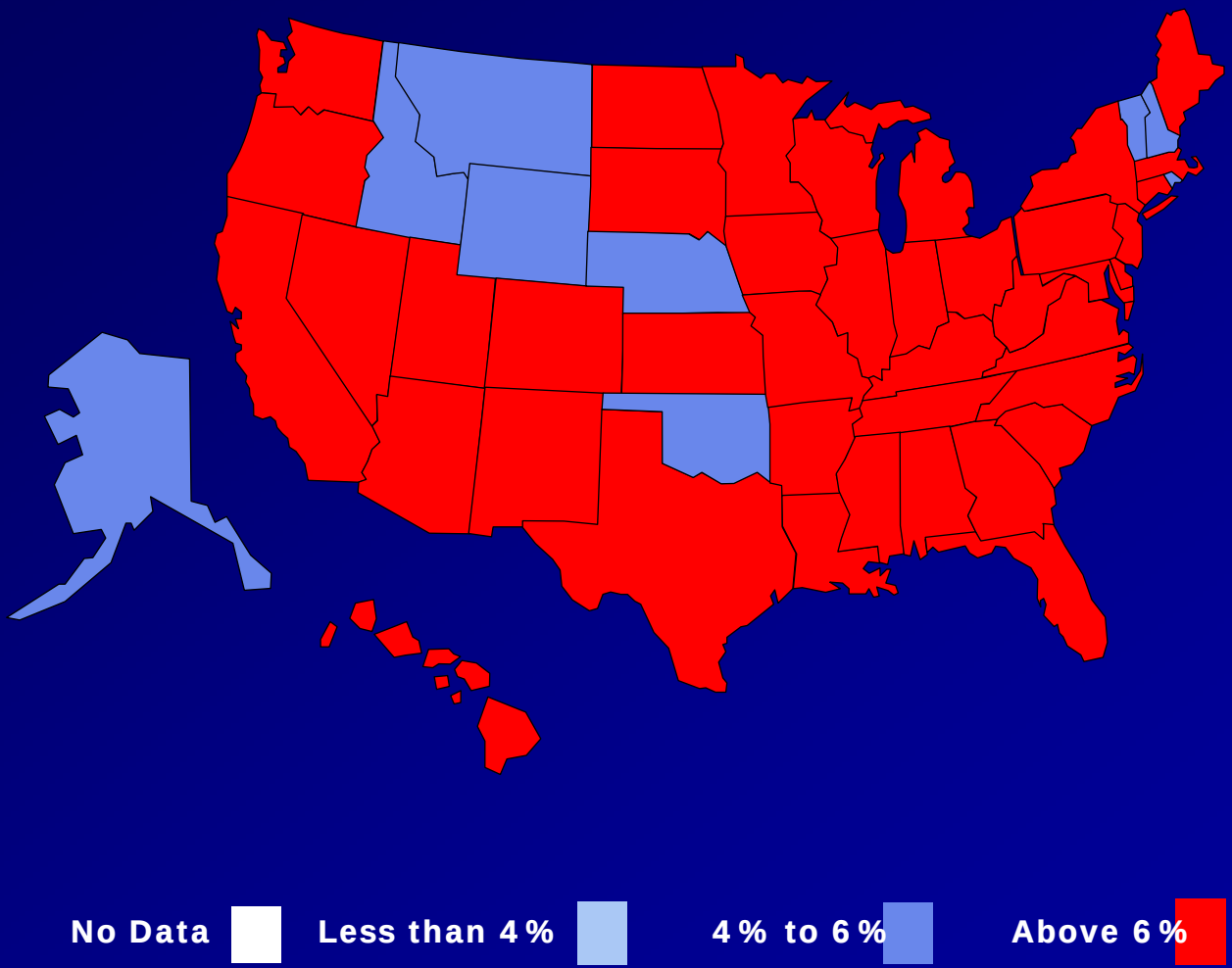
Mokdad et al. *Diabetes Care.* 2000;23:1278-1283.

Diabetes and Gestational Diabetes Trends: US Adults, BRFSS 1999



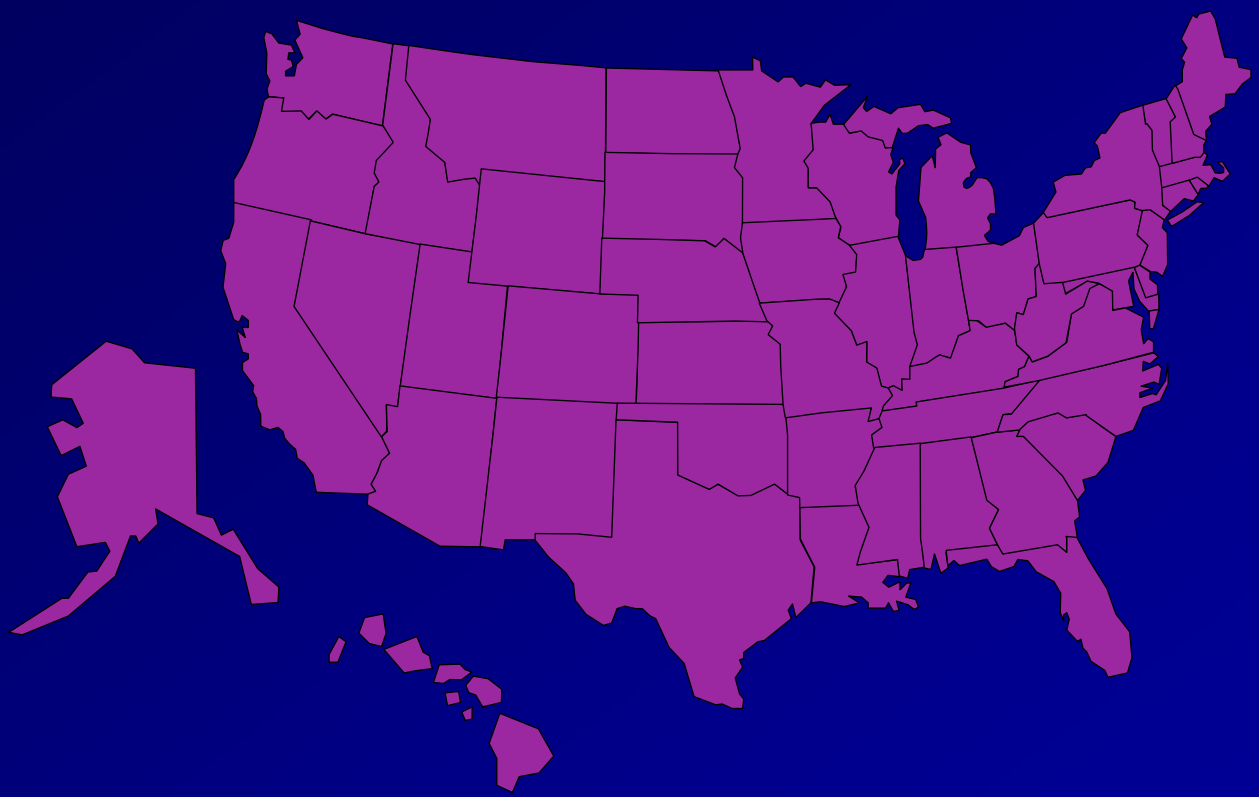
Mokdad et al. *Diabetes Care.* 2001;24:412.

Diabetes and Gestational Diabetes Trends: US Adults, BRFSS 2000



Mokdad et al. *JAMA.* 2001;286(10).

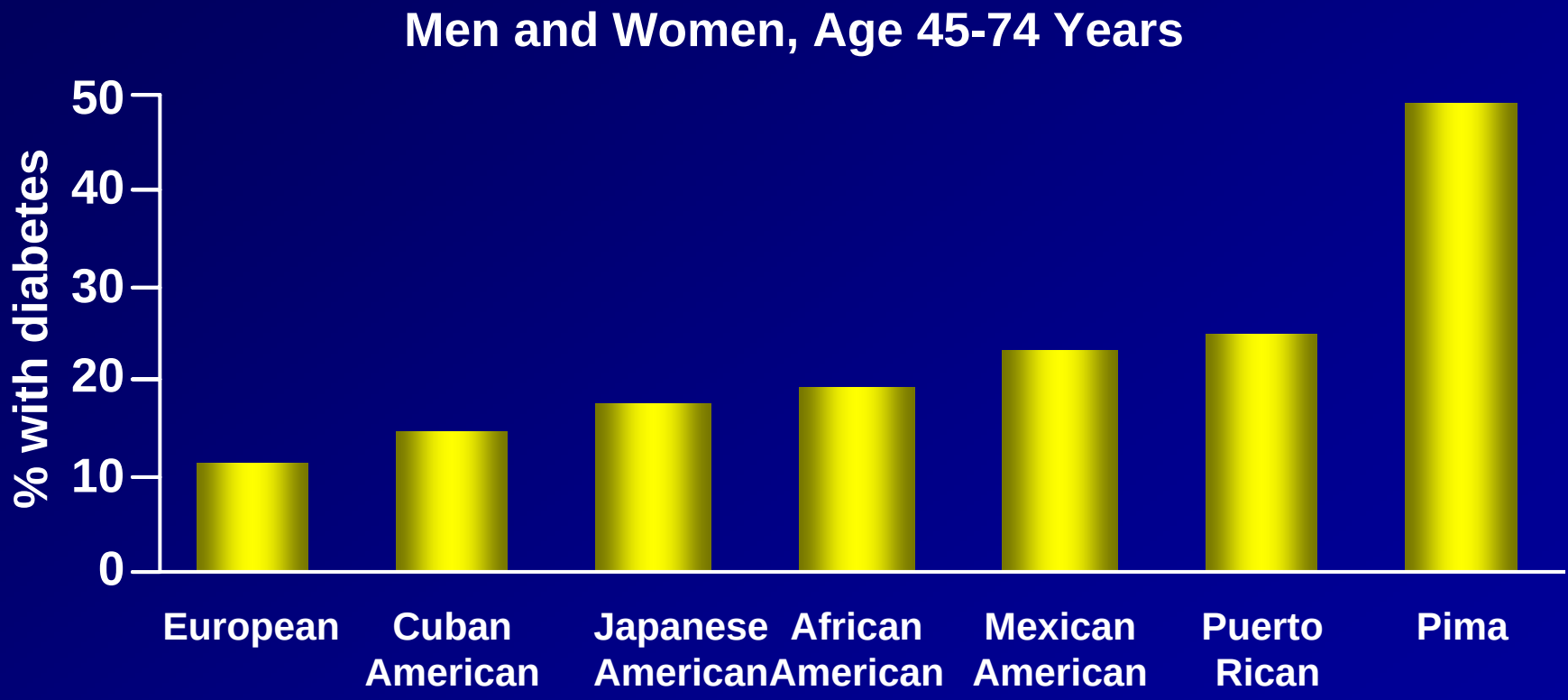
Diabetes and Gestational Diabetes Trends: US Adults, Estimate for 2010



No Data | Less than 4% | 4% to 6% | Above 6% | Above 10%

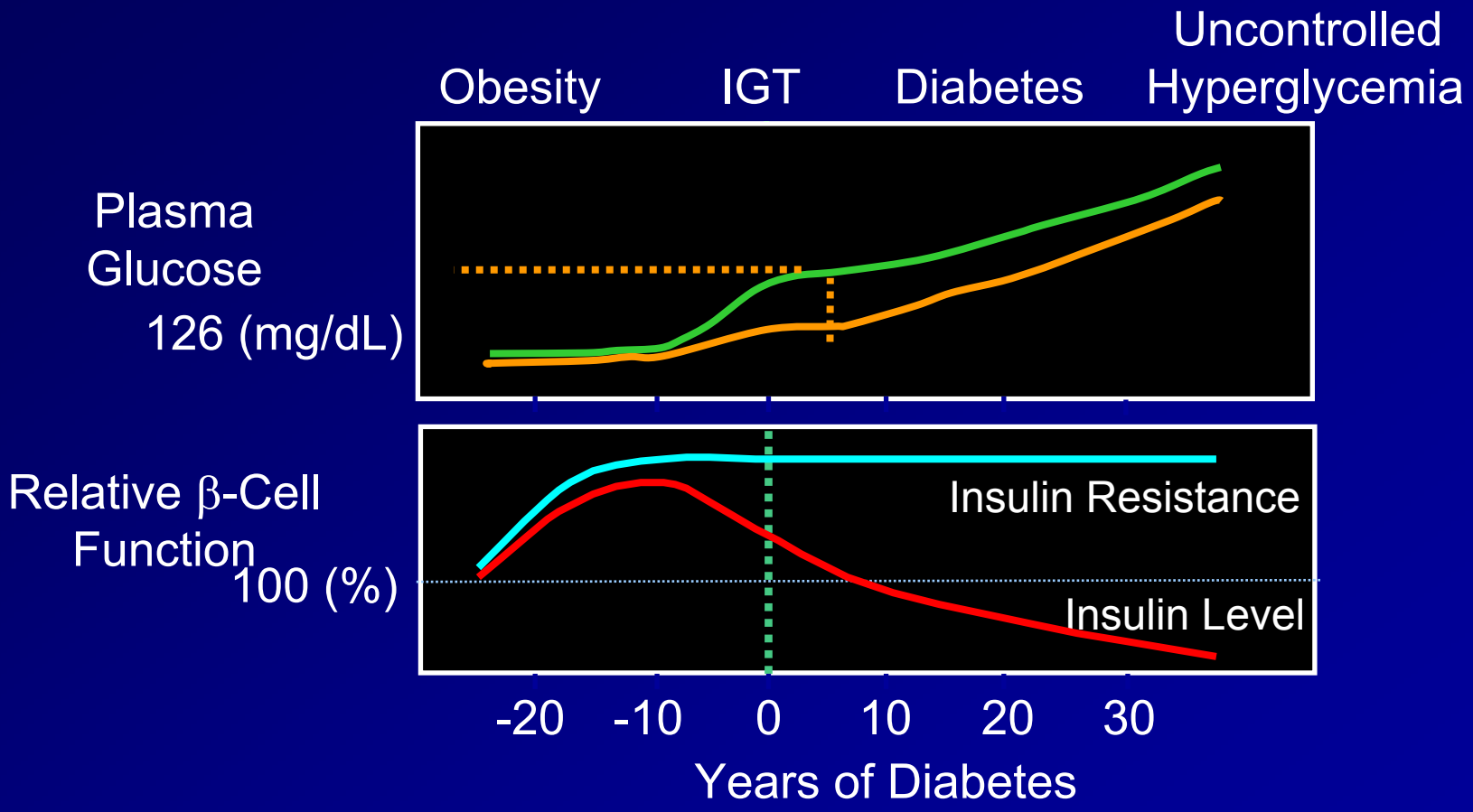
www.diabetes.org.

US Diabetes Prevalence by Ethnic Group



Harris et al. *Diabetes.* 1987;36:523.
Flegal et al. *Diabetes Care.* 1991;14(suppl 3):628.
Knowler et al. *Diabetes Care.* 1993;16(suppl 1):216.
Fujimoto et al. *Diabetes Res Clin Pract*. 1991;13:119.
Fujimoto et al. *Diabetes.* 1987;36:721.

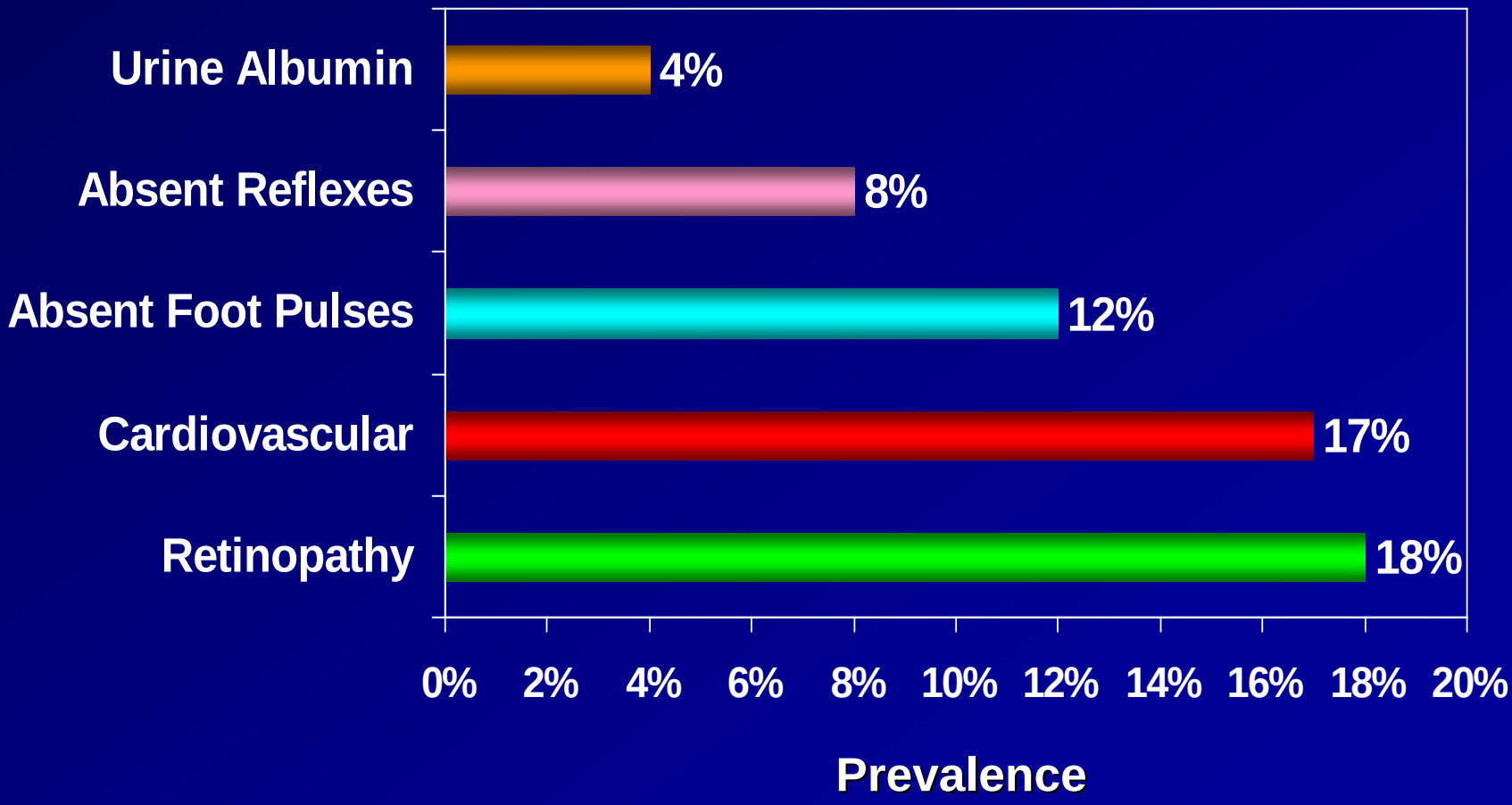
Natural History of Type 2 Diabetes



IGT = impaired glucose tolerance.

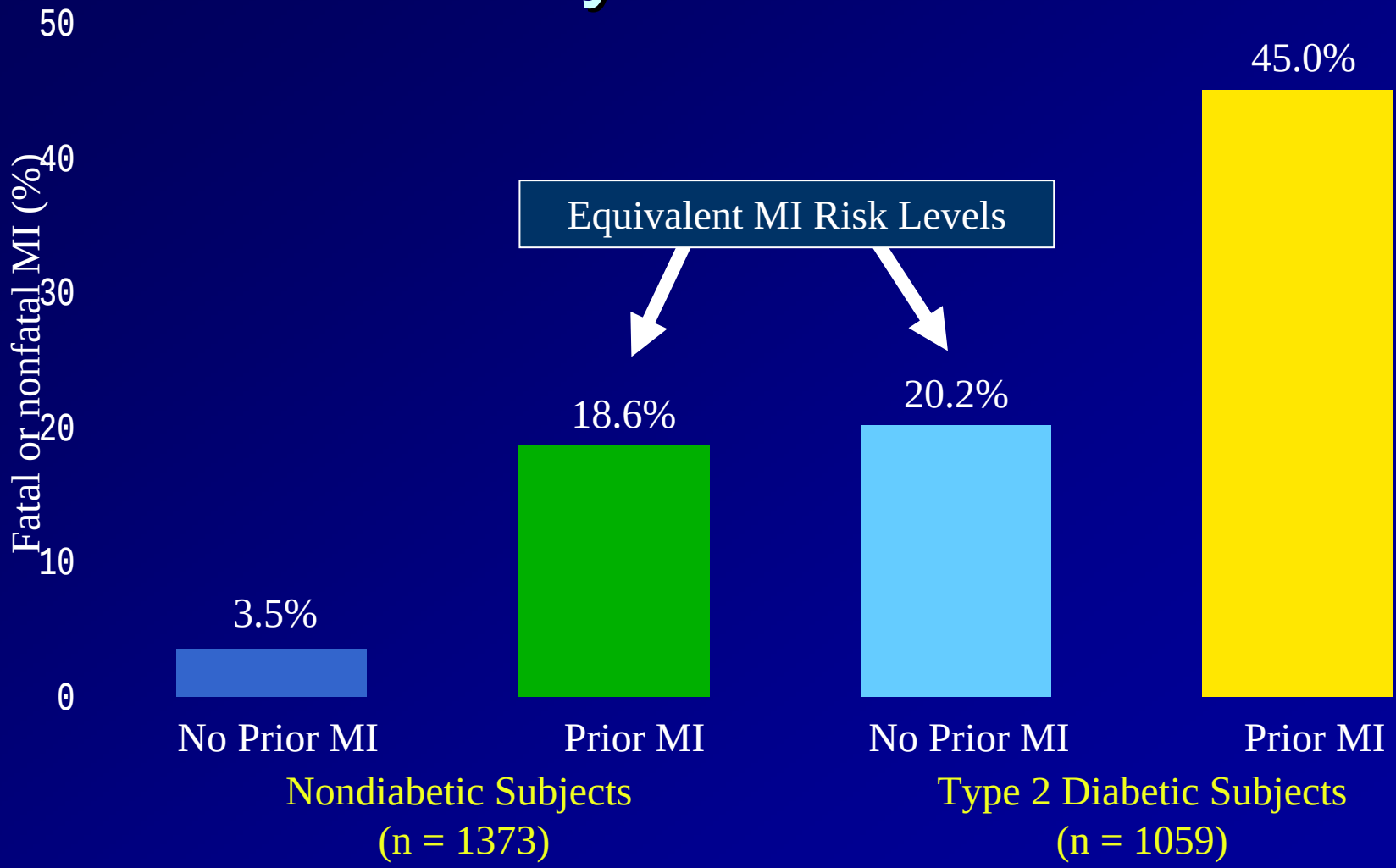
Adapted from: International Diabetes Center (IDC). Available at: www.parknicollet.com/diabetes/disease/diagnosing.cfm. Accessed March 26, 2006.

Prevalence of Diabetic Tissue Damage at Diagnosis of Type 2 Diabetes



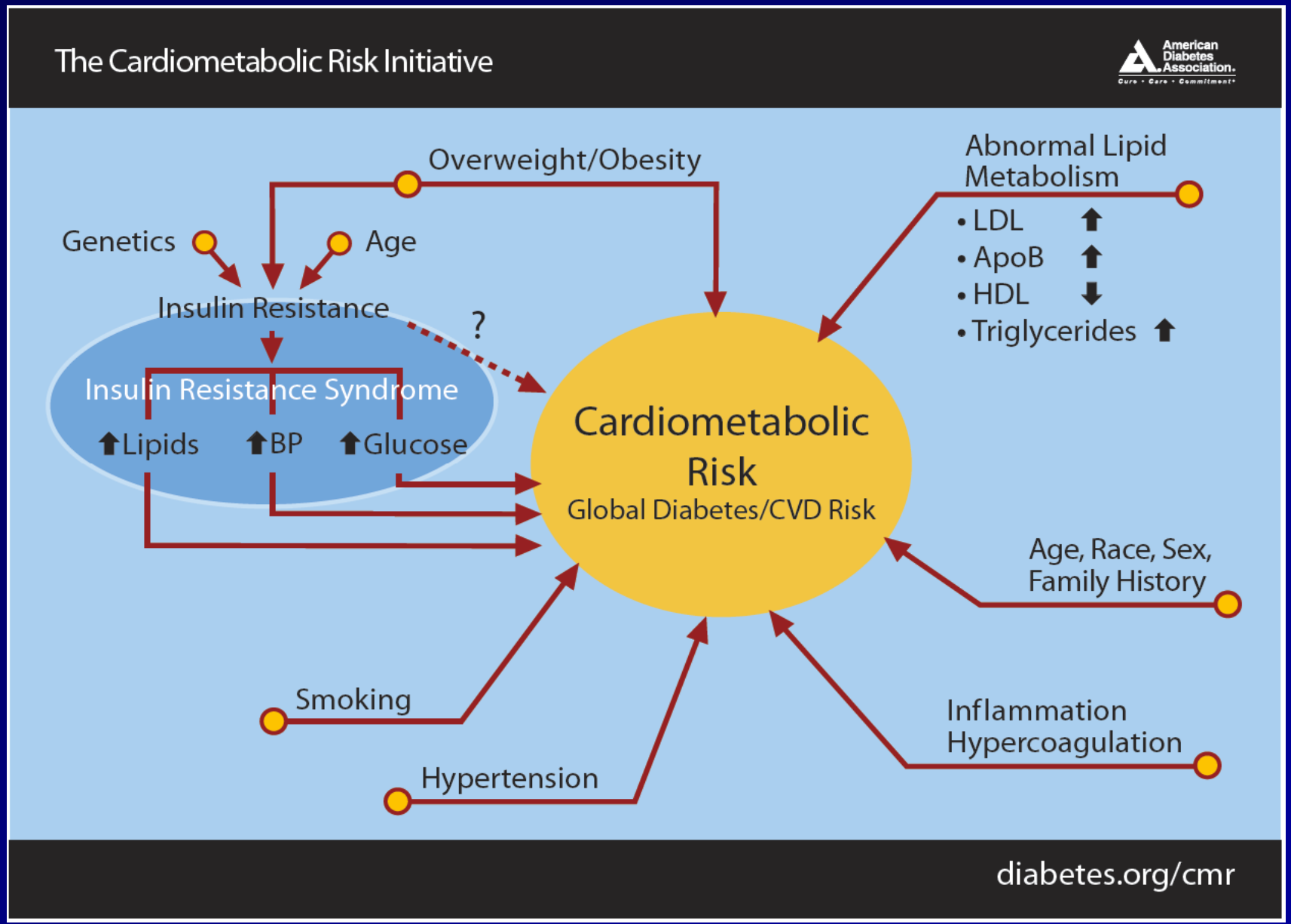
Dagogo-Jack et al. *Arch Int Med*. 1997;157:1802-1817.

Diabetes is a CVD Risk Equivalent to Previous Myocardial Infarction



Haffner SM et al. *N Engl J Med*. 1998;339:229-234.

ADA Cardiometabolic Risk Initiative



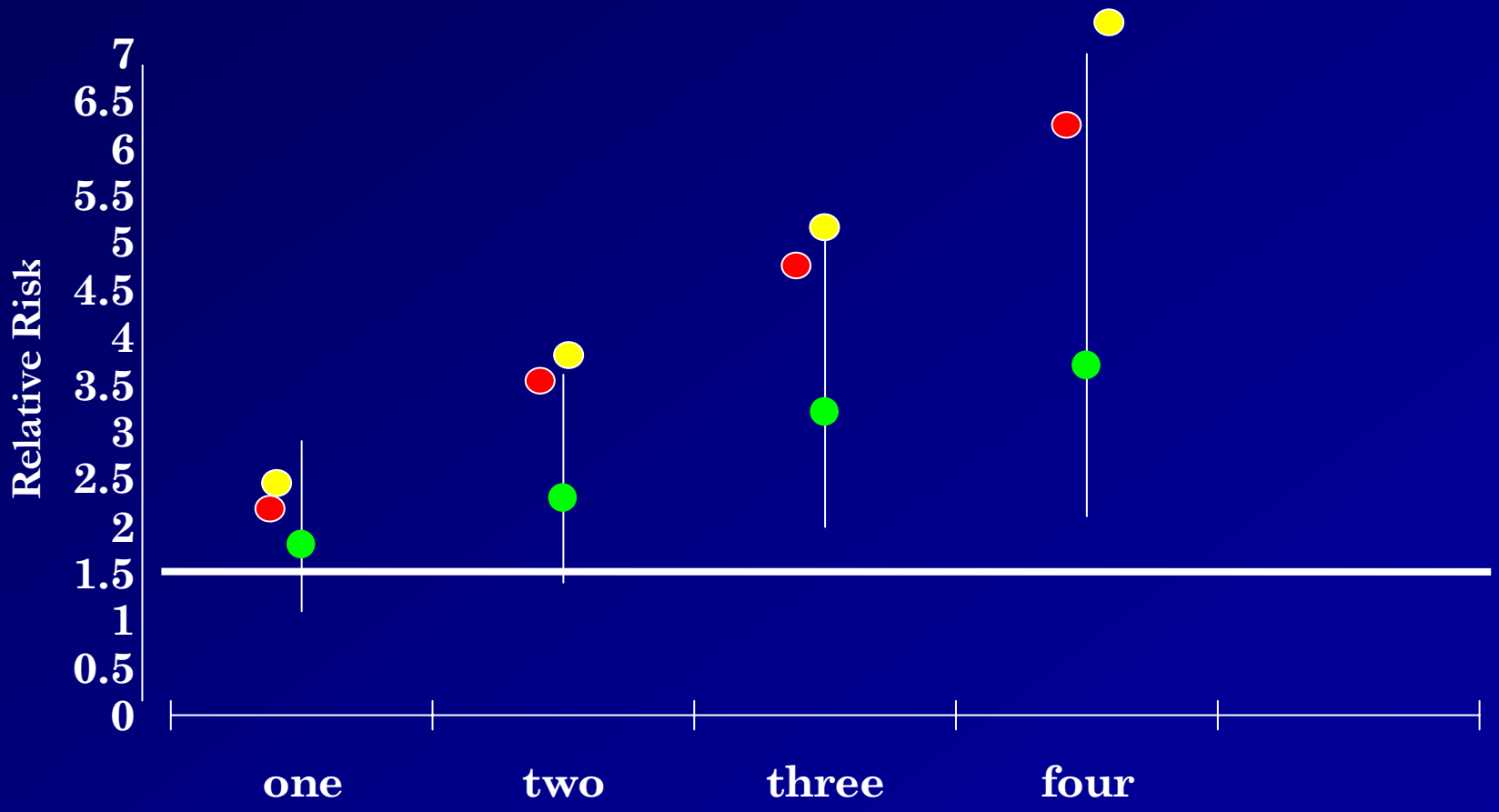
Identification of the Metabolic Syndrome

≥3 Risk Factors Required for Diagnosis	
Risk Factor	**Defining Level**
Abdominal obesity Men Women	Waist circumference >40 in (>102 cm) >35 in (>88 cm)
Triglycerides	≥150 mg/dL (1.69mmol/L)
HDL cholesterol Men Women	<40 mg/dL (1.03mmol/L) <50 mg/dL (1.29mmol/L)
Blood pressure	≥130/85 mm Hg
Fasting blood glucose	≥110 mg/dL (6.1mmol/L)

HDL = high-density lipoprotein

NCEP III. *Circulation*. 2002;106:3143-3421.

CHD Risk Increases with Increasing Number of Metabolic Syndrome Risk Factors



Sattar et al, Circulation, 2003;108:414-419
Whyte et al, American Diabetes Association, 2001
Adapted from Ridker, Circulation 2003;107:393-397

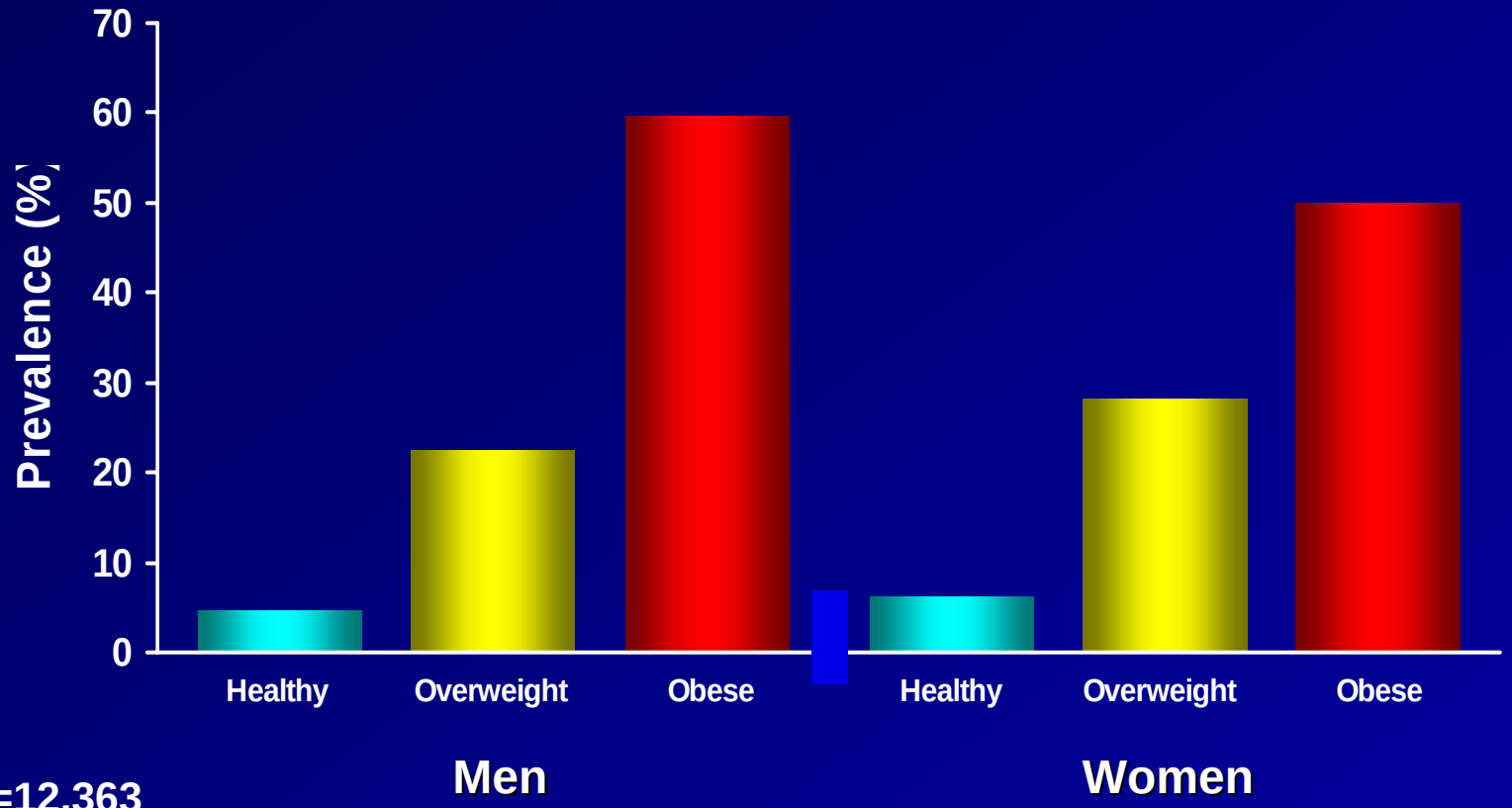
Comparison of Metabolic Syndrome and Individual Criterion Prevalence in Fasting CATIE Subjects and Matched NHANES III Subjects

	Males			Females		
	CATIE N=509	NHANES N=509	*p*	CATIE N=180	NHANES N=180	*p*
Metabolic Syndrome Prevalence	36.0%	19.7%	.0001	51.6%	25.1%	.0001
Waist Circumference Criterion	35.5%	24.8%	.0001	76.3%	57.0%	.0001
Triglyceride Criterion	50.7%	32.1%	.0001	42.3%	19.6%	.0001
HDL Criterion	48.9%	31.9%	.0001	63.3%	36.3%	.0001
BP Criterion	47.2%	31.1%	.0001	46.9%	26.8%	.0001
Glucose Criterion	14.1%	14.2%	.9635	21.7%	11.2%	.0075

Meyer et al., Presented at APA annual meeting, May 2005

McEvoy JP et al. *Schizophr Res.* 2005;(August 2005)

Prevalence of Metabolic Syndrome According to BMI in the Adult General Population



N=12,363

"Overweight" = BMI 25-29.9

"Obese" = BMI ≥30

(National Heart, Lung, and Blood Institute, Obesity Guidelines)

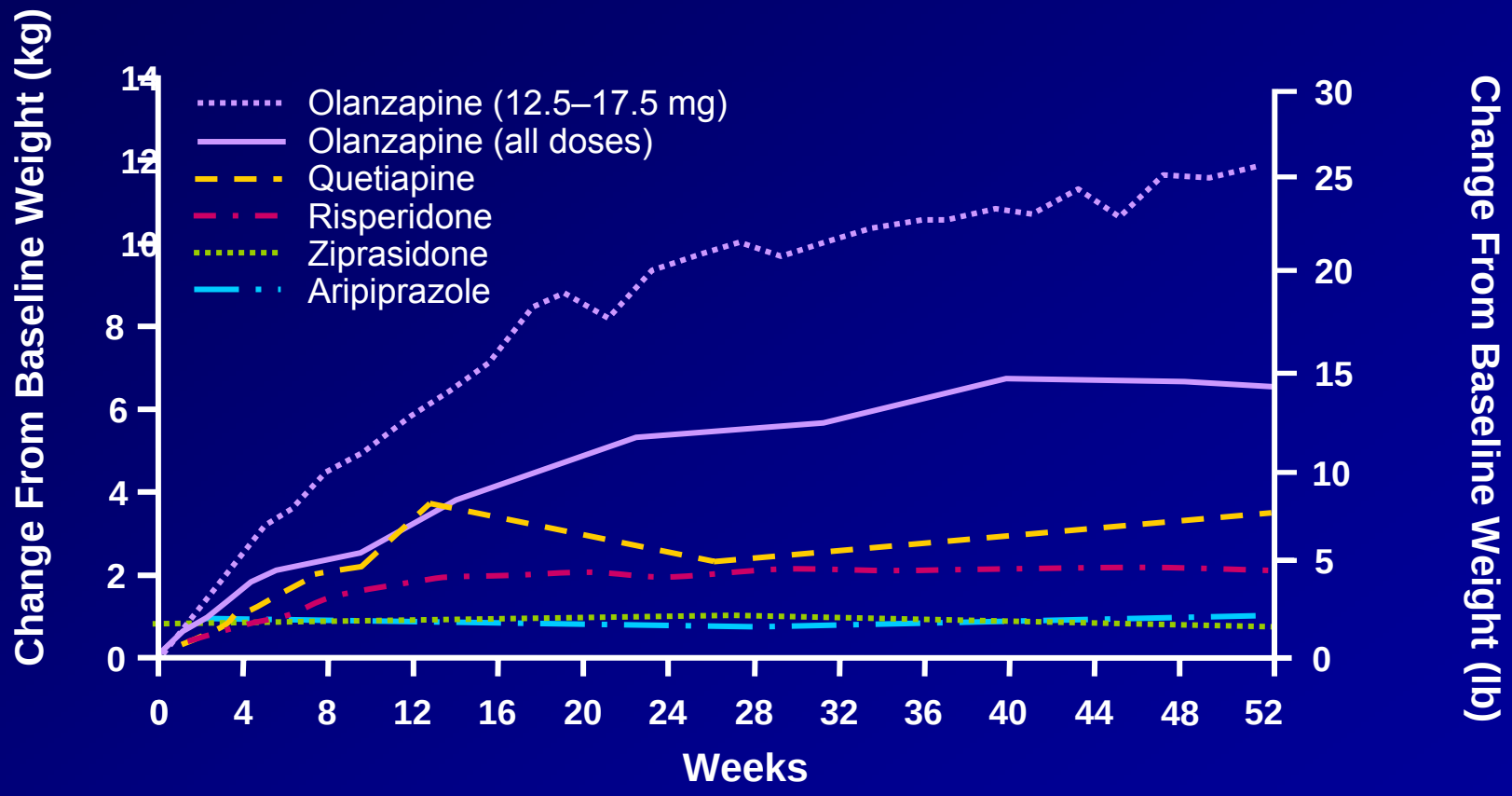
Park et al. *Arch Intern Med*. 2003;163:427.

Modifiable Risk Factors Affected by Psychotropics

- Overweight / Obesity
- Insulin resistance
- Diabetes/hyperglycaemia
- Dyslipidemia

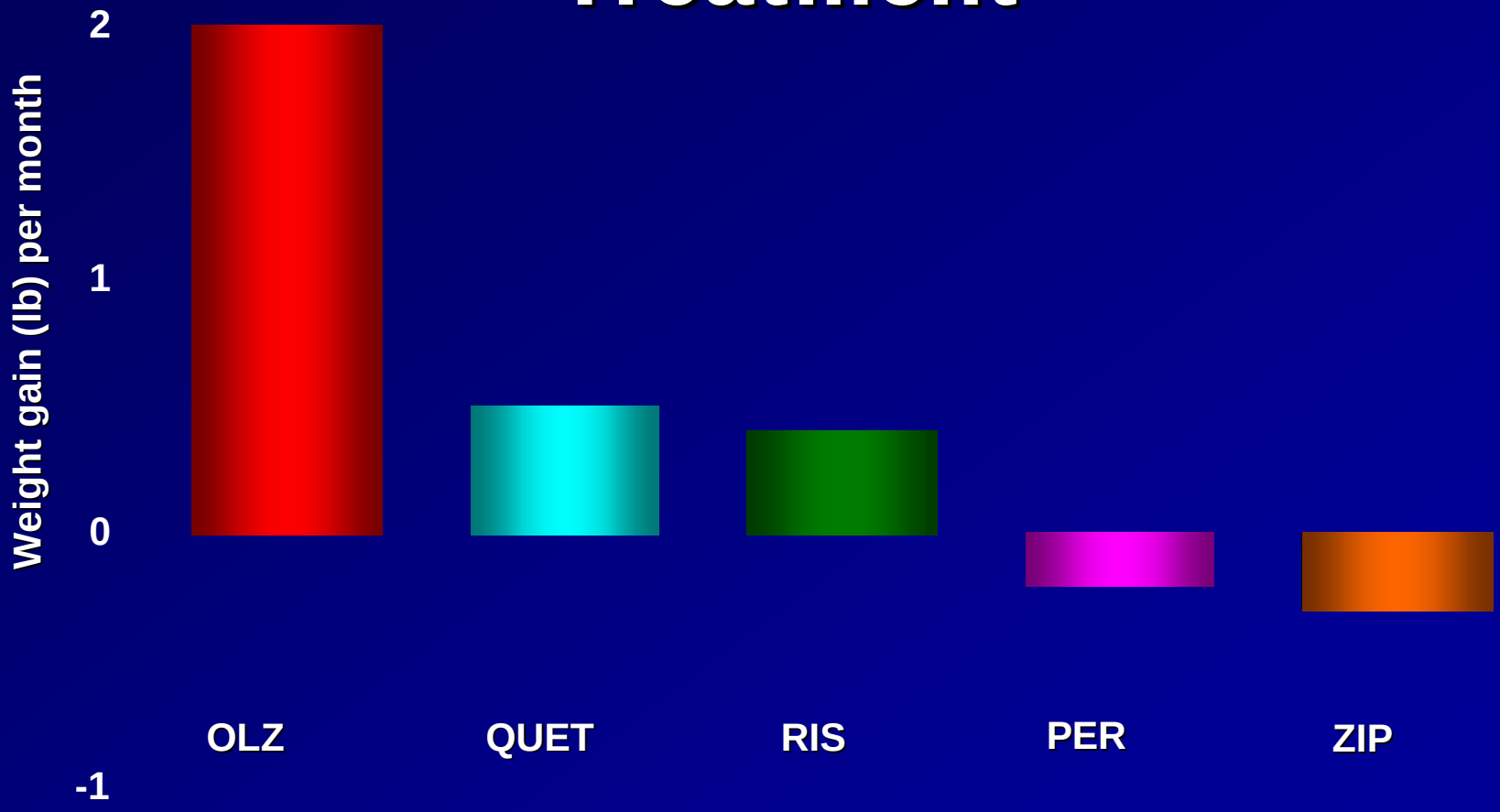
Newcomer JW. *CNS Drugs* 2005;19(Supp 1):1.93.

1-Year Weight Gain: Mean Change From Baseline Weight



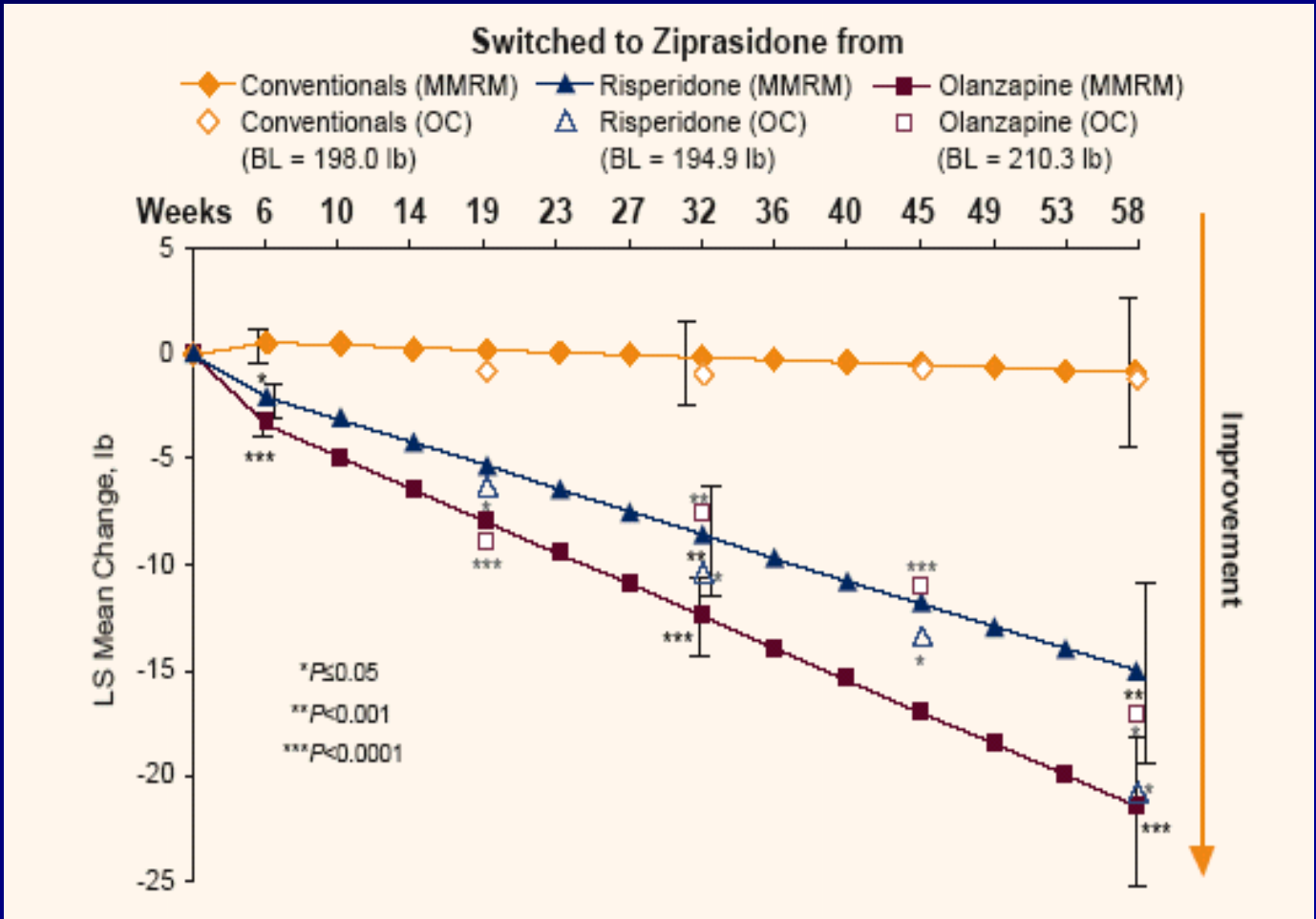
Nemeroff CB. *J Clin Psychiatry.* 1997;58(suppl 10):45-49; Kinon BJ et al. *J Clin Psychiatry*. 2001;62:92-100; Brecher M et al. American College of Neuropsychopharmacology; 2004. Poster 114; Brecher M et al. *Neuropsychopharmacology*. 2004;29(suppl 1):S109; Geodon® [package insert]. New York, NY:Pfizer Inc; 2005. Risperdal® [package insert]. Titusville, NJ: Janssen Pharmaceutica Products, LP; 2003; Abilify® [package insert]. Princeton NJ: Bristol-Myers Squibb Company and Rockville, Md: Otsuka America Pharmaceutical, Inc.; 2005.

CATIE Trial Results:
Weight Gain Per Month Treatment



NEJM 2005 353:1209-1223

Change in Weight From Baseline 58 Weeks After Switch to Low Weight Gain Agent



Weiden P et al. Presented APA 2004.

Modifiable Risk Factors Affected by Psychotropics

- Overweight / Obesity
- Insulin resistance
- Diabetes/hyperglycaemia
- Dyslipidemia

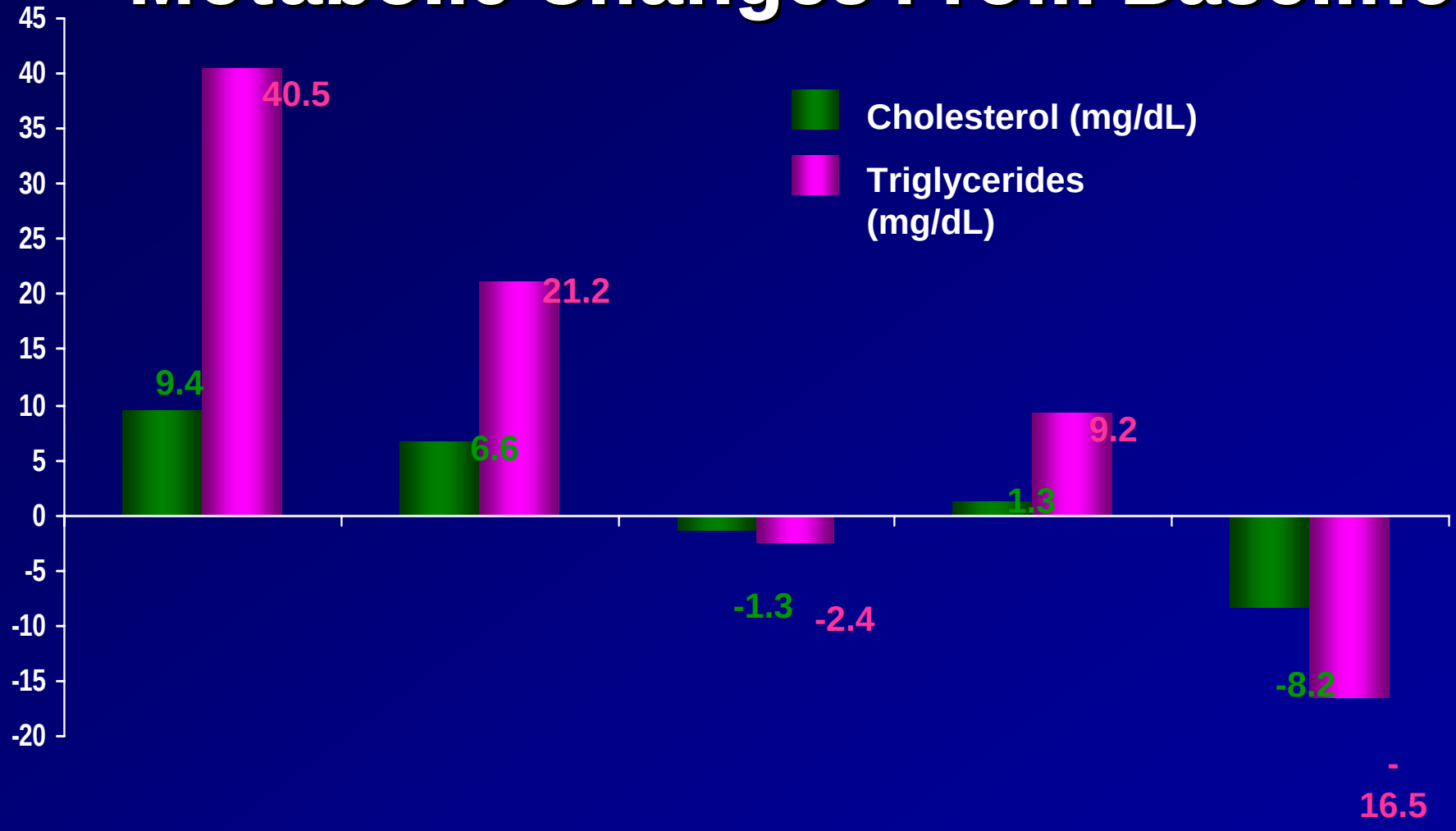
Newcomer JW. *CNS Drugs* 2005;19(Supp 1):1.93.

Randomized Clinical Trials

Growing number of studies measure drug effects on the following:

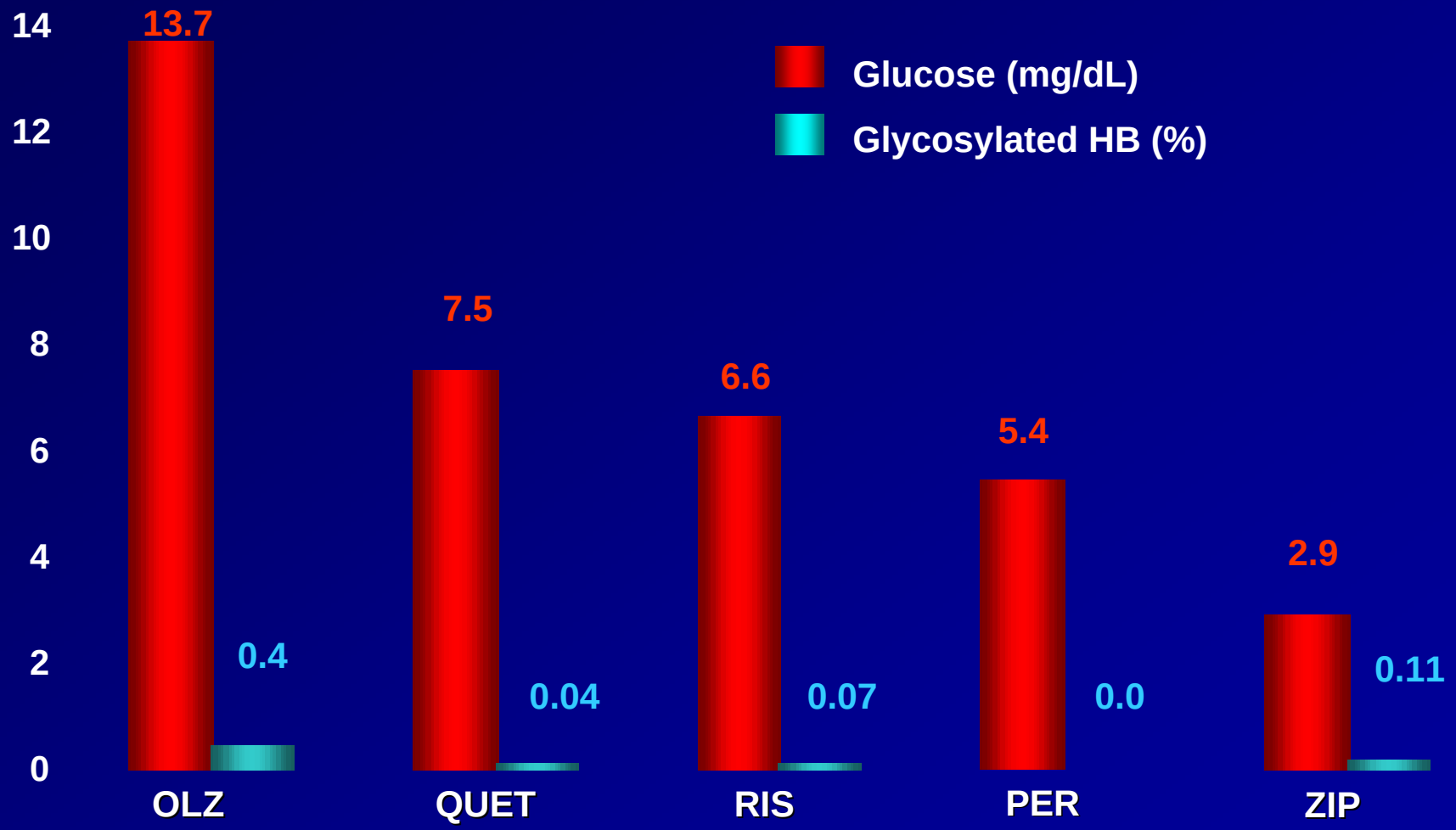
- **Insulin resistance**
- **Fasting lipids**
- **Fasting or post-load glucose and insulin**
- **Metabolic syndrome**

CATIE Results:
Metabolic Changes From Baseline



NEJM 2005 353:1209-1223

CATIE Results:
Metabolic Changes From Baseline



NEJM 2005 353:1209-1223

American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, North American Association for the Study of Obesity:

Consensus Conference on Antipsychotic Drugs and Risk of Obesity and Diabetes

Drug	Weight Gain	Diabetes Risk	Dyslipidemia
clozapine	+ + +	+	+
olanzapine	+ + +	+	+
risperidone	+ +	D	D
quetiapine	+ +	D	D
aripiprazole	+/-	-	-
ziprasidone	+/-	-	-

+ = increased effect; - = no effect; D = discrepant results.

Diabetes Care 27:596-601, 2004

ADA/APA/AACE/NAASO Consensus on Antipsychotic Drugs and Obesity and Diabetes: Monitoring Protocol*

	Start	4 wks	8 wks	12 wk	qtrly	12 mos.	5 yrs.
Personal/family Hx	X					X	
Weight (BMI)	X	X	X	X	X		
Waist circumference	X					X	
Blood pressure	X			X		X	
Fasting glucose	X			X		X	
Fasting lipid profile	X			X		X ←	X

*More frequent assessments may be warranted based on clinical status

Diabetes Care. 27:596-601, 2004

METABOLIC SCREENING AND MONITORING FORM

NAME: _____

There is a growing awareness that some psychiatric illnesses and atypical antipsychotics can increase metabolic risks. Frequency of monitoring for modifiable risk factors depends on level of risk present at baseline screening.

OBESITY SCREENING [1,2]

Consider BMI (weight/height in kg/m²) at each visit.
Normal (18.5-24.9); Overweight (25-29.9); Obese (≥30)

	BASELINE	Dates/Values From Subsequent Visits				
Height _____	Date ___/___/___	___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
	BMI _____					
	Wt _____					

LIPID SCREENING — CHOLESTEROL, TRIGLYCERIDES (TG)[3]

	Optimal/ Desirable (mg/dL)	Near/Above Optimal (mg/dL)	Borderline High (mg/dL)	High/ Undesirable (mg/dL)	Very High (mg/dL)	BASELINE ___/___/___	Dates/Values From Subsequent Visits ___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Total	<200		200–239	≥240							
LDL	<100	100–129	130–159	160–189	≥190						
HDL	≥60			<40		*Enter values as indicated in the Metabolic Syndrome (MS) Screening section of the form below.*					
TG	<150		150–199	200–499	≥500*						

** ≥500 for TG requires immediate pharmacotherapeutic intervention without waiting for therapeutic lifestyle changes.*

METABOLIC SYNDROME (MS) SCREENING[3]

Risk Criteria:	BASELINE ___/___/___	Dates/Values From Subsequent Visits ___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Abdominal Obesity measured in waist circumference (men >40 inches, women >35 inches)						
Triglycerides (mg/dL) (≥150; or drug treatment)						
HDL Cholesterol (mg/dL) (men <40, women <50; or drug treatment)						
Blood Pressure (mmHg) (≥130/≥85; or drug treatment)						
Fasting Plasma Glucose (≥100 mg/dL; or drug treatment)[4]						
Total Criteria for each visit (≥3 = MS Diagnosis*)						

**Risk for cardiovascular disease increases with each criterion present, motivating intervention for any single criterion.[5]*

TYPE 2 DIABETES MELLITUS (T2DM) SCREENING[1]

Risk Factors:

- ☐ Age (≥45)
- ☐ Habitual physical inactivity
- ☐ Race/ethnicity*
- ☐ Polycystic ovary syndrome
- ☐ Overweight (BMI ≥25 kg/m²)†
- ☐ History of GDM or delivery of baby >9 lbs.
- ☐ Hypertension (>140/90 mmHg in adults)
- ☐ History of vascular disease
- ☐ Family history
- ☐ Previously identified IFG or IGT
- ☐ HDL ≤35 mg/dL and/or triglyceride ≥250 mg/dL

Diagnostic Criteria for Prediabetes and T2DM ‡ [1]	BASELINE ___/___/___	Dates/Values From Subsequent Visits ___/___/___	___/___/___	___/___/___	___/___/___	___/___/___
Fasting Plasma Glucose (FPG)§ Normal: <100 mg/dL; Prediabetes: 100-125 mg/dL; T2DM: ≥126 mg/dL						
Two-hour Postload Glucose (OGTT)§ Normal: <140 mg/dL; Prediabetes: 140-199 mg/dL; T2DM: ≥200 mg/dL						
Symptoms of T2DM [Yes + casual (random) PG ≥200 mg/dL]‖						
Random Plasma Glucose (≥100 mg/dL requires formal screening with FPG or OGTT)[6]						

** Includes African Americans, Hispanic Americans, Native Americans, Asian Americans, Pacific Islanders*

† May not be correct for all ethnic groups

‡ Screen at 3-year intervals beginning at age 45, particularly for those with BMI of ≥25; test at <45 or more frequently when overweight and have 1+ other risk factors.[1]

*§ FPG and OGTT are the **only** measures currently approved by the ADA for diabetes screening/diagnosis; ADA recommends preferential use of FPG due to ease of use/acceptance.[1]*

‖ Diagnosis must be confirmed on a subsequent day with FPG, 2-h PG, or casual (random) PG if symptoms (e.g., polyuria, polydipsia) are present, unless unequivocal hyperglycemia with acute metabolic decompensation is present.[1]

ATP-III recommends therapeutic lifestyle changes (TLC) for those with prediabetes,[7] hypertension,[8] 0-1 CHD risk factor and LDL ≥160 mg/dL;[3] 2+ CHD risk factors and LDL ≥130;[3] MS;[3] and perhaps subsyndromal MS.[5] Follow-up monitoring of 6- to 12-week intervals to monitor TLC response[3] is recommended and pharmacotherapy intervention if TLC fails after 3 months — unless lipid, blood pressure, or glucose values demand immediate drug treatment.[3]

ADA/APA Consensus Statement recommends considering antipsychotic medication switch for those who gain ≥5% of baseline body weight.[9]

Authored by John W. Newcomer, MD and Dan W. Haupt, MD. Compiled primarily from ADA and ATP-III guidelines.

Produced by **Compact** Clinicals Kansas City, MO

Problem:
SMI and Reduced Use of Medical Services

- Fewer routine preventive services (Druss 2002)
- Worse diabetes care (Desai 2002, Frayne 2006)
- Lower rates of cardiovascular procedures (Druss 2000)

Access and Quality of Care

- SMI may be a health risk factor because of:
  - Patient factors, e.g.: amotivation, fearfulness, homelessness, victimization/trauma, resources, advocacy, unemployment, incarceration, social instability, IV drug use, etc
  - Provider factors: Comfort level and attitude of healthcare providers, coordination between mental health and general health care, stigma,
  - System factors: Funding, fragmentation

Goals: Lower Risk for CVD

- Blood cholesterol
  - 10% ↓ = 30% ↓ in CHD (200-180)
- High blood pressure (> 140 SBP or 90 DBP)
  - 4-6 mm Hg ↓ = 16% ↓ in CHD; 42% ↓ in stroke
- Cigarette smoking cessation
  - 50%-70% ↓ in CHD
- Maintenance of ideal body weight (BMI = 25)
  - 35%-55% ↓ in CHD
- Maintenance of active lifestyle (20-min walk daily)
  - 35%-55% ↓ in CHD

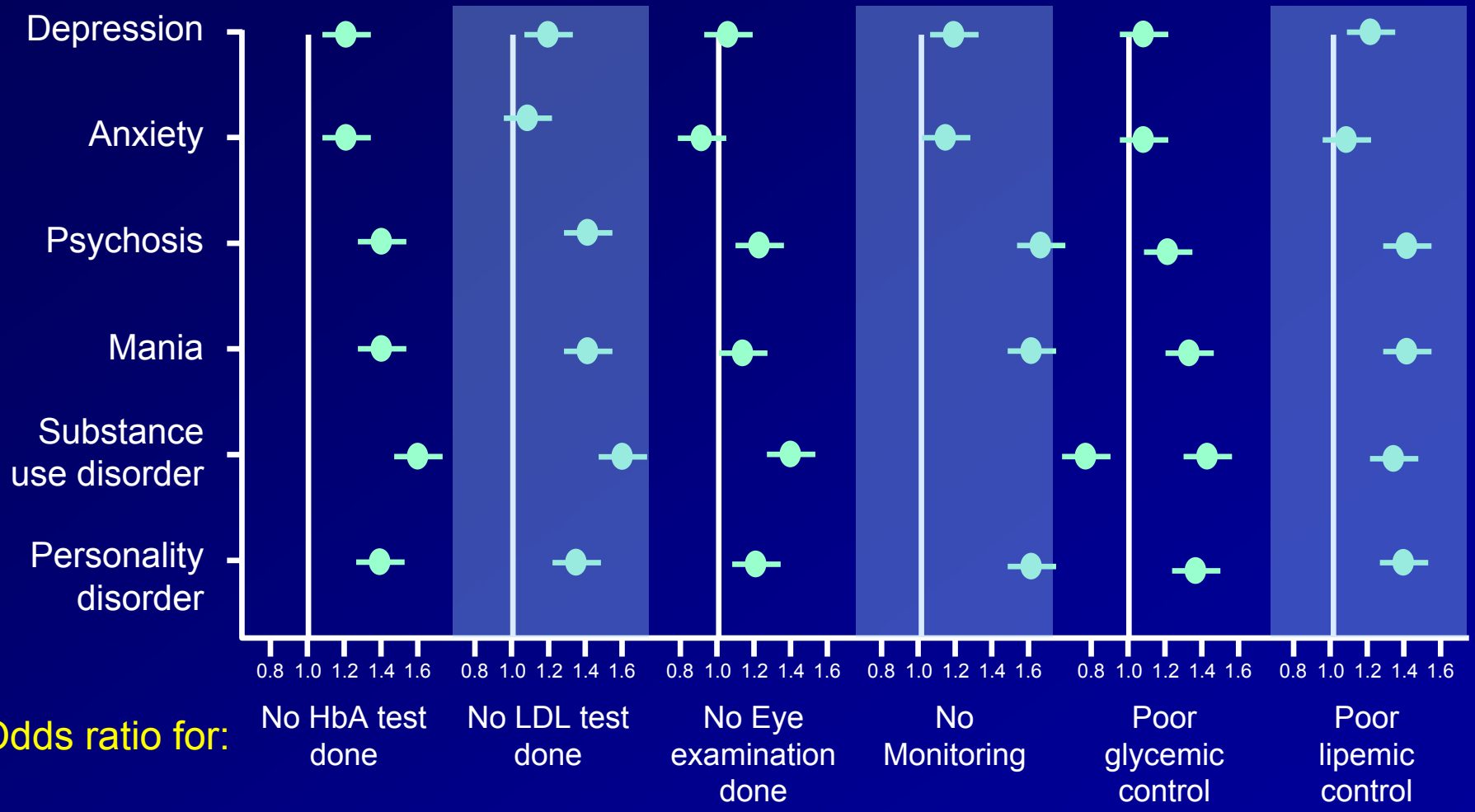
Hennekens CH. *Circulation.* 1998;97:1095-1102.

Survival Following Myocardial Infarction

- 88,241 Medicare patients, 65 years of age and older, hospitalized for MI
- Mortality increased by
  - 19%: any mental disorder
  - 34%: schizophrenia
- Increased mortality explained by measures of quality of care

Druss BG et al. *Arch Gen Psychiatry*. 2001;58:565-572.

Disparities in care: impact of mental illness on diabetes management



313,586 Veteran Health Authority patients with diabetes
76,799 (25%) had mental health conditions (1999)

Frayne et al. *Arch Intern Med*. 2005;165:2631-2638

Why Should we be Concerned About Morbidity and Mortality?

- **Recent data from several states have found that people with serious mental illness served by our public mental health systems die, on average, at least 25 years earlier that the general population.**

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

Recommendations

NATIONAL LEVEL

1. Seek federal designation of people with SMI as a distinct at-risk health disparities population. Establish co-ordinated mental health and general health care as a national healthcare priority.

2. 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.

Recommendations

NATIONAL LEVEL

3. Share information widely about physical health risks in persons with SMI to encourage awareness and advocacy. Educate the health care community. Encourage consumers and family members to advocate for wellness approaches as part of recovery.

Recommendations

STATE LEVEL

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

2. Establish co-ordinated 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 co-ordinated and integrated mental health and physical health care for persons with SMI.

   See 11th NASMHPD Technical Paper: *Integrating Mental Health and Primary Care.*

Recommendations

STATE LEVEL

5. Develop a quality improvement (QI) process that supports increased access to physical healthcare and ensures appropriate prevention, screening and treatment services.

   - Target common causes of increased mortality and chronic medical illness in the SMI population
   - Include all key stakeholders: state agencies, practitioners, individuals and their families, academic and training institutions in QI planning and review
   - A key component : training and technical assistance for practitioners in both mental health and primary health fields

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

Overview - PROPOSED SOLUTIONS

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  - Prevention, Screening and Treatment
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Full report available at

- http://www.nasmhpd.org/general_files/publications/med_directors_pubs/Technical%20Report%20on%20Morbidity%20and%20Mortaility%20-%20Final%2011-06.pdf

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