Depression in Later Life: Epidemiology and Assessment

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Pre-Lecture Exam
Question 1

1. **True or False:** Major Depressive Disorder is more highly prevalent in the elderly than in the general adult population.

Question 2

2. Which of the following is NOT true?

A. The elderly population is the most rapidly increasing segment of the US population.

B. Major depressive disorder is more prevalent among the elderly than minor depressive disorders.

C. Depression is highly prevalent in long term care settings.

D. Depression is associated with increased functional disability.

E. Depression is associated with increased mortality.

Question 3

3. Which of the following is NOT true?

A. Suicide rate increases in later years.

B. White males account for most of the increase in suicide rate among the elderly.

C. Substance abuse is the most frequent diagnosis antecedent to suicide in the elderly.

D. Suicide with firearms is more frequent among the elderly than among the young.

E. Physical illness is the most frequent stressor among suicides over 80 years of age.

Question 4

4. Each of the following is recommended in the routine assessment of late life depression EXCEPT:

A. Current and past psychiatric history

B. History from collateral informant

C. Panel of laboratory tests

D. fMRI imaging study of brain

E. Mental status exam including assessment of cognitive functioning.

Question 5

5. “Vascular depression” is characterized by all of the following EXCEPT:

A. Late onset

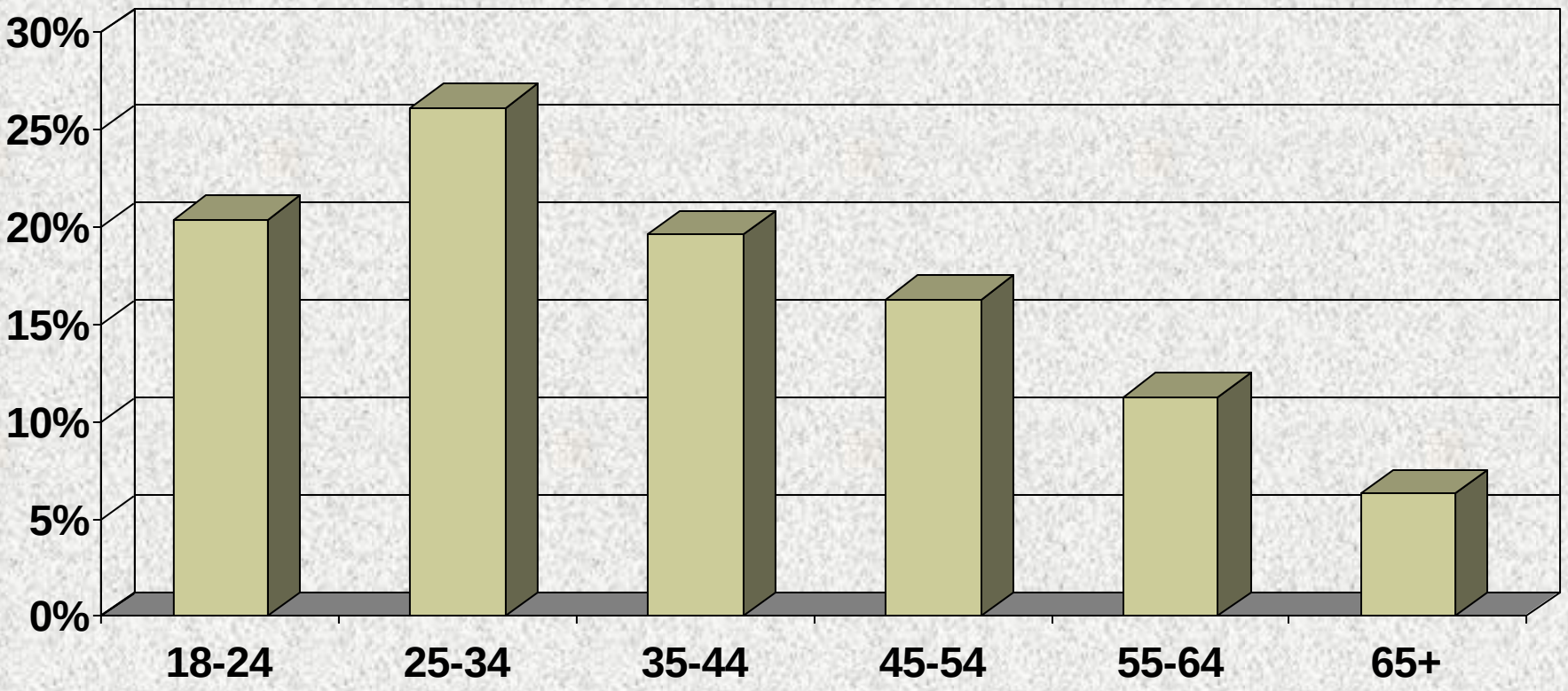
B. T2 hyperintensities on MRI

C. Impaired executive function

D. Impaired verbal fluency

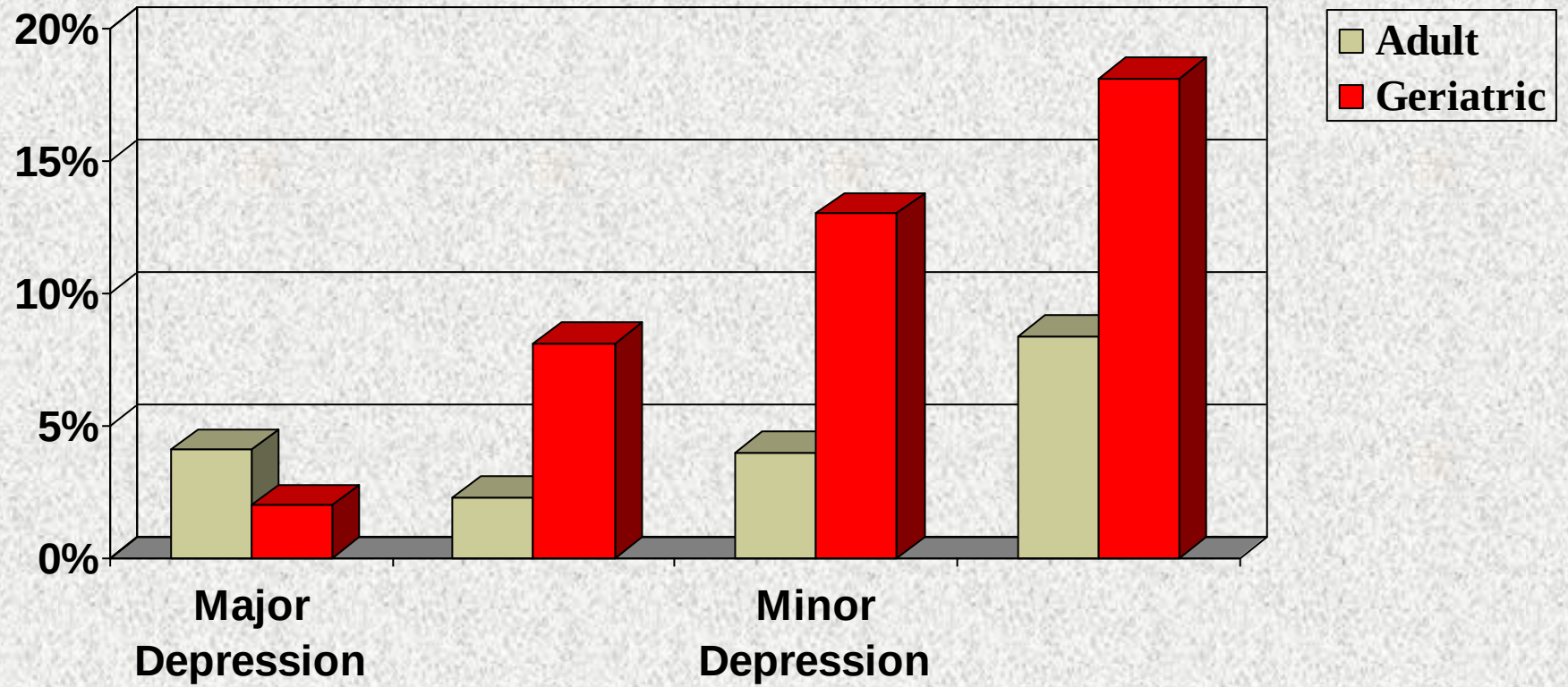
E. Increased motivation

The Prevalence of Major Depression Decreases in Late Life



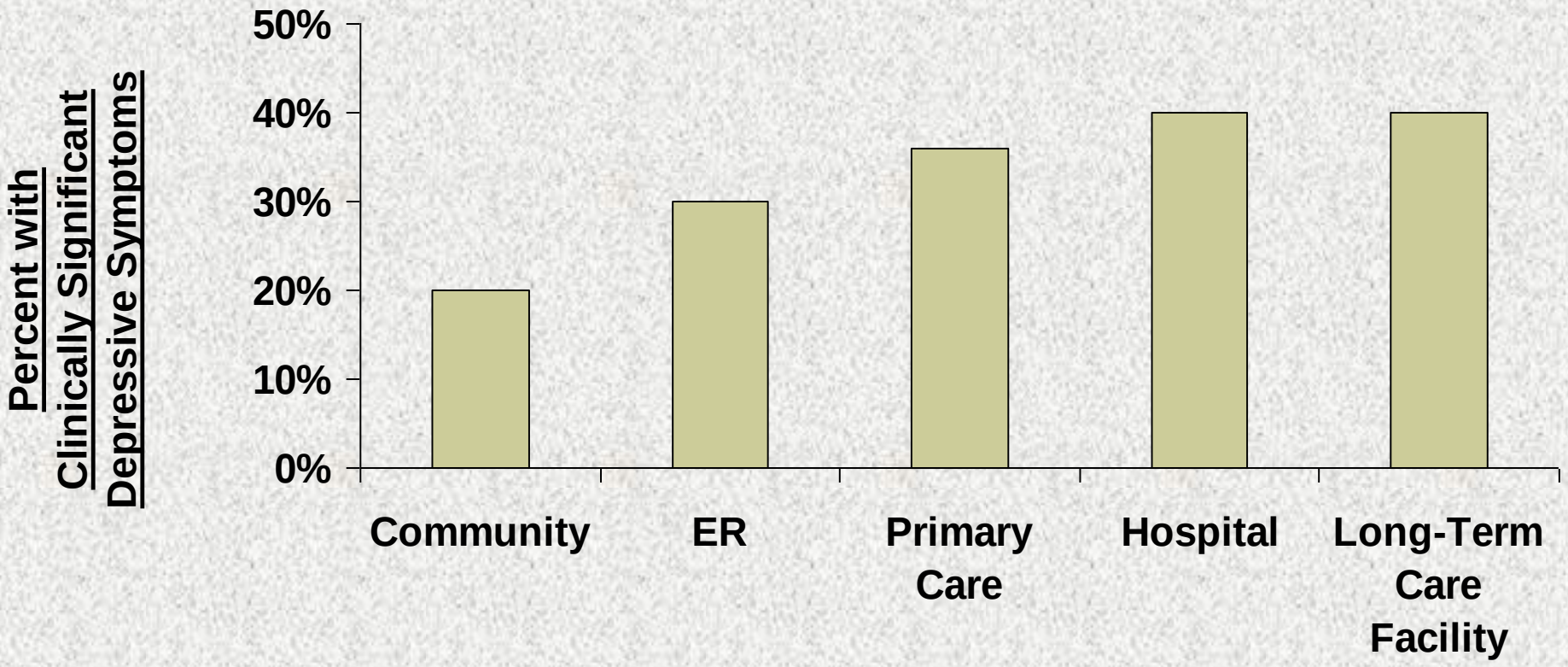
Judd and Kunovac 1998, from Judd and Akiskal 2002

Non-Major Depression's Prevalence Increases in the Elderly



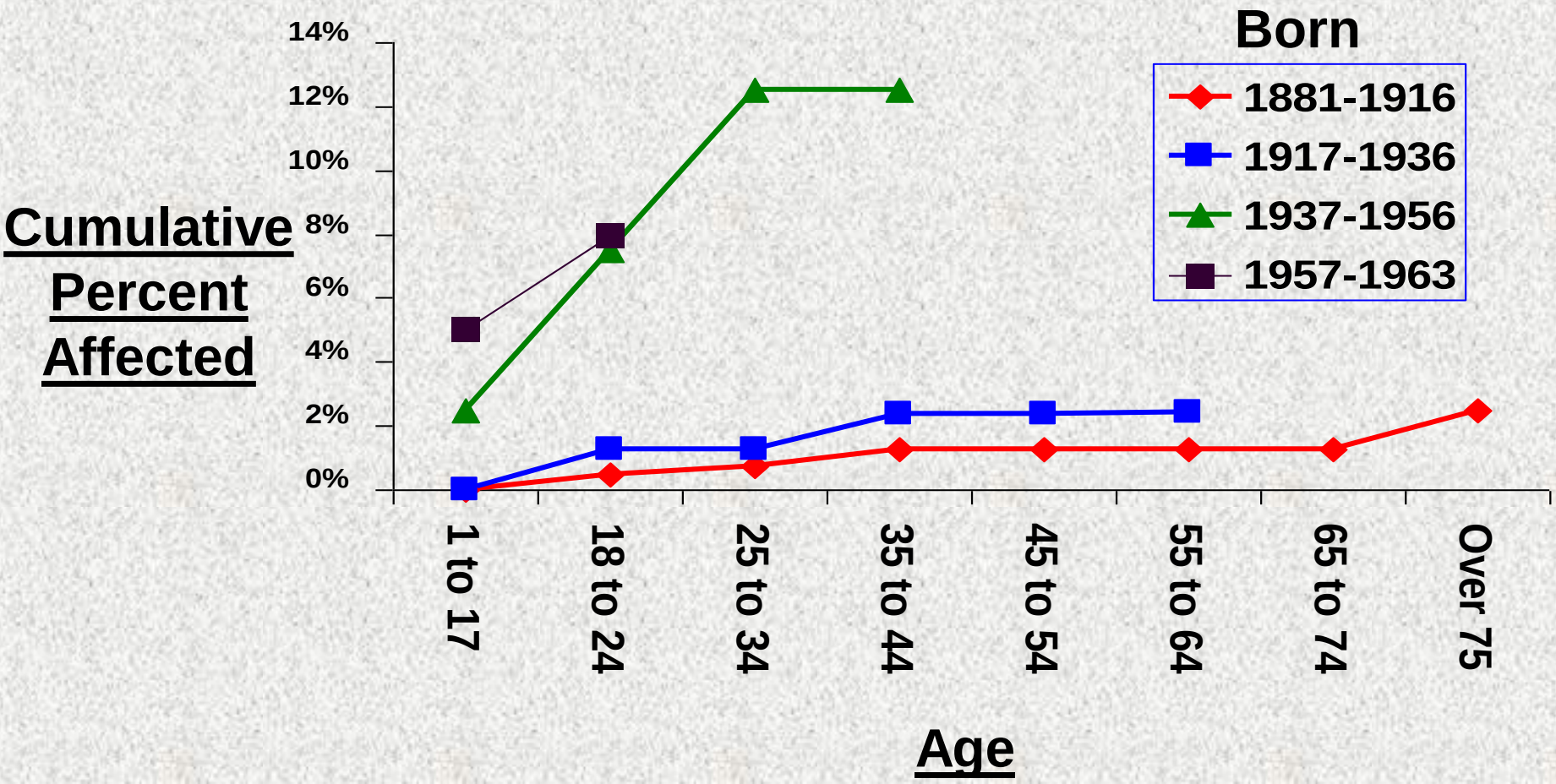
Penninx et al. 1999; Isometsa et al. 1997; Judd et al. 1995; Judd et al. 1998; Blazer et al. 1987

Geriatric Depressive Symptoms: Prevalence by Setting



Koenig and Blazer, 1992; Fabacher, 2002; Alexopoulos, 1996; Koenig et al., 1997; Parmelee,1989.

Birth Cohort Effects on Geriatric Depression: Prevalence of Major Depression for US Women



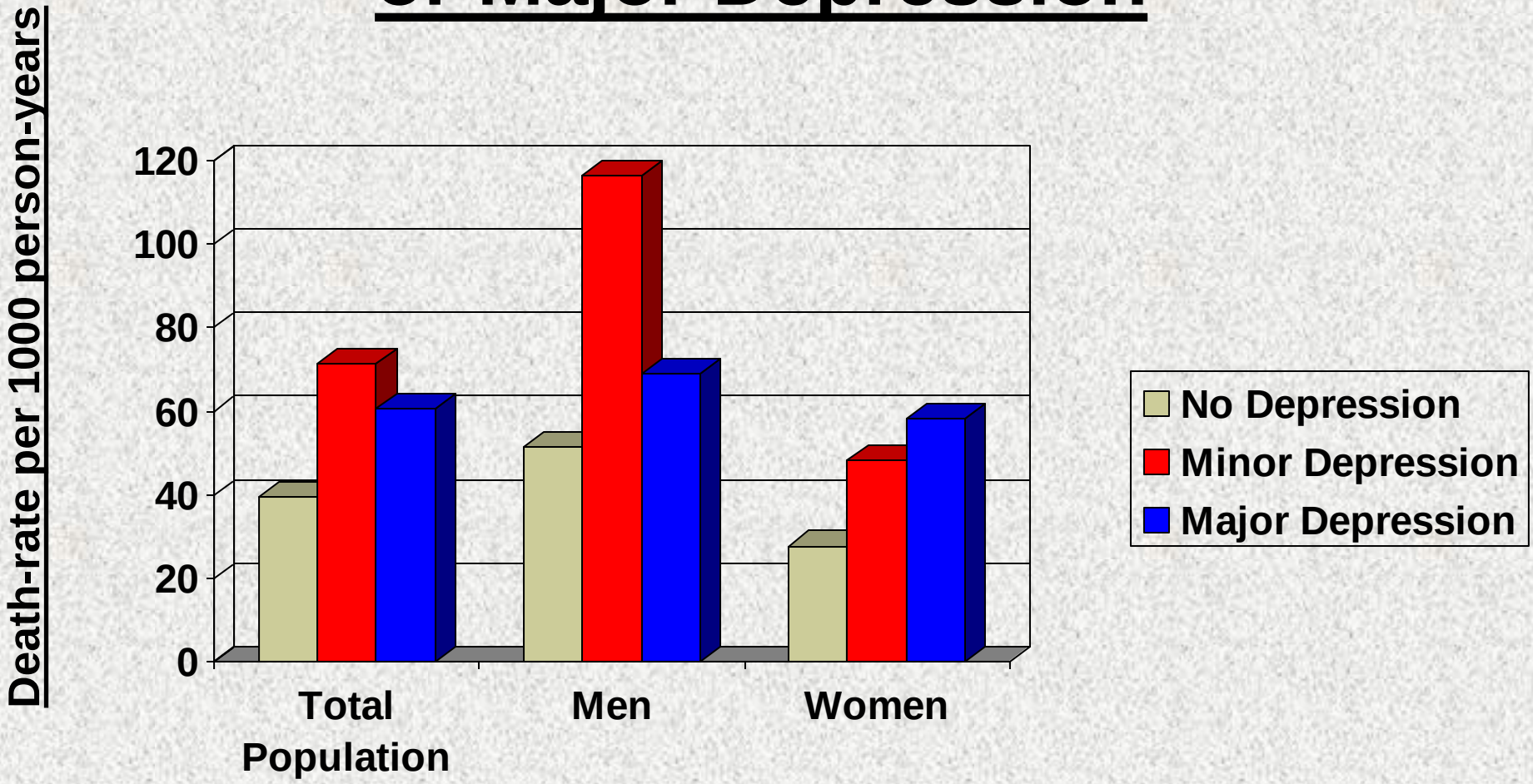
Weissman et al. 1984

Geriatric Depressive Syndromes: Adverse Outcomes

- Functional Decline / Increased disability[1,2]
- Increased use of non-mental health services[1]
- Increased risk of cancer [2]
- Increased mortality rate[3]
  - Increased cardiac mortality[4]
  - Increased CVA mortality[5]
- Increased suicide rate

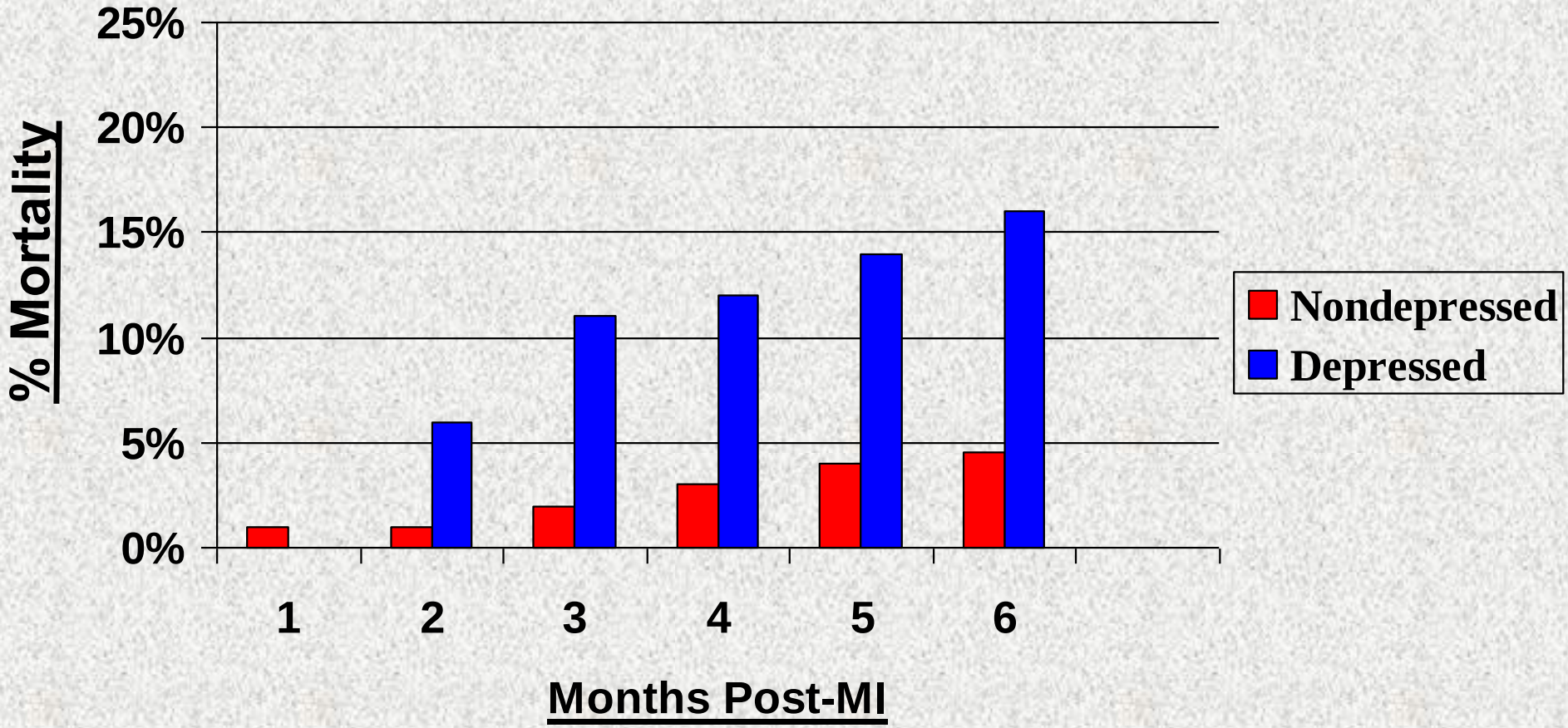
1. Beekman et al. 1997; 2. Penninx et al. 1998; 3. Penninx et al. 1999;
4. Frasure-Smith et al. 1993; 5. House et al. 2001

Mortality Rates: Elders with No Depression, Minor Depression, or Major Depression



Adapted from Penninx et al. 1999

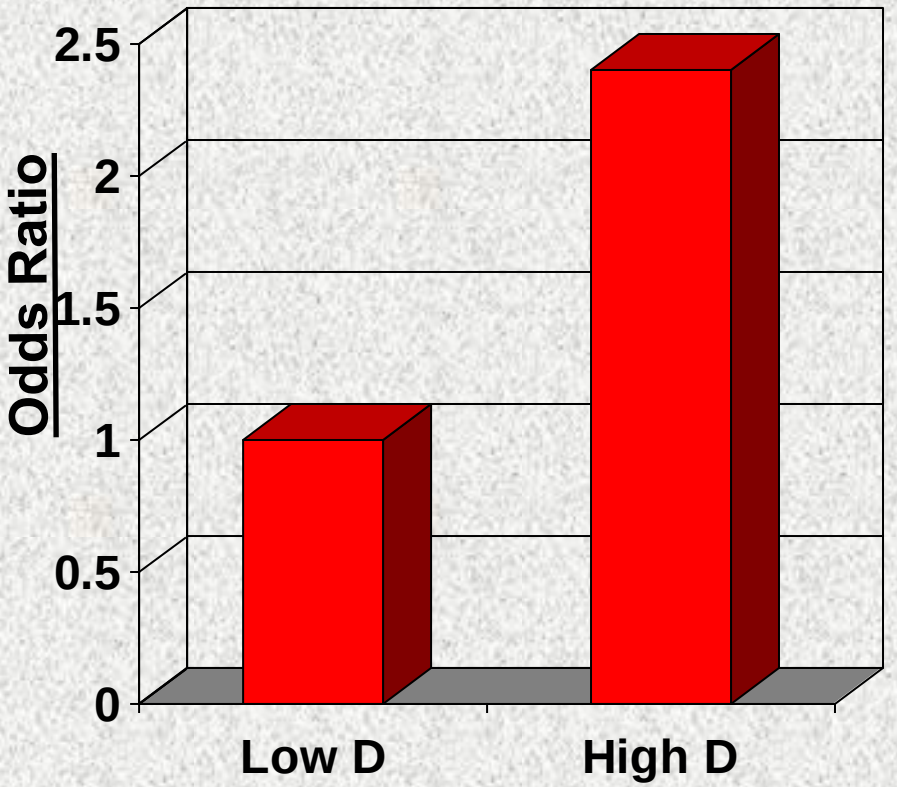
Cumulative Mortality for Depressed and Non-depressed Patients 6 Months After MI



Frasure-Smith et al. 1993

Depressive Symptoms 1 Month After Stroke Predict Increased Mortality at 12 and 24 Months

- 448 hospitalized CVA patients assessed at 1 month after stroke
- OR for mortality at 12 and at 24 months more than doubled with high score on depression subscale (GHQ-D) of General Health Questionnaire-28

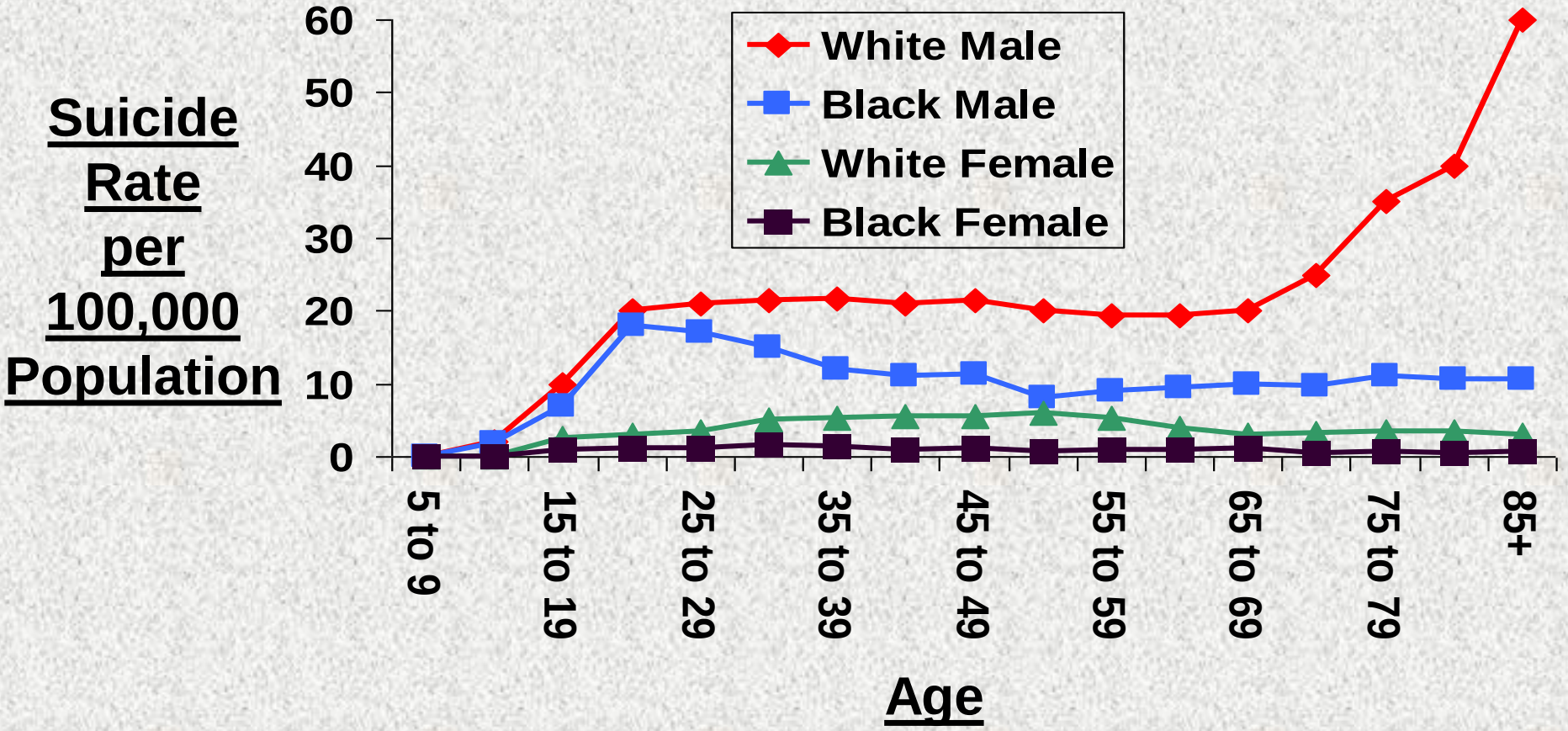


House et al. 2001

The Elderly Suicide Rate is the Highest of All Age Groups

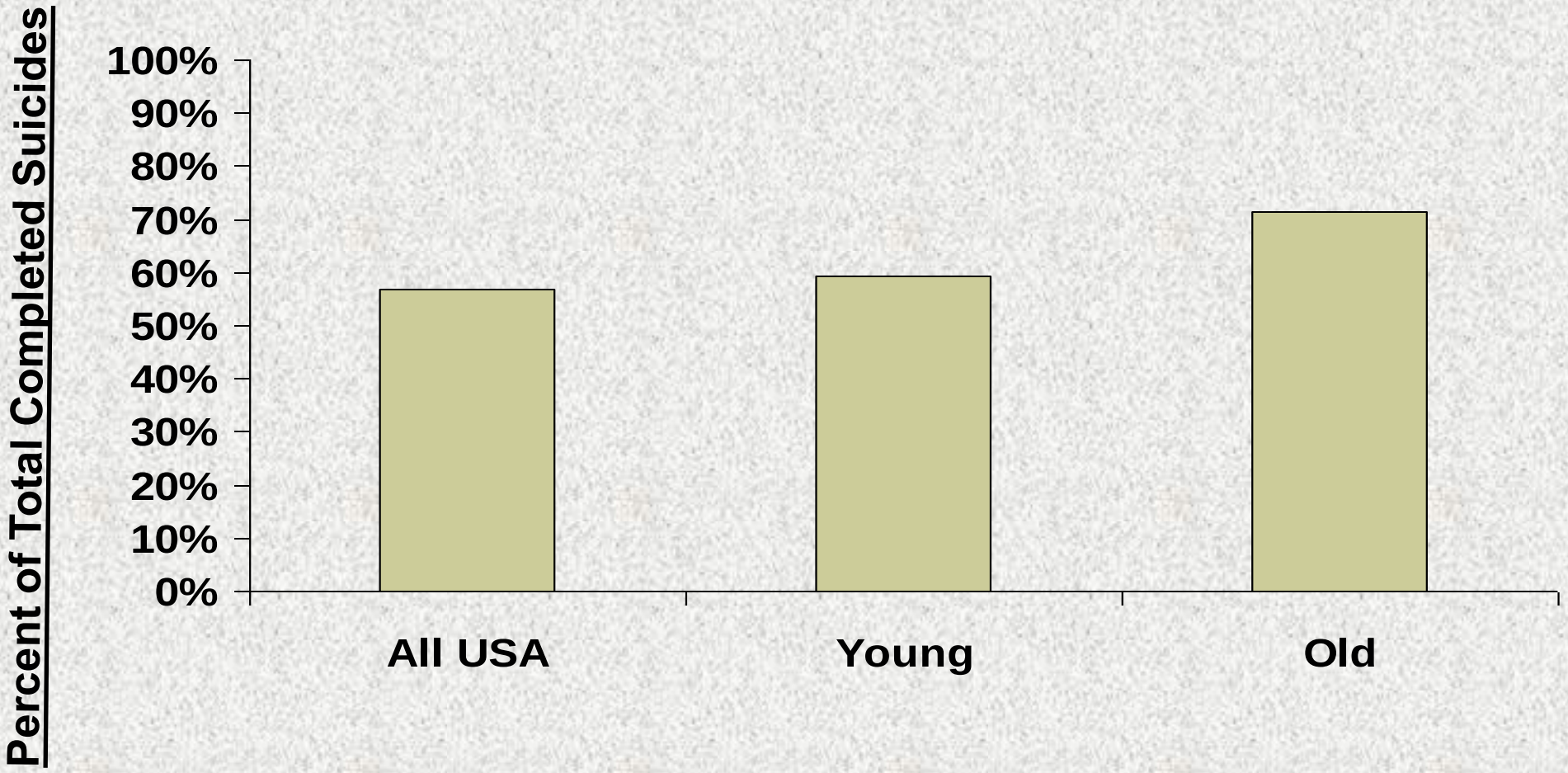
- 9th leading cause of death in US population
  - 12/100,000
- Among the elderly:
  - 19.1/100,000 over age 65
  - 22.9/100,000 ages 75-84
- Depression is the most frequent mental disorder preceding suicide
- Physical illness is the most frequent stressor in suicides over 80 years of age

1999 USA Suicide Rate



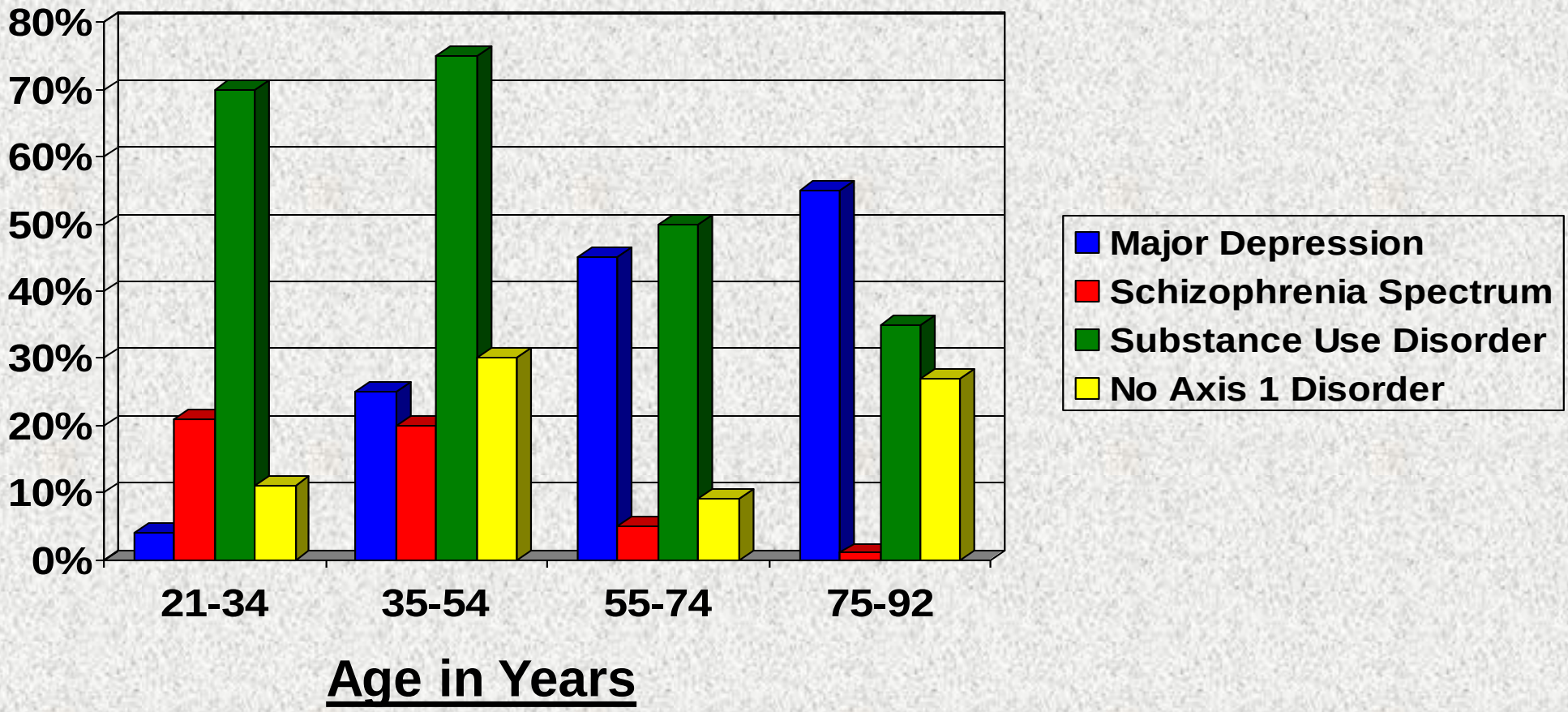
Source: National Center for Health Statistics

Percentage of Firearms-Related Suicides: Young vs. Old, USA, 1999



Hoyert et al., National Vital Statistics Report, 1999

Psychiatric Diagnoses of Suicide Completers



Conwell et al. 1996

Major Depressive Episode (DSM IV TR)

- Depressed mood or anhedonia of at least 2 weeks with at least 4 of the following:
  - ↓ interest or pleasure most of the time
  - Significant change in weight when not dieting
  - Insomnia or hypersomnia
  - Psychomotor agitation or retardation
  - Fatigue or loss of energy
  - Feelings of worthlessness, inappropriate guilt
  - ↓ concentration or thinking, indecisiveness
  - Recurrent thoughts of death or suicide
- No medical/substance etiology/mixed episode/other psych
- Significant distress or impairment
- Not uncomplicated bereavement

APA 2000

Geriatric Depression: Looks Different from Adult Depression

Symptom	Adult Presentation	Geriatric Presentation
Mood	Depressed Anhedonic Suicidal thoughts	Weary, Hopeless, Angry Anxious Thoughts of death
Somatic	↓↑ Sleep ↓↑ Appetite ↓↑ Psychomotor ↓↑ Increased pain	↑ Pain, and Somatic symptoms overlap with effects of medications, comorbid disease
Cognitive	↓ Concentration Indecisiveness	↓ Selective attention ↓ Working memory/retrieval ↓ New learning ↓ Processing speed ↓ Executive function

Gallo et al. 1997; Geiselmann and Bauer 2000; Devanand 1994; Mazure et al. 2002; Lezac 1994; Lavretsky and Kumar 2002

Organic Differential Diagnosis

- Medication toxicities
- Cardiopulmonary disorders
- Neurological disorders
- Endocrine/Metabolic disorders
- Nutritional deficiencies
- Sleep disorders
- Infectious disorders
- Neoplasms

Differential Diagnosis: Psychiatric Considerations

- Bereavement/Adjustment Disorder
- Bipolar Disorder
- Substance Abuse Disorders
- Anxiety Disorders
- Personality Disorder
- Schizophrenia

Life Events and Depression

- Bereavement[1]
  - 8-13% show major depression after 1 year
  - Subsyndromal depression present in
    - 19% at 13 months
    - 12% at 25 months
- Personality style can interact with adverse events to increase vulnerability to depression[2]

1. Zisook et al. 1994; 2. Devanand et al. 2002

Dementia Syndrome of Depression (DSD) vs. Alzheimer's Disease (AD)

	DSD	AD
Symptom duration	Short	Long
Prior psychiatric history	Usual	Unusual
Patient complaint	Frequent	Variable
Behavior congruent with cognitive deficits	Unusual	Usual
Mood disorder	Autonomous	Reactive
Recognition memory	More intact	Impaired
Effort on tasks	Poor	Good
Prompting effect	Helpful	Less helpful

Adapted from Kaszniak and Christenson, in Storandt and VandenBos, Neuropsychological Assessment of Dementia and Depression in Older Adults: A Clinician's Guide. Washington, DC, American Psychological Association, 1994.

Confusing Comorbidity: Depression in Demented Patients

- 50% of patients with dementia or other neurological impairments are depressed
  - 17-31% of Alzheimers patients
  - High rates in Parkinson's and post-stroke
- May require reports from collateral informants
- Treatment is of potential value when mood symptoms are present.

Assessment of Late Life Depression:
1. Psychiatric History

- Use of informant
- Atypical symptom presentation
- Psychosocial factors
- Medical factors
- Medications and treatment adherence
- Nutrition and deficiencies
- Use of additional substances

Assessment of Late Life Depression:
2. Medical History and Physical Examination

- Essential component of work up
- Cardiopulmonary history/examination
- Cerebrovascular history/examination
- Neurological examination
- Sleep history/assessment

Assessment of Late Life Depression: *3. Mental Status Examination*

- Baseline cognitive assessment
- Appearance and self-care
- Variant presentations of mood
  - Withdrawal
  - Weariness
  - Comorbid anxiety
- Mental Content
  - Somatic preoccupations, Pain
  - Complaints re cognitive functioning

Assessment of Late Life Depression: *4. Use of Diagnostic Instruments*

- **Consider formal depression instrument**
  - **Hamilton Depression Rating Scale**
  - **Montgomery Asberg Depression Rating Scale**
  - **Geriatric Depression Scale**
  - **Minimum Data Set Depression Rating Scale**
  - **Cornell Scale for Depression in Dementia**
- **Include cognitive screening**
  - **MMSE**
  - **Tests of functional capacity**
  - **Tests of executive function**

Assessment of Late Life Depression: *5. Laboratory Assessment*

- **Hematology**
  - **WBC, differential**
  - **HGB/HCT, MCV**
  - **Platelets**
- **Urine**
  - **Urinalysis**
  - **Culture and sensitivity**
- **Chemistry**
  - **Lytes, BUN, Creatinine**
  - **Liver function tests**
  - **Thyroid function tests**
  - **ESR**
  - **B12 or methylmalonic acid**
  - **Folate or RBC folate**
  - **Testosterone level (males)**

Assessment of Late Life Depression: *6. Ancillary Studies*

- **Neuroimaging Studies**
  - **Structural (CT, MRI)**
  - **Functional (fMRI, SPECT, PET)**
- **Neuropsychological Testing**
  - **Memory**
  - **Executive functions**

Vascular Depression

- **Observations:[1]**
  - **High rate of depression with HT, DM, CAD**
  - **High rate of depression following CVA**
  - **Prevalence of silent CVA & white matter hyperintensities in late-onset depression**
  - **Lower prevalence of family history for mood disorders in post-CVA depression**
- **Majority of depressive patients presenting to geriatric psychiatrists may be "late onset" [2]**

1. Alexopoulos 1997,2. Baldwin and O'Brien 2002

Vascular Depression: Definition of Syndrome

- **Defined by:**
  - First onset of depression at or after 60 years of age
  - Presence of HT and/or TIA or surgery for vascular disease
- **Associated with:**
  - reduced depressive ideation
  - Increased psychomotor retardation
  - Cognitive dysfunction
    - Impaired fluency/naming
    - Lack of insight
    - Executive dysfunction
- **MRI findings**: Left frontal and left putamen deep white matter hyperintensities[2]

1. Alexopoulos 1997;
2. Greenwald et al. 1998

T2 Hyperintensities on MRI

Courtesy of Martin Goldstein MD

Conclusions

- Geriatric depression is prevalent
  - Not normal aspect of aging
  - Dysthymic, minor and subsyndromal variants are common
- Geriatric depression ⟹ high morbidity/mortality
- Presentation may be subtle or misleading
- Careful differential diagnosis and comprehensive assessment are required

Post Lecture Exam
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Answers to Pre & Post Competency Exams

1. False
2. B
3. C
4. D
5. E