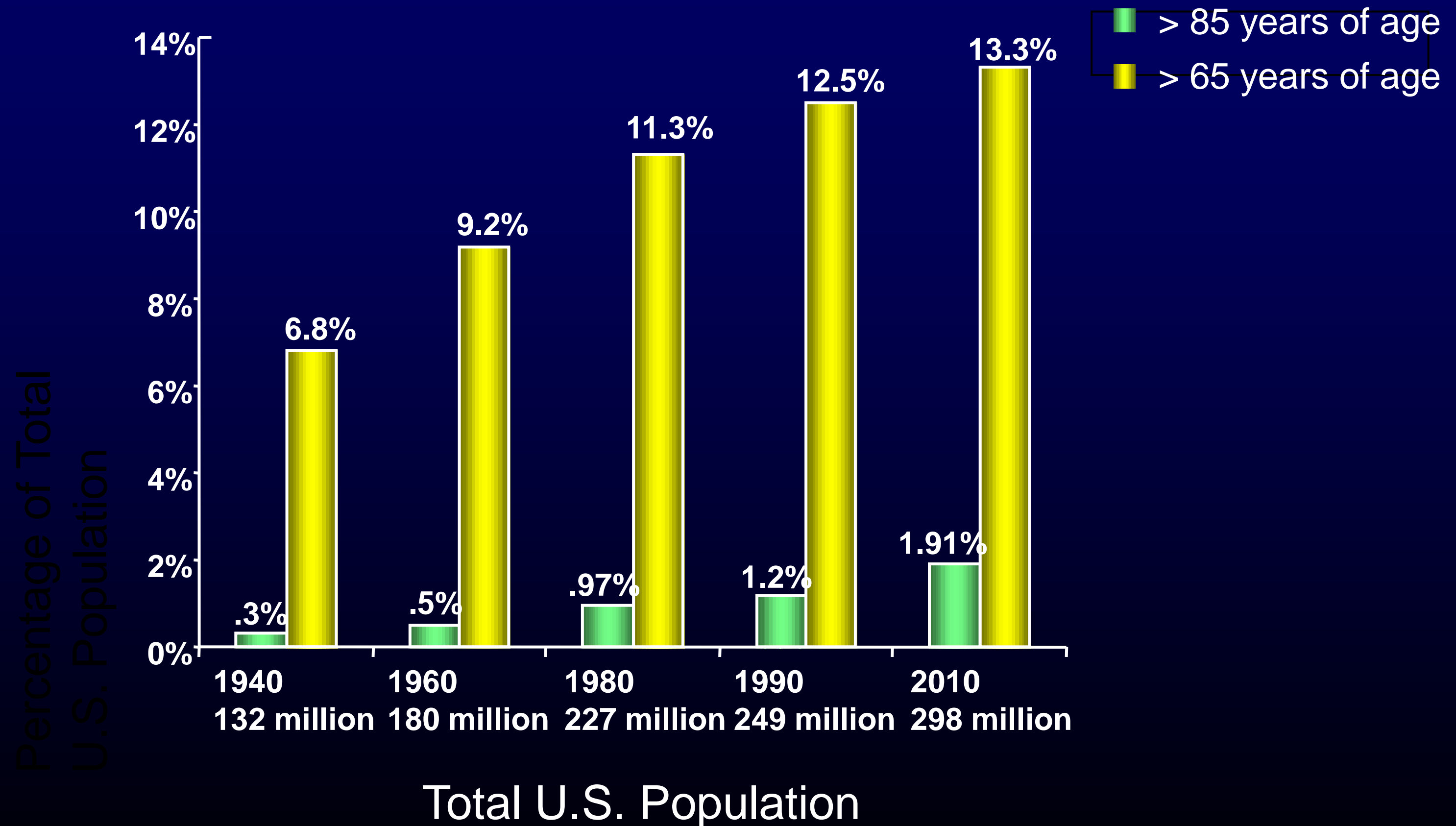
Phamacotherapy in Geriatric Mental Health Care in Georgia

William M. McDonald, MD
JB Fuqua Chair and Professor of Psychiatry
Emory University

Disclosures

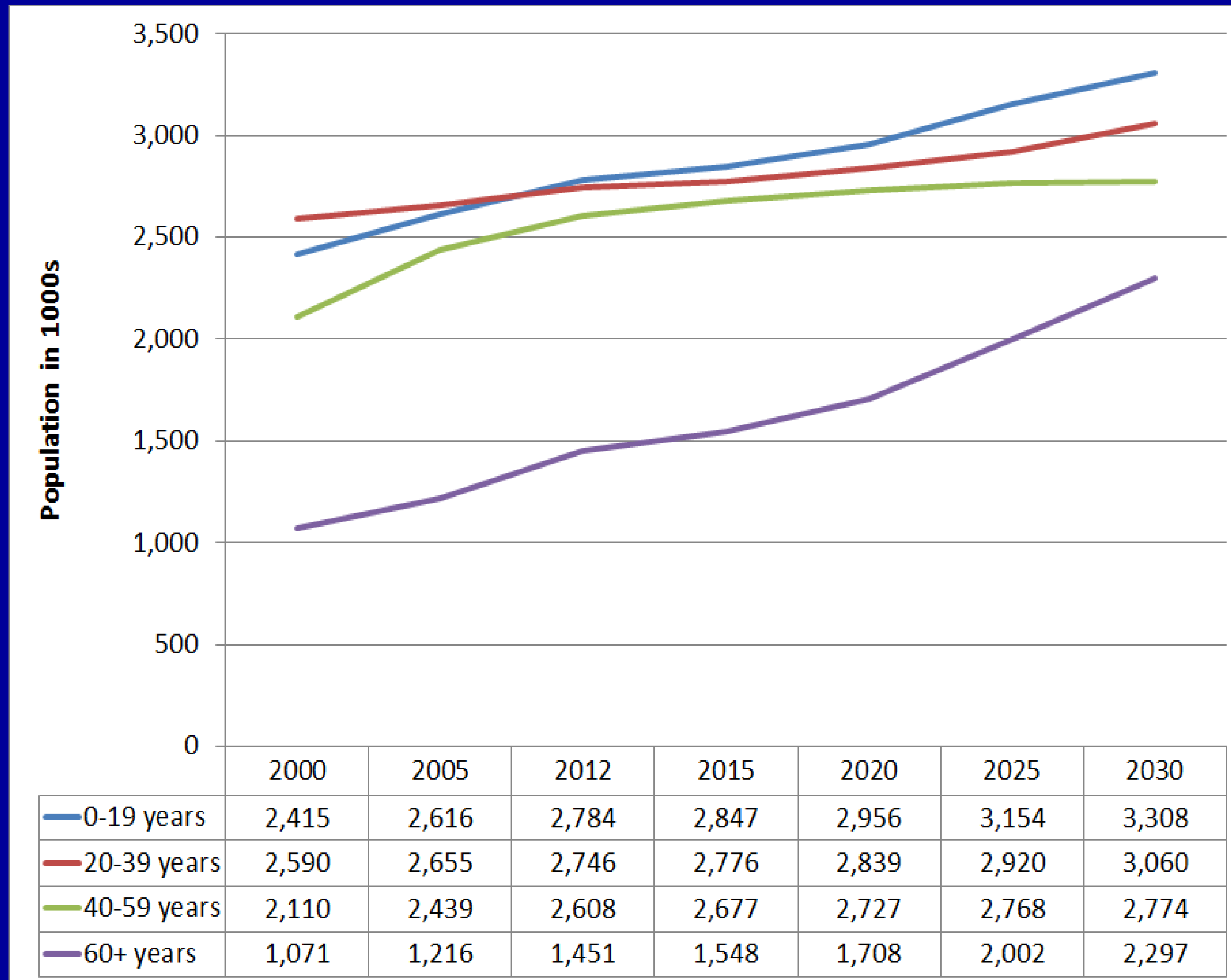
- APA Council on Quality and Research
  - Task Force for ECT guidelines
- Neuronetics and NIMH (R01 MH069886) trials in rTMS
- Neurostar (Neuronetics) device on loan for a investigator funded trial
- Emory University has a patent for Neuronetics neurostimulator
- Research funded by Cervel in rTMS
- Research funded by Stanley Foundation using the Soterix tDCS stimulator
- Contract with Oxford University Press to co-edit a book on the Clinical Guide to Transcranial Magnetic Stimulation in the Treatment of Depression

Demographics



Borson, et.al., *Am J of Geriatric Psych*, 2001

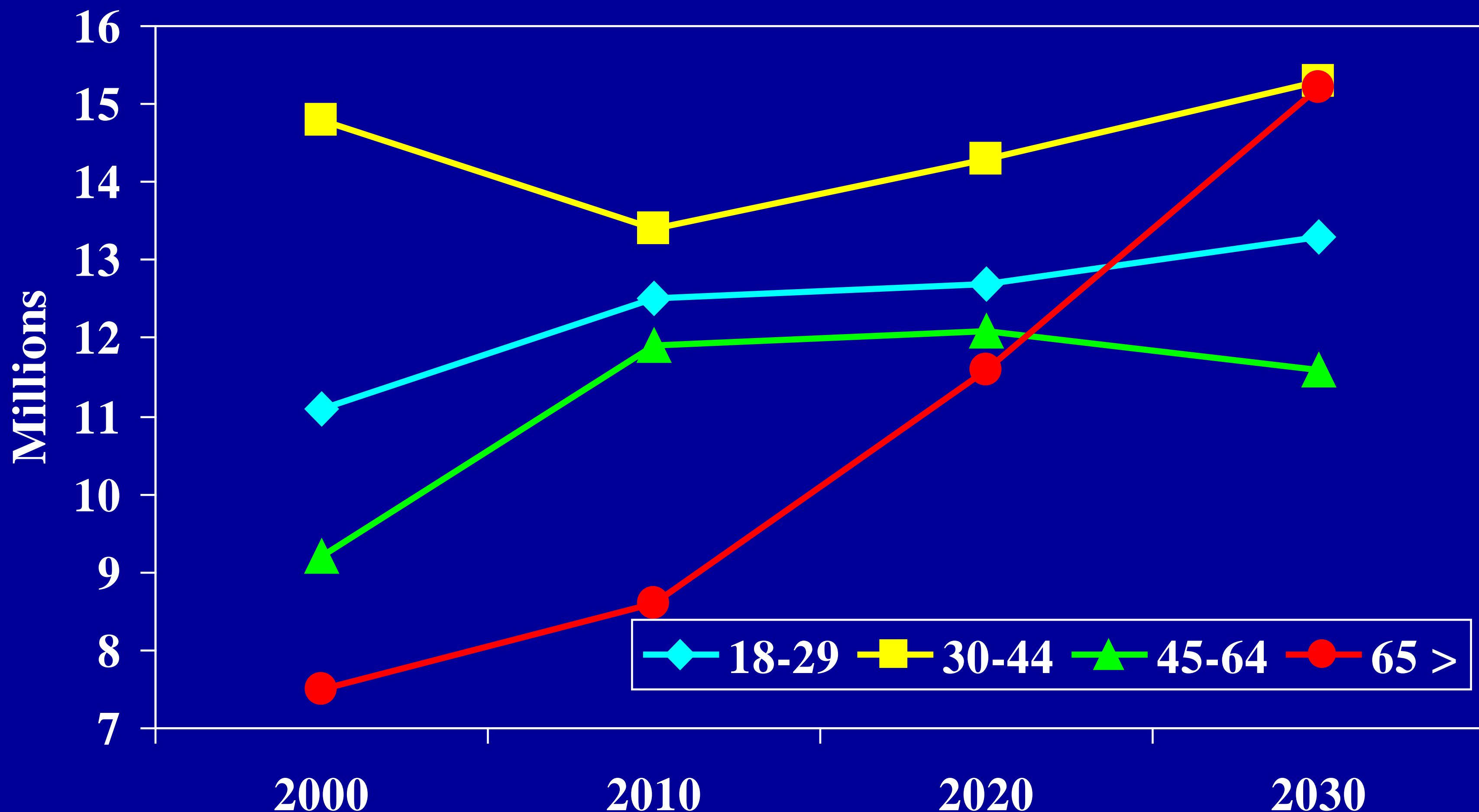
Georgians 60 years+ are the fastest growing age group



	2000	2005	2012	2015	2020	2025	2030
0-19 years	2,415	2,616	2,784	2,847	2,956	3,154	3,308
20-39 years	2,590	2,655	2,746	2,776	2,839	2,920	3,060
40-59 years	2,110	2,439	2,608	2,677	2,727	2,768	2,774
60+ years	1,071	1,216	1,451	1,548	1,708	2,002	2,297

Source: U.S. Census Bureau Projections, 2009

Estimated Prevalence of Major Psychiatric Disorders by Age Group



Consensus Statement on the Upcoming Crisis in Geriatric Mental Health: Research Agenda for the Next 2 Decades JAMA Psychiatry 1999; Dilip V. Jeste, MD; George S. Alexopoulos, MD; Stephen J. Bartels, MD, MS; Jeffrey L. Cummings, MD; Joseph J. Gallo, MD, MPH; Gary L. Gottlieb, MD, MBA; Maureen C. Halpain, MS; Barton W. Palmer, PhD; Thomas L. Patterson, PhD; Charles F. Reynolds III, MD; Barry D. Lebowitz, PhD

Community Mental Health Services

- Older persons appear underrepresented
  - 2.5 percent of the people served by the Georgia mental health system were ages 65 and older or approximately 4,040 people.
- Lack staff trained to address medical needs
- Often lack age-appropriate services

Number of Consumers Served
By Age Cohort and Modified NRI Diagnostic Category
Adult Mental Health
FROM 7/1/2013 TO 6/30/2014

	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
Schizophrenia	2,038	2,409	2,879	2,401	1,540	653	302	96	43	21	12,272
Other Psychoses	190	207	252	151	91	49	20	12	4	4	977
Major Depression	2,536	3,539	4,370	3,587	1,958	585	189	71	43	15	16,751
Bipolar	1,948	2,118	2,021	1,400	701	264	93	34	9	1	8,516
Other Affective Disorders	390	514	519	454	269	69	25	14	1	2	2,255
Other Mood Disorders	243	223	237	158	67	18	7	4	1	1	959
Anxiety Disorders	590	638	727	504	339	122	38	24	8	3	2,985
MR/DD	36	45	36	27	20	13	8	2	0	0	187
SA	314	382	391	260	107	14	11	2	0	1	1,477
Other Organic Brain Disorders	38	45	76	49	25	15	6	4	1	2	261
Dementia	0	3	0	7	8	6	3	4	0	2	33
Other disorders	8	10	13	17	4	1	0	1	0	0	54
Unknown/Other	3,849	4,026	3,753	2,431	1,187	384	142	66	33	14	15,841
GRAND TOTAL	10,133	11,819	12,884	9,873	5,560	2,020	785	310	131	63	52,600

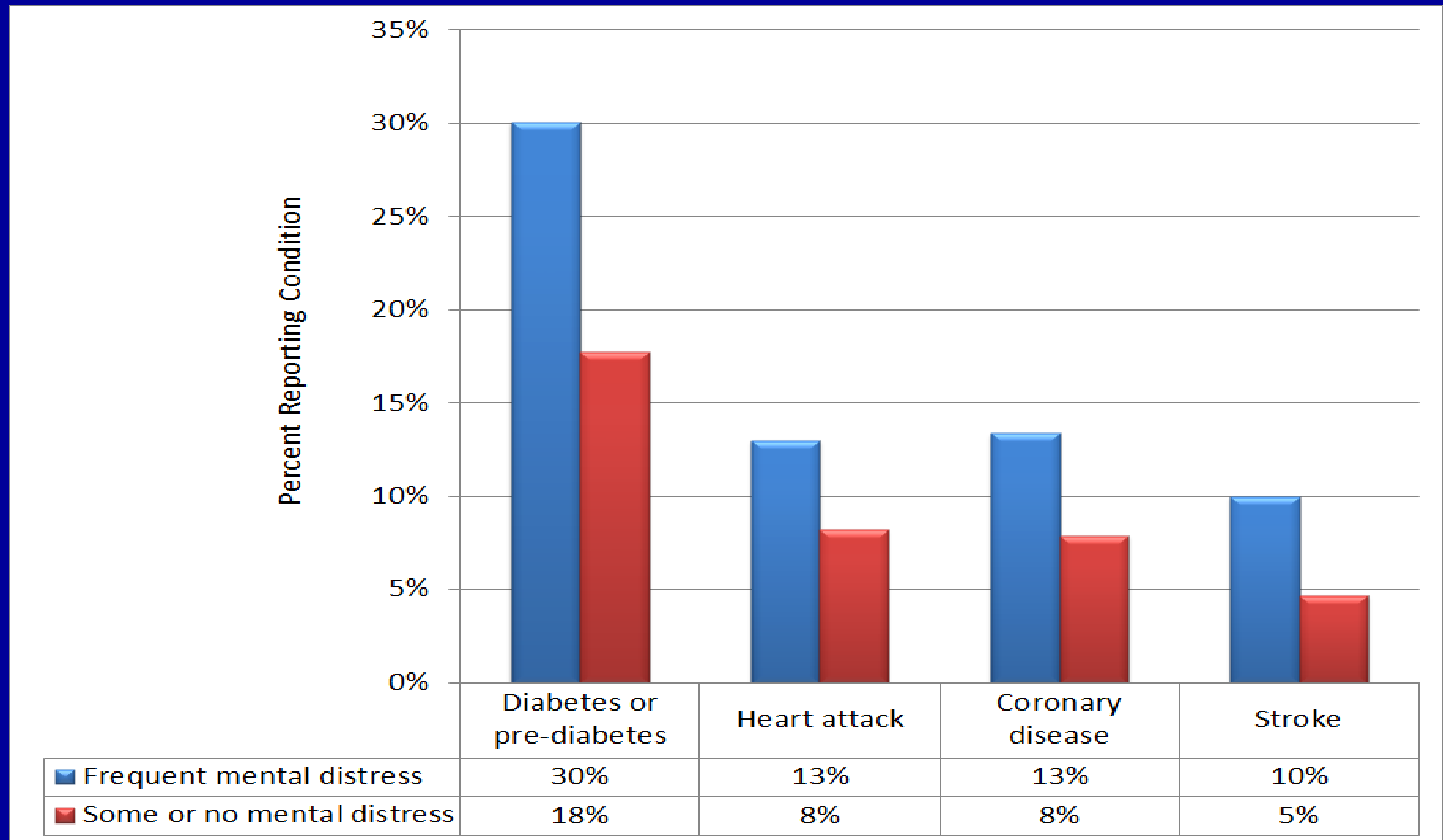
Georgia's Older Adult Population

- In Georgia, 294,000 older adults with have a mental illness in a one year period
- Top mental illnesses in the elderly
  - Mood and anxiety disorders
  - Substance abuse
  - Severe and persistent mental illnesses
  - Alzheimer's dementia and related psychiatric problems

Georgia's Mental Health Gap Analysis (2005). APS Healthcare. http://www.apsero.com/Downloads/Mental%20Health%20Gap%20Analysis/?14@873.az53apBRbgM.1@

Mood and Anxiety Disorders

Older adults who experience recurrent depression and anxiety are more likely to report serious health problems.



	Diabetes or pre-diabetes	Heart attack	Coronary disease	Stroke
Frequent mental distress	30%	13%	13%	10%
Some or no mental distress	18%	8%	8%	5%

Source: BRFSS, 2011

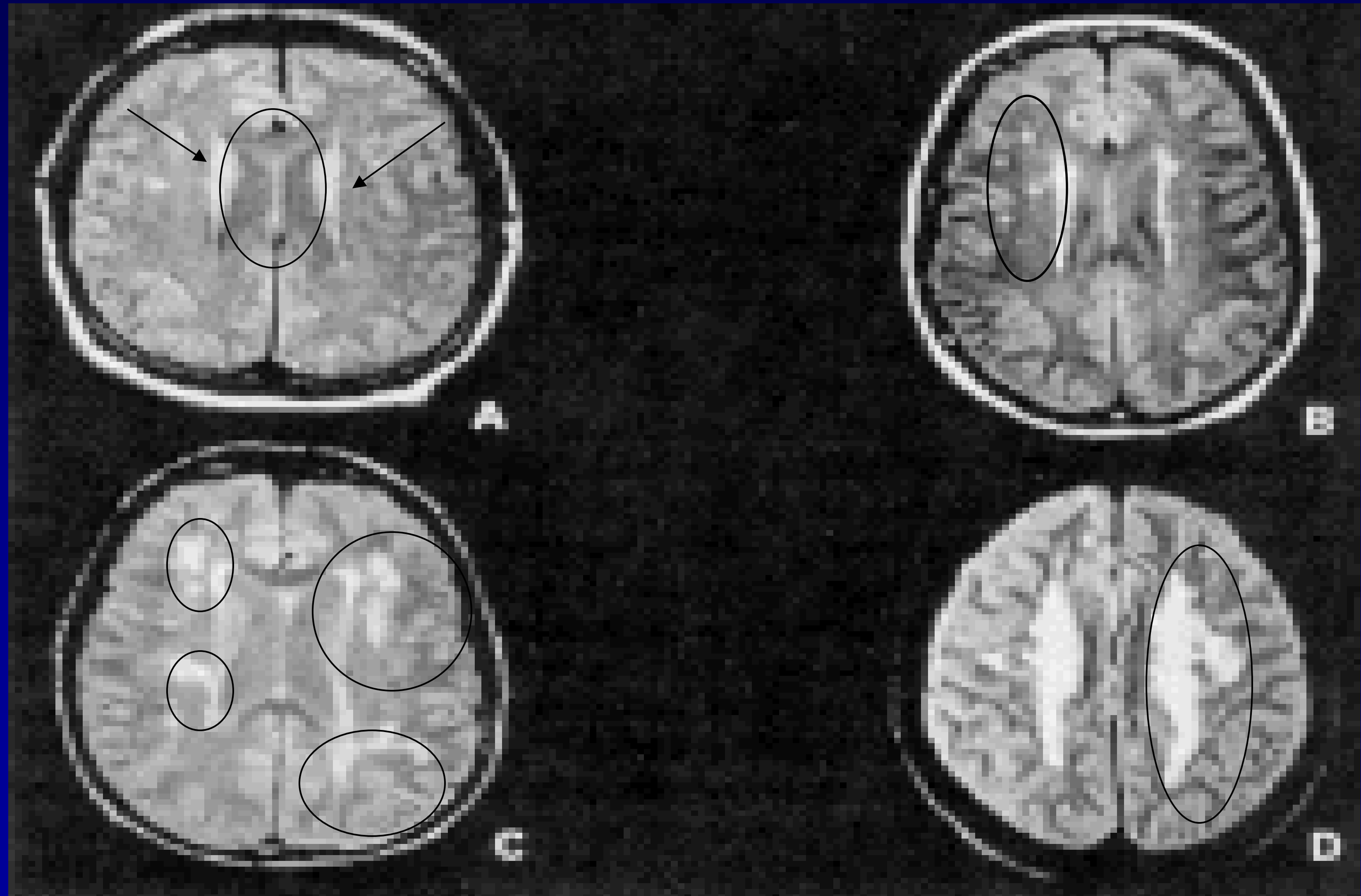
Depression in the elderly

Depression in the elderly is associated with:

- Treatment resistance
- High rates of recurrence
- Higher suicide rates and premature mortality compared to younger adults
- Dementia

Covinsky et al. *Ann Intern Med* 1999; 130: 563-569; Henriksson et al*. Int Psychogeriatr* 1995; 7: 275-286; Oxman. *J Clin Psychiatry* 1996; 57 (Suppl 5): 38-44; Rovner et al. *JAMA* 1991; 265: 993-996

MR Scans of Depressed Patients



Suicide by race and gender

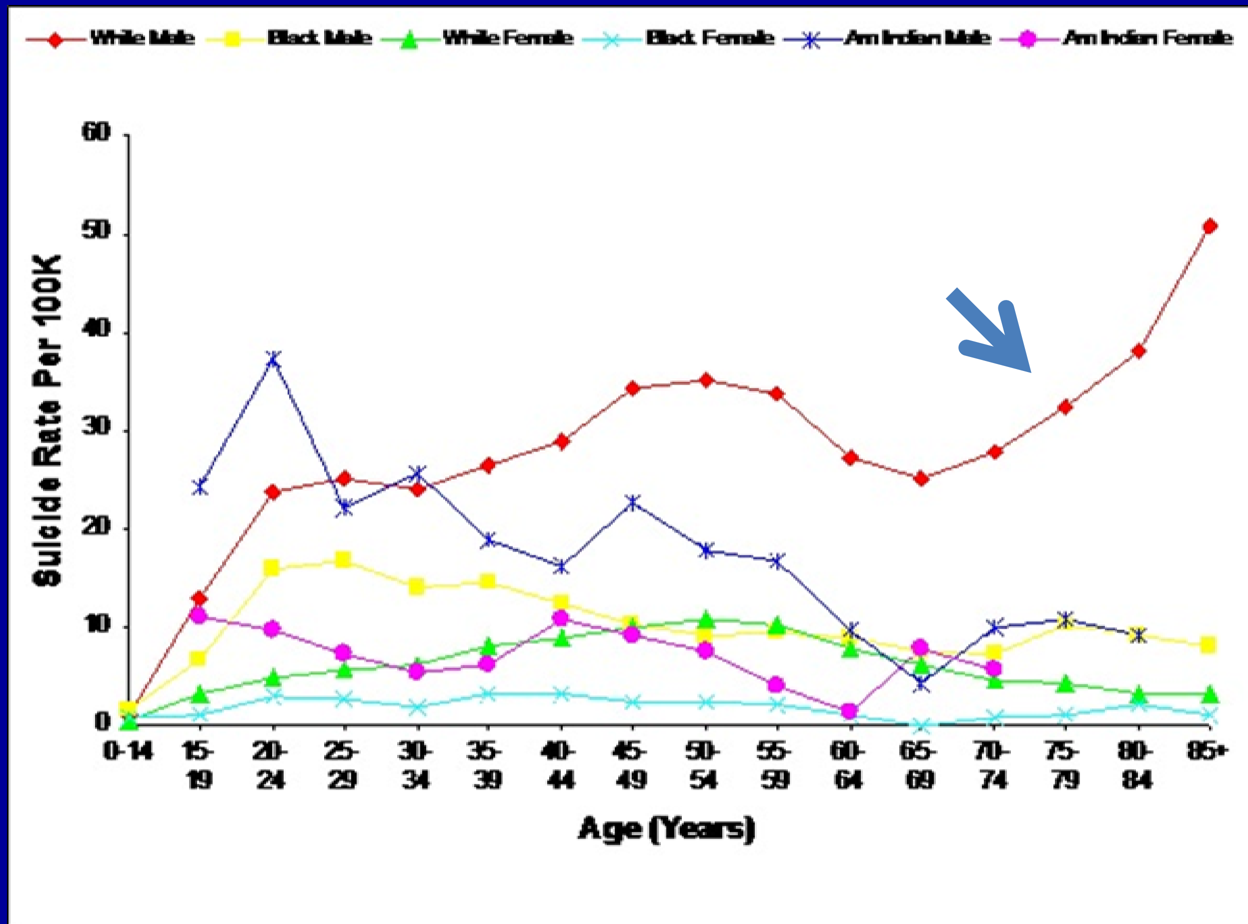
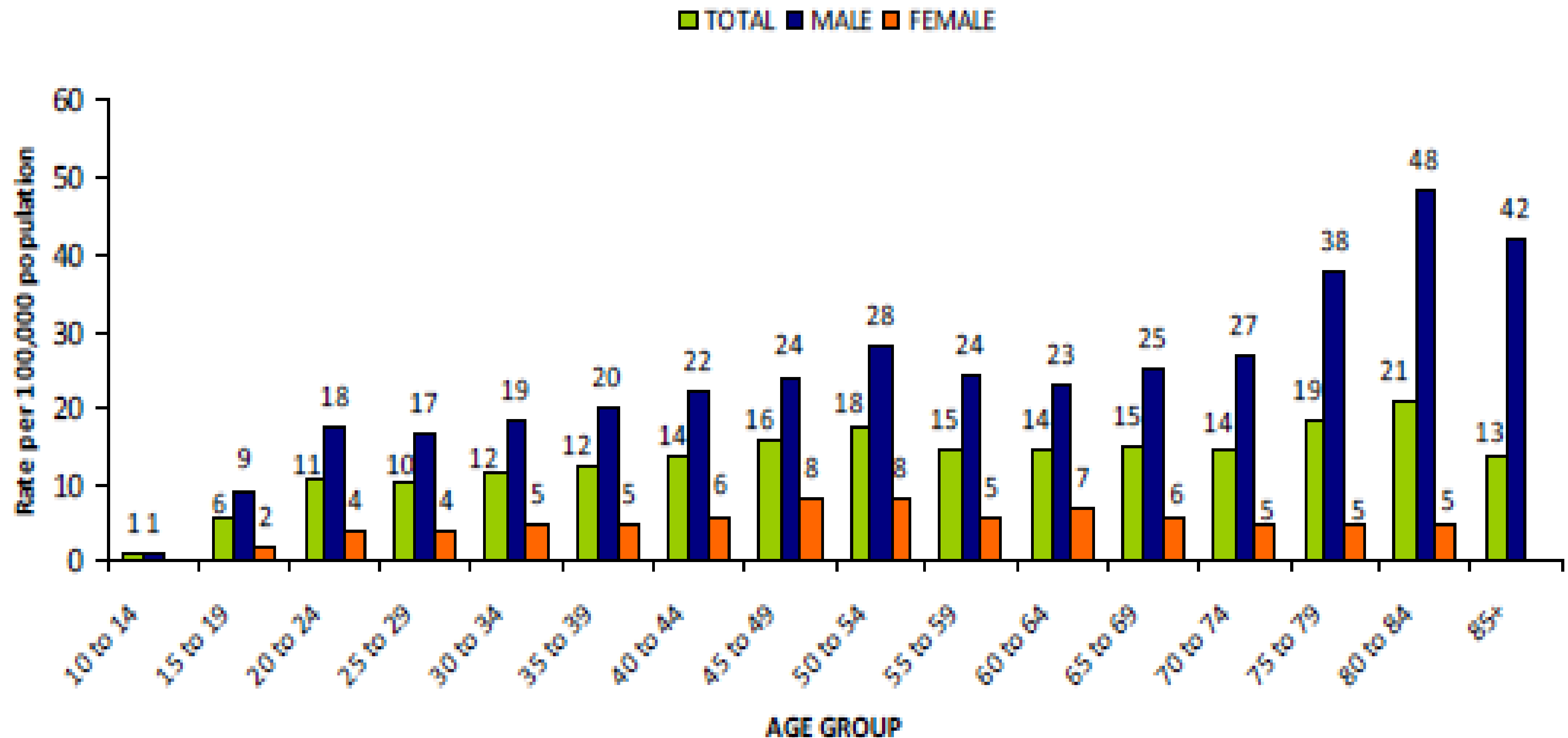


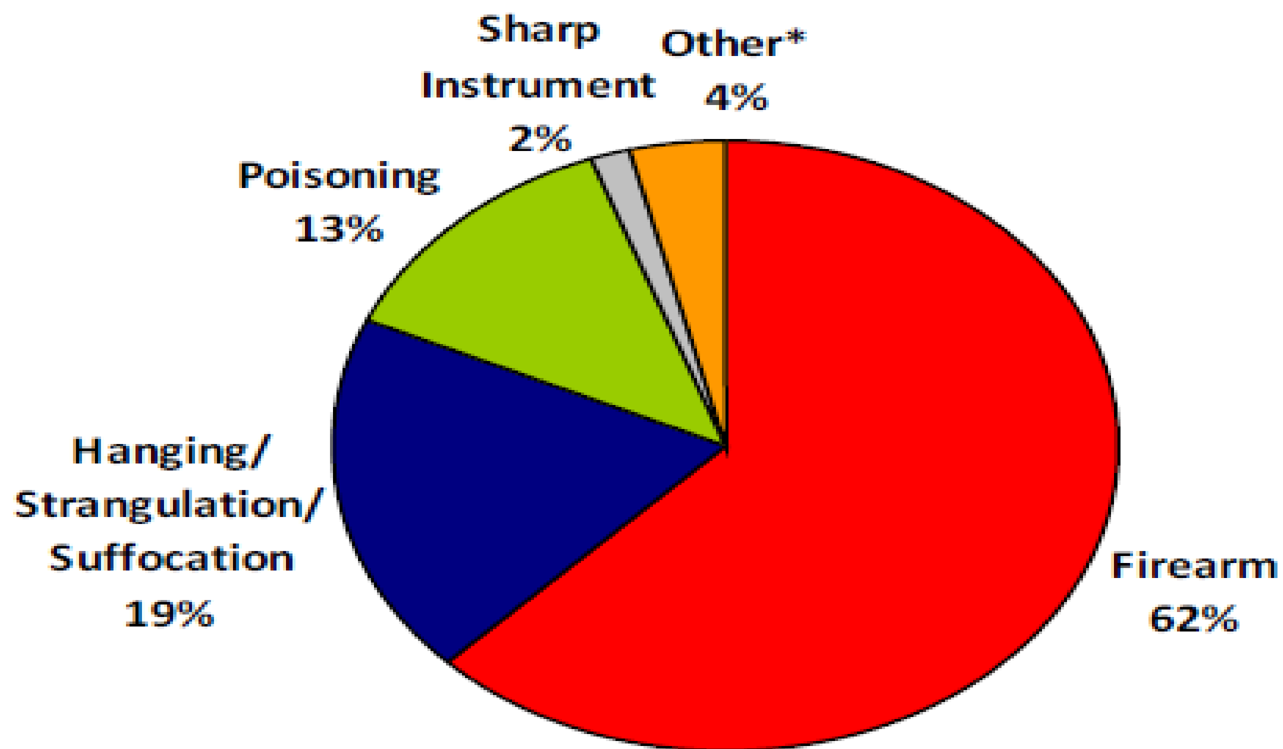
Figure 1: Suicide Rates USA 2010 (Centers for Disease Control and Prevention, 2013)

Completed Suicides



Methods used to Suicide

- Firearms were used most frequently (59%) in Georgia to commit suicide



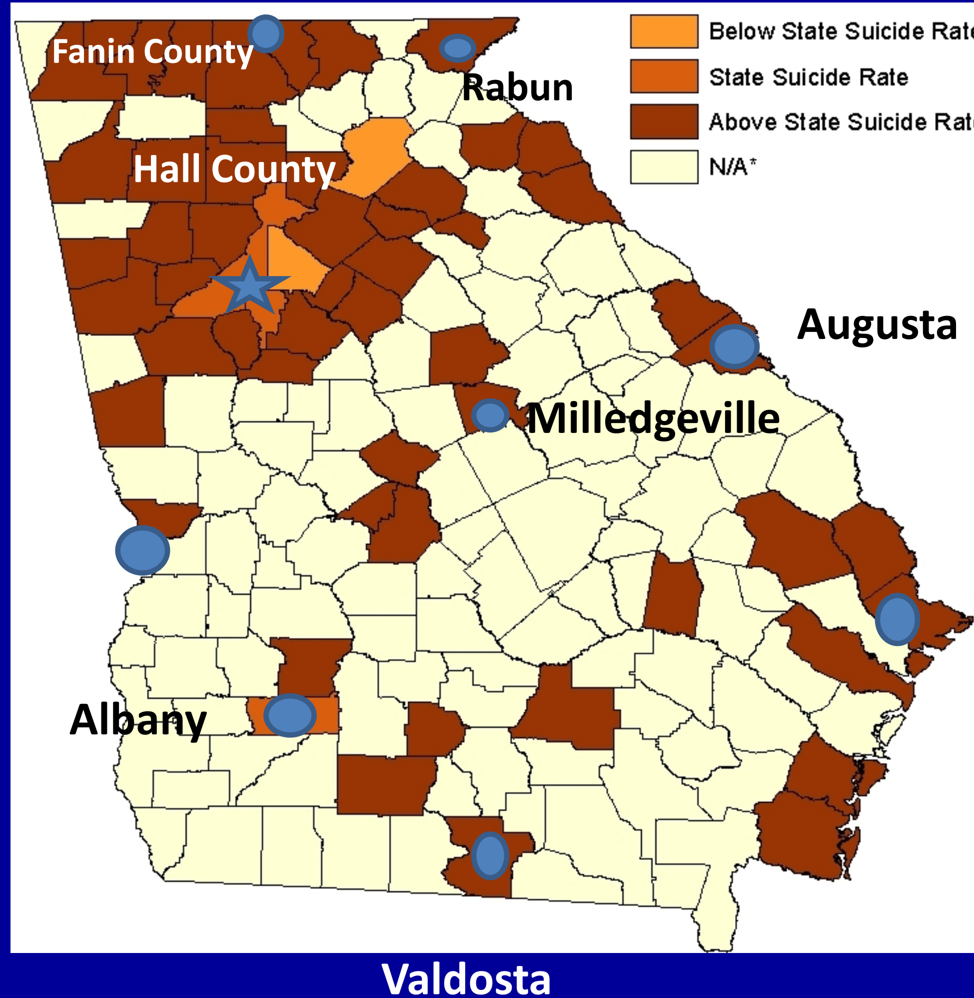
*Includes: blunt instrument, drowning, falls, fire or burns, motor vehicle, personal weapons, and other.

Ratio of Attempted to Completed Suicide

	ER Visits	Hospitalizations	Deaths
General Population	30	5	1
Older Adults	4	2	1

Kim Van Orden, PhD ; Center for the Study and Prevention of Suicide

Suicides by County



Columbus

Savannah

Suicide Prevention

- Screen for depression
- Collaborative care addressing physical issues including pain
- Suicide prevention plan
  - Decreasing isolation
  - Addressing family discord
  - Remove firearms
  - Assess triggers including alcohol; encourage plan should thoughts occur
  - Behavioral activation

Basic elements of treating older depressed adults

- Symptoms
  - Anxiety, pain, cognitive problems, hopelessness
- Comorbidity
  - Why wouldn't I be depressed, I have Parkinson's disease?
- Stigma
  - Do you think I am crazy?
- Barriers
  - Work with aging services

Signs of Geriatric Depression
Triad of depression, anxiety and somatization

- Worry, obsessive ruminations
- Restlessness, pacing
- Sleep loss
- Complaints of physical symptoms
- Irritability, hostility
- Social withdrawal
- Delayed recovery from illness
- Refusal of treatment

Pharmacotherapy

- First Line
  - Selective serotonin reuptake inhibitors (SSRIs)
    - Escitopram (Lexapro), citalopram (Celexa), sertraline (Zoloft), paroxetine (Paxil), fluoxetine (Prozac)
  - Serotonin and norepinephrine reuptake inhibitor (SNRIs)
    - Venlafaxine (Effexor), duloxetine (Cymbalta), mirtazapine (Remeron)
- Side Effects: Serotonergic- agitation/ tremor, nausea, apathy, decreased libido

Pharmacotherapy for Anxiety

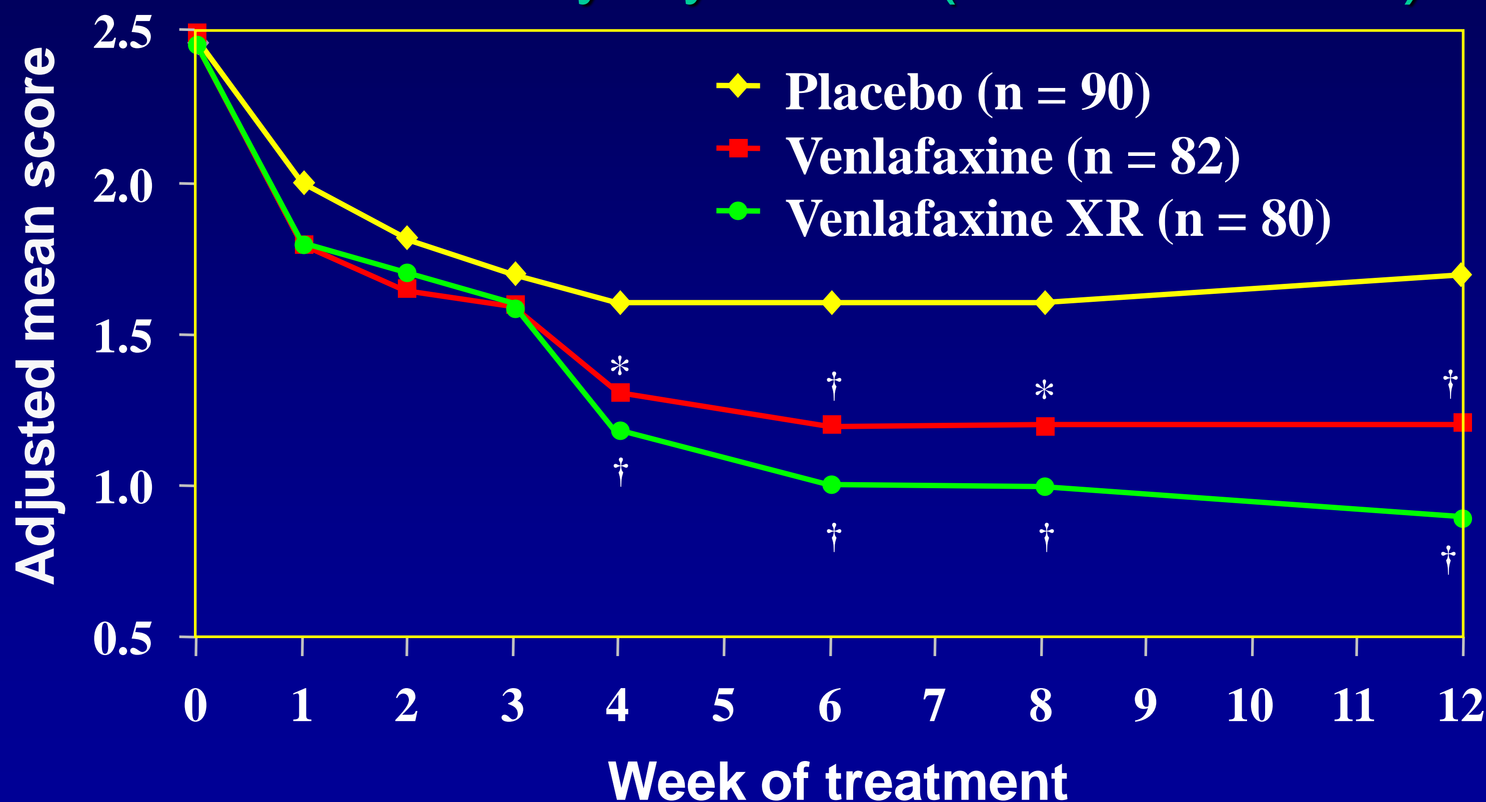
- Benzodiazepines are effective but use should be short term because of side effects such as cognitive impairment, gait instability and falls, sedation, disinhibition and dependency.
  - Alprazolam (Xanax)
  - Clonazepam (Clonopin- long acting benzo)
  - Older medications such as diazepam (Valium) and clordiazepoxide (Librium) are likely to accumulate and create toxicity

Pharmacotherapy for Anxiety

- Buspirone
  - Trials show fewer adverse effects, reduced chronic anxiety
  - Experience suggests inconsistent benefit
- Diphenhydramine, hydroxyzine- caution
- Trazodone
- Quetiapine- caution
- SSRI’s

Lauderdale, Sheikh, Clinical Geriatric Medicine, 2003

Venlafaxine XR is Effective for Depression with Associated Symptoms of Anxiety



* $P \leq .01$, † $P \leq .001$ vs. placebo

Feighner JP, et al. *J Affect Disord.* 1998;47:55-62.

Recommendations

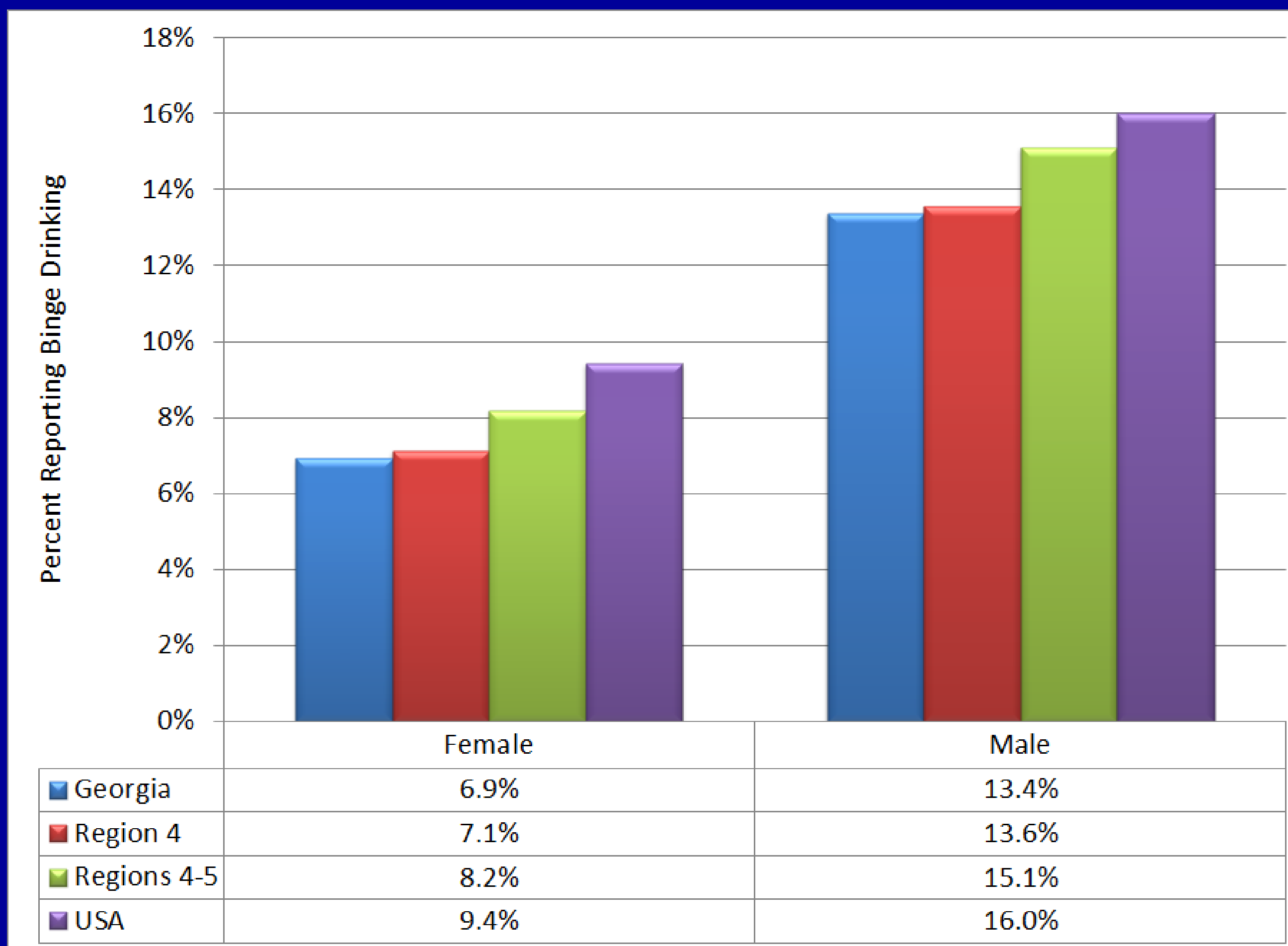
- Use SSRI’s/ SNRI’s in the elderly
  - They have similar efficacy
  - May work on anxiety but that can takes weeks not days
- The medications made need comparable doses as younger patients but not always
- Treatment may take up to 10- 12 weeks so be patient and don’t keep switching if a medication is well tolerated
- Psychotherapy is important!

Case Study

- A 72 year old man presents with apathy and lack of energy. He had a myocardial infarct 3 months earlier. His wife says he has completely withdrawn from the family. He says he is not depressed but that his main problem is feeling tired since his MI. He had previously been very active and engaged with his family and church.

Substance Abuse

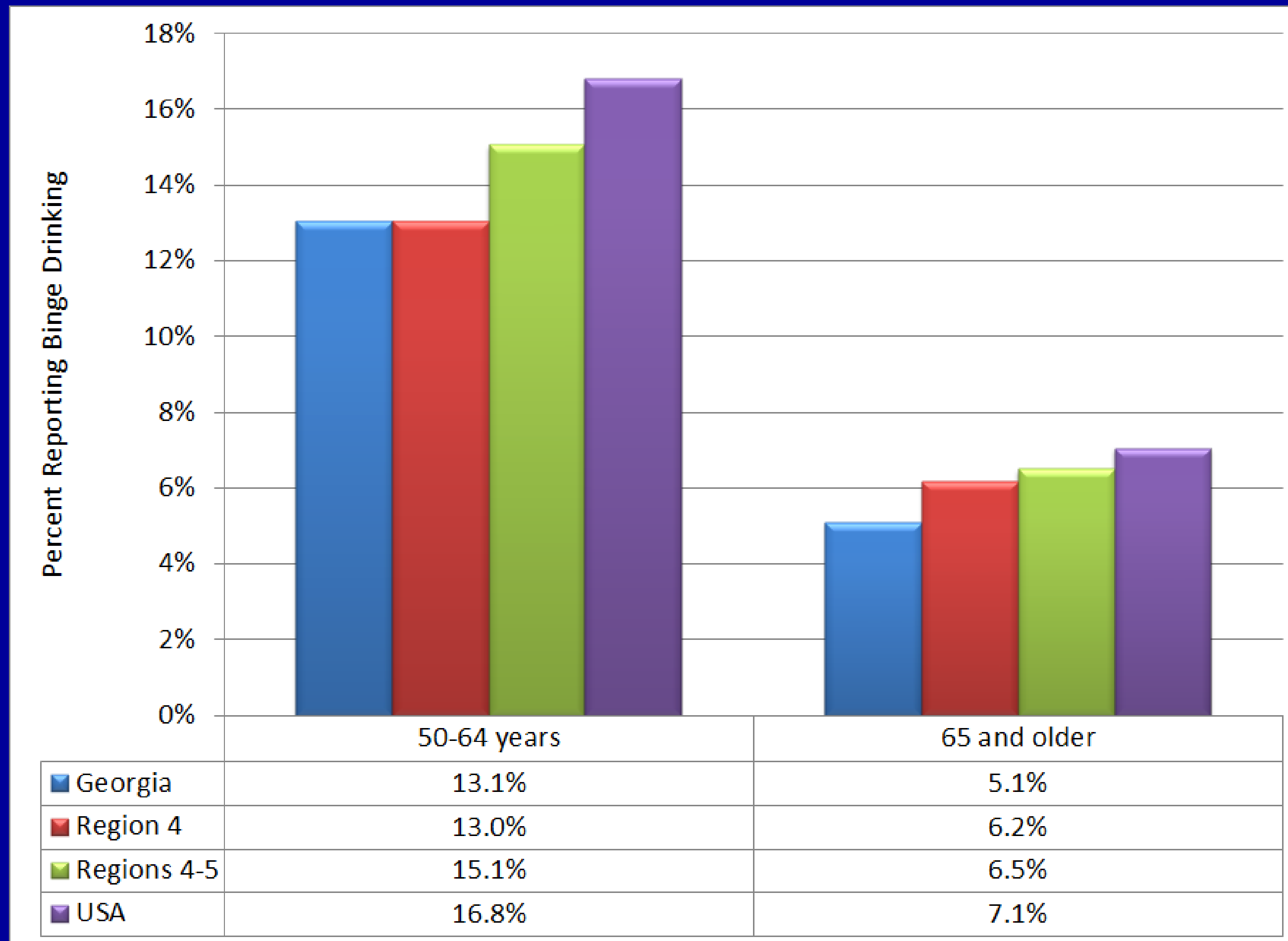
30-Day Binge Drinking Among Older Georgians



	Female	Male
Georgia	6.9%	13.4%
Region 4	7.1%	13.6%
Regions 4-5	8.2%	15.1%
USA	9.4%	16.0%

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2011.
Regions 4 and 5 include Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, Michigan, Minnesota, Mississippi, North Carolina, Ohio, South Carolina, Tennessee, and Wisconsin.

Binge drinking decreases with age



	50-64 years	65 and older
Georgia	13.1%	5.1%
Region 4	13.0%	6.2%
Regions 4-5	15.1%	6.5%
USA	16.8%	7.1%

Source: BRFSS, 2011

Prevention and Early Interventions

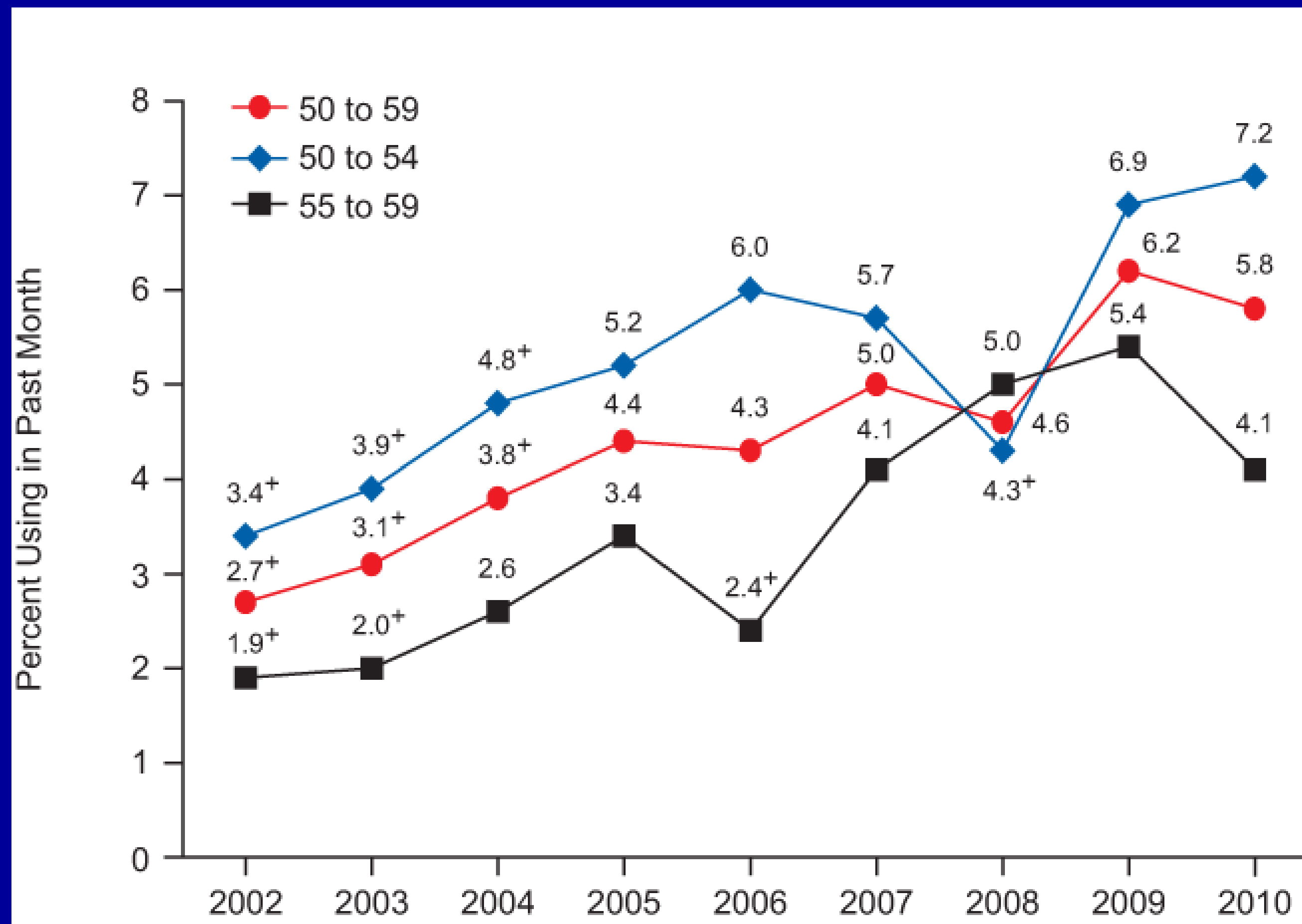
- Brief Advice
- Brief Interventions – using motivational interviewing techniques
- Referral Management

- Definition
  - Time-limited (20 minutes in 1-3 brief sessions) and targets alcohol misuse
- Goals
  - Facilitate treatment entry
  - Change in behavior

Use of 12 Step Group Oriented Treatment 1 Month after Residential Care

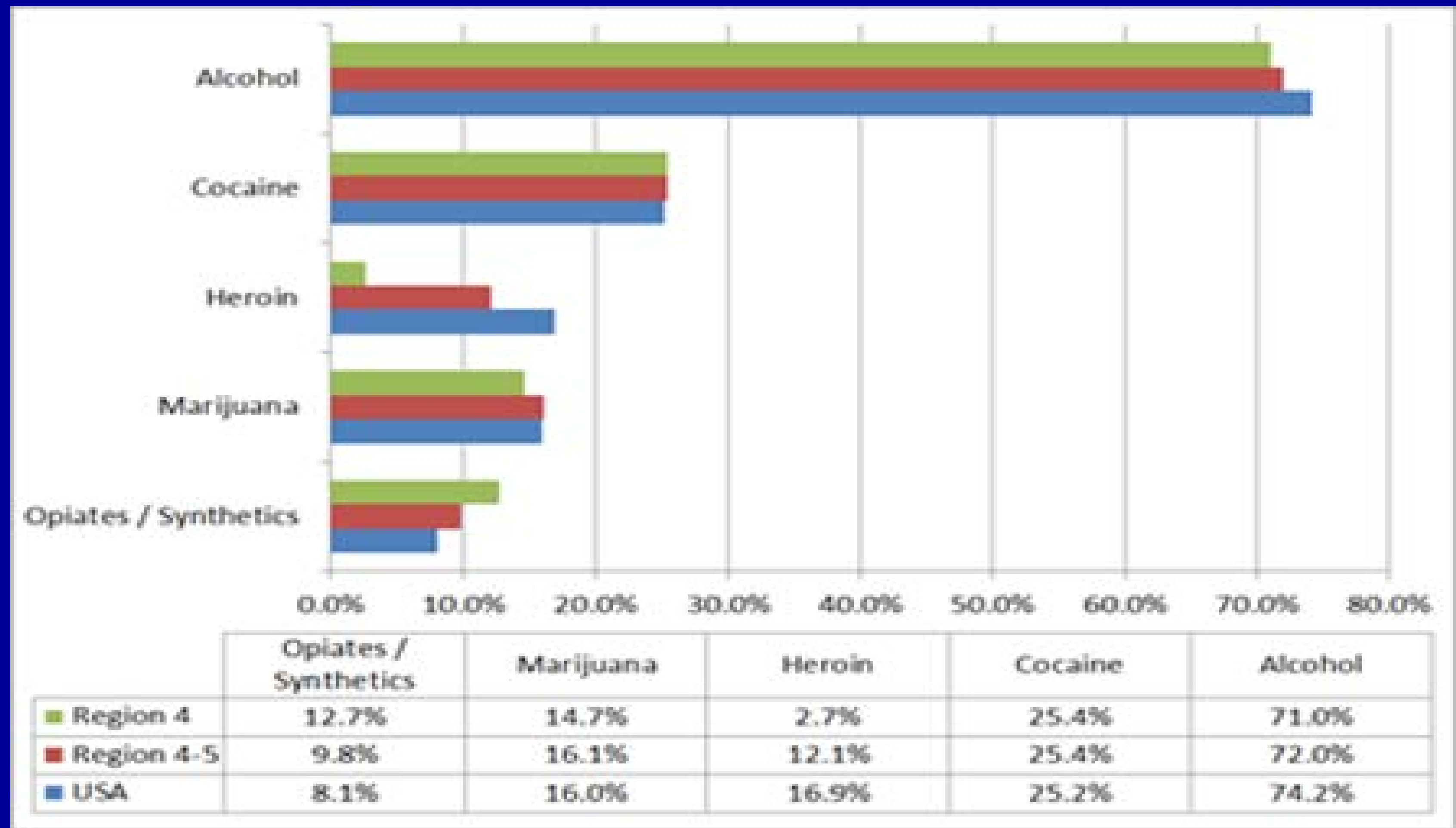
	Elderly Subjects	Middle Aged	P
Attend AA	81.2	91.1	0.372
Have a sponsor	54.6	64.7	0.076
Attend Aftercare	31.2	56.4	0.039
Abstinent	84.0	85.1	0.133

Nationally illicit drug use has more than doubled among 50- 59 year olds since 2002 (SAMHSA)



SAMHSA National Survey on Drug Use and Health (NSDUH) (http://www.oas.samhsa.gov/2k9state/Cover.pdf)

Treatment admissions aged 50 years and older by substance used



	Opiates / Synthetics	Marijuana	Heroin	Cocaine	Alcohol
Region 4	12.7%	14.7%	2.7%	25.4%	71.0%
Region 4-5	9.8%	16.1%	12.1%	25.4%	72.0%
USA	8.1%	16.0%	16.9%	25.2%	74.2%

Source: Treatment Episode Data Set (TEDS), 2010: TEDS data are collected by states that accept Substance Abuse Prevention and Treatment (SAPT) Block Grant funds

Specialty Addiction Services

- Compliance with treatment is greater in older adults compared to younger adults
- Age specific programming (groups, focus, etc) appears to have an impact on outcome in 1 randomized study and several observational studies

Pharmacotherapy

- Alcohol dependence
  - Naltrexone (oral and depot)
  - Acamprosate
  - Antabuse
- Opioids
  - Buprenorphine
  - Methadone
  - Naltrexone
- Cocaine
  - ?
- Nicotine
  - Nicotine replacement
  - Bupropion
  - Varenicline

Drug-related ED visits involving pharmaceutical misuse by older adults

- In 2004, there were an estimated 115,803 emergency department (ED) visits involving pharmaceutical misuse and abuse by adults aged 50 or older; in 2008, there were 256,097 such visits (increase of 121%)
- One fifth of ED visits involving pharmaceutical misuse and abuse among older adults were made by persons aged 70 or older
  - pain relievers were the type of pharmaceutical most commonly involved (43.5 percent), followed by drugs used to treat anxiety or insomnia (31.8 percent) and antidepressants (8.6 percent)

2010 summary from the SAMHSA Center for Behavioral Health Statistics and Quality report from the Drug Abuse Warning Network (DAWN). DAWN comprises a nationwide network of hospital emergency rooms (ERs)
http://www.samhsa.gov/data/2k10/WebSR018Pharma50+/Pharma50+HTML.pdf

Recommendations

- Use brief interventions techniques
- Refer to treatment programs particularly residential treatment
- Ask about illicit drug abuse
- Monitor for prescription drug abuse

Case Study

- 69 year old females comes to the ED and you are called to evaluate her because she is acting belligerent toward the staff

Psychosis and SPMI

Thanks to Carl Cohen

1 in 4 Lifetime Risk

- Up to 23% of the older adult population will experience psychotic symptoms at some time, with dementia being the main contributing cause
- Community: 0.2% to 4.7%
  - In NYC study: 3% psychosis
  - 14% if paranoia included
- Age 85+ (without dementia): 7.1% to 13.7%
  - May be prodromal for dementia
- Age 95+(without dementia): 7.4%

(Khouzam & Emes, 2007; Cohen et al, 2004

Etiologies of Psychoses in Older Adults (order of frequency)

1. Alzheimer's disease and other dementias (40%)
2. Depressive disorder (33%)
3. Medical/toxic causes including substances (11%)
4. Delirium (7%)
5. Bipolar Affective Disorder (5%)
6. Delusional disorder (2%)
7. Schizophrenia spectrum disorders (1%)

Manepalli et al, 2007 and Webster et al, 1998

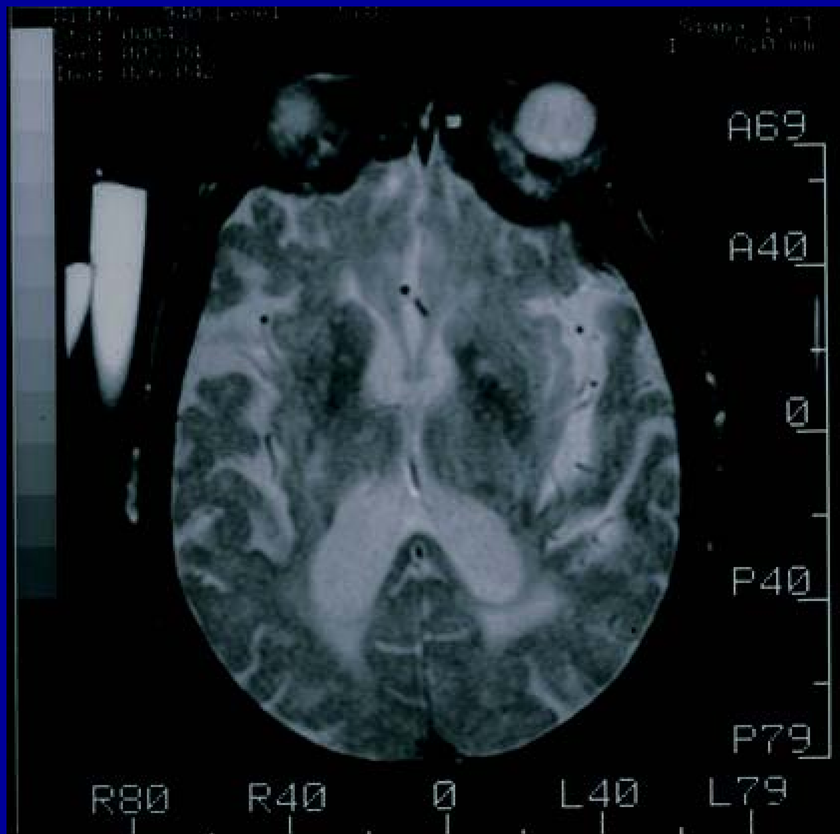
Severe and Persistent Mental Illness (SPMI)

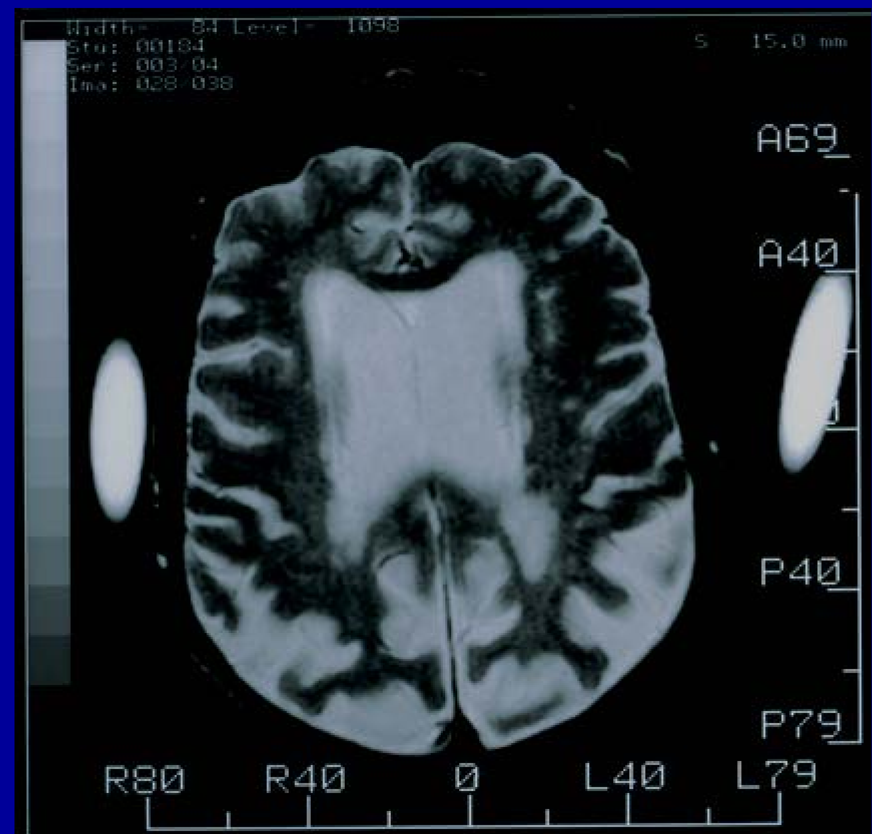
- Increased comorbid medical problems
  - Metabolic syndrome, chronic smokers, dementia
- Community reintegration programs with nursing homes
- Lack of resources in the mental health centers

SPMI in the community

- Georgia can estimate a 6% prevalence of SPMI among older adults, about 88,700 individuals
  - 85% in the community, 12% in nursing homes and 3% in long term care in psychiatric hospitals
  - More comorbid medical problems
  - Higher rates of substance abuse
  - More neuropsychological deficits

MRI changes in elderly patients with SPMI





- Based on long-term studies carried out in Europe ranging from 22 to 37 years, Ciompi found:

  *20 to 27% of patients attained complete symptomatic remission,
  *22 to 33% attained mild end states,
  *24% to 29% attained intermediate end-states,
- *14 to 18% attained severe end-states.

Thus, roughly half of persons exhibited recovery or mild end-states, and half showed moderate or severe end states.

Ciompi, L.: Catamnestic long-term studies on the course of life of schizophrenics. Schizophrenia Bull. 6: 606-618, 1980; Ciompi, L.: The natural history of schizophrenia in the long term.Brit. J. Psychiatr. 136: 413-420, 1981

Types of Antipsychotics

Typical

- Haloperidol (Haldol)
- Thioridazine (Mellaril)
- Chlorpromazine (Thorazine)

Atypical

- Clozapine (Clozaril)
- Olanzapine (Zyprexa)
- Risperidone (Risperdal)
- Quetiapine (Seroquel)
- Ziprasidone (Geodon)
- Aripiprazole (Abilify)

Typical antipsychotic side effects

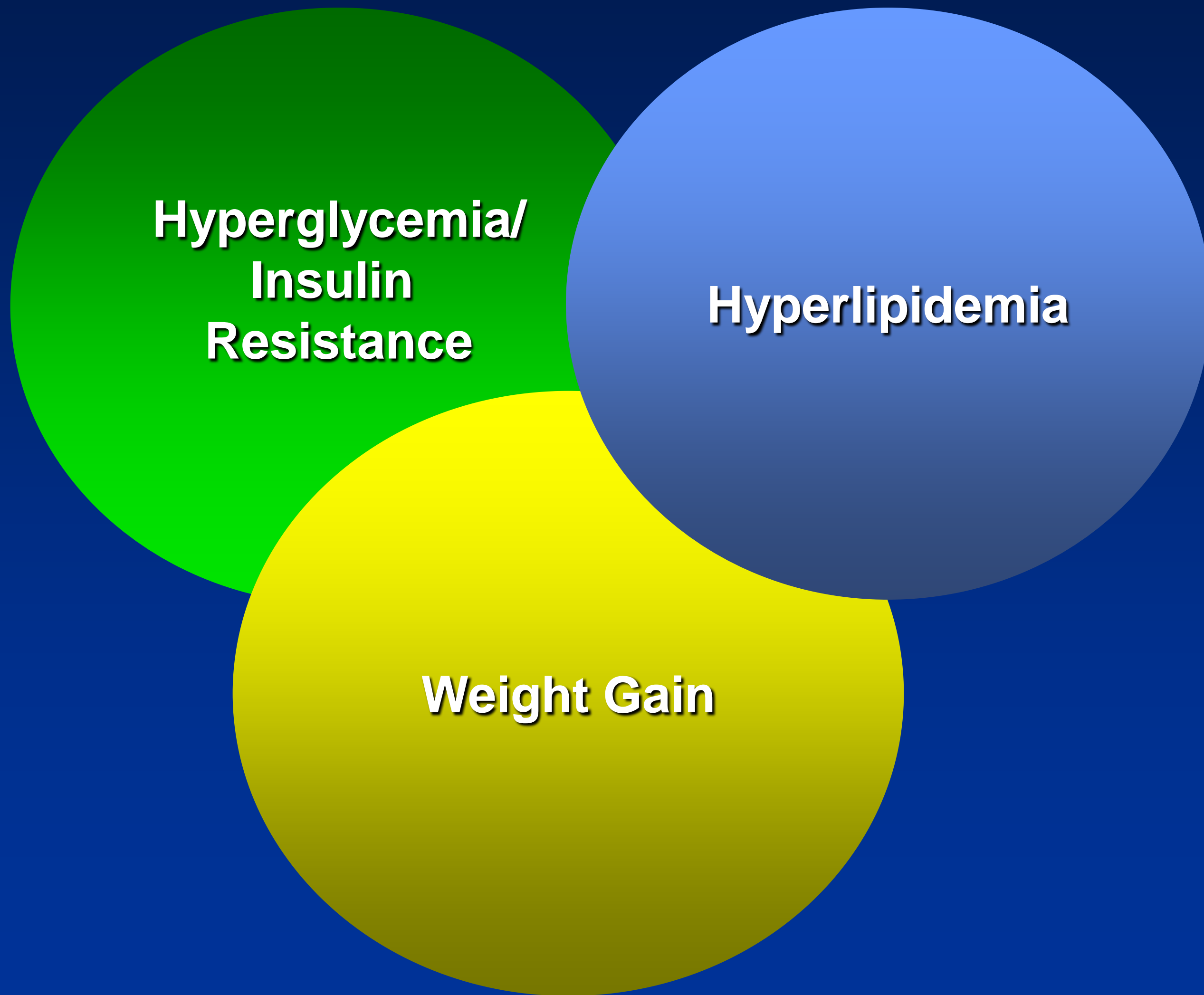
Haloperidol

- Parkinsonian symptoms: tremor, rigidity, short stepped gait
- Akasthesia "internal feeling of restlessness
- Acute dystonia "sudden tensing of a muscle group"

Chlorpromazine

- Sedation
- Hypotension
- Constipation, dry mouth

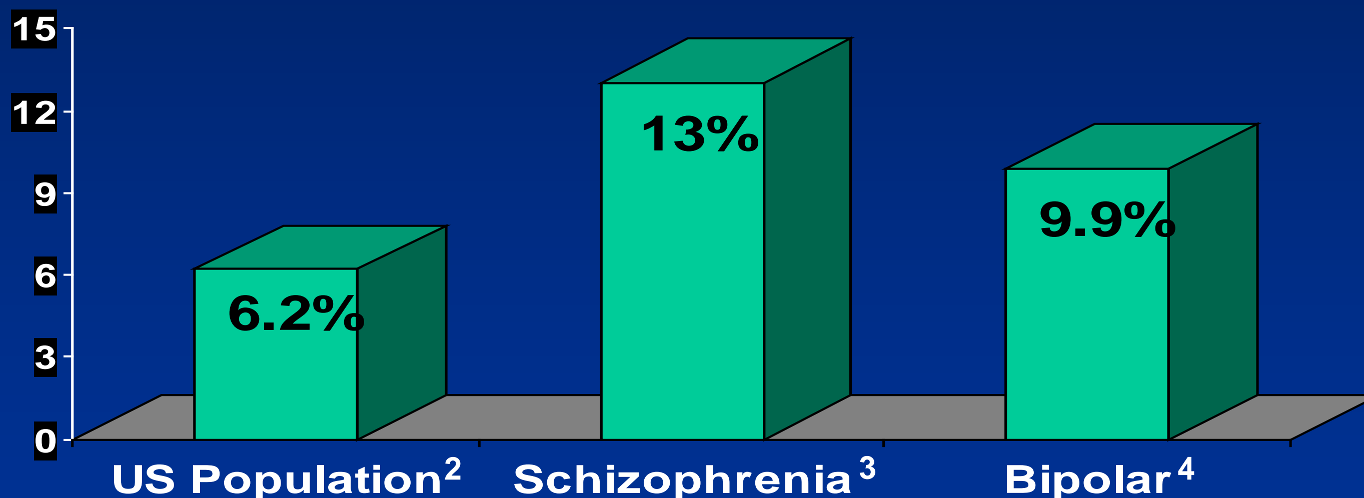
Atypical Side Effects of Atypicals and Metabolic Syndrome



Diabetes is a Major Health Concern

- Up to 50% of people with diabetes are undiagnosed in general population[1]
- It is important to note that the risk of diabetes is increased in patients with schizophrenia and bipolar disorder[2-4]

Prevalence (%) of Diabetes in US Population and in Patients With Schizophrenia or Bipolar Disorder*



*Prevalence percentages for schizophrenia are based on small study populations.

1 Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care*. 2002;25:S5-S20.
2 The American Diabetes Association [Online]. Available: www.diabetes.org [2003, October 28].
3 Regenold WT, Thapar RK, et al. *J Affect Disord*. 2002;70:19-26.
4 Cassidy F. *Am J Psychiatry.* 1999;156:1417-1420.

Tardive Dyskinesia

- Movement disorder caused by medications that block the dopamine receptor
  - 15% prevalence from 1959-1979[2]; 24% in review from 1992[3]
  - Antipsychotics (54 million prescriptions in 2011 and >3-fold increase over 10 years)[1]
  - Metoclopramide (7 million prescriptions annually)

Cloud LJ, Zutshi D, Factor SA: Tardive Dyskinesia: Therapeutic options for an increasingly common disorder; Neurotherapeutics (in press); 1. Friedman RA. A call for caution in the use of antipsychotic drugs. New York Times, 2012; 2. Kane JM, Smith JM: Arch Gen Psychiatry 1982;39:473–481; 3. Yassa R, Jeste DV: Schizophr Bull 1992;18:701–715

Tardive Dyskinesia

- Linear increase in TD with the duration of exposure
  - 5%/ year to 25% in five years; 49% in ten years and 68% after 25 years
  - Over age 45 years: 12-25%/ year

Uses of Atypicals
FDA Approved vs. "Off Label"

- Schizophrenia
- Bipolar Disorder (Mania)

- Depression
- Agitated dementia
- Autism
- Anxiety Disorders
- Insomnia

Atypical Comparison

- Olanzapine (Zyprexa)- most sedating, most weight gain
- Risperidone (Risperdal)- most parkinsonism, hyperprolactinemia
- Aripiprazole (Abilify)- akasthesia, less wt gain
- Ziprasidone (Geodon)- cardiac, less wt gain
- Quetiapine (Seroquel)- sedating, less parkinsonism
- Clozapine (Clozaril)- lowest parkinsonism, most side effects

Recommendations

- Use atypical antipsychotics over typical
- Consider limiting off label use
- Monitor for metabolic syndrome
- Monitor for tardive dyskinesia
- Monitor for cognitive changes

Case Study

- A 68 year patient which chronic schizophrenia is being managed with haloperidol decanoate for 20 years and has been without any episodes of psychosis.
  - What sort of health maintenance would you do regularly?

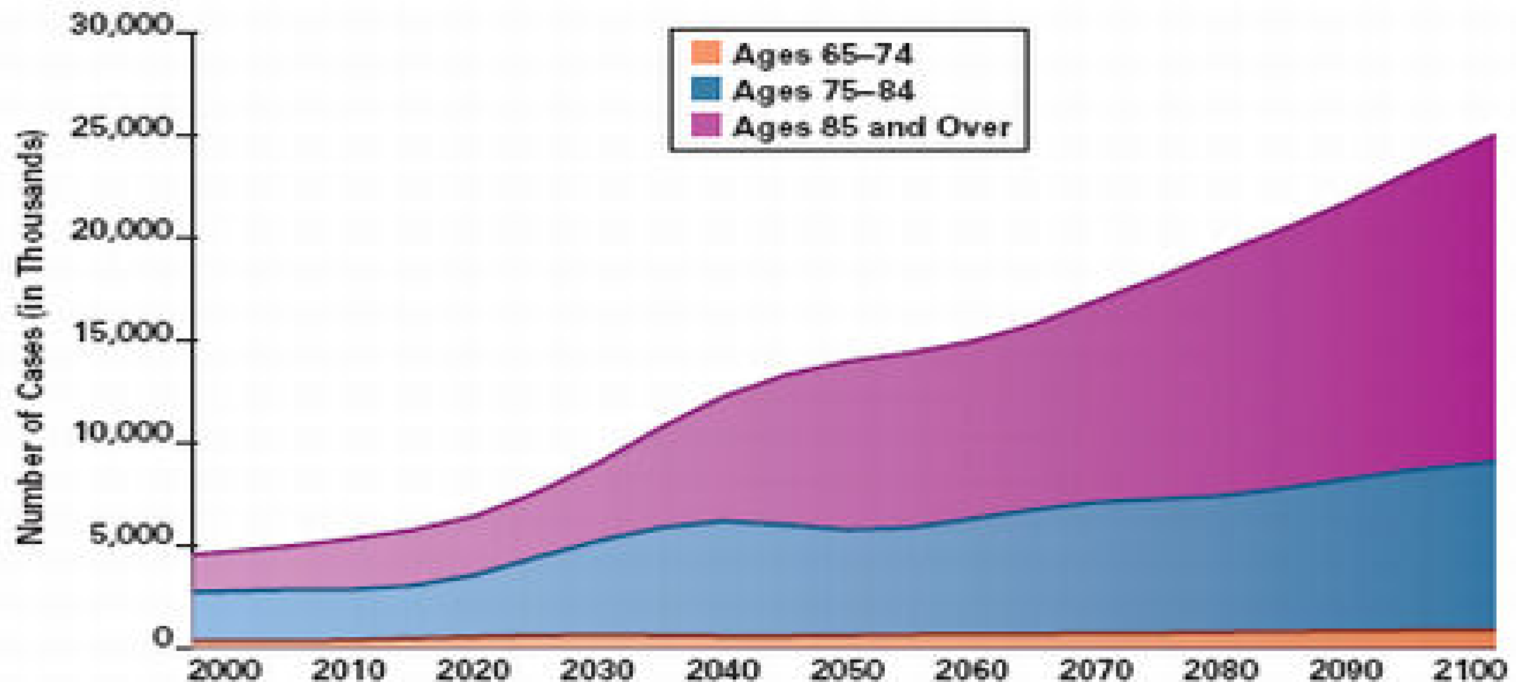
Dementia

Risk for Alzheimer’s disease

- Age is most important risk factor
  - Annual incidence worldwide increases from 1% between the ages of 60 and 70 years to 6 to 8% at the age of 85 years or older
  - In countries in which survival to the age of 80 years or older is not uncommon, the proportion of persons in this age group with Alzheimer's disease now approaches 30% and is expected to continue to increase substantially

Mayeux Annu Rev Neurosci 2003;26:81-104; Ziegler-Graham Alzheimers Dement 2008;4:316-323

Epidemiology of Alzheimer's disease



Psychiatric and Behavioral Symptoms in AD

- Apathy (50%-70%)
- Agitation (40%-60%)
- Mood lability (40%)
- Blunted affect (40%)
- Disinhibition (30%-40%)
- Withdrawal (30%-40%)
- Delusions (20%-40%)
- Anxiety (30%-50%)
- Suspiciousness (30%)
- Dysphoria (20%-40%)
- Hostility (30%)
- Aggression (10%-20%)
- Hallucinations (5%-15%)

Sultzer DL. Postgraduate medicine: A special report.1999:19-26.

Delusions in Alzheimer's Disease

- Delusional thought content (eg, paranoia) is common (studies suggest 34%–50% incidence)
- Common Delusions
  - Marital infidelity
  - Patients, staff are trying to hurt me
  - Staff, family members are impersonators
  - People are stealing my things

Deutsch et al. *Am J Psychiatry.* 1991;148:1159-63; Dreverts. *Bio Psychiatry.* 1989;25:39-48.

Medications used to treat dementia

Cognitive symptoms

- Cholinesterase inhibitors
  - Donepezil
  - Reminyl
  - Galantamine
- Glutamitergic
  - Memantine

Behavioral symptoms

- Benzodiazepines
- Trazodone
- Valproic acid
  - Carbamazepine
- Typical neuroleptics
  - Haloperidol
- Atypical neuroleptics
  - Risperidone
- SSRI's

- The Food and Drug Administration has determined that the treatment of behavioral disorders in elderly patients with dementia with atypical (second generation) antipsychotic medications is associated with increased mortality
  - Of a total of seventeen placebo controlled trials performed with olanzapine (Zyprexa), aripiprazole (Abilify), risperidone (Risperdal), or quetiapine (Seroquel) in elderly demented patients with behavioral disorders, fifteen showed numerical increases in mortality in the drug-treated group compared to the placebo-treated patients

Recommendations

- Try cholinesterase inhibitors for one year and discontinue if there is no benefit
- Maximize medical care
- Focus on psychosocial interventions particularly with the caregiver
- Avoid polypharmacy

Sources

- BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (http://www.cdc.gov/brfss/), CDC. Atlanta, Georgia: U.S. Department of Health and Human Services, 2010 and 2011. BRFSS is “the world’s largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984. Currently, data are collected monthly in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam.” BRFSS data are collected by local jurisdictions and reported to the CDC.
- Georgia Policy Academy State Profile (Dec 2012) developed by the Substance Abuse and Mental Health Services Administration in partnership with the U.S. Administration on Aging.

Additional Information on Geriatric Depression

- Fuqua Center Website www.fuquacenter.org