Serious Mental Illness in Older Veterans

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The Aging Veteran Population

- In the US, numbers of persons aged 65 years and over grew from about 4 percent of the population in 1900 to 12 percent in 1994
- By 2010 about 13.3 percent of the population will be over 65
- Veterans over 65 accounted for 38 percent of the total veteran population in 1999 and are expected to number between 7.8 million and 9 million until 2020.

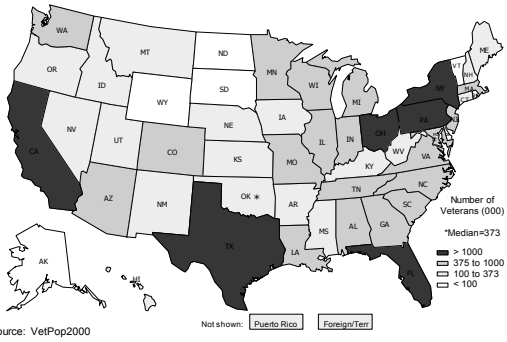
THE VA

And the Aging Veteran

VA Healthcare for Older Veterans

- National VA network:
  - 172 medical centers, 551 outpatient clinics, 132 nursing home care units, and 40 domiciliaries.
- Long-term-care facilities
  - 93 state veterans homes operated by 42 individual states

The States with the Largest Population Have the Largest Number of Veterans As of September 30, 2000

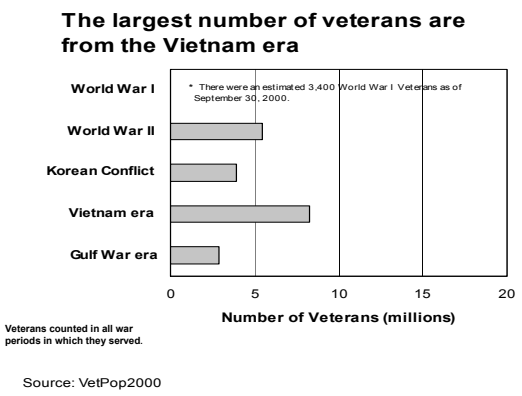


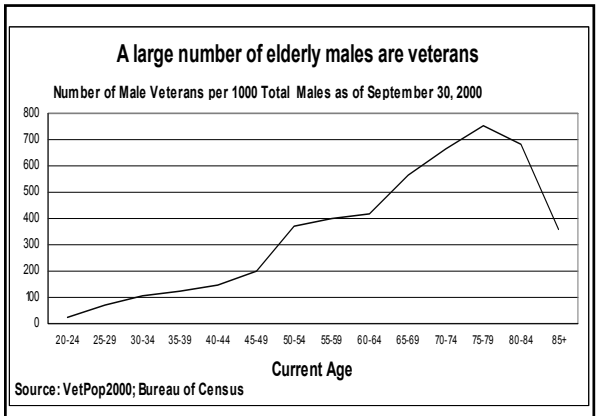
Source: VetPop2000

Census 2000 Veteran Data
VISN 22 - California Market

	Census 2000* Veterans	VetPop 2001Adj FY2012
LOS ANGELES, CA	510,712	315,258
RIVERSIDE, CA	144,174	106,327
SAN DIEGO, CA	292,034	206,900
IMPERIAL, CA	8,544	5,741
INYO, CA	2,329	1,494
KERN, CA	54,403	36,543
ORANGE, CA	193,548	141,076
SAN BERNARDINO, CA	140,439	96,408
SAN LUIS OBISPO, CA	27,825	20,821
SANTA BARBARA, CA	35,950	23,342
VENTURA, CA	63,430	43,936
Market Area Total	**1,473,388**	997,846

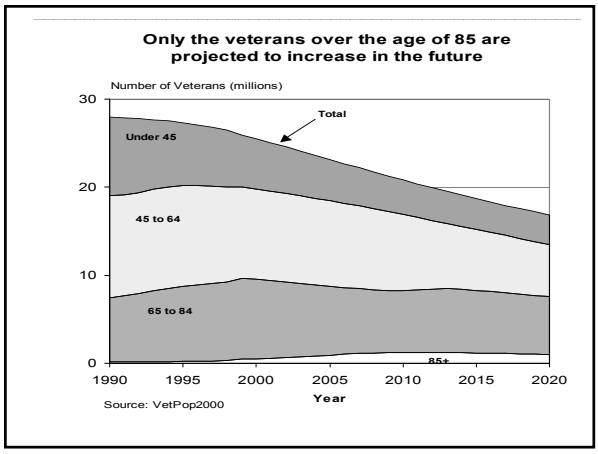
* Census 2000 is as of April 2000

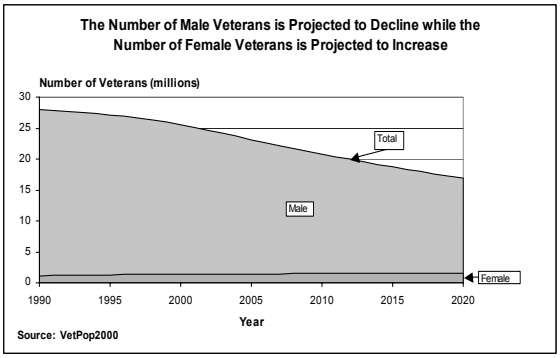




Veterans Across the Age Range

- Male veterans make up the majority of all civilian males at older ages, 65 to 85, reflecting the high proportion of all men who served during World War II.
- A relatively high proportion of men of the early baby boom generation, now in their 50s, are veterans, reflecting the relatively large number of men serving during the Vietnam era.
- At ages 30-49, a relatively smaller proportion of men are veterans as a result of a smaller, all-volunteer military.
- At the youngest ages, the proportion of men who are veterans is even smaller because many are still in the military.



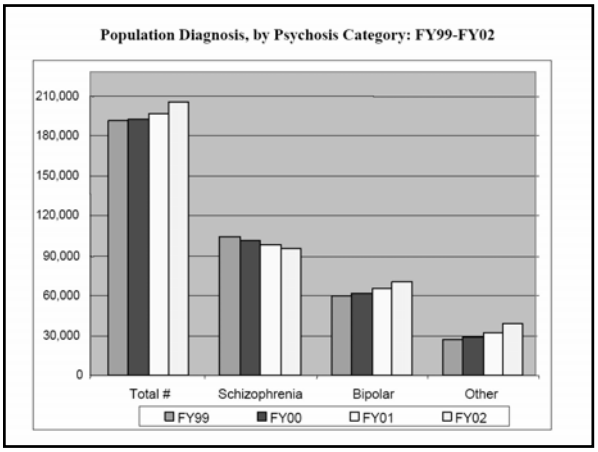


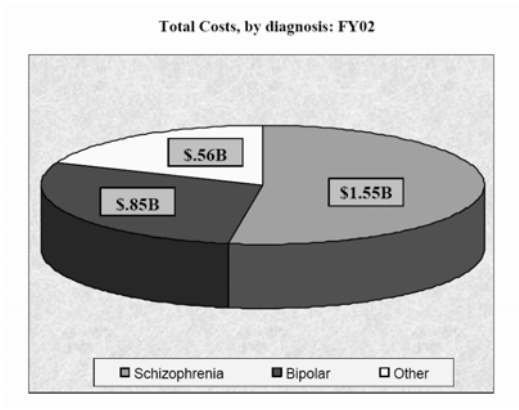
Serious Mental Illness

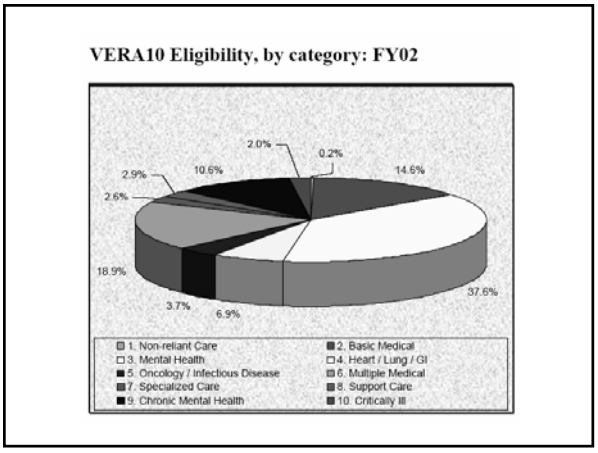
And Aging in the VA

Serious Mental Illness (SMI)

- Considered synonymous with "psychosis"
- Defined by one admission or ≥ 6 outpatient visits/year
- Predominantly schizophrenia and bipolar disorder

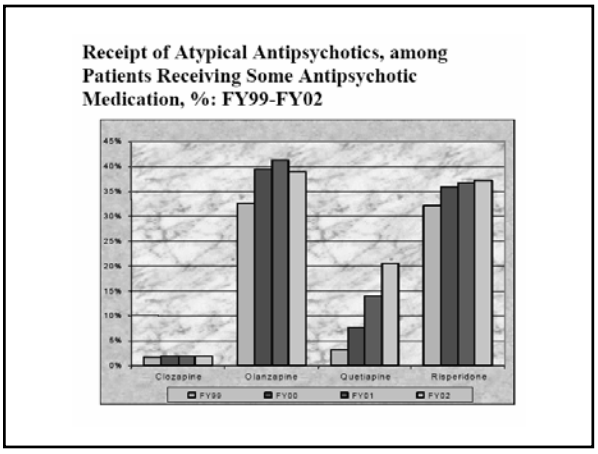






SMI Trends through 2002

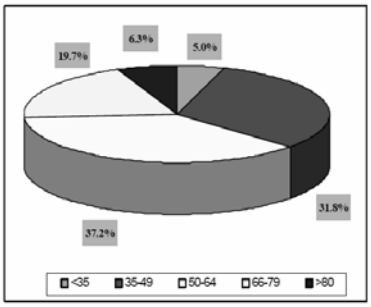
- Higher use of antipsychotics in SZ compared to BP (78% vs 43%)
- Atypical (second generation) drugs increasing from 62% (1999) to 85%
- Quetiapine prescription increasing fastest, olanzapine decreasing



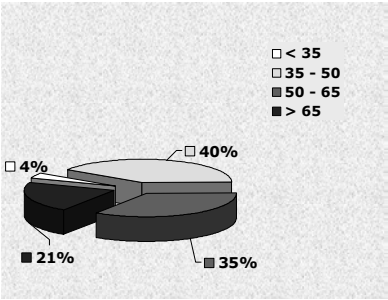
SMI Costs in the VA

Variable	FY99	FY00	FY01	FY02
Total Cost	$2.9B	$2.8B	$3.1B	$2.9B
$ per patient	$15,593	$14,518	$15,673	$14,370
Outpatient $ per patient	$5,893	$5,553	$6,939	$6,515
Hospital $ per patient	$6,908	$6,471	$5,597	$4,849

Age Distribution of Psychosis Patients, by diagnosis: FY02



Schizophrenia
Age Distribution in the VA



The Importance of SMI in the Older Veteran Population

- Conservative estimates for those aged 65 years or older suggest a minimum of 10 percent with Alzheimer's disease or other dementias and an additional 15 to 30 percent with other psychiatric illnesses
- It can be expected that at any time during the period of 1999 to 2020, between 2.3 and 2.7 million veterans will need psychogeriatric care

Approach to the Older Veteran with SMI

Risk Factors

Assessment and Diagnostic Tests - at the Bedside

- Focused psychiatric history and exam
- General physical history and exam
- Routine cognitive examination or rating scale (e.g. MMSE)
- Focused neurological exam

Assessment and Diagnostic Tests - Routine Laboratory, Drug Levels

- Urinalysis
- Complete blood count
- Basic chemistry screen
- Blood levels if patient is taking:
  - digoxin
  - anticonvulsant
  - theophylline
  - tricyclic antidepressant

Additional Assessments

- TSH, other thyroid
- ESR
- Serum B12
- Serum folate
- Urine culture
- Toxicology screen
- Chest x-ray
- ECG
- EEG
- CT or MRI scan

Brief Overview of Psychopharmacology of Psychosis in Older Veterans

Choosing an Antipsychotic - Guidelines

- Literature
- Consensus Guidelines
  - Treatment of Geriatric Agitation in Patients with Dementia (Expert Consensus Guideline Series)
  - Practice Guideline for the Treatment of Patients with Schizophrenia (American Psychiatric Association)
- Clinical experience

Typical (First Generation) Antipsychotics – Neuroleptics

- High potency (e.g. haloperidol)
  - Typical neuroleptics of choice for most older patients
  - Use with caution in patients with preexisting parkinsonism
- Low potency (e.g. thioridazine)
  - More sedating
  - Use with caution with prostatic hypertrophy, glaucoma, orthostasis

Current Use of First Generation Agents in Older Patients

- Patients who are doing well, with no evidence of TD
- Acute management of psychosis and delirium
- Adjunctive agents for patients partially responsive to second generation drugs

Atypical (Second Generation) Antipsychotics

- Clozapine, olanzapine, quetiapine, risperidone, ziprasidone, aripiprazole
- Most widely prescribed antipsychotics in the U.S
- Less EPS and tardive dyskinesia
- More effective on negative symptoms

Atypical (Second Generation) Antipsychotics -2

- Much more significant metabolic risks than first generation, including:
  - Obesity
  - Elevated lipids and cholesterol
- Probable higher risk for orthostasis and falls than high potency first generation agents
- Experience in older patients is still limited

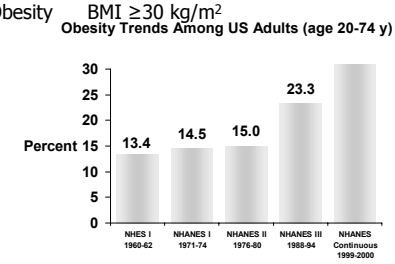
Problems with Second Generation Drugs

Obesity

WHO Definitions (conversion: (lb/in^2) x 705)

Overweight BMI ≥25 kg/m^2

Obesity BMI ≥30 kg/m^2



Flegal KM et al. *JAMA*. 2002;288:1723-1727.

High-Risk Groups for DM

- 45 years of age or older
- High BMI (>27 kg/m^2)
- Family history of diabetes in first-degree relative
- Ethnicity (eg, African-American, Hispanic-American, Asian-American, or Native American)
- Delivered a baby weighing >9 lb
- Medical history
  - Hypertension (≥140/90 mmHg)
  - Dyslipidemia (HDL ≤35 mg/dL or TG ≥250 mg/dL)
  - History of gestational diabetes, impaired glucose tolerance, or impaired fasting glucose

Buse JB. *J Clin Psychiatry*. 2002;63(suppl 4):37-41.

Glucose Monitoring Recommendations

- Screening for family/personal history of diabetes, especially patients with obesity or of high-risk ethnicity
- Education about the symptoms of diabetes
  - Fatigue, thirst, polyuria
- Baseline and quarterly fasting glucose during the first year of atypical antipsychotic therapy
  - Confirm provisional diabetes values on subsequent day
  - Decrease to semiannually if no change or if patient lacks risk factors
- Inquire about symptoms at each clinical visit
- In high-risk patients, monthly exams for first 3 months

Meyer JM. *J Clin Psychiatry*. 2002;63:425-433.

Lipid Monitoring Recommendations

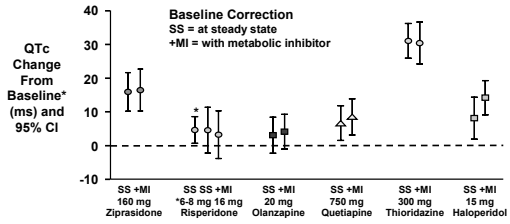
- Full lipid panel with fractionation of cholesterol should be performed annually for routine monitoring of all patients
- Quarterly fasting total triglycerides and cholesterol levels should be considered during the first year of antipsychotic treatment with higher-risk atypical agents (may be added to fasting glucose)
- Frequency of tests may be decreased depending upon results obtained and agent used

Meyer JM. *J Clin Psychiatry*. 2002;63:425-433.

QTc Interval and Consequences Associated With Its Prolongation

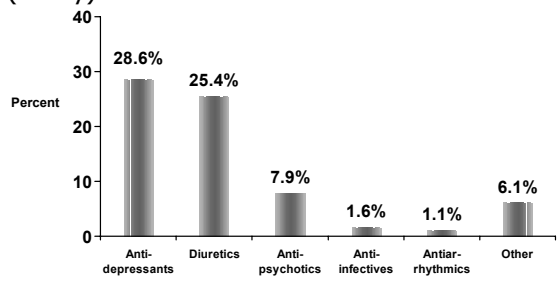
- Corrected QT interval
  - Adjusted for heart rate
    - Bazett or baseline correction
- Normal values
  - Men: QTc <420 ms
  - Women: QTc <430 ms
- Consequence of prolonged QTc interval
  - Ventricular tachycardia/fibrillation
  - Torsade de pointes
  - Syncope and resulting injury
  - Sudden death

Effect of Antipsychotics on Mean QTc with and without Metabolic Inhibitor



*Age range: 20-58 years; data on older patients unavailable.
Pfizer 054; open-label trial in patients with schizophrenia (N = 183; 164 completers).
FDA Psychopharmacological Drugs Advisory Committee — July 19, 2000.
Pfizer study 054 www.fda.gov/ohrms/dockets/ac/00/backgrd/3619b1a.pdf.

Percent of Co-Prescription of QTc Prolonging Drugs With Atypical Antipsychotics in Elderly (>65 y)



Data on file, Janssen Pharmaceutica Products, L.P. 2001.

CV Events in Risperidone Trials in Elderly*

	Risperidone	Placebo
Study #	Patients w/ CVAEs	Patients w/ CVAEs
AUS-5	9% (15/167)	2% (3/170)
INT-24	8% (9/115)	2% (2/114)
USA-63	1% (5/462)	1% (2/163)
BEL-14	0% (0/20)	0% (0/19)
Total	4% (29/764)	2% (7/466)

CVAE = cerebrovascular adverse event.
*Health Canada: www.hc-sc.gc.ca/hpb-dgps/therapeut/htmleng/adviss_ind_e.html.

CV Events in Risperidone Trials in Elderly: Considerations

- Findings among trials are inconsistent
- Number of overall reports is low
- "Cerebrovascular adverse events" are broadly defined
- Study not designed to determine incidence of, or risk factors for, strokes or CVAEs
- Data not adjusted for pre-existing risk-factors

*Summary:

"There is insufficient information to determine whether CVAEs in elderly patients with dementia are associated specifically with RISPERDAL, all antipsychotic agents, or any particular type of dementia." --Health Canada

CVAEs = cerebrovascular adverse events.
*Health Canada: www.hc-sc.gc.ca/hpb-dgps/therapeut/htmleng/adviss_ind_e.html.

Second Generation Antipsychotics - Therapeutic Efficacy in Elderly Patients – Conclusions and Dosages

Young Schizophrenia > Elderly Schizophrenia > Elderly Dementia

- Risperidone 2 – 6 mg/day; 1 – 3 mg/day; 0.5 – 1.5 mg/day
- Olanzapine 10 – 20 mg/day; 5 – 15 mg/day; 5 – 15 mg/day
- Quetiapine 400 – 800 mg/day; ???, ???
- Ziprasidone 80 – 160 mg/day; ???, ???
- Aripiprazole 10 – 30 mg/day; ???, ???

Second Generation Agents: Summary

- Clinical Trials in Schizophrenia and Dementia
  - Few published double-blind studies have directly compared therapeutic efficacy of typical versus atypical antipsychotics in elderly patients
  - Clinical experience suggests that atypical agents are at least as effective as (and may be more effective in some areas than) typical neuroleptics
- Despite similar mechanisms of action, atypical agents have differing side-effect profiles
- Appropriate dosing may help mitigate certain dose-related side effects
- Sedating agents should be avoided due to adverse CNS consequences, including possible risk of falls
- Use of agents with a higher likelihood for EPS should be accompanied by appropriate monitoring
- Use of agents with a higher likelihood for adverse metabolic effects should be accompanied by appropriate monitoring

Special Issues

Suicide

Tardive Dyskinesia

Polypharmacy

Suicide "SAD PERSONS" Risk Factors

- **S**ex: 3:1, most common among white males
- **A**ge: elderly at high risk; increasingly prevalent among adolescents (3rd leading cause of death)
- **D**epression:
- **P**revious attempts: increases risk 50-100 times
- **E**thanol abuse: 25-35% of suicides; 55% of attempters have consumed alcohol at the time of the attempt
- **R**ational thinking: disorganized ideation, psychosis
- **S**ocial supports: dearth of family or friends, living alone
- **O**rganized plan: method, time, setting, availability of means
- **N**o spouse
- **S**ickness: 35-40% have chronic illness/disability

Psychiatric Disorders with High Suicide Rates

- Major depression and Bipolar disorder (15-30%): *depression is the single factor most contributory to suicide*
- Substance abuse (15% with alcohol abuse)
- Schizophrenia (10%): mostly males, early
- Personality disorders (5-10%): borderline, antisocial, avoidant, schizoid
- PTSD

Older Individuals have the Highest Risk of Suicide

- Especially white male > 75 y/o (2x suicide rate of general population)
- Widowed/divorced
- Depressed
- Alcohol abuse
- Diminished social support
- Economic insecurity

Older Individuals have the Highest Risk of Suicide -2

- Health problems (70% see PCP in month before, 40% in week before)--present with masked depression (somatic complaints with no c/o depression or suicidal ideation)
- Less purpose/meaning in life
- Growing social acceptability of ending a painful life
- *It is critical to screen for depression and suicidal ideation in the elderly.*

Tardive Dyskinesia

- Tardive dyskinesia - risk factors
  - Age (26%, 52%, 60% after 1, 2, 3 years)
  - Length of treatment
  - Alcohol abuse/dependence
  - Early-onset EPS
  - Medical co-morbidity
  - Female gender
  - Mood disorders

Tardive Dyskinesia in Elderly

- May appear as early as 1 month
- Prevalence as high as 60%
- Course is variable
- 1/3 of patients who d/c neuroleptics have improvement

Tardive Dyskinesia

- The risk for TD with second generation drugs is 1/6th to 1/12th that of first generation in younger patients
- In older patients, the risk for TD with 2nd Generation Drugs is similar to the risk for TD in younger patients with 1st Generation Drugs (3-4%/year)

Polypharmacy

- Differing definitions of Polypharmacy
  - The prescription administration or use of more medications than are clinically indicated in a given patient (Montamat and Cusack, 1992)
  - The use of more than one drug to treat symptoms or disease (Stewart and Hale, 1992)

Facts About Polypharmacy

- Persons aged 65 and older receive 3 times more prescription drugs than those under 65
- Older patients represent 12% of the population, but receive 31% of prescription drugs
- Patients over 65 are typically on 2 to 3 prescribed drugs, in addition to 1 non-prescribed drug, and this increases with age
- Adverse drug reactions increase exponentially with the number of drugs taken, with less than 5% of patients have ADRs with less than 5 drugs, 15 % with 10 drugs, and over 60% with 18 or more drugs

What Makes Some Polypharmacy Bad?

- Drug-drug interactions
- Increase in adverse drug reactions
  - Restlessness
  - Falls
  - Depression
  - Confusion
  - Loss of memory
  - Constipation
  - Incontinence
  - EPS
- Compliance problems

Irrational Polypharmacy

- Using multiple drugs when one may be sufficient
  - Hair-trigger responsiveness to symptom change
  - Anxiety related to stopping medication
  - Incomplete switching of medication
  - Pre-combined polypharmacy (perphenazine and amytriptyline)
- Using drugs when pharmacological treatment may be ineffective or unwarranted
  - Placebo effects
  - Insomnia
  - Homeostatic responses

Irrational Polypharmacy-2

- Using drugs to treat side effects of other drugs
  - Overly aggressive medication increase
- Using drugs to treat psychiatric effects of other drugs
  - Psychiatric patients can also have psychiatric side effects

What factors increase the likelihood of irrational polypharmacy?

- Patient-related factors
  - Use of multiple automatic refills
  - Hoarding of medication
  - Use of multiple pharmacies or physicians
  - Borrowing medications
  - Self-medication (and OTC medications)
  - Impaired vision or cognition
- Physician-related factors
  - Poor communication to patient
  - Misdiagnosis
  - Failure to review or discontinue medications
  - Use of multiple automatic refills without adequate follow-up

What Makes Polypharmacy Rational?

- All pharmacological treatments are polypharmacy
  - Pharmacodynamics
  - Site-specificity and Action-specificity
  - Problems with one disease-one transmitter
  - Neural circuit interactions
- Rethinking Ockam's Razor
  - *Entia non sunt multiplicanda sine necessitate* (Entities should not be multiplied beyond necessity)
- Carefully weighing advantages and disadvantages
  - Synergy and side effects

Principles of Rational Polypharmacy

- Avoid Irrational Polypharmacy
  - Ask patients to bring all medications in
  - Restrict prn prescribing
  - Involve families and caregivers
  - Educate and communicate
- Avoid treating side-effects
- Increase medications slowly
- Be patient
- Try switching medications rather than adding
- Switch completely if possible
- Familiarize yourself with psychiatric effects of medications

Principles of Rational Polypharmacy-2

Improve therapeutic effectiveness
- Synergistic benefits are more likely to occur with drugs with different modes of action

Reduce or cancel side-effects
- Use beneficial side-effects

Summary of Polypharmacy

- Avoid Irrational Polypharmacy
- Consider Polypharmacy when:
  - Multiple Medical Conditions
  - Potential Synergy in Therapeutic Effect
  - Overall Reduction in Side Effects
- Keeping in mind:
  - Potential Increase in ADRs
  - Potential Compliance Problems