Psychopharmacology

- A primary treatment mode of psychiatric-mental health nursing care

Psychopharmacology - continued

- ANA Task Force Guidelines
  - Integrate current data from the neurosciences.
  - Demonstrate knowledge of psychopharmacologic principles.
  - Provide safe and effective care of clients taking these medications.
Psychiatric Medications

- Prior to the 1950s: focus on behavioral interventions and sedatives
- Mid-fifties: Introduction of the first antipsychotic medication chlorpromazine (Thorazine)

Psychiatric Medications - continued

- Since then, many advances have led to the treatment of the client with mental illness in the community.

Figure 7.1 The great success of biological psychiatry. This graph illustrates the dramatic decrease in psychiatric inpatient numbers since the inception of psychopharmacology.
Psychiatric Medications - continued

- Psychiatric medications allow for the correction of imbalances of brain chemicals.
- Many medications now have more uses than their original indication.
  - Fluoxetine (Prozac): indicated for depression and now also for obsessions and premenstrual dysphoria

Psychiatric Medications - continued

- Ongoing research on new medications
- Ongoing research on new delivery systems
  - Newer depot: Risperidone Consta
  - Orally Disintegrating Tablets

Impact on Ethnic Groups

- Some ethnic groups are slow metabolizers.
  - More side effects
  - Greater risk of toxicity
- Some ethnic groups are fast metabolizers.
  - Less effect of the medication
Impact on Ethnic Groups - continued

- High expressed emotionality = poorer prognosis and more relapses
- Ethnic diversity may impact how high expressed emotionality is perceived.

Psychiatric Symptomatology and Side Effects

- Extended observation important
- Difficult to distinguish symptoms from side effects

Psychiatric Symptomatology and Side Effects - continued

- Benzodiazepines may further sedate a client with dementia.
  - Dementia getting worse or cognitive decline due to the medication
- Antipsychotic medications
  - May cause parkinsonianism
Psychiatric Medications

- Positive Effects
  - Allowed release of clients from inpatient hospital to treatment in the community
  - Manage illnesses but do not cure them
  - Eliminate or decrease the symptoms of mental illnesses

Psychiatric Medications - continued

- Negative Effects
  - Side effects
  - Potential interactions with other medications and substances
  - Possible need to cope with the realization of having a chronic illness

Antipsychotic Medications

- Beneficial in disorders that include psychotic states
- Decrease symptoms of delusional thinking, hallucinations, confusion, motor agitation, motor retardation, formal thought disorder, blunted affect, bizarre behavior, social withdrawal, belligerence, and uncooperativeness
Antipsychotic Medications - continued

- Side effects
  - ANS, extrapyramidal, other CNS, allergy, blood, skin, eye, endocrine, and weight gain

Antidepressants

- Negative effects
  - Tricyclics may aggravate symptoms in a person with schizophrenia.
  - MAOIs may cause a hypertensive crisis when combined with:
    - Foods containing tryamine
    - Sympathomimetics
    - SSRIs, SNRIs

Antidepressants - continued

- Negative effects - continued
  - Initiation of antidepressants may contribute to the risk of suicide in children, adolescents, and adults.
Antidepressants - continued

- Primarily treat depression
- Specific antidepressants may treat other symptoms as well.
- The negative effects include the potential side effects and interactions.

Mood Stabilizers

- Treat disorders with significant variations in mood (bipolar disorders).
- Lithium: Initially the most effective
- Divalproex (Depakote)
- Carbamazepine (Tegretol)

Guidelines for the Treatment of Bipolar Disorder

- A mood stabilizer is used in all phases of treatment.
- Atypical antipsychotics are preferable to conventionalals.
- Mild depression is treated initially with a mood stabilizer; an antidepressant is used in the beginning of a severe depression.
- Rapid cycling is treated with a mood stabilizer alone.
Lithium Levels

- Lithium levels monitored due to the narrow window between therapeutic and toxic:
  - Every 2-3 months
  - If dosage increases
  - If behavior changes

Anxiolytic Medications

- Effect the disinhibition of fear-induced behavior.
- Side effects include addiction potential and overdose sequelae.
- Classes are benzodiazepines and nonbenzodiazepines.

Insomnia

- Treatment includes:
  - Antidepressants
  - Benzodiazepines
  - Nonbenzodiazepines
  - OTC medications
  - Barbiturates
Insomnia - continued

- Treatment of choice
  - Nonbenzodiazepines
    - Rapid absorption
    - Efficient elimination
    - Less hangover effect

Acetylcholinesterase Inhibitors

- Improve or slow the decline in functioning and memory of clients with dementia of the Alzheimer’s type.

Antipsychotics

- Conventional
  - Block dopamine receptors at 70% to 80% occupancy to be effective.
- EPSEs occur at occupancy > 80%
Antipsychotics - continued

- Atypicals
  - Reduced affinity for dopamine receptors
  - Affinity for serotonin receptors
  - Fewer EPSEs
  - Reduction in negative symptoms

Antidepressants

- Most antidepressants
  - Make NE and or 5-HT more available to the synaptic receptors in the CNS.

- Tricyclics
  - Block the reuptake of NE and 5-HT.

- MAOIs
  - Interfere with the enzyme responsible for the breakdown of NE and 5-HT.

Antidepressants - continued

- SSRIs
  - Inhibit the reuptake of 5-HT.

- SNRIs
  - Inhibit the reuptake of NE and 5-HT.

- Atypical antidepressant
  - Buproprion (Wellbutrin) is believed to have noradrenergic and dopaminergic effects.
Reuptake Inhibitor

Click here to view an animation on Reuptake Inhibitor

Mood Stabilizers

- Lithium
  - Aids in the reduction of neurotransmitter release into the synapse and enhances return.
- Lithium and anticonvulsants
  - May affect neurocellular changes that occur over weeks and months.

Anxiolytic Medications

- Benzodiazepines
  - Potentiate GABA, producing relaxation.
- Benzodiazepine receptors
  - Type 1: located in parts of the brain responsible for sedation
  - Type 2: located in parts of the brain responsible for cognition, memory, and psychomotor functioning
**Acetylcholinesterase Inhibitors**

- Increase available acetylcholine in the CNS by decreasing acetylcholinesterase, an enzyme that breaks down acetylcholine.

**Educating Clients**

- Promotion of self-care
- Advocation for the best outcomes
- Awareness of drug counterfeiting
- Safe use of herbal medications and supplements

**Resources**

- [http://www.psych.org/psych_pract/treat/pg/prac_guide.cfm](http://www.psych.org/psych_pract/treat/pg/prac_guide.cfm)
  This site for the American Psychiatric Association includes practice guidelines for mental illnesses, most of which contain a section on pharmacological treatment of the disorder.
- [http://www.fda.gov](http://www.fda.gov)
  The Food and Drug Administration, whose mission includes providing for public safety by assuring the safety, efficacy, and security of medications, offers information for consumers and health care professionals related to medications and a host of other issues.
Resources - continued


This National Institute of Mental Illness site provides patient educational publications about the various medications used to treat mental illnesses.