Medications and Dementia

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JOHNSON COUNTY KANSAS

2 Types of Medications

- Treat *cognitive* symptoms of dementia
- Treat *behavioral / psychological* symptoms of dementia

What challenges have you faced with medications for the people you serve?

Please type in the chat

Medications: Cognitive Enhancers

Treat the cognitive symptoms

- Memory loss
- Confusion
- Problems with thinking and reasoning

Improve symptoms and slow progression

Medications: Cognitive Enhancers

2 types:

Cholinesterase Inhibitors:

- donepezil (Aricept)
- galantamine (Reminyl)
- rivastigmine (Exelon).

NMDA receptor antagonist:

- memantine (Namenda)

Common Side effects:

- Gastrointestinal
- Lightheadedness / dizziness
- Altered dreams.

Medications: Cognitive Symptoms

Cholinesterase Inhibitors

Used to treat Early stages

Often tried with other dementias such as Vascular

Unclear how long they will work

NMDA receptor antagonist

Used to treat moderate to advanced Alzheimer's

Often used to treat mild to moderate Vascular dementia

Medications that may have a positive effect in adults in the general population with AD may not always work for adults with ID

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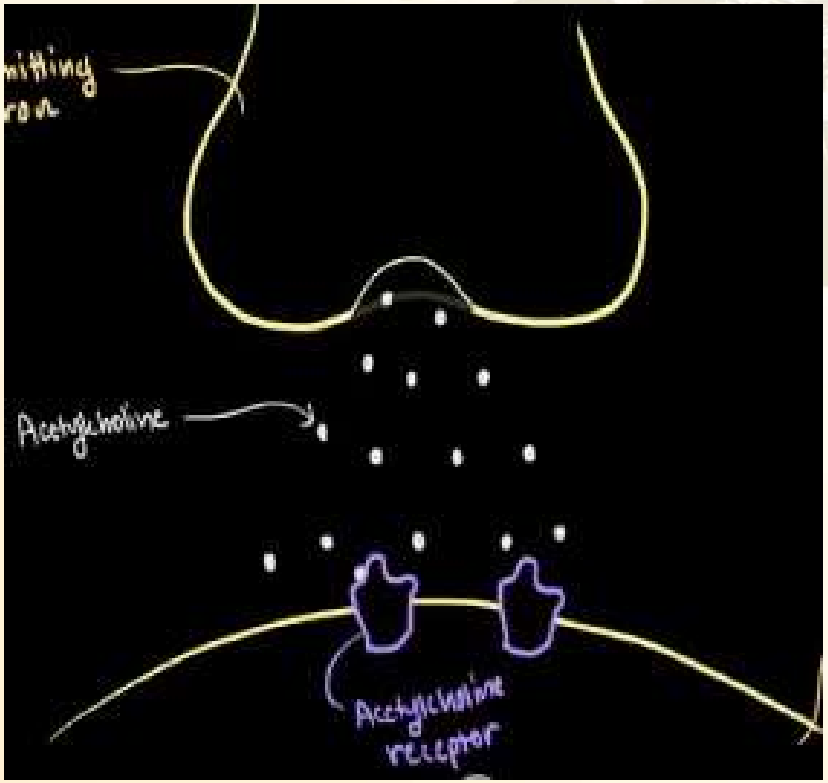
Anticholinergics

- Drugs that block acetylcholine from binding to its receptors
- Used to treat:
  - Urinary incontinence
  - Overactive bladder
  - COPD
  - Allergies (Benadryl)
  - Parkinson's Disease
  - Muscle spasms associated with other conditions



Common Anticholinergics

- Atropin (Atropine)
- Benztropine mesylate (Cogentin)
- Darifenacin (Enablex)
- Fesoterodine (Toviaz)
- Oxybutynin (Ditropan XL)
- Solifenacin (VESIcare)
- Tiotropium (Spiriva)
- Tolterodine (Detrol)

Implications of Anticholinergics

Lessen neuron communication

- Can exacerbate dementia symptoms
- Can prevent efficacy of cognitive enhancers

Long term use can increase risk of dementia

Implications of Anticholinergics

- Not recommended for people with Down syndrome

- Not recommended for older population 65+

True or False?

There are 2 types of medications for the *cognitive* symptoms of dementia.

True or False?

Anticholinergics do not affect the efficacy of Alzheimer's medications

Medications: Behavioral / Psychological Symptoms in Dementia (BPSD)

- Treat behaviors that are of imminent and severe risk to self or others
- Used only when non-medication approaches have failed
- Target symptom clusters

Examples of Behaviors Presenting Severe Risk

- Self-injurious behavior resulting in severe injury
- Aggression towards others that puts the person at risk of severe injury (such as with osteoporosis)
- Prolonged states of anxiety / worry that severely impacts quality of life and the ability to carry out necessary tasks such as eating or sleeping
- Constant attempts at elopement causing distress to the person and their mental state

Special Note: Delirium

- An acutely disturbed state of mind that occurs in fever, intoxication, and other disorders and is characterized by restlessness, illusions, and incoherence of thought and speech

- Often comes on abruptly / suddenly

Sudden changes must be investigated promptly so the underlying condition can be treated

Medications: Behavioral Psychological and Symptoms in Dementia (BPSD)

- FDA **Black Box Warning** for usage in patients with dementia.
- Antipsychotics are NOT indicated by the FDA for treatment of dementia-related psychosis
- Increased risk of mortality and vascular complications

- Important to weight benefits vs. risks

Special Note: Lewy Body Dementia

- DO NOT give antipsychotic medication if Lewy Body dementia is suspected
- Detrimental affects that may be irreversible
- Advocacy is critical, confirm the diagnosis if possible

True or False?

Antipsychotic medications are safe for people with Alzheimer's or Dementia

Advocacy:
Questions for Healthcare Providers

- Expected time to response
- Risks associated with and without Rx
- Appropriate dose range
- Monitoring for side effects and response
- When to consider dose reduction, discontinuation.

Symptom Clusters

Target Symptoms	Medication
Delusions Hallucination Aggression "Agitation"	Atypical Antipsychotics: • risperidone • olanzapine • quetiapine
Sadness Irritability Anxiety Insomnia	Antidepressants • citalopram • sertraline • venlafaxine • mirtazapine • trazodone

Target symptoms	Medication
Mood swings Euphoria Impulsivity	Mood stabilizers: • valproic acid • carbamazepine
Agitation Apathy Irritability	Cholinesterase Inhibitors. Memantine
Anxiety (short term use in predictable situations)	Anxiolytics: • lorazepam • oxazepam

The Biology of Medication Side Effects

- Polypharmacy and dosages can adversely affect behavior
  - Decreased ability to metabolize medications with age
  - Dosage guidelines developed for younger persons and applied to older adults

Determinant	Effect of Aging	Clinical Implications
Absorption	Increased gastric emptying time	Little
Distribution	Increased body fat Decreased body water	Decreased elimination of fat-soluble drugs Increased effect of water-soluble drugs
Protein Binding	Decreased serum albumin	Increased free fractions of some drugs, leading to toxicity
Hepatic Metabolism and Clearance	Decreased oxidative metabolism	Decreased clearance of most drugs
Renal Metabolism and Clearance	Decreased renal blood flow	Decreased clearance of water-soluble drugs
End-organ sensitivity	Increased	Increased effects at lower doses

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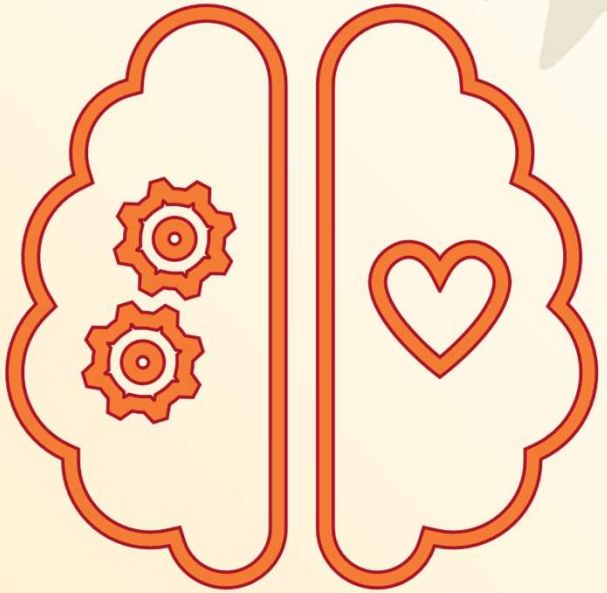
Start with the lowest possible dose and work up from there.

Do not assume the 'standard' dose is an acceptable place to start for older adults.

The Biology of Medication Side Effects

- Lifetime use of medications
  - Schizophrenia
  - Corticosteroids
  - Seizures
  - Antipsychotics



The Behavior of Medication Side Effects

- Decreased fluid intake
  - Incontinence
  - More frequent urges to go
- Avoidance of activities
  - Standing, walking, dressing

We may see changes in behavior before we realize it is a potential side effect of medications

Corticosteroids

Asthma, COPD
Allergic conditions
Ulcerative colitis
Other gastro-intestinal conditions
Lupus
Arthritis

Psoriasis and other skin conditions
Endocrine disorders
Collagen diseases
Blood disorders
Eye diseases

Corticosteroids

Flovent (Fluticasone)
Pulmicort (Budesonide)
Qvar (Beclomethasone)
Alvesco (Ciclesonide)
Aerospan (Flunisolide)
Singulair (Montelukast)
Foradil (formoterol)

Advair Diskus
Symbicort
Dulera
Breo
Albuterol
Serevent (Salmeterol)

Why am I talking about this?

- Osteoporosis
- High probability of side effects
- Side effects can lead to changes in behavior

Corticosteroids

Short-Term Side Effects:

Elevated eye pressures
Fluid retention and swelling
High blood pressure
Problems with Mood, memory, behavior
Weight gain
Dry Skin
Insomnia
Nervousness
Joint Pain- hip and knee (adrenal necrosis)
Indigestion, ulcers

Longer-Term Side Effects:

Clouding of the lens in eyes (cataracts)
High blood sugar
Increased risk of infection
Osteoporosis
Suppressed adrenal gland hormone production
Thin skin, bruising and slower wound healing

True or False?

Medication side effects can be biological or behavioral.

Be Aware of What Medications People Take

- Age-related changes cause a decline in ability to metabolize medications
- This results in adverse drug reactions (ADRs)
  - May mask, mimic or exacerbate other diseases or disorders present
- Need to have drug regime reviewed by physician and/or pharmacist to keep it simple

Be Aware of What Medications People Take

Increase observations to change:

- Co-morbidities increase the number of medications prescribed
- This increases the risk of drug-to-drug interactions
- This also increases the chance of adverse drug reactions (ADRs).

Being Watchful for ADRs

Adults with Down syndrome (and with IDD) :

- Presence of chronic health conditions increases risk of ADRs
  - Higher than that of general population
- Older adults with Down syndrome are at 5 times the risk for hospitalization, in part, due to increased ADRs

Being Watchful for ADRs

Any changes in behavior or biological functions, when medications are changed, are a strong indicator of ADRs

- Record medications that were changed
- Record behavior and biological function changes
- Report these changes to healthcare provider

Data Collection

- Effectively tracking possible side effects involves gathering meaningful data.
- Specifically:
  - Input (food, fluids)
  - Behaviors observed
  - Mental States (mood, anxiety)
  - Vital signs / other measurable health indicators
  - Task Performance

Data Examples

Date new medication started: 9/1/18

Time medication is scheduled: daily, 7am

Name of Medication:

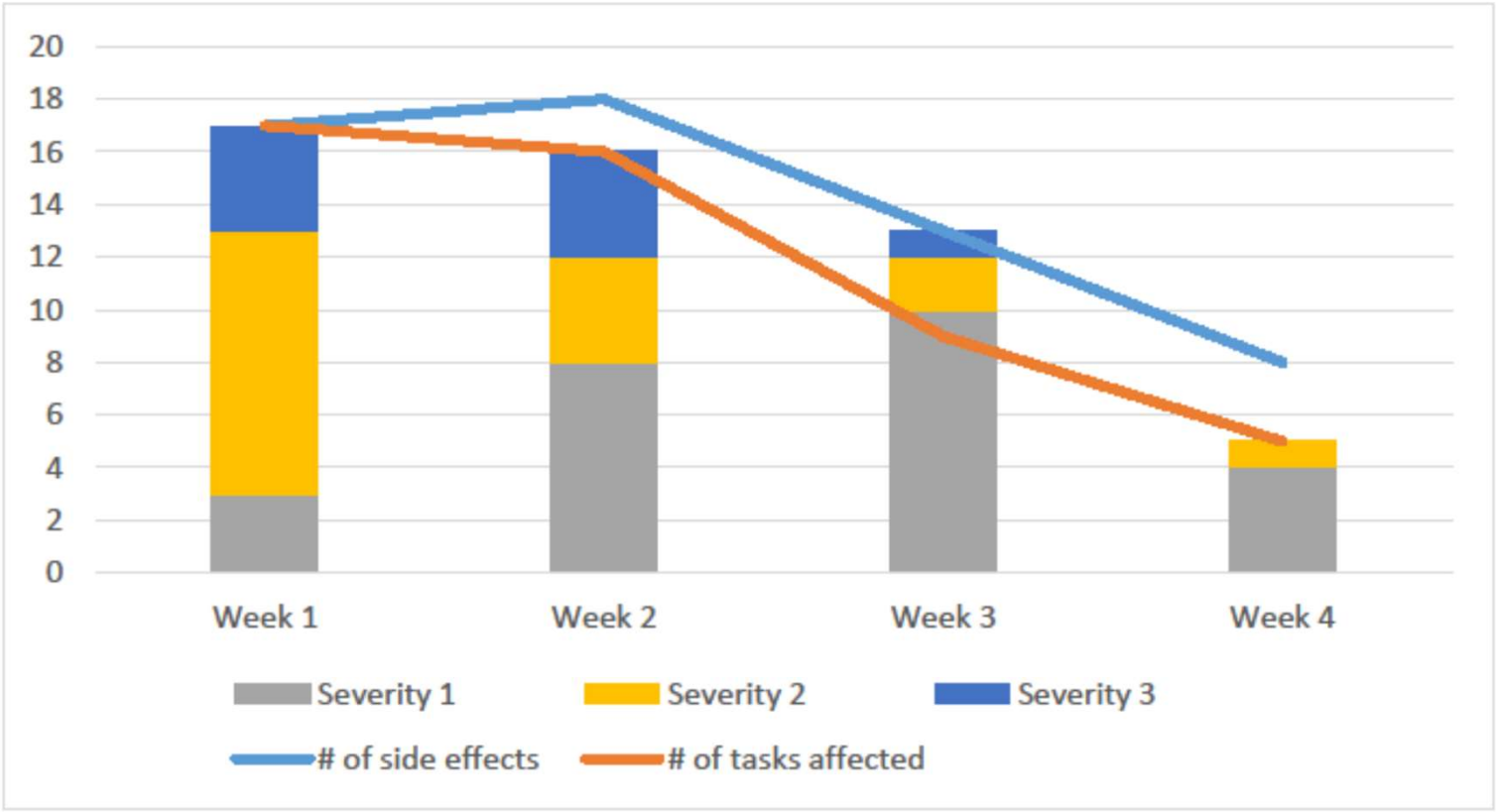
Severity Scale: 1 = mild, minimal effect on task completion, behaviors exhibited require little redirection or staff involvement

2 = moderate, difficulty with task completion, may require prompts or physical assistance. Behaviors exhibited require a moderate level of staff interaction such as changing the environment, removing the person from a stimulus, or providing verbal or physical redirection and/or assistance to complete the task

3= severe, cannot complete task, requires significant staff interaction to redirect challenging behavior. Might include physical interactions and redirections and PRN medications to address behavioral issues.

Date	Possible side effect	Time observed	Behaviors exhibited	Tasks presenting difficulty	Severity	Staff Response / Notes
9/2/18	insomnia	11pm	Pacing around room, rummaging	Falling asleep	3	Staff redirected verbally several times. Redirected client to recliner in living room to encourage rest and sleep. Client did not sleep at all.
9/3/18	dizziness	930am	Stood up from kitchen table and paused, not moving on to next step	Taking dishes to the sink	2	Verbal prompt given to go to the sink, staff then physically assisted by touching arm and guiding to sink
9/5	Drowsiness	8am	Falling asleep at the table	Eating breakfast	2	Staff gave verbal prompts to complete task, some physical assistance provided: putting food onto utensil, handing utensil to client / placing in hand. Staff had to sit 1:1 with client to monitor for alertness / choking
9/6	Drowsiness	10am	Falling asleep while watching TV	none	1	Seems more tired than usual, doesn't usually fall asleep during favorite show. Allowed client to sleep

Visual Data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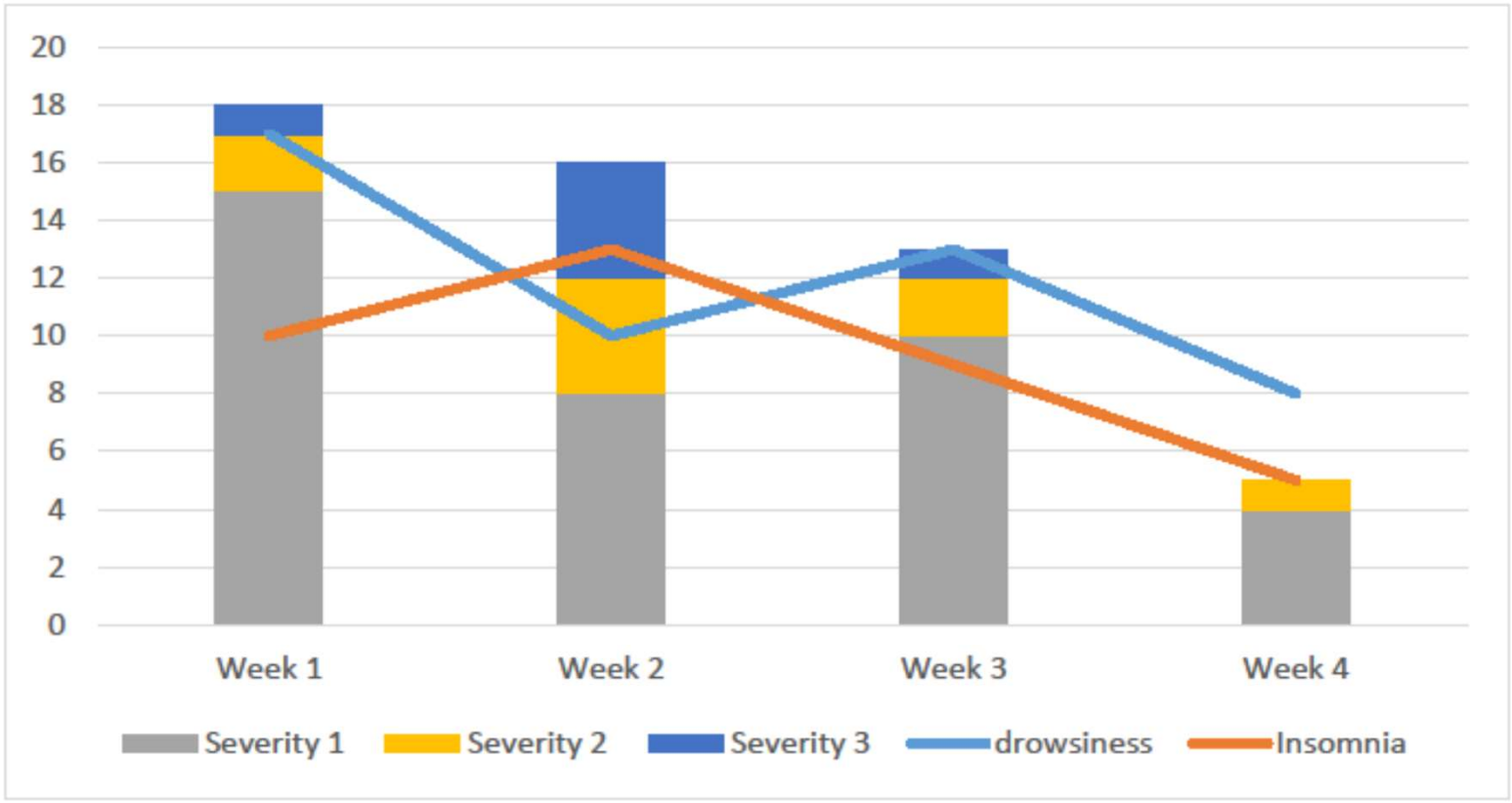
Week 1
Week 2
Week 3
Week 4
Severity 1
Severity 2
Severity 3
# of side effects
# of tasks affected

Visual Data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Week 1
Week 2
Week 3
Week 4
Severity 1
Severity 2
Severity 3
drowsiness
Insomnia

Take-Away Points

- There are medications used to treat *cognitive* symptoms of dementia, and *behavioral / psychological* symptoms of dementia
- There are 2 types of medications that treat *cognitive* symptoms
- Anticholinergics can impact cognition and increase risk of dementia
- Other long-term use medications can impact health
- Monitoring for Adverse Drug Reactions is critical
- Collecting meaningful data helps determine causes for concern

Thank you!

Contact Information

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