

Cognitive Impairment in Older Adults: Identification and Clinical Implications



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COLLABORATION FOR HOME CARE ADVANCES IN MANAGEMENT AND PRACTICE



This presentation was delivered by Valerie T. Cotter, Director of the Adult Health and Gerontology Nurse Practitioner Programs, University of Pennsylvania School of Nursing at the VNSNY Beatrice Renfield Lecture Series on Tuesday, September 20th, 2005

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Cognitive Impairment: What is it?

- A reduction in mental or intellectual functions: thinking, learning, knowing
- Acute (delirium) or chronic (dementia)
- Diffuse or localized
- Acquired at birth or occurs later in life from injury or part of disease



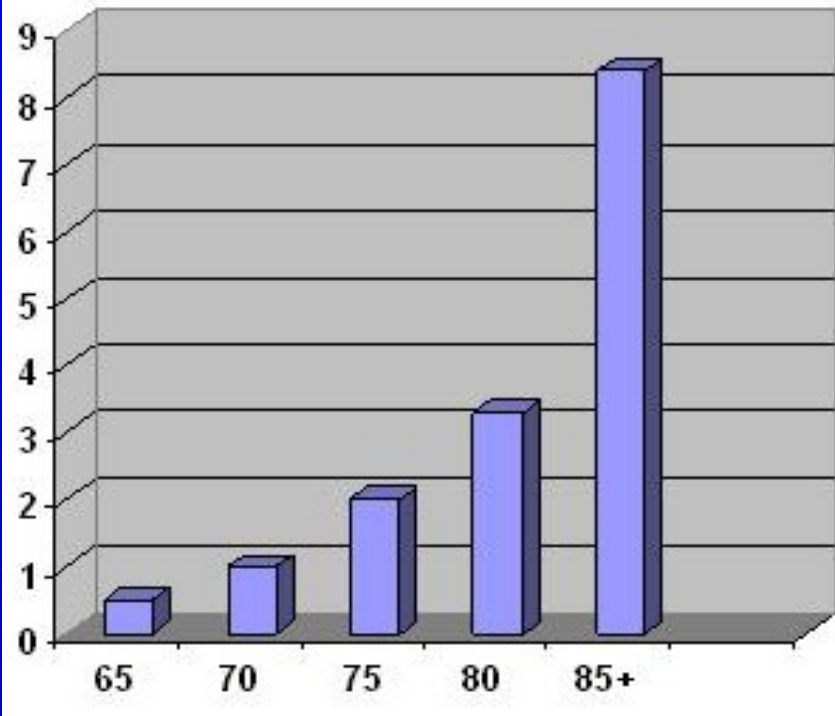
Dementia

- A syndrome of memory loss (amnesia)
- And decline in other cognitive functions:
 - use of language (aphasia)
 - visual-spatial function (perceptual confusion)
 - recognition (agnosia)
 - motor coordination (apraxia)
 - sequential tasks (executive dysfunction)



Alzheimer's Disease

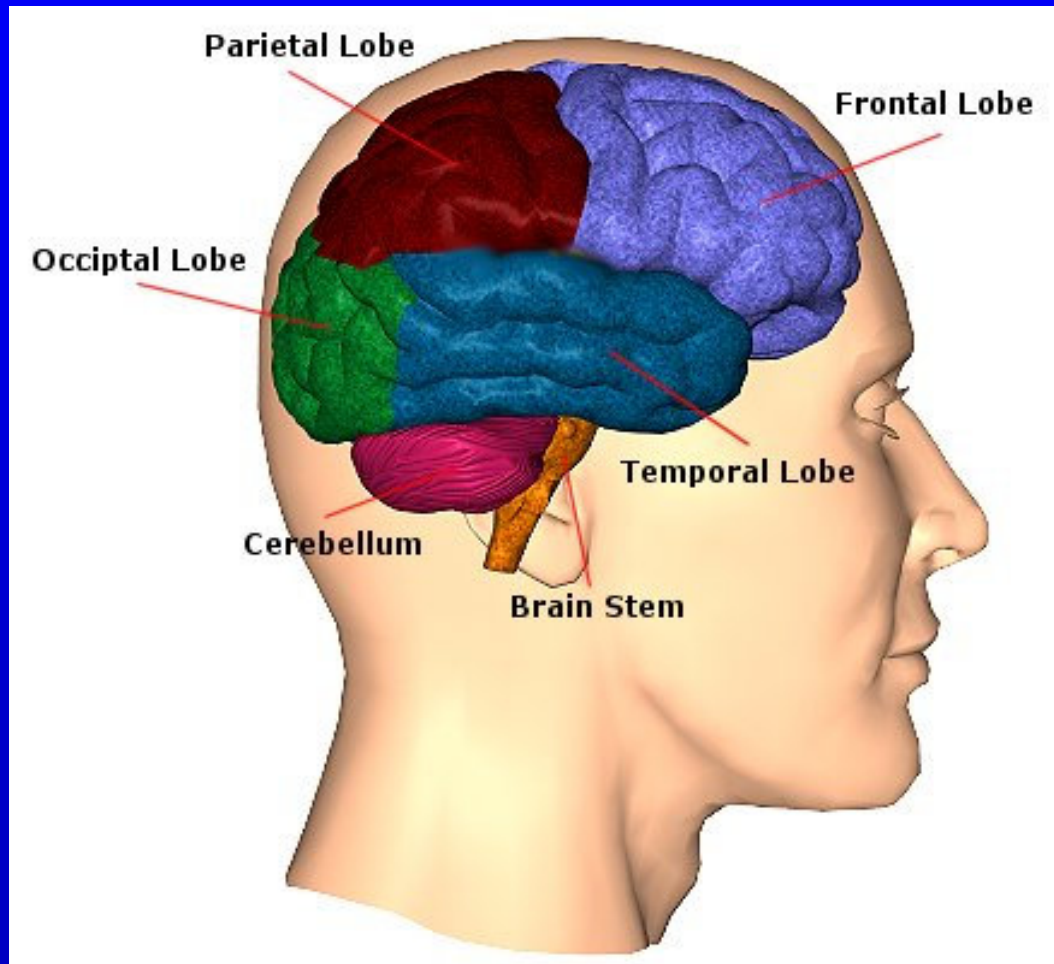
AD Incidence (%)



- AD affects 4.5 million Americans and over 100,000 die annually
- AD occurs in men and women of all ethnic groups and at all socioeconomic levels
- The US Census Bureau predicts that AD will affect 14 million Americans by 2050



How Does AD Affect the Brain?



Biologic Basis for Progression

- Early disease affects temporal lobe areas
 - Memory, learning, language
- Progressively affects multiple brain areas
 - Frontal lobe=executive dysfunction, behavioral symptoms, judgment
 - Parietal lobe=visuospatial orientation, agnosia, apraxia
 - Basal ganglia=walking, movement
 - Brainstem=swallowing, breathing
- Neurotransmitter changes
 - Dopamine excess can lead to psychosis; depletion leads to parkinsonism
 - Serotonin excess can lead to depression, apathy, withdrawal
 - Acetylcholine depletion leads to poorer memory, cognitive function
 - Glutamate excess leads to neuron cell death



Alzheimer's Disease Symptomatology Over Time

	Mild	Moderate	Severe
Function	IADL independent ADL independent	IADL dependent ADL independent	IADL dependent ADL dependent
Cognition	-Difficulty learning -Difficulty with time and word finding -Mild judgment impairment	-Substantial memory loss -Disoriented to -Impaired judgment -Decreased attention	-Fragmented memory -Severe language -Short attention span
Behavior	-Mild personality changes	-Psychosis -Wandering	-Impulsivity -Vocalizations



Adapted from Cotter VT (2002)

Delirium

- Acute onset
- Altered level of consciousness
- Reduced ability to focus, sustain or shift attention (inattention)
- Change in cognition (memory, disorientation, language disturbance) or a perceptual disturbance that's not part of a dementia
- Fluctuating course
- Types=hyperactive, hypoactive, mixed



Causes of Delirium

- Infection
- Cardiovascular
- Cerebrovascular
- Drugs
- Sensory deprivation
- Fecal impaction
- Urinary retention
- Metabolic



Clinical Course of Delirium

- Often present prior to medical symptoms
- Often superimposed on dementia
- 11%-50% hospitalized patients
- 28%-83% end of life patients
- Common among older hip fracture patients
- Poor outcomes
- Short onset with fluctuation
- May be sustained for 6 months after onset



The Case of Mr. B

- 80 yo living at home with his wife
- 3 days post discharge resection stage I squamous cell lung cancer; atrial fibrillation; COPD; OA
- He is disoriented to time and place, walking around the house at night, and frequently falling
- What are your thoughts on Mr. B?



Symptoms of Dementia vs Delirium?

- A. Were these symptoms present before or during hospitalization?
- B. What was his cognitive function before hospitalization?
- C. Are his symptoms related to an underlying medical condition, medication or something else?
- D. What would be your next steps?



Dementia

- Baseline cognitive function impaired (always disoriented to time, intermittently to home)
- Functionally impaired from cognitive deficits (needs reminders with hygiene, IADL dependent)
- Behavioral symptoms (an episode of wandering from home, awakens at night disoriented and walks about)

Delirium

- Baseline cognitive function normal or impaired
- Baseline functional impairment or acute decline
- No behavioral symptoms at baseline or acute change in current symptoms
- Previous history of acute mental status decline on previous admission and during recent admission



Nursing Interventions

- Promote function and mobility
- Education with pt and family
- Promote safety
- Careful assessment for acute problems and review of medications
- Judicious use of neuroleptics or other psychoactive medications
- Collaboration with referring health care provider and home care team



Conclusion

- **Home care nurses are often the first professional to detect delirium or dementia in an older adult**
- **Significant clinical implications for the pt and family**
- **Important to address these clinical syndromes in your assessment and plan of care**

