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Steps to Manage an Older Person with Delirium

Acute Care for the Elderly (ACE) Program
Aurora Sinai Medical Center/UW School of Medicine
& Public Health

- Treat underlying causes of medical problems/contributing factors.
- Carefully review medications with pharmacist/eliminate non-essential medications; reduce psychotropic medications.
- Optimize hydration/nutrition status.
- Treat pain optimally (avoid meperidine).
- Encourage family members to bring in familiar objects and stay with patients.
- Provide frequent orientation with clear, calm communication.
- Keep tasks simple/avoid multiple stimuli.
- Allow uninterrupted time for sleep at night.
- Use clocks/calendars.
- Use eyeglasses/hearing aids.
- Encourage mobility and self-care.
- Avoid physical restraints.
- Use low bed or mattress on the floor.
- Consider pleasant music, relaxation tapes or massage.
- Eliminate any unnecessary tubes or catheters/reassess the need daily.
- Treat (prevent) constipation, urinary retention.

If absolutely necessary...

- Haloperidol po or parenteral 0.25-0.5 mg can be repeated every 20-30 minutes until patient is awake, but calm; not oversedated.
- Use lorazepam for alcohol withdrawal.



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Ten Essential Steps to Evaluate an Older Person who Develops Delirium in the Hospital

1. Review baseline mental status (corroborate with family if possible).
2. Look for multiple possible etiologies (usually multifactorial).
3. Look for predisposing conditions: cognitive impairment, advanced age, vision impairment, severe illness, and dehydration.
4. Assess for precipitating factors: physical restraints, malnutrition, 3 new medications, bladder catheter, any iatrogenic event.
5. Look for signs of new or worsened illness: vital signs, pulse ox, careful physical exam, directed neurologic examination, weight, hydration status, sensory problems, rectal check.
6. Consider alcohol withdrawal.
7. Assess for sleep deprivation.
8. Initial lab includes: CBC, BMP, LFTs, CXR, U/A, ECG, cardiac enzymes, cultures as appropriate.
9. Assess for pain.
10. Consider head imaging if recent trauma or new focal neurologic finding.

Michael Malone, MD & Ellen Danto-Nocton, MD – 12/03

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Check List to Improve the Hospital Care of Elderly



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- Prevent Problems:* Critically review the necessity of all tests/procedures.
- Pressure Ulcers:* Ambulate; avoid "bed rest" order.
Correct nutrition restrictions.
Turn q 2 hrs. if bedridden.
- Delirium:* Assess cognitive function.
Bring in glasses/hearing aide/items from home.
Keep hydrated p.o.
- Immobility/Falls:* Prescribe assist device; physical therapy.
Order acute rehab therapy consult.
Walk with assist.
(Else, consider DVT prophylaxis.)
- Functional Decline:* Define baseline ADLs.
Increase activity level.
Avoid restraint and catheters.
- Constipation:* Provide prune juice/power pudding.
Provide stool softener.
- Undernutrition:* Review serum albumin.
Consider nutrition consult; supplement.
Could medications contribute to anorexia?
- Depersonalization:* Music, pictures, food from home.
Encourage visitors, stuffed animals.
Chaplain visit (hospice care).



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Check List to Improve the Hospital Care of the Elderly



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- History:* Collaborate data with family; nursing staff.
Define goals of care.
Define Advanced Directives.
Assess for pain.
Define baseline functional status ADLs.
- Physical Exam:* Assess for delirium.
Assess risk for pressure ulcer.
Is patient out of bed?
Can urine catheter, IV line be removed?
Avoid restraints.
- Data Collection:* Review vital signs, intake/output, daily weight, diet intake, bowel movement.
Review the medication cardex;
How does it compare to Rx prior to admit?
Could problems be caused by the Rx?
Should any Rx be stopped?
Add multiple vitamin.
Review therapy notes (PT/OT/speech).
Review social service note (living situation/support).
Review dietitian notes; lab data changes.
- Communicate:* Talk with the nurse to assess status;
discuss goals and anticipated discharge.
Update family of anticipated discharge plans or change in status.



Michael Malone, MD & Ellen Danto-Nocton, MD 6/2007

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How to Properly Identify Frail Elderly

Acute Care for the Elderly (ACE) Program
 Aurora Sinai Medical Center/
 UJW School of Medicine & Public Health

Background:

Frailty is a process of physiologic decline that reduces homeostatic reserve and predisposes patient to organ system failure. About seven percent of community dwelling seniors are frail. An acute illness and/or decompensation of a long-standing chronic disease can trigger/worsen frailty.

Frailty places seniors at high-risk for adverse health outcomes of:

- Dependency
- Disability
- Institutionalization
- Falls with injury
- Slow recovery from acute illness
- Mortality

“Frailty Phenotype” is composed of five physical criteria:

1. The presence of unintentional weight loss (10 pounds in the past year).
2. Self-reported exhaustion.
3. Weakness as estimated by grip strength.
4. Slow walking speed (on the “Timed Up and Go” test: normal equals 10 seconds.)
5. Low physical activity.

The occurrence of three or more of the criteria suggests the presence of frailty. One or two of the criteria poses increased risk of frailty in an incremental fashion.



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How to Properly Identify Frail Elderly

Clinical Pearls in Recognizing the Frail Senior:

- Gradual onset of a sometimes-unexplainable decline in function.
- Anorexia of an undetermined cause.
- Insidious decline in activity.
- Loss of muscle mass.
- Obese persons can be frail if they manifest clinical characteristics.
- Self-reported unsteadiness.
- Loss of independent performance of ADL’s immediately before hospitalization.
- Perceived increases effort required to complete “submaximal exercise task”.
- Frailty has a multi-factorial basis that includes age related physiologic changes and their interactions with coexistent diseases.

Clinical Interventions:

- Careful evaluation for acute medical illness.
- Assessment for exacerbation of chronic illness.
- Critical review of medication.
- Nutritional assessment/recommendation.
- Interdisciplinary assistance: PT/OT/ Social Service.
- Review advanced directives.
- Assess/treat concurrent depression/delirium/dementia.

References: Linda P. Fried, Catherine M. Tangen, Jeremy Walston, et al.
 Frailty in Older Adults: Evidence for a Phenotype J Gerontol A Biol Sci Med Sci 2001, Vol. 56A No. 3: M146-M157.

Michael Malone, MD 3/09





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Preventing Falls in the Hospital

Acute Care for the Elderly (ACE) Program
Aurora Sinai Medical Center/UW Medical School

Health Care Behavior: Identify older patients at risk of falling and employ interventions to prevent falls.

Background: Falls in the hospital are a common problem among hospitalized elderly, with 30% of falls resulting in physical injury. Most falls occur in a patient's room, near their bed, or in the bathroom. Multiple factors have been associated with an increased risk of falls in the hospital.

Common Risk Factors:

- Altered mobility or poor balance
- Special toileting needs due to incontinence and/or diarrhea
- Increasing age
- High patient-to-nurse staffing ratios
- History of falling
- Cognitive impairment and/or altered mental status
- Multiple psychotropic medications
- Muscle weakness and neurologic deficits
- Dizziness
- Impaired balance or gait
- Orthostatic hypotension
- Dehydration
- Multiple comorbidities: stroke, heart failure
- Depression



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Preventing Falls in the Hospital

Acute Care for the Elderly (ACE) Program
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The key to preventing these dangerous and costly falls is multi-tiered intervention:

- Maintain a safe and hazard-free environment.
- Assess and identify those at high risk for falling.
- Provide individual assistance and intervention from the entire hospital staff: nursing, physician, custodial.

Beneficial Intervention Techniques:

- Educate patients and nurses on the need for assistance with getting out of bed.
- Increase scheduled assistance from staff for walking and toileting.
- Implement exercise programs and/or physical therapy to increase muscle strength and balance control.
- Increase access to walking aides, as well as eyeglasses and hearing aides.
- Make sure patient is wearing appropriate footwear.
- Make sure room is cleared of any obstacles and is adequately lit.
- Provide proper equipment: bed in low position, half rail, locked wheels, call light within reach.
- Review medication list daily to decrease use of psychotropic medications.

(Sources: Hitcho et al. Characteristics of falls in a hospital setting. *J Gen Intern Med* 2004;19: 732-739.; Kerzman, H., Chetrit, A., Brin, L., Tore, O. Characteristics of falls in hospitalized patients. *J Adv Nurs* 2004;47(2):223-229; Mahoney, J. Audio Presentation - "An older man who fell in the hospital." *Practical Reviews in Geriatric Medicine* Vol.6(2), 10-28-2004.)

Michael Malone, MD & Ellen Danto-Nocton, MD – 06/07©





**ACE Cards ©
Elder Neglect and Abuse**

Acute Care for Elders (ACE) Program
Aurora Health Care/UW School of Medicine & Public Health

Elder Neglect

Refusal or failure to fulfill any part of a person's obligations or duties to an elder.

Elder Abuse

Intentional actions resulting in harm of an older adult: physical, sexual, psychological, and/or the exploitation of money and property.

Patient Related Risk Factors for Elder Abuse:

- Dementia.
- Disruptive/aggressive behaviors.

Caregiver Related Risk Factors for Elder Abuse:

- Shared living conditions.
- Caregiver burden/stress.
- Social isolation.
- Financial interdependence/motivations.
- Caregiver mental illness.
- Caregiver drug/alcohol abuse.
- Emotional dependence of caregiver on elder.
- History of "family" dysfunction/abuse.
- Poor coping skills of caregiver.
- Limited use/knowledge or refusal of resources.



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Elder Neglect and Abuse**

Recognition of the Mistreated Senior

(Many of these findings are clues, but may not be diagnostic.)

General Observations

- Poor hygiene.
- Poor nutrition and hydration status.
- Frequent exacerbation of common illnesses.
- Long delay between presentation of patient's problem and seeking help
- Elder may appear fearful of caregiver
- Caregiver may refuse to leave a patient's side
- A change in the pattern of office visits
- A pattern of unusual vaginal or rectal bleeding
- Family not giving medications
 - Evidenced by subtherapeutic medication levels or exacerbations of previously stable chronic illness
- Withdrawal or infantilizing of patient.

Skin and Other Organ Findings:

- Multiple and/or unusual pattern of bruises.
- Multiple pressure ulcers with infection or infestation.
- Overgrown, unkept nails.
- Matted hair.
- Fecal impaction.
- Delirium/depression.

Most Important Practice Behaviors:

- Interview patient and caregiver together and individually.
- Ask all elderly patients about mistreatment if there are inconsistencies in history of injuries or illness.
- Perform thorough physical exam with patient in gown.
- Obtain social and cognitive assessment.
- Report suspected abuse, neglect, or exploitation to local protective service agency.

Michael Malone, MD -5/23/2005 ©





ACE Cards © A Systematic Evaluation of an Older Person With Falls

Acute Care for Elders (ACE) Program
Aurora Health Care/UW School of Medicine & Public Health

Background Information:

- The assessment of an older person with falls is difficult because there are numerous interacting and contributing factors, which are often not clinically obvious.
- Approximately 30% of older persons living in the community fall each year; the number is higher in institutions.
- Five percent of all falls result in serious injury.
- Older adults may under-report falls.
- A recent history of falls is a strong predictor of future falls.
- Falls and instability precipitate nursing home admissions.

History:

All vulnerable elders should be asked at least annually about the occurrence of recent falls.

For those with a recent fall:

What was the activity at the time of the incident?

Was there loss of consciousness?

How long was the patient down?

Where, when, and how did the fall occur?

Any associated symptoms:

Any acute illness?

Dizziness/pain/precipitating factors?

Any environmental factors that contribute to the fall?

Any prior falls?

Any fear with falling?

Any problems with vision, hearing, or use of an assist device?

Careful Review of Medications:

Benzodiazepine; sleep medication; neuroleptics, antidepressant, anti-convulsant, Class 1A antiarrhythmic

Past Medical History: Diabetes mellitus, Parkinson's disease, stroke, cognitive impairment, osteoporosis.

Social History: Living situation, an environmental assessment.

Functional Status: ADL's and mobility baseline/and now.



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Evaluation and Prevention of Falls in Older Persons

Physical Examination-

Vital signs: Postural blood pressure and pulse. Temperature, respiratory rate, and pulse oximetry.

Mental Status Exam: Folstein MMSE/consider Geriatric Depression Scale.

Visual Acuity/Visual Fields.

Cardiac Respiratory Exam: Look for evidence of an acute illness –pneumonia, heart failure.

Musculoskeletal Exam: Range of motion of upper extremities; lower extremity joint function.

Neurologic Exam:

- Strength testing; new focal deficit, motor tone.
- Evidence of tremors or Parkinsonism.
- Decrease in vibratory sense.
- “Get up and go” gait and balance assessment.

Feet Exam: Look for calluses or deformities.

Skin Exam: Look for bruising; skin tears.

Interventions for Preventing Falls:

- Multidisciplinary interventions targeting multiple risk factors are effective.
- Muscle strengthening combined with balance training, individually prescribed at home by a trained health professional.
- Tai Chi may be effective.
- Home hazard assessment and modification by a health professional.
- Cardiac pacing for fallers with cardio-inhibitory carotid sinus hypersensitivity.
- Withdrawal/reduction of psychotropic medication.
- Individually tailored interventions work better than group programs.
- Vitamin D supplementation: 700-800 IU/d for those with deficiency.

Reference: Rubenstein LZ, Powers CM, MacLean CH. Quality indicators for the management and prevention of falls and mobility problems in vulnerable elders. *Annals Int Med* 2001, 135:686-693
Michael Malone, MD Rev. September 09





ACE Cards ©
Improving the Care of Older Adults in the Emergency Department

Acute Care for the Elderly (ACE) Program
 Aurora Health Care/UW School of Medicine & Public Health

- Seniors are more likely to utilize the ED compared with their proportion in the general population.
- Nearly one-third to one-half of the visits result in hospital admission.
- Likewise, more than half of seniors may be discharged from the ED after their care.
- Their length of ED stay is longer, requiring more staff, more tests, and resources.
- The most common medical problems are ischemic heart disease, CHF, arrhythmias, syncope, acute CVA's, pneumonia, abdominal disorders, dehydration, and UTI.
- The most common surgical problems: traumatic injuries caused by falls.
- Their ED diagnoses tend to be less accurate.
- They are more likely to complain of lack of complete resolution of their presenting complaint after their visit.
- Seniors are at higher risk of adverse health outcomes after their visit:
 - Repeated visit to ED.
 - Functional decline.
 - Hospitalization.
 - Death.



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Improving the Care of Older Adults in the Emergency Department

The following best predict adverse outcomes:

- Baseline functional dependence.
- Recent hospitalization or ED visit.
- Living alone.
- Lack of social support.

Issues that are under-detected/poorly addressed:

- Functional dependence.
- Psychosocial concerns.
- Geriatric conditions.

Questions in the Identification of Senior's at Risk

1. Before this illness/injury, did you need someone to help you on a regular basis? (yes*/no)
2. Since the illness or injury that brought you to the ED, have you needed more help than usual to take care of yourself? (yes*/no)
3. Have you been hospitalized for one or more nights during the past six months? (yes*/no)
4. In general, do you see well? (yes/no*)
5. In general, do you have serious problems with your memory? (yes*/no)
6. Do you take more than three different medications every day? (yes*/no)

Two or more high-risk responses identified with an asterisk (*) indicate a positive screening.

Reference: Adaptd from McCusker J, Cardin S, et al, Detection of Older People at Increased Risk of Adverse Health Outcomes After an Emergency Room Visit. The ISAR Screening Tool. *Jam Geriatr Soc* 1999; 47:1229-1237

Michael Malone, MD - 3/06





ACE Cards ©
Approach to an Older Adult with Delirium:
Pharmacist Perspective

Acute Care for the Elderly (ACE) Program
 Aurora Health Care/UW School of Medicine & Public Health

Differentiating Delirium from Dementia:

	DELIRIUM	DEMENCIA
Onset	Acute	Insidious
Course	Fluctuating	Steadily Progressive
Consciousness/ Orientation	Clouded Disoriented	Clear until late stages
Attention/ Memory	Poor short-term memory; inattention	Poor short-term memory; no marked inattention
Psychosis	Commonly present	Less Common

Source: Meagher,D. Delirium: Optimising management. *BMJ* 2001; 322:144-9.

Evaluate for Precipitating Causes:

- Beers List medications, other anticholinergics or benzodiazepine (BZD).
- Addition of new medication or recent dose change.
- Withdrawal from discontinued medication (BZD, opiates, antidepressants, antipsychotics, etc.).
- Consider alcohol or other illicit drug withdrawal.
- Previous medication intolerances (ex: h/o hallucinations).
- Does timing of delirium onset correlate with administration or pharmacokinetic peak of a certain medication?
- Abnormal drug levels (i.e. digoxin, anti-epileptic drugs, theophylline etc.).
- Pain control/constipation/urinary retention.
- Infection/dehydration.
- Post-operative/procedure causes (anesthesia, sedatives).
- Many other clinical causes that may be determined by physician, in a hospital setting.



Katherine Claxton, PharmD, Lynne Spearbraker, PharmD, & Michael Malone, MD
 Rev. 10/08.



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Approach to an Older Adult with Delirium:
Pharmacist Perspective

Treatment Considerations: Pharmacist Perspective

- Recommend alternatives to Beers list medications.
- Start with lowest dose of new medications and titrate slowly.
- Assess home medication regimen for medications that may have been inadvertently stopped on admission.
- Avoid abruptly stopping specific medications (i.e. steroids, long-term opiates and benzodiazepine, certain antidepressants and antipsychotics, etc).
- Has the alcohol withdrawal protocol been initiated (if needed)?
- Assess administration time, dose, and cumulative number of PRN doses given – does delirium correlate?
- Stool softener present? Urinary retention issues?
- Evaluate UA, cultures, antibiotics, and fluid status. Recommend changes if appropriate.
- Evaluate current pain management plan and medication regimen.

If delirium persists:

- Reassess medications daily. Consider Lewy body dementia.
- Consider possibility of discontinuing non-essential medications (in collaboration with physician) and evaluate for improvement.

If Pharmacologic Treatment Necessary* (Requires MD order)

- Haloperidol 0.25 – 0.5mg PO/IV/IM every 30 min. until patient is awake and calm, but not oversedated. If ineffective may consider recommending low dose lorazepam or alternate antipsychotic. Avoid haloperidol in patients with Parkinson's disease.
- For Parkinson's disease patients: Quetiapine 12.5-25mg PO every 4 hr PRN, or low dose lorazepam** (0.25 – 0.5mg)
- Use lorazepam** for EtOH withdrawal.

* For acute care: medication on discharge.

** Of note: in some cases benzodiazepine use can potentiate delirium.





ACE Cards © Evaluating a Patient with Alzheimer's Disease in the Emergency Department

Acute Care for the Elderly (ACE) Program
Aurora Sinai Medical Center/UW School of
Medicine and Public Health

Background:

- Alzheimer's disease (AD) is the most common type of dementia, accounting for 2/3 of all cases and affecting 6-8% of those over 65. An estimated 30% or more of those over age 85 have AD.
- Emergency Department clinicians often struggle to detect subtle changes in patients with cognitive impairment.
- The patient may not be able to give a good history of his/her present illness and past medical history.
- Non-specific symptoms (weakness/falls/poor appetite) may be the predominant complaint.
- The physician in the Emergency Department may not understand the patient's baseline cognition and/or the patient's baseline functional status may also be difficult to obtain.
- It may be difficult to recognize the patient with acute onset of cognitive problems vs. chronic dementia.
- Medication compliance may be difficult to define (especially if no caregiver is available).
- The senior with Alzheimer's Disease may have difficulty cooperating during the physical exam, and may have difficulty with understanding risks and benefits of treatment decisions.

Aupperle PM. *Navigating patients and caregivers through the course of Alzheimer's Disease.* Journal of Clinical Psychiatry. 2006;67(3):8-14.
Karlavish JHT, Casarett DJ, James BD, et. al. *The ability of persons with Alzheimer's Disease (AD) to make a decision about taking an AD treatment.* Neurology. 2005;64:1514-1519.



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Ten Essential Steps to Evaluate a Patient with Alzheimer's Disease in the Emergency Room

1. Look for "red flags" of cognitive impairment during the encounter:
 - Patient immediately looks to the caregiver for an answer to a simple question.
 - Staff reports patient to be a "poor historian."
 - Patient gives very abbreviated response to questions.
 - Patient over-estimates his/her abilities.
 - Patient discounts the problem.
 - Patient presents with an exacerbation of chronic illness because of poor medication compliance.
2. Get baseline information from the electronic record (if available).
3. Keep the questions simple.
4. Define the baseline/current functional status of the patient.
5. Ask the family member/caregiver to describe the situation.
6. Find multiple sources for history (call to the nursing facility).
7. Assess their home situation: Who is there to help? (Assess for the possibility of caregiver burnout.) Which community resources are in place?
8. Look at the whole patient (appearance, dress, smell, their response, their alertness).
9. Ask an assistant to help during the physical exam.
10. Assess the patient's gait.

Michael Malone, MD & Ellen Danto-Nocton, MD – 7/21/06





ACE Cards © Recognizing Depression Among Hospitalized Seniors

Acute Care for the Elderly (ACE) Program
Aurora Sinai Medical Center/UW Medical School & Public Health

Background:

- The prevalence of major depression among healthy community dwelling seniors is surprisingly low (1% to 2 %).
- Major depression has been identified in 6% - 10% of older persons in primary care and in 12% - 20% of nursing home residents.
- More varied rates of 11% up to 45% have been reported among elderly requiring hospital care.
- Seniors may have undiagnosed and/or untreated depression prior to their acute medical illness.
- Patients with an acute medical illness (e.g., myocardial infarction) and concurrent depression have a higher mortality rate.
- Depression can be difficult to distinguish from an adjustment to multiple losses of a senior during an acute illness.
- Depression is not a part of the natural aging process, as some still believe.
- Seniors with concurrent depression may be admitted with diagnoses of “weight loss,” “failure to thrive,” “persistent pain,” or “generalized weakness.”
- The clinical features may be atypical:
 - Minimal interactions with staff.
 - Poor eye contact during interactions.
 - Requesting more assistance with cares than required.
 - Refusing to get out of bed.
 - Pain that is difficult to control.
 - Difficulty in making decisions about treatment recommendations.
 - Overt statements – “I wish I were dead.”



ACE Cards © Recognizing Depression Among Hospitalized Seniors

Evaluation:

1. Use a standardized tool to screen for depression (Geriatrics Depression Scale/HANDS tool).
2. Define the onset of depressed mood, the duration, frequency, progression over time, and correlated medical signs and symptoms.
3. Consider concurrent illnesses associated with depression (e.g. stroke, diabetes mellitus, vascular dementia, hypothyroidism).
4. Review current medications for risk of depression as an adverse drug reaction (e.g. beta-blocker, clonidine).
5. Define family history of depression.
6. Assess current social stressors; functional status.
7. Assess alcohol abuse.
8. Measure orthostatic blood pressure changes.
9. Obtain ECG baseline.
10. Assess for cognitive impairment/anxiety symptoms/suicide risk.

Management:

1. Clinicians may be hesitant to treat depression in a hospitalized senior because of concerns about drug-drug interactions or starting antidepressants for an acutely ill senior.
2. SSRIs (with the possible exception of fluoxetine) are now the drugs of first choice for geriatric depression.
3. “Start low, go slow.”
4. Venlafexine has efficacy and may provide additional benefit in relief of pain of diabetic neuropathy.
5. Tricyclic antidepressants are associated with higher risk of cholinergic side effects.
6. The goal of management can and should be full remission.
7. The combination of antidepressants *and* psychotherapy is more effective for seniors than either therapy alone.

Rabheru K. *Special issues in the management of depression in older patients.* Can J Psychiatry. 2004;49(1):41-50. Reynolds CF III, Dew MA, Pollock BG, et. al. *Maintenance treatment of major depression in old age.* N Engl J Med. 2006;354(11):1130-1138.

Michael L. Malone, MD - 7/24/06

