

# The Geropsychiatric Interview, Assessment and Diagnosis

Charles Pinto<sup>1</sup>

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## Introduction

The population of elderly persons is growing with extraordinary rapidity. Although the majority enjoys good health, many older people suffer from multiple illnesses and significant disability. They tend to exhibit great medical complexity and vulnerability; have illnesses with atypical and obscure presentations; suffer major cognitive, affective, and functional problems; are especially vulnerable to iatrogenesis; are often socially isolated and economically deprived; and are at high risk for premature or inappropriate institutionalization.

They indeed have Unique Health Care Needs in contrast to any stage in development like

- 1) Multiple chronic conditions (e.g., heart disease, cancer, diabetes, respiratory conditions, stroke).
- 2) Unique diagnostic procedures: Presenting symptoms of illness not always source of primary disease process.
- 3) Focus on Disease Management
- 4) Requires integration between physical, functional, psychological, educational, financial, and sociological factors

— To deal with these difficult health care issues, health professionals need to collect, organize, and use a vast array of clinically relevant information known as ***Comprehensive Geropsychiatric Assessment***

- This process, is defined as a multidisciplinary evaluation in which the multiple problems of older persons are uncovered, described, and explained, if possible, and in which the resources and strengths of the person are catalogued, need for services assessed, and a coordinated care plan developed to focus interventions on the person's problems.

## Scope of Comprehensive Geropsychiatric Assessment

- The Goals, Structure, Processes, and Elements of Geropsychiatric Assessment for Clinical Decision Making are

## Goals

The goals of comprehensive geropsychiatric assessment are:

- (1) To improve diagnostic accuracy,
- (2) To guide the selection of interventions to restore or preserve health,
- (3) To recommend an optimal environment for care,

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1. M.D., Prof. of Psychiatry, Dr. YBL Nair Hospital, Mumbai

- (4) To predict outcomes, and
- (5) To monitor clinical change over time

### **Structure**

Comprehensive geriatric assessment may be done in many institutional settings, including acute care, psychiatric, or rehabilitation hospitals and nursing homes, and in ambulatory settings, including outpatient or freestanding clinics, the offices of Psychiatrists and primary care physicians, or in the patient's home.

It often has been applied to elderly persons at critical transition points in their lives, including actual or threatened decline in health and functional status, impending change in living environment, bereavement, or other unusual stress

### **Process**

Comprehensive geropsychiatric assessment is initiated by a referral from one of a number of sources. In addition to the patient; the process often includes family members and other important persons in the individual's environment.

It is conducted by a core team that consists, at a minimum, of a psychiatrist, nurse, and social worker, each with special expertise in caring for older people.

The specific activities and contributions of each team member may vary considerably, and flexibility in roles may facilitate the assessment process.

The assessment begins with a case-finding approach that utilizes screening instruments and techniques. Based on these initial findings, a more detailed assessment is frequently undertaken. This in-depth assessment often requires the participation of a number of other professions. These may include audiology, clinical psychology, dentistry, nutrition, occupational therapy, optometry, pharmacy, physical therapy, speech pathology, and the clergy.

Support from other medical disciplines, such as neurology, ophthalmology, orthopedics, physiotherapy, surgery, and urology, is commonly needed. Self-rating scales completed by the patient or caregivers may provide some aspects of geropsychiatric assessment. Such information may lead to different insights than those obtained through external assessment performed by a member of the health care team.

### **Physical Health**

A careful history is obtained from the patient and others with significant knowledge of the patient. Special attention is directed to the use of prescription and nonprescription medications and clues to the presence of malnutrition, falling, incontinence, and immobility.

Data are gathered on smoking, exercise, alcohol use, immunization status, and sexual function. Also important is information regarding the patient's personal strengths, values, perceived quality of life, acceptability of interventions, and expected outcomes from his or her health care.

A physical examination is performed with emphasis on identification of specific diseases or conditions for which curative, restorative, palliative, or preventive treatment may be available. Special attention is directed toward visual or hearing impairment, nutritional status, and conditions that may contribute

to falling or difficulty in ambulation. Laboratory tests and other diagnostic studies are obtained as indicated

### **Mental Health**

Cognitive, behavioral, and emotional status is evaluated. Detection of dementia, delirium, and depression is particularly important. A range of assessment instruments is available for these purposes. For some patients a detailed psychiatric interview, a neurobehavioral consultation, or comprehensive neuropsychological testing is indicated

### **Social and Economic Status**

Evaluating the social support network includes identifying present and potential caregivers and assessing their competence, willingness to provide care, and acceptability to the older person. This information may be obtained by questionnaires, structured interviews, or other methods. The degree of caregiver stress and the caregiver's support network also are considered. Areas of special importance to the individual, such as cultural, ethnic, and spiritual values, are noted. The individual's own assessment of the quality of life is recorded. The clinician evaluates the economic resources of the elderly person, which often determine access to medical and personal care and influence options for living arrangements

### **Functional Status**

There are several components to a comprehensive assessment of an older person's ability to function. Physical functioning usually is measured by the ability to accomplish basic activities of daily living (ADL)

Behavioral and social activities that require a higher level of cognition and judgment than physical activities are instrumental activities of daily living (IADL)

### **Environmental Characteristics**

Evaluating the patient's physical environment is essential. Home visits and questionnaires are used to determine the safety, physical barriers, and layout of the home as well as access to services, such as shopping, pharmacy, transportation, and recreation facilities

### **Outcomes**

- **Improved Through Geropsychiatric Assessment by**
  - Improved Diagnostic Accuracy
  - Prolonged Survival
  - Reduced Annual Medical Care Costs
  - Reduced Use of Acute Hospitals
  - Reduced Nursing Home Use
  - Increased Use of Health/Social Services in Home
  - Reduced Medication Use
  - Improved Placement
  - Improved Cognition/Functional Status

## **Characteristics of the Geropsychiatrist**

A sense of humor, Patience,

A willingness to listen and explore possibilities and not jump to conclusions.

An interest in medicine, neurology and psychiatry is helpful.

Working with families is a key part of what we do so some desire or interest in this would be important.

Like older people

One must enjoy trying to figure out the many complex biopsychosocial factors influencing psychiatric problems in an older person.

Geriatric patients with psychiatric issues do in fact get better and can lead a more fulfilling and enjoyable life.

Families are also eternally grateful

Professional Training in Geropsychiatry/Gerontology which Is Limited

Few health professionals receive exposure to geriatrics during initial training.

Geropsychiatry and gerontology rarely addressed in continuing education of health care professionals.

Geriatrics is the one specialty in psychiatry in which you must understand and appreciate the interaction between medical illness, neurological disorders, medication side effects and psychiatric symptoms.

## **TIPS FOR INTERVIEWING OLDER ADULTS**

- The older adult may need **reassurance** that the stranger at the door is there to assist.
- **Slow down your speech.**
- Use **formal address** when referring to older adult.
- Be aware of **hearing and/or visual deficits** that may interfere with interview.
- Ensure **comfort** as much as possible.
- **Speak** with older adult **directly.**
- Be aware of **non-verbal cues** from client and Caregiver/caretaker.

An older person's **ability to manage** may be influenced by his/her health, attitudes, cognitive skills, social skills and supports, financial status and/or environment.

## **The Geropsychiatric History –**

### **A) Previsit Questionnaire**

Patient's Identifying Information

Personal Physician w/ address and telephone number

Emergency Contact (family member, friend)

Insurance Information: Medicare, Private Medical Insurance

### **General Information**

Age / Sex

Marital status

Living arrangements

Type of residence

Educational level

Religion  
Employment status  
Major occupation/employment  
Spouse's major occupation/employment  
Income level  
Insurance Type  
Long term care insurance  
Primary caregiver  
Services/Community Agencies involved in care  
Legal tools  
Adequacy of current living situation  
Assessment of IADL's  
Past Medical History screening  
Family History screening  
List of Family members  
Assistance with completing the questionnaire  
What are the patient's goals for the assessment?  
Dementia-related Symptom Review  
Food Diary  
Authorization to Release Medical Records

## **B) Geropsychiatric Interview**

### **a) Introduction**

The geropsychiatric interview in a comprehensive geriatric assessment is a free-flowing interview focusing on psychiatric issues that may be affecting the patient's cognitive function

The approach to the history and physical examination sometimes needs to be modified in the assessment of a very old or frail patient. A physician may need to interview the patient and the caregiver separately. The physical examination may have to be performed at a different time than the interview because of patient fatigue; in addition, physical examination may require two sessions. Because a complete history may not be obtainable, the physician may need to focus more on the physical examination.

### **b) Approach to the interview:**

A physician's knowledge of the everyday concerns, social circumstances, and psychology of elderly persons helps orient and guide the interview. Traditionally, physicians use the chief complaint as the focal point of the interview. However, this highly structured approach may be too limiting for elderly patients. Instead, having the patient describe a typical day reveals information about quality of life, liveliness of thought, and physical independence. This approach is especially useful during the first meeting, whether in an emergency room, a hospital, or a nursing home.

Allowing the patient to speak with pride about a long life, accomplishments, and things of personal

importance leads to physician-patient rapport. A good relationship with the patient helps the physician when communicating with family members or obtaining adherence with treatment.

Often, illness can be detected by verbal and nonverbal clues (eg, the way the story is told, tempo of speech, tone of voice, eye contact). An elderly person may omit or deny symptoms of anxiety or depression, yet betray them with a lowered voice, subdued enthusiasm, or even tears. A patient's comments about sleep and appetite may reveal information about physical and mental health. A change in the fit of clothing or dentures may indicate weight gain or loss.

Also important are the patient's personal hygiene and dress, the person who accompanies the patient, and the patient's preference about having that person talk during the interview.

Patients should be fully clothed during the interview. A patient who wears dentures, eyeglasses, or a hearing aid should wear it to facilitate communication. To overcome communication problems due to the patient's hearing or vision loss, the interviewer moves close to the patient, faces the patient directly, and speaks clearly and slowly to allow lip-reading. Shouting at the patient does not help because age-related stiffening of the tympanic membrane and ear ossicles distorts high-volume sound. Using a stethoscope in reverse (speaking into the stethoscope like a microphone while the patient wears the earpiece) may be helpful.

A mental status examination may be necessary early in the interview for determining the patient's historical reliability; this examination is conducted tactfully so the patient does not become embarrassed, offended, or defensive, especially if a relative is present.

Unless directed by the physician, a person accompanying the patient does not answer the questions. Some patients prefer to have a relative present; however, unless mental status is impaired, the patient is interviewed alone to encourage the discussion of personal matters. The physician should not invite a relative to be present without asking the patient's permission, because doing so implies that the patient is incapable of providing a complete history. Asking the patient to wait outside while a relative or friend is interviewed can damage the physician-patient relationship.

### **c) History**

Physicians often need to spend more time interviewing and evaluating elderly patients than they would younger patients. Elderly patients may present with many nonspecific symptoms, making it difficult to focus the interview.

Sensory deficits (eg, hearing or vision loss), common in the elderly, can also interfere with the interview process.

Elderly patients may underreport symptoms (eg, dyspnea, hearing or vision loss, problems with memory, incontinence, gait disturbance, constipation, dizziness, falls), which they consider a part of normal aging. However, no symptom should be attributed to normal aging.

In elderly patients, clinical features of diseases may differ from those in younger patients. For example, diseases may manifest solely as functional decline. In such cases, standard questions may not apply (eg, a patient with both arthritis and coronary artery disease whose mobility is severely limited by arthritis may not report dyspnea or chest pain on exertion, even if severe). Questions pertaining to the duration of functional decline can add useful information (eg, "How long have you been unable to do your own shopping?").

Because of cognitive dysfunction, elderly patients may have difficulty recalling all past illnesses, hospitalizations, operations, and drug use; the physician may have to obtain these data from an alternative source (eg, family member, home health aide, medical records). However, the patient's chief complaint may differ from what the family views as the main problem.

#### **d) Components of the Geropsychiatric History**

Before a psychiatric history is done, **a review of medical problems (Axis III)** and a probe for **psychosocial and environmental stressors (Axis IV)** is done - these can often explain a patient's depressive symptoms and/or cognitive deficits

#### **Chief complaint:**

What specific issues are bothering the patient and/or the patient's caregiver?

#### **ODP:**

Time course, previous evaluation and treatment of these problems  
psychosocial stressors, which may be contributing to, or worsening the patient's symptoms/problems  
Review of psychiatric symptoms with pertinent negatives

#### **Psychiatric history:**

Psychiatric problems may not be detected as easily in older patients as in younger patients. Insomnia, changes in sleep patterns, constipation, decreased cognition, anorexia, weight loss, fatigue, preoccupation with bodily functions, increased alcohol consumption, and somatic complaints are common symptoms.

The patient should be questioned about delusions and hallucinations; past psychiatric care, including psychotherapy, institutionalization, and electro convulsive therapy; and the use of psychoactive drugs or antidepressants.

Sadness, hopelessness, and crying episodes may indicate depression. Many circumstances (eg, recent loss of a loved one, including pets; hearing loss) may contribute to depression. Irritability may be the primary affective symptom or patients may present with cognitive loss, often called pseudodementia

#### **Past Psychiatric History:**

Current and previous psychiatric diagnoses, inpatient and outpatient treatments, psychotropic medication use, history of suicide attempts

#### **Past Medical History:**

Including both medical diseases and also careful review of medications.

When reviewing past medical illnesses, the physician asks the patient about diseases that used to be more common (eg, rheumatic fever, poliomyelitis) and about outdated treatments (eg, pneumothorax therapy for tuberculosis, mercury for syphilis).

A history of immunizations (eg, tetanus, influenza, pneumococcus), adverse reactions to

immunizations, and skin test results for tuberculosis is obtained.

If the patient recalls having surgery but does not remember the procedure or its purpose, surgical records can be sought.

### **Other medical illnesses and complaints are reviewed systematically**

#### **Neuro Behavioral Evaluation**

Cognitive deficits can result from many neurological disorders. Parkinson's disease and Lewy-body dementia are being increasingly recognized as etiologies of dementia besides Alzheimer's. Other neurological diseases including NPH, tumor, brain abscess, intracerebral bleeding, amyotrophic lateral sclerosis, etc. need to be properly evaluated for as possible etiologies to the patient's cognitive decline. Sometimes it is very difficult to distinguish Alzheimer's disease from vascular dementia (and these may even coexist). For example, does a patient who has had a stroke have Alzheimer's disease if he or she was never evaluated for Alzheimer's before the stroke? A comprehensive behavioral neurological evaluation will help to identify etiologies for the cognitive impairment, which can markedly impact long term planning for the patient.

#### **Neurological History**

- Focused on determining if there is a neurological disease present that may be the etiology of cognitive decline in the patient
- History and course of cognitive impairments and previous neurological diseases and symptoms
- Review of cardiac history as it relates to strokes/TIA's
- Stroke risk factors

#### **Functional status:**

Evaluating the patient's functional status is a hallmark of good geriatric care.

Physical functioning usually is measured by the ability to accomplish basic activities of daily living (ADL), including bathing, dressing, toileting, transferring, continence, and feeding.

Other components of functional well-being are behavioral and social activities that require a higher level of cognition and judgment than physical activities. These instrumental activities of daily living (IADL) include preparation of meals, shopping, light housework, financial management, medication management, use of transportation, and use of the telephone.

Functional status (ADL and IADL) is probably most accurately evaluated by direct observation of the patient by family or health professionals in the home or a simulated homelike environment. However, surprisingly accurate information is also obtained by standardized questionnaire or self-report

#### **Family and social histories:**

Family history should focus on disorders of later life known to have inherited patterns (eg, Alzheimer's disease, cancer, diabetes). The age of onset in family members is noted.

Social history includes assessment of the patient's living arrangements (number of rooms; plumbing; availability of elevators, heating, and air conditioning), possibly best achieved by a home visit. Home

features that can lead to falls (eg, poor lighting, slippery bathtubs, unanchored rugs) are identified and remedies suggested.

Having the patient describe a typical day, including activities such as reading, television viewing, work, exercise, hobbies, and interactions with others, provides valuable information.

The patient is asked about the frequency and nature of social contacts (eg, friends, senior citizens' groups), family visits, religious or spiritual participation, and availability of transportation.

Caregivers and support services (eg, church/Temple, senior citizens' groups) available to the patient are identified.

The ability of family members (eg, their employment status, their health, traveling time to the patient's home) to assist the patient is determined. Other organized support systems (eg, church) may be assisting the patient.

The patient's attitude toward the family and the family's attitude toward the patient are explored.

The patient's marital status (single, married, widowed, living in a relationship without marriage) is noted. Questioning about sexual practices and satisfaction must be sensitive and tactful but thorough; the number and sex of sexual partners are elicited and the risk of sexually transmitted diseases assessed.

Economic difficulties due to retirement, a fixed income, or death of a spouse or partner who may have contributed financial support are discussed. Financial or health problems may result in loss of a home, social status, or independence.

A longtime relationship with a physician may have been lost because the physician retired or died or because the patient relocated.

Tobacco and alcohol use are recorded; the risk of falling asleep while smoking in bed is increased in the elderly, who should thus be warned against smoking in bed. Patients should be counseled to quit smoking. Alcoholism is also a serious, under diagnosed problem in the elderly. Signs of alcoholism include confusion, anger, hostility, alcohol odor on the breath, and tremors. The CAGE screening questionnaire identifies patients with a history of drinking problems.

The patient's wishes regarding measures for prolonging life must be documented. The patient is asked what provisions for surrogate decision-making have been made in case of incapacity.

### **Occupational history**

Information about his past jobs and employment history will contribute to his functional ability in past

Age and circumstances of retirement will inform of his attitude to work and retirement

Part or Fulltime jobs held after retirement contribute to income and function

### **Nutrition history:**

The type, quantity, and frequency of food eaten, including the number of hot meals per week, are determined. Any special diets (eg, low salt, low carbohydrate) or self-prescribed fad diets are noted.

The intake of alcohol, dietary fiber, and prescribed or over-the-counter vitamins is recorded. The amount of money the patient has to spend on food and the accessibility of food stores are important issues. Lack of suitable kitchen facilities may prevent a patient from preparing meals.

The patient's ability to eat (eg, chewing, swallowing) is assessed. It may be impaired by xerostomia (dry mouth), which is common in the elderly. Decreased taste or smell may reduce the pleasure of eating, so the patient may eat less. Patients with decreased vision, arthritis, immobility, or tremors may have difficulty preparing meals and may injure or burn themselves when cooking. Patients who are worried about urinary incontinence may reduce their fluid intake, which may also lead to poor food intake.

### **Drug history:**

The physician records the drug history—a flow sheet is often useful—and gives a copy to the patient or caregiver. The drug history includes determining which drugs are used, at what dose, how often they are taken, who prescribed them, and for what reason.

Topical drugs must be included; eg, eye drops for treating glaucoma are absorbed systemically, producing cardiovascular, pulmonary, or central nervous system effects that may be comparable to IV dosing.

Over-the-counter drugs must be included because their overuse can have serious consequences (eg, constipation from laxative use, salicylism from aspirin use).

The precise nature of any drug allergies should be determined.

Sometimes, asking the patient or family members to bring in all of the pills, ointments, or liquids in the patient's medicine cabinet is best. However, possession of current prescription drugs does not guarantee that the patient is complying with treatment. Counting the number of tablets in each vial on the first and subsequent visits may be necessary. If drugs are administered by someone other than the patient, then that person is interviewed.

Patients should demonstrate their ability to read labels (often printed in small type) and open vials (especially the child-resistant type). They should demonstrate their ability to recognize drugs, which may be difficult to differentiate if they have combined them into one vial.

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### **E) The Geriatric Physical Exam**

The geriatric exam starts as soon as the patient is first seen (observations are made about the patient's appearance, speech, ability to move around, etc.) and continues after the formal exam is completed (i.e. does the patient have problems with dressing himself/herself, finding the way back to the car).

Elderly patients may require additional time to undress and transfer to the examining table for the physical examination; they should not be rushed. The examining table is adjusted to a height that the patient can easily access; a footstool facilitates mounting. The patient must not be left alone on the table. Portions of the examination may be more comfortable if the patient sits in a chair.

The patient may want a relative or aide in the room during the examination. Preliminary assessment of the patient's functioning can be made by observing personal hygiene.

The patient's general appearance is described (eg, comfortable, restless, malnourished, inattentive, pale, dyspneic, cyanotic). If the patient is examined at bedside, use of a water mattress, a sheepskin, bedside rails (partial or full), restraints, a urinary catheter, or an adult diaper is

noted

- **Vital signs:**

During measurement of **height and weight**, patients with balance problems may need to grasp grab bars placed near or on the scale.

When the **temperature** is recorded, hypothermia can be missed if the thermometer does not measure low temperatures. The absence of fever does not exclude infection.

**Pulses and blood pressure (BP)** are checked in both arms. The pulse is taken for  $\geq 30$  seconds and any irregularity noted. Because many factors can alter BP, several measurements are taken under resting conditions.

### **Respiratory Rate/Quality / O<sub>2</sub> Saturation**

Systemic examination of : Skin, Head, Eyes, Ears, Nose, Oropharyngeal, Neck/Thyroid, Lymphatic, Back, Chest/Lungs, Breasts, Heart, Peripheral Vascular, Abdomen, Musculoskeletal & Pelvic/Rectal as per complaint of the subject.

### **F) Geropsychiatric Mental status Examination:**

A patient who resents a mental status examination—a key component of assessment—should be reassured that it is routine.

The examiner must ensure that the patient can hear; pure word deafness (an isolated inability to understand speech) may be mistaken for cognitive dysfunction. Assessing the mental status of a patient who has a speech or language disorder (eg, mutism, dysarthria, speech apraxia, aphasia) can be difficult.

Elderly persons process information and retrieve memories more slowly; however, abnormalities of consciousness, orientation, judgment, calculations, speech, language, or praxis cannot be attributed solely to age. The patient should be asked questions that will signal abnormalities in these areas; questions only about orientation fail to indicate dementia in many cases. If abnormalities are noted, further assessment, including a formal test of mental status, is needed.

Most of this exam is observed through the interview conversation with patient

**General Appearance/Behavior:** Grooming and hygiene, unusual movements, attitude, psychomotor activity, eye contact

**Affect:** (external range of expression) flat, blunted, labile, full/wide range

**Mood:** (internal emotional tone) dysphoric, euphoric, angry, euthymic, anxious

**Thought Processes:** Language (quality/quantity of speech), tone, associations, speech fluency  
Note presence of: pressured speech, poverty of speech, blocking, flight of ideas, loosening of associations, tangentiality,

Circumstantiality, echolalia, neologisms, clanging, perseveration, ideas of reference

**Thought Content:** note hallucinations, delusions, illusions, derealization, depersonalization, and suicidal or homicidal ideation

**Cognitive:** (mostly covered by psychometric tests) level of consciousness, orientation

**Insight:** the patient's understanding of his or her problems and implications of these problems

**Judgment:** based on history of patient's decision making

**Functional Disability** | One of the core concepts in the geriatric assessment is to evaluate how the patient's problems and living environment lead to functional disability and diminished quality of life

Evaluate for Basic and Instrumental ADL's in history and especially note acute changes in patient's functioning. The patient's level of functional disability is then used to assess for need of community services, rehabilitation services, and institutionalization required

### **G) Comprehensive Neurological Examination**

Focused on looking for neurological deficits that may be a sign of neurological disease (CVA, Parkinson's, etc)

#### **Neurological status examination:**

The neurological examination for an elderly patient, similar to that for any adult, assesses cranial nerves, motor function, sensory function, and mental status. However, non-neurological disorders that are common among the elderly may complicate the neurological examination. For example, diminished sight and hearing may impede the assessment of cranial nerves, and peri-arthritis of the shoulder due to hemiplegia may interfere with the assessment of motor function.

Signs detected during the examination must be considered in light of the patient's age, history, and other findings. Symmetric findings unaccompanied by functional loss, other neurological signs, and complaints may be a result of aging. The physician must decide whether these findings justify a detailed evaluation for a neurological lesion.

Patients should be reevaluated periodically for functional changes, asymmetry, or new complaints.

#### **Chief Components of Exam**

##### **General appearance**

Head exam focusing on temporal arteries, carotid arteries, and fundoscopy  
**Mental Status Exam:** with special emphasis on

Attention and orientation, short term memory (name & address and 5 min recall),

Naming and recognizing president, language output (fluency, word finding problems, paraphrastic errors),

Conversational comprehension/following commands, naming, similarities, sets of words (first letter, animals),

Serial 7's, arithmetic (number of quarters in a monetary amount), spatial neglect  
**Cranial Nerves**

**Motor Exam:** muscle tone, strength

**Sensory Exam:** light touch sensation, proprioception

Deep tendon reflexes with Babinski's

**Cerebellar Exam:** posture, Romberg, walking gait

**Normal age related changes** seen on neuro exam

Decreased lower extremity vibratory sensation

Diminished patellar DTR

Diminished or absent Achilles tendon DTR

Cortical release signs such as grasp, palmomentary, glabellar, and snout reflexes

Difficult sensory exam if patient has altered mental status or aphasia

Increased muscle tone, involuntary rigidity on passive motion

Diminished strength and muscle mass in small muscles of hand

#### H) **Common Geriatric Labs and Studies**

These labs and studies are ordered after the geriatric history and physical has been completed and are used to detect diseases that are easily missed in the history and physical such as anemia, renal impairment, hypothyroidism, and especially reversible etiologies of cognitive impairment (dementia).

#### **CBC**

- BioChemistry Tests
- TSH
- UA
- Vitamin B12/folate
- RPR/VDRL
- ESR
- LFT's

1) **Geriatric Assessment Tools** are a standardized means of obtaining information from geriatric patients as part of a comprehensive assessment visit.

*Assessment tools enable the practitioner to efficiently evaluate a patient's current level of function, cognition, and safety. The practitioner can then use the information from the assessment to help optimize the patient's current situation.*

#### a) **Neuropsychometric Testing**

Patient will be asked sets of question to assess for the patient's overall intellectual and cognitive function normalized to the patient's age and baseline educational and intelligence level. This stressful, arduous component of the geriatric assessment is explained to the patient as being the equivalent to the brain as a cardiac stress test is to the heart. These tests are important because we often miss dementia completely in patients subject to the traditional medical interview, particularly those that are well educated, socially adept, and in denial of their cognitive problems. These tests should be ordered for any geriatric patients that the clinician suspects to have dementia even if the patient has a normal MMSE score. The information from these tests will then allow for proper characterization of the pattern of cognitive deficits that will provide clues to the specific type of dementia the patient is suffering from.

#### **A standard neuropsychometric testing battery**

- 1) Attention
- 2) Abstraction/Problem Solving

- 3) Motor
- 4) Verbal
- 5) Perceptual/Constructional
- 6) Memory
- 7) Orientation
- 8) Estimated Premorbid Verbal IQ
- 9) Depression

#### **b) Rating scales in Geropsychiatry**

Rating scales primarily used in research studies are useful in clinical practice in assessment of the elderly to delineate specific problems, documenting change, teaching and communicating with colleagues and they can be useful in insurance and medico legal purposes. There is a plethora of scales that can be used but there is no single scale or instrument to measure all pathology. In India there is also the issue of translation and validation in various languages to maintain its reliability and validity at the same time ensure that the items pertain to our culture and clinically appropriate. Some of the widely used scales will be summarized below

### **DEPRESSION**

#### **Geriatric Depression Scale**

The Geriatric Depression Scale (GDS) is a self-report scale designed to be simple to administer and not to require the skills of a trained interviewer (Yesavage et al, 1983). Each of the 30 questions has a yes/no answer, with the scoring dependent on the answer given. A sensitivity of 84% and specificity of 95% have been documented with a cut-off score of 11/12; a cut-off of 14/15 decreased the sensitivity rate to 80% but increased specificity to 100%. A 15-item version of the GDS has been devised by Shiekh & Yesavage (1986), and is probably the most common version currently used. The shortened version has a cut-off score of 6/7 and correlates significantly with the parent scale. Logistic regression analysis has been used to derive a four-item version, which has a specificity of 88% with a cut-off of 1/2, and sensitivity of 93% with a cut-off of 0/1 (Katona, 1994). For the assessment of depression in older people, it is the scale against which others should be rated.

#### **Hamilton Rating Scale for Depression**

The Hamilton Rating Scale for Depression (Hamilton, 1960) is the gold standard of observer-rated depression rating scales. It is a semi-structured interview, requires training to complete, and takes 20-30 minutes to administer. It is used to assess in all age groups, both for clinical and research purposes, the severity of depression rather than as a diagnostic tool. A cut-off score of 10/11 is generally regarded as appropriate for the diagnosis of depression

#### **Montgomery- sberg Depression Rating Scale**

The Montgomery- sberg Depression Rating Scale (MADRS) is administered by a trained interviewer, takes 20 minutes to complete and was designed as a measure of change in studies of the treatment of depression (Montgomery & sberg, 1979). It was developed by taking items from a longer scale. It is widely used in treatment trials, in both young and older patients. Specific instructions are given regarding the ratings and there is a comparative lack of emphasis on somatic symptoms, making it

useful for the assessment of depression in people with physical illness. Cut-off scores have been suggested by Snaith et al (1986): 0-6 indicates the absence of depression (or recovery in the setting of a clinical trial); 7-19, mild depression; 20-34, moderate depression; and 35 and above, severe depression.

### **Cornell Scale for Depression in Dementia**

The Cornell Scale (Alexopoulos et al, 1988) is specifically for the assessment of depression in dementia and is administered by a clinician. It takes 20 minutes with the carer and 10 minutes with the patient. It differs from other depression scales in the method of administration rather than in analysis of any different symptom profile seen in depression with dementia compared with depression alone (Purandare et al, 2001). The 19-item scale is rated on a three-point score of 'absent', 'mild or intermittent' and 'severe' symptoms, with a note when the score is unevaluable. A score of 8 or more suggests significant depressive symptoms. It is the best scale available to assess mood in the presence of cognitive impairment.

## **DEMENTIA: COGNITIVE IMPAIRMENT**

### **Mini-Mental State Examination**

The Mini-Mental State Examination (MMSE) is a rating of cognitive function and takes 10 minutes to administer by a trained interviewer (Folstein et al, 1975). It is the most widely used measure of cognitive function, and users need some training and familiarization with the instrument. Much has been written about the MMSE and amendments have been suggested such as the Standardized Mini-Mental State Examination (Molloy et al, 1991) and the Modified Mini-Mental State (Teng et al, 1987). The original validity and reliability of the MMSE were based on 206 patients with a variety of psychiatric disorders, the scale successfully separating those with dementia, depression, or a combination of the two. Details of extensive subsequent validity and reliability studies are described by Tombaugh & McIntyre (1992). A cut-off score of 23 for the presence of cognitive impairment has been suggested, with variations depending on lack of education.

### **Clock drawing test**

The clock drawing test takes only 2 minutes to administer and reflects frontal and temporoparietal functioning (Brodaty & Moore, 1997; Shulman et al, 1986). The main advantages are its simplicity of administration and the non-threatening nature of the task. The patient is asked to draw a clock face marking the hours and then draw the hands to indicate a particular time (e.g. 10 minutes to 2). Standardized methods of scoring have been described with sensitivities of up to 86% and specificity of up to 96% compared with diagnosis using the MMSE. This test is particularly useful in the general practice setting.

### **Alzheimer's Disease Assessment Scale**

The Alzheimer's Disease Assessment Scale (ADAS) takes 45 minutes administered by a trained observer and is a standardized assessment of cognitive function and non-cognitive features (Rosen et al, 1984). The cognitive section of the scale (ADAS-Cog) is the gold standard for measuring change in cognitive function in drug trials. Deterioration of about 10% per year in cognitive tests in patients

with Alzheimer's disease is regarded as average. The cognitive domains include components of memory, language and praxis, while the non-cognitive features include mood state and behavioral changes. There are 11 main sections testing cognitive function and 10 assessing non-cognitive features.

## **GLOBAL ASSESSMENTS**

### **Clinical Dementia Rating**

The Clinical Dementia Rating (CDR) scale is used as a global measure of dementia (Hughes et al, 1982; Berg, 1984) and is usually completed by a clinician in the setting of detailed knowledge of the individual patient. Much of the information will therefore already have been gathered, either as part of normal clinical practice or as part of a research study. If a specific interview is carried out, about 40 minutes is needed to gather the relevant information. The CDR has become one of the main methods by which the degree of dementia is quantified into stages. Six domains are assessed: memory; orientation; judgment and problem solving; community affairs; home and hobbies; and personal care. Ratings are 0 for healthy people, 0.5 for questionable dementia and 1, 2 and 3 for mild, moderate and severe dementia as defined in the CDR scale.

## **BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS**

### **Neuropsychiatric Inventory**

The Neuropsychiatric Inventory (NPI) evaluates a wider range of psychopathology than comparable instruments (Cummings et al, 1994). It may help distinguish between different causes of dementia, records severity and frequency separately, and takes 10 minutes to administer. The NPI assesses ten domains: delusions; hallucinations; dysphoria; anxiety; agitation/aggression; euphoria; disinhibition; irritability/lability; apathy; and aberrant motor behavior. A screening strategy is used to cut down the length of time the instrument takes to administer, but obviously it takes longer if replies are positive. It is scored from 1 to 144 and severity and frequency are independently assessed. The NPI has been translated into a number of languages and it is now used widely in drug trials.

### **BEHAVE-AD**

The BEHAVE-AD (Reisberg et al, 1987) takes 20 minutes to administer by a clinician and was designed particularly to be useful in prospective studies of behavioral symptoms and in pharmacological trials to document behavioral symptoms in patients with Alzheimer's disease. The BEHAVE-AD is the original behavior rating scale in Alzheimer's disease. It is in two parts: the first part concentrates on symptomatology, and the second requires a global rating of the symptoms, on a four-point scale of severity. The domains covered are paranoid and delusional ideation; hallucinations; activity disturbances; aggression; diurnal variation; mood; and anxieties and phobias.

## **ACTIVITIES OF DAILY LIVING**

### **Bristol Activities of Daily Living Scale**

The Bristol Activities of Daily Living Scale was designed specifically for use in patients with dementia (Bucks et al, 1996). The scale assesses 20 daily living abilities. Face validity was measured by way of carer agreement that the items were important, construct validity was confirmed by principal

components analysis and concurrent validity by assessment with observed performance, and there is good test-retest reliability. Three phases in the design of the scale are described, and researchers designing their own scale should read the account of this development, which is a model of clarity.

### **Alzheimer's Disease Functional Assessment and Change Scale**

The Alzheimer's Disease Functional Assessment and Change Scale (ADFACS) is used for the assessment of activities of daily living in patients with Alzheimer's disease with particular reference to outcomes in clinical trials (Galasko et al, 1997). It is informant-based and takes 20 minutes. The scale has been used in drug trials, and consists of ten items for instrumental activities of daily living: ability to use the telephone; performing household tasks; using household appliances; handling money; shopping; preparing food; ability to get around both inside and outside the home; pursuing hobbies and leisure activities; handling personal mail; and grasping situations or explanations. These are rated from no impairment to severe impairment.

Basic activities of daily living are assessed on a six-point scale (an additional rating, very severe impairment, is included). These are: toileting, dressing, personal hygiene and grooming, physical ambulation and bathing. The scale was developed from 45 activities of daily living items, with the chosen items having been shown to be sensitive to change over 12 months, to correlate with the MMSE and to have good test-retest reliability (Galasko et al, 1997).

## **GLOBAL MEASURES OF PSYCHIATRIC SYMPTOMATOLOGY**

### **Brief Psychiatric Rating Scale**

The Brief Psychiatric Rating Scale (BPRS) takes about 20 minutes and is administered by a trained interviewer. The BPRS is a 16-item, seven-point ordered category rating scale, which has been developed through previous versions (Overall & Gorham, 1962). The domains assessed are somatic concern; anxiety; emotional withdrawal; conceptual disorganization; guilt feelings; tension; mannerisms and posturing; grandiosity; depressive mood; hostility; suspiciousness; hallucinatory behavior blunted affect. The questions are completed in 2-3 minutes following the interview.

### **Cambridge Mental Disorders of the Elderly Examination**

The Cambridge Mental Disorders of the Elderly Examination (CAMDEX) is a structured instrument made up of eight sections - an interview with the subject, a cognitive section (the CAMCOG), the interviewer's observations of the subject, a physical examination, results of investigations, a note of medication, any additional information and an interview with an informant (Roth et al, 1986). The resulting information provides a formal diagnosis in a number of categories: four types of dementia, delirium, depression, anxiety, paranoid disorder, and other psychiatric disorders. Interrater reliability is excellent and a cut-off score of 79/80 gives a 92% sensitivity and 96% specificity in relation to a diagnosis of dementia. The CAMDEX has been used extensively in research studies.

## **CARER BURDEN AND QUALITY OF LIFE**

### **Quality of Life in Alzheimer's disease Patient and Caregiver Report**

The Quality of Life in Alzheimer's disease Patient and Caregiver Report (QoL-AD) is used for the

assessment of quality of life in dementia and is taken from self and caregiver reports (Logsdon et al, 1999). This 13-item assessment relates to the domains of mood, physical health, memory, relationships, self-esteem and current situation. Each is marked on a four-point scale.

## **H) Neuroimaging in Geriatric Psychiatry.**

Neuroimaging techniques provide an opportunity to study the structure and function of the brain in Elderly. Structural imaging like Ct and MRI are useful tools though information is limited

CT is affordable and is good for SAH, bony abnormalities and calcified tumours, AV malformations, and SOLs like Abscess, Tumours, inflammation and atrophy. It is quick easy to perform, less costly and can be done in presence of pacemakers and ferromagnetic bodies. Its limitations are poor visualization of white matter pathology

MRI Scan detects white matter abnormalities and has excellent contrast between gray matter, white matter, and CSF. It is the technique of choice as it can clearly delineate Tumors, abscess, hemorrhage, inflammation, and vascular abnormalities like AV malformations. Only disadvantage is its cost, time, CI to metal objects.

Advances in radiotracer chemistry and instrumentation have increasingly positioned neuroimaging methods as an interface between basic and clinical neuroscience research.

The in vivo visualization of neurotransmitter metabolism, transporters, and receptors with single photon emission computed tomography (SPECT) and positron-emission tomography (PET) has been made possible by advances in radiotracer development

- One of the most exciting advances relevant to geriatric neuropsychiatry is the development of radiotracers for the in vivo visualization of amyloid deposition. This work is an exquisite example of how data from neuropathological studies and animal models informed the development of a powerful biomarker for Alzheimer disease (AD) and, potentially, mild cognitive impairment (MCI).

Underscoring the rapid advances in this area of radiotracer development, the findings of Verhoeff and colleagues, represent the initial publication of a third PET radiotracer, tested in living human subjects, that has been shown to specifically bind to fibrillar alpha- $\beta$  aggregates.

Neurochemical brain imaging studies of psychotropic drug mechanisms have focused mainly on the imaging occupancy of transporters and receptors at the primary sites of action.

Neuroimaging studies of the neural circuitry of cognition have increasingly used well-designed and validated tests that are derived from cognitive neuroscience constructs. The consideration of these aspects of study design is especially critical in assessing the potentially subtle changes associated with the pathophysiology of normal aging or MCI. Also, cognitive-activation paradigms could be integrated with pharmacological activation techniques or with neurochemical imaging methods (e.g., Carbon et al. 1). Such studies may provide unique information regarding the role of neurotransmitter systems in the neural circuitry of cognition in normal functioning and disease.

Over the past decade, volumetric measurements of magnetic resonance imaging (MRI) scans have resulted in a considerable body of data regarding structural brain alterations in normal aging and AD. More recently, these methods have been applied to geriatric affective disorders. These studies have focused on measuring alterations in brain structure that have been hypothesized to reflect cerebrovascular and/or neurodegenerative disease processes Beyer and colleagues report increased

left-hippocampal volumes in geriatric patients with bipolar disorder, most prominently in those patients treated with lithium. Lavretsky and colleagues observed decreased frontal gray matter volumes, bilaterally, in depressed elderly men, compared with women, only when controlling for medical burden in the statistical analysis.

A quantitative evaluation of white-matter signal hyper intensities in geriatric depression by Firbank and colleagues demonstrated increased frontal lobe white-matter lesion volume in patients relative to comparison subjects, including diagnosis (unipolar versus bipolar depression), medication exposure, gender, and medical co morbidity. The nature of the structural MRI findings observed in late-life affective disorders underscores the critical role of postmortem data in understanding the pathophysiological significance of these observations.

Neuroimaging studies in late-life neuropsychiatric disorders have not focused on patients with treatment-resistant depression, bipolar disorder, psychotic depression, and late-life psychotic disorders. Furthermore, the mechanisms of action of the treatments that are effective in these conditions (e.g., electro convulsive therapy, lithium, clozapine, and mifepristone) have not been extensively studied.

Another area that could be addressed uniquely with neuroimaging methods is the longitudinal evaluation of the impact of repeated depressive episodes on brain structure and functioning. Such longitudinal studies may have implications for the important question of whether "depression could occur as a psychological reaction to cognitive decline, as a noncognitive manifestation of neuronal loss, or as a neurobiological prodrome.

The ultimate usefulness of neuroimaging research in geriatric neuropsychiatry will be determined by our ability to address these critical and challenging question

### **I) Home Visit Assessment**

The Home Visit Assessment is an essential part of the comprehensive geriatric assessment most often done by social workers or public health nurses. This assessment is important because it is important to understand the impact of the patient's environment on his problems, particularly problems with fall risk and functional disability. The home visit adds to the functional assessment via direct observation of a patient carrying out activities of daily living

### **J) Diagnosis**

The most common method of diagnostic categories would be the DSM 1V as shown or ICD 10

Psychiatric Diagnostic Axes

Axis I: Clinical psychiatric disorders

Axis II: Personality disorders, mental retardation

Axis III: General medical conditions

Axis IV: Psychosocial and Environmental Stressors

Axis V: Global Assessment of Functioning

However most elderly do not fit into the diagnostic categories as they have multiple overlap of symptoms. Hence Geriatricians have suggested a Syndromal approach in general and geropsychiatrists in particular

## **Blazer has identified 7 Syndromes**

- 1) Acute Confusion or Delirium is a transient organic brain syndrome characterized by acute onset and global impairment of cognitive function. In elderly at times a Hypoactive delirium is seen with apathy. There are biological, cognitive and environmental contributors
  - 2) Memory Loss or the Dementia syndrome that is a frequent but disabling syndrome. It has a sustained decline in cognitive function with insidious onset
  - 3) Insomnia is more frequent than in any age group. They may be Primary or Secondary. Others are Sleep Apnea, SWS disorder and Nocturnal Myoclonus
  - 4) Anxiety which may be Primary as GAD, Panic disorder; or Secondary to Organic disorders or co morbid with other Psychiatric disorders
  - 5) Suspiciousness specially when experiencing cognitive impairment ranging from distrust, increased cautiousness to paranoid delusions
  - 6) Depression that is most disabling subjectively and can be grief, depressed mood co morbid with dementia, major depression or late life depression. Cognitive impairment and Psychotic symptoms have to be watched for and treated
  - 7) Hypochondriasis is a common and frustrating somatoform syndrome. Some organic finding may be present but not explain the symptoms and the symptoms do reach delusional proportions
- The syndromal diagnosis enables a therapeutic approach and emphasis the multiple presentations and co morbid medical illnesses in the Elderly

## **K) Competence**

The level of Competence may be required to be assessed in light of all the above to check patients

- a) Give consent for medical treatment
- b) Give power of attorney, draw and change a will
- c) Consent by advance directives for research and withdrawal of life support systems

Though Competency is a Legal term it is assessed for a particular task within the specific framework as the person may vary in giving consent for different tasks

## **L) Process of Therapy Delivery**

- a) Assessment and Problem Definition The geropsychiatrist goes over history, examination, labs, imaging studies, and specialist opinions leading to diagnoses of multiple problems. He or she further supports these diagnoses with quantitative data such as Dementia Rating Scale scores.  
A social worker or public health nurse then goes over the patient's environmental conditions.
- b) Plan A review of initial plan factoring in additional information from specialist referrals, home visit, diagnostic labs and studies to update the initial plan as needed in the diagnostic, therapeutic, and educational components Specific resources available to the patient and caregiver are also considered at this point and integrated within the care plan with appropriate revisions of the care plan as needed.
- c) Family Conference After the patient and family/friends have heard the overall assessment

and plan, they are allowed to ask questions regarding the assessment and plan and to offer their own input regarding possible resources they may be able to draw on or offer comments on other issues they feel should be addressed. The final assessment and plan is based on negotiations between the health care team and their recommendations and the desires and wishes of the patient and the caregiver. These negotiations will helpfully lead to a middle ground that will allow the best possible treatment program that is acceptable to the patient and caregiver. A timeline of planned actions and follow up is also presented to the patient at the end of the family conference.

- d) **Follow Up** The long-term success of a comprehensive geropsychiatric assessment program is highly dependent on follow-up to not only ensure implementation of the plan but also to continue to update and modify the plan to best suit the patient's needs as the situation changes. Including regularly scheduled follow-up visits to check on the clinical progress of the patient and to both ensure the implementation of the plan and to make further modifications to the plan as needed. **What Are the Comparative Merits of Different Methods in Carrying Out a Geropsychiatric Assessment?**

Many assessment methods for specific domains have undergone rigorous validation, and the criteria for acceptance of a given method have been carefully defined. However, in domains in which there are multiple validated instruments to measure the same function, there have not yet been studies that directly compare one method to another. As a result, identification of the single best instrument in each domain is not possible at this time. One of the first steps in establishing a program of geropsychiatric assessment is deciding upon a standardized approach to data collection.

Before choosing from among the different methods, clinicians should consider some of the following issues. In the context of comprehensive geropsychiatric assessment, there is a role for both structured and unstructured methods of data gathering.

There are several merits of a structured approach. Using standardized validated questions and requiring the respondent to choose from a limited number of answers enhance precision, reproducibility, and freedom from bias. The task of data collection is more easily delegated if the format is standardized. Standardized data collection methods help in clinical decision-making and prospective evaluation of the efficacy of interventions.

On the other hand, merits of unstructured methods include flexibility of the testing procedure, ability to probe problems in detail, and the opportunity for synthesis of findings to develop a global impression. In-depth geropsychiatric assessment methods need to have high predictive value, detect small changes in function, identify potentially remediable problems, and efficiently predict patient outcomes.

Special expertise is often required to carry out an in-depth assessment.

Three additional issues should be addressed.

First, in-depth assessments (and consequent interventions) must take patients' values into account.

Second, comprehensive assessment methods should accurately reflect change in patient status over time. Most existing methods do not meet this need.

Finally, while it is possible to educate a variety of health care professionals to carry out various aspects of comprehensive assessment, experience and leadership are required in the individual or individuals responsible for supervising the assessment effort.

## **Conclusions**

The settings, uses, processes, personnel, and component domains of comprehensive geropsychiatric assessment have been defined with sufficient clarity to provide guidelines for establishment of new assessment programs.

Accumulated evidence indicates with moderate-to-high confidence that comprehensive geropsychiatric assessment is effective when coupled with ongoing implementation of the resulting care plan.

Effectiveness has been most convincingly demonstrated in two inpatient settings, the geriatric assessment unit and the combined geropsychiatric assessment-rehabilitation unit. The most consistently demonstrated favorable outcomes of comprehensive geropsychiatric assessment have been prolonged survival, reduced annual medical care costs, and reduced use of acute hospitals and nursing homes.

Although the evidence allows for alternative interpretation, it is probable that careful selection of patients has contributed importantly to the ability to demonstrate benefit from comprehensive geropsychiatric assessments

In view of the seemingly indispensable role of monitoring and implementation of the care plan in achieving desired outcomes, ongoing health care should be linked systematically to the process of comprehensive geropsychiatric assessment.

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