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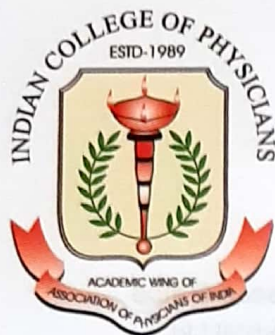
# Progress in Medicine 2023

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*Editor-in-Chief*  
**Alaka K Deshpande**



# Progress in Medicine 2023



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# CHAPTER 117

## Clinical Approach to the Elderly Patient: How it Differs?

Anand Premanand Ambali

### ABSTRACT

The clinical approach to an older person (above 60 years) is full of challenges. A clinician should have patience and good communication skills for better assessment and outcome. The older person presents with multiple symptoms with a background of multimorbidity and disabilities. The reduced cognition, hearing, and vision are challenges we need to overcome. Acute illness precipitates chronic diseases as well which leads to overlap in symptoms and signs. The important person in geriatric care is the caregiver. This chapter should help us to understand how older people differ in clinical scenario and ways to approach them in a better way thus overcoming difficulties, and managing time in an outpatient setup.

### INTRODUCTION

The clinical approach to an older person is full of challenges. As per World Health Organization (WHO) an older person at age of 60 years, will be living another 17 years. These 17 years they should have healthy ageing.

The older person would have already consulted many clinicians in his life by the time he has met you now and he will be knowing whether to respond or to react to you. He will judge the clinician by their body language and communication skills.

The approach should be directed toward assessment of physical, mental, social, and spiritual aspects in a given older person.

After thorough understanding of the core issues, an effort to provide holistic care should begin, to ensure that quality of life improves.

### HOW THE APPROACH DIFFERS IN ELDERLY?

Following are the features that make an approach different:

- The challenge is when an older person with blindness, decreased hearing, impaired cognition and depressed mood, presents to you.
- We need to assess multiple domains like physical, mental, social, and spiritual aspects in a given older person.
- Law of parsimony does not hold true in geriatric practice.
- Past history will be longer than present history.

- Multiple comorbidity and their complications are common in majority of the older person.
- Atypical symptoms are common. For example, there is suppressed fever response in old age as a result of which the symptoms like excess thirst, reduced appetite, or giddiness suggest fever. Another example is that the pain and dyspepsia are absent in presence of peptic ulcer disease.
- Geriatric giants like fall, incontinence, confusion, pressure sores, and immobility can be presenting feature of serious underlying disease.
- Late presentation due to tolerance, blaming symptoms to old age, and lack of family support is common.
- Masking of symptoms occurs due to restricted mobility. For example, an older person with severe osteoarthritis having limitations in walking will not experience angina in ischemic condition or breathlessness in heart failure.
- Role of caregiver is important in decision making and compliance of treatment.
- Polypharmacy, frailty, weak link, and sarcopenia need to be evaluated.
- The older person seeks privacy while narrating history. They prefer to give detailed history in absence of family members. They also wish to talk regarding sexual health for which the clinician should be prepared.
- Symptoms like constipation, fall, and incontinence are deliberately concealed due to embarrassment.
- Case record folders, best measured in kilograms rather than pages, commonly testify to the numerous

departments previously involved in the care of a majority of older patients.

- The good old format of *the chief complaints, history of present illness, and past medical history* is usually combined in older patients.
- *Normal variants:* The Deep tendon reflex at ankle will be absent in minority of older people which may not have clinical significance. Crepitations are heard in both basal areas of lung and lost vibratory sensation can be a normal variant. Testing for gag reflex has limited value in predicting speech and swallowing function.

*The main goals while approaching should be:*

- To identify core problem
- To provide plans to prevent disability/dependency and to provide dignity in death.

*The clinician should develop following qualities:*

- *Patience:* The clinician should have patience to listen to the history from patient as well as the caregiver. More time is required in consultation hence we can divide examination patterns at different intervals by giving priority to the presenting symptoms. Clinicians should be aware that the response time is slow in older person and at times it may take 30 seconds to get a response.
- *Repetition:* We should have patience to listen to the repetition of symptoms. An older person keeps repeating the symptoms throughout consultation. This is due to the insecurity they feel. They want to ensure that the clinician has understood the symptoms. Hence, it is wise to inform the patient that you have understood what they are trying to tell you after taking the history. This prevents repetition.
- *Apprehensions:* The older people will have lot of apprehensions and fear when brought to hospital. We need to address them during our approach.
- *Observational skills:* It gives more information and makes approach easy. The gait, state of confusion, facial features, use of aids like spectacles, cane, hearing aids and dentures, and way the older person gets up from the chair should be observed.
- *Communication skills:* The most important aspect is to listen. During conversation make an eye-to-eye contact, speak clearly, loudly and in short sentences. Always prefer adequate light, comfortable chair, and reduced noise in the consultation room. Avoid shouting and distractors.
- The clinician must know what *is* and what is *not* part of ageing.

## History Taking

Sir William Osler's aphorism "Listen to the patient, he will give you the diagnosis" very much hold true in geriatric practice.

- Older people provide history according to the preference of their symptoms that bothers them most. How these symptoms have affected the functional capacity in them?
- History from caregiver is the symptoms that bothers them most like cough in night while constipation will be bothering most to the older person.

- We should never bypass the history from older person as it leads to diminish self-image and important information that the patient knows is lost.
- History of which activity has been stopped recently? It reflects new-onset severe disease or worsening of existing disease.
- History of fall(s) in the past, fear of fall, and personal safety measures used should be enquired as the older person does not reveal in presence of family members.
- *Function assessment:* History related to activities of daily living (ADL) (needs assistance or is independent in bathing or showering, dressing, getting in and out of bed or a chair, walking, using the toilet, and eating) and instrumental activity of daily living (cooking, cleaning, transportation, laundry, and managing finances). This helps us to know the functional decline during illness, impact of disease on health, monitor response to treatment, and provide prognostic information to help plan long-term care.
- History of unintentional weight loss, slow walking speed, subjective exhaustion, low grip strength, and low levels of physical activities suggest *Frailty*.
- History of medicines used, recently added drug, nonallopathic medicines, Brown Bag check, and drugs that are abused. *Brown Bag check* is a concept where in all the medicines used by the older person is checked for number of medicines, appropriate and inappropriate indications, and possibility of drug interactions and accordingly removed from the use. This also helps to prevent treatment cascade.
- History of fear, suicidal ideas, being abused or neglected, and feeling lonely.
- History of immunization, body and organ donation pledge.
- History of habits and drug dependence
- Sleep disturbance with delay in getting sleep or early awakening should be noted. These suggest anxiety and depression, respectively. What is the reason for disturbed sleep must be enquired. Nocturia or paroxysmal nocturnal dyspnea are common culprits in older people.
- Details of advanced directives and surrogate decision maker should be noted. The older people who are living alone, have early dementia, usually nominate surrogate decision maker to decide their health-related decisions.

*History regarding social support:*

- Who is the person to help them during emergency?
- Is the older person staying alone or with family and is socially active like attending various functions, marriages, and senior citizen forum activities? Reduced social interaction despite good physical health suggests depression.
- Is the caregiver formal or informal?

*Know the caregiver:* Take history regarding the older person from their caregiver too. This collateral history is also important for the clinicians as they will reveal the history hidden by the older person. We should make an attempt to identify burnt out in caregivers and address the issue. We can suggest importance of respite care for the caregivers.

**Spiritual history:** Spirituality has positive influence on health of older person. We should try to know how spiritual is the older person, what are their beliefs and practices in clinician in few medical decisions, especially during terminal illness.

## General Physical Examination

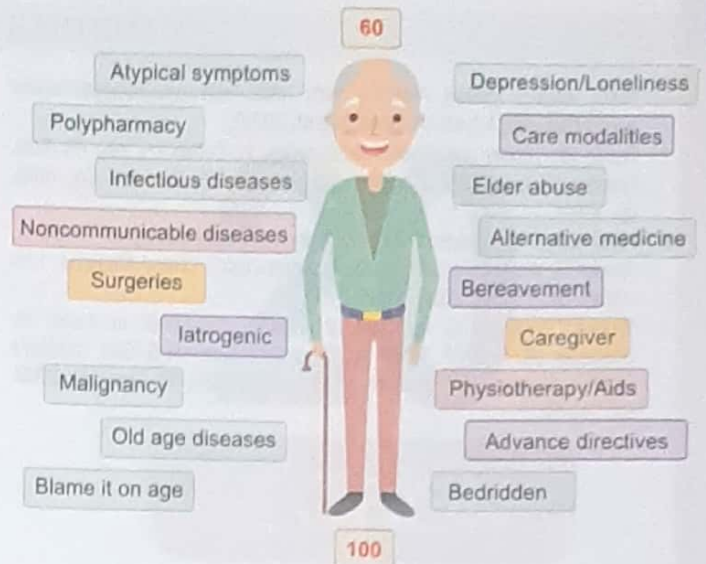
*"The bright and smiling face of an old lady may well mask considerable defects of memory and orientation"*

— Hutchinson

- **Oral cavity:** Should be examined for hygiene, dentures, hydration, patches, coating, and halitosis.
- **Vital signs:** Apart from pulse, blood pressure, respiratory rate, and temperature, we need to look for orthostatic hypotension, pain, and delirium.
- Look for signs of *elder abuse*: Signs of being restrained, such as rope marks on wrists, pinch marks, or injuries which are bilateral symmetrical, dirty clothes, dehydration, severe anemia, unexplained vaginal or anal bleed, torn underwear, bruised breasts, and wounds in various stages of healing.
- **Body mass index:** Height should be calculated using arm demi span. The older person may be having decreased vertebral height due to old vertebral fractures.
- **Gait:** Type and speed should be observed.
- **Timed Up and Go Test** is done for assessment of mobility. The person is made to stand from chair, not using arms, walk 10 feet, turn around and walk back, sit down on the chair. This activity is timed. If the person takes more than 13 seconds for this test, then it suggests they are more likely to fall.
- Hand grip strength
- Examine spine for kyphosis and scoliosis
- **Functional assessment:** When there is history of reduced activity, use The Katz Index to assess ADL and The Lawton Instrumental Activities of Daily Living (IADL) Scale to assess IADL. In our clinical practice we ask the older person how did he reach the clinic? If answer is by cycling, bus, car or scooter, it suggests that the functional capacity of the older person is normal.
- **Cognition assessment:** Initially three item recall test should be carried out. If score is one out of three, then proceed to use Montreal Cognitive Assessment (MoCA) or Mini-Mental Status Examination (MMSE) or Indian Council of Medical Research (ICMR) scale for cognitive assessment.
- If depression is suspected on history, Geriatric Depression Scale can be applied.
- **Nutritional assessment** can be carried out by using Mini Nutritional Assessment scale.

## A PHYSICIAN'S JOURNEY WITH AN OLDER PERSON (FIG. 1)

For a physician, the older person when visits and gains confidence with you will stay with your professional career till his last day. During these years a physician will come across various health, social, and mental health-related



**FIG. 1:** A physician's journey with an older person.

issues along with malignancy and degenerative diseases. **Figure 1** is the concept created by the author. It shows two facets. One shows various issues an old person can present to his physician over his survival period. And second is, in clinical scenario a physician can come across five older people with different factors mentioned in the **Figure 1** in a same day. For example, one patient with malignancy, another with dementia, third for preoperative check-up, fourth with drug-induced reaction, and fifth with abuse will be attending the clinic on a same day. The physician should be well versed to handle such issues.

## CONCLUSION

In geriatric care, where the issues are in multiples, (multidimensional, multimorbidity, and multidisciplinary) and we as clinicians should be a part of solutions. We should prioritize the main issue that is bothering and find a solution for that in first setting. Later again you can call them to discuss other issues.

Thorough clinical assessment can be divided in multiple settings of 15 minutes each. This is recommended to prevent fatigue both in clinician and patient.

Good communication skills and empathy make the clinical assessment successful.

Elderly fear disability than death. Hence, after clinical assessment the measures to prevent complications should be initiated immediately. Issues concerned to end-of-life care, advance directives, and palliative care should be initiated as and when deemed necessary.

We must ensure dignity of the older person throughout their remaining life.

We must avoid ageism. The pejorative terms like "bed blockers" or "space occupiers" should not be used. The older persons not being offered certain treatments or tests because of advanced age constitute ageism.

*"You do not heal old age, you promote it, you protect it and you extend it."*

—Sir James Sterling Ross

## FURTHER READINGS

1. WHO. Ageing. [online] Available from [https://www.who.int/health-topics/ageing#tab=tab\\_1](https://www.who.int/health-topics/ageing#tab=tab_1) [Last accessed August, 2022].
2. Duthie EH. History and physical examination. In: Duthie EH, Katz PR (Eds). *Practice of Geriatrics*, 3rd edition. Pennsylvania: WB Saunders Co; 1998. pp. 3-14.
3. Adam Harper et al. Geriatric medicine, frailty and multimorbidity. In: Feather A, Randall D, Waterhouse M (Eds). *Kumar and Clark's Clinical Medicine*, 10th edition. UK: Elsevier; 2020. pp. 297-319.
4. Reuben DB, Rosen S. Principles of geriatric assessment. In: Halter JB, Ouslander JG, High KP, Tinetti M, Asthana S, Studenski S (Eds). *Hazzard's Geriatric Medicine and Gerontology*, 6th edition. USA: Mc Graw Hill; 2009. pp. 141-52.
5. Ouslander JG, Bernardo Reyes. Caring for the geriatric patient. In: Fauci AS, Longo DL, Kasper DL, Jameson JL, Loscalzo J, Hauser SL (Eds). *Harrison's Principles of Internal Medicine*, 21st edition. USA: MC Graw Hill; 2022. pp. 3739-49.
6. Ambali AP. Elder abuse. In: OP Sharma (Ed). *Principles and Practice of Geriatric Medicine*, 3rd edition. Delhi: VIVA Books; 2015. pp. 774-6.
7. Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW. Studies of illness in the aged: The Index of ADL: A standardized measure of biological and psychosocial function. *J Am Med Assoc*. 1963;185(12):914-9.
8. Lawton MP, Brody EM. Assessment of older people: Self-maintaining and instrumental activities of daily living. *Gerontologist*. 1969;9(3):179-86.
9. Evaluating the geriatric patient. In: Kane RL, Ouslander JG, Resnick B, Malone ML (Eds). *Essentials of Clinical Geriatrics*, 8th edition. McGraw Hill Education; 2017.