



# **Major Health Issues amongst Older Patients and their Management**

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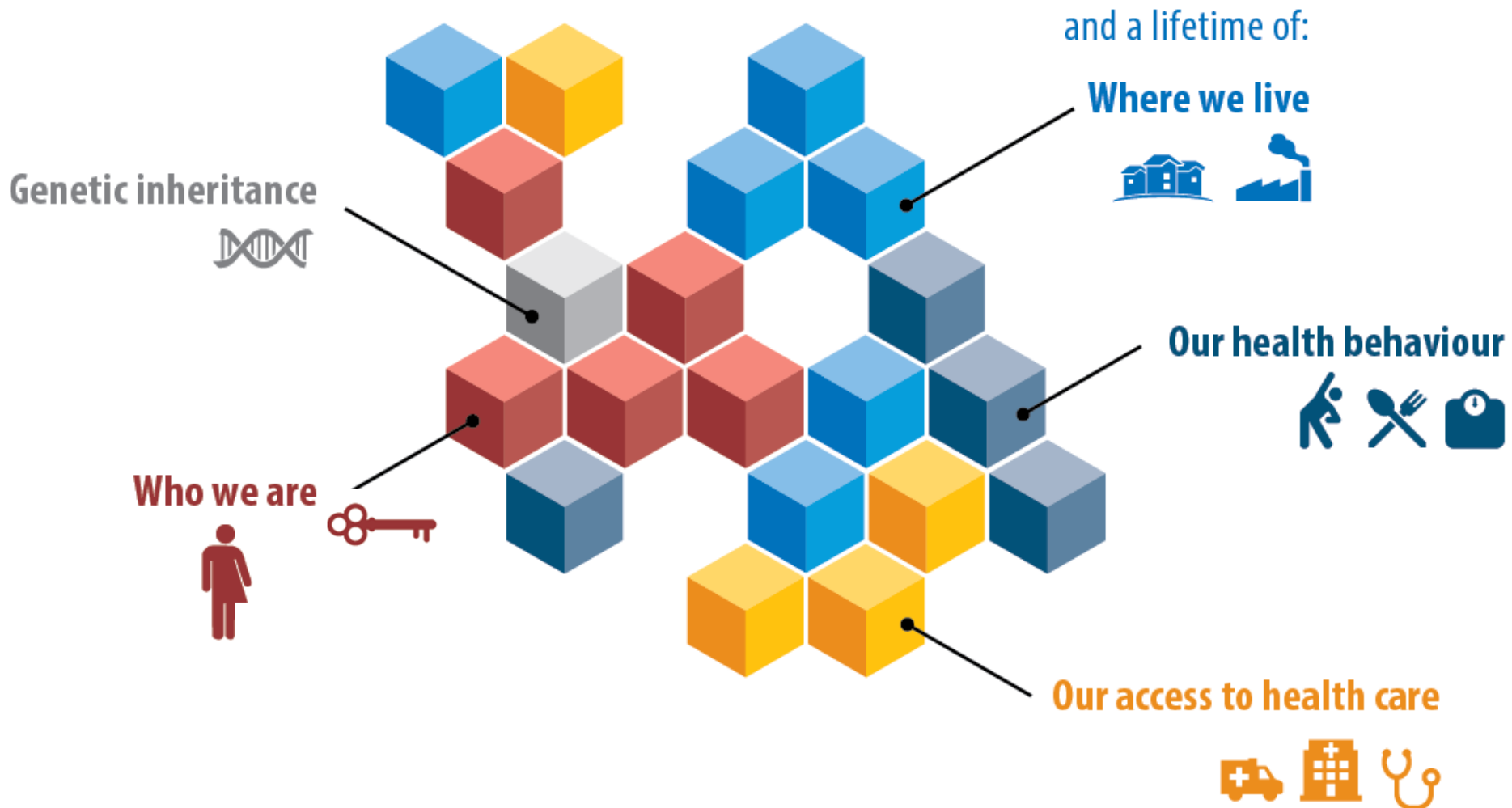
**In 1970-75, life expectancy at birth: 48 years**  
**5.9% of the population was aged 60 years or more**

**In 2026-30, life expectancy at birth: 73 years**  
**13% of the population was aged 60 years or more**

**In 2050-55; life expectancy at birth: 79 years**  
**19% of the population was aged 60 years or more**

# Health in old age is not a random phenomenon

## What makes us age differently?



**Ageing is the process that gradually turns healthy adults into frail older individuals with a diminished capacity for surviving threats (infectious agents, the stress, physical dangers ).**

**(Miller ; JAGS 1997)**

**Healthy aging is a continuous process of optimizing opportunities to maintain and improve physical and mental health, independence, and quality of life throughout the life course.**

**(WHO, 2021)**

**Healthy ageing is a developmental goal. It thus requires policy, societal collaboration and individual action.**

# **What constitutes good health in old age?**

- Biological decline, metabolic effects of life process; and impact of exposure to internal and external environmental hazards are a part of life, so some decline is a part of healthy ageing and is inevitable.**
- Identification of the deficits and prevention at each level can lead to good health in old age.**

# **Disease & Disability in Late Life**

**Acute: infection, vascular events, accidents**

**Chronic: Hypertension, cataract, heart disease, chronic bronchitis, diabetes, degenerative arthritis, depression, stroke, enlargement of prostate, cancers, functional GI disorders**

**Health problems in the very old: physical dependence, stroke, osteoporosis & fracture, heart failure, dementia**

**Disability: vision, chewing, hearing, locomotion, cognition**

## **Important issues in old age**

- **cardiovascular health**
- **cognitive decline & dementia**
- **bone health & rheumatism**
- **vision & hearing**
- **nutrition & supplementation**
- **gut health**
- **physical activity & exercise**
- **sleep**
- **managing medication**
- **immunization**
- **sexuality**
- **worries & anxiety**
- **living alone**
- **Bereavement**

# **What affect the quality of life in old age are:**

**Physical frailty**

**Poor muscle strength**

**Failing memory & mind**

**Painful joints**

**Fragile bones & risk of fracture**

**Unsteady gait**

**Black out & falls**

**Loneliness**

**What affect the quality of life in old age are:**

**Most practical indicator of measuring wellbeing in old age:**

**Activities of Daily Living**

**Basic (6)**

**Intermediate (8)**

**Advanced (3)**

# **The Practice of Geriatric Medicine**

# **An Older Person in Clinical Practice**

- **Extreme complexity**
- **Multi-morbidity**
- **Some degree of sensory deficit**
- **Cognitive impairment**
- **Possibility of affective disorder: anxiety, depression**
- **Multiple disability**
- **Uncertain socio-economic support system**

# An Older Person in Clinical Practice

- Heterogeneous group
- Some age-related functional decline
- Pathological decline masquerading as ageing process
- Clinical reasoning for diagnosis affected by
  - Atypical presentation
  - Multiplicity of diagnosis in presence of multiple unrelated pathologies
  - Late presentation to health system

## Comprehensive Geriatric Assessment (CGA)

- **Operational idea that complex health issues could be handled through comprehensive geriatric assessment was proposed by Warren in the late 1930s**
- **Larry Rubenstein considered CGA as**
  - **Multidimensional**
  - **Interdisciplinary**
  - **Diagnostic process**
  - **Focused on determining a frail older person's Medical, psychological, and functional capability to develop a coordinated and integrated plan for treatment and long-term follow-up**

# Domains of Comprehensive Geriatric Assessment

- **Majority of CGA tools include similar measurable dimensions, grouped into the four domains**
- **Physical health (traditional history, physical examination, laboratory data, disease-specific severity indicators, and preventive health practices)**
- **Functional status (basic and instrumental activities of daily living and other functional scales such as mobility or balance and fall risk assessment)**
- **Psychological health (including mainly cognitive and affective status)**
- **Socioenvironmental status (such as social networks and supports, and environmental safety, adequacy, and needs)**

**CGA is time consuming  
Doctors hate it  
Not suitable for large populations**

**Thus, there is need for quick and effective tools.**

# Constructs of Healthy Ageing

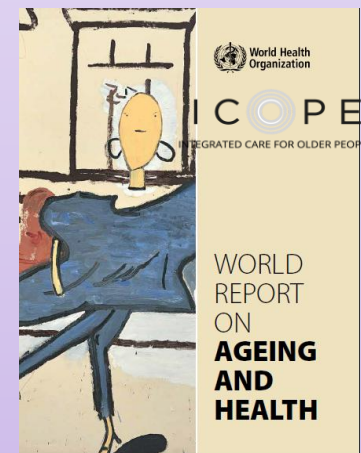
Process of developing and maintaining the functional ability that enables wellbeing in older age

## *Intrinsic Capacity (IC)*

Combination of all the physical and mental capacities of an individual

## *Functional Ability (FA)*

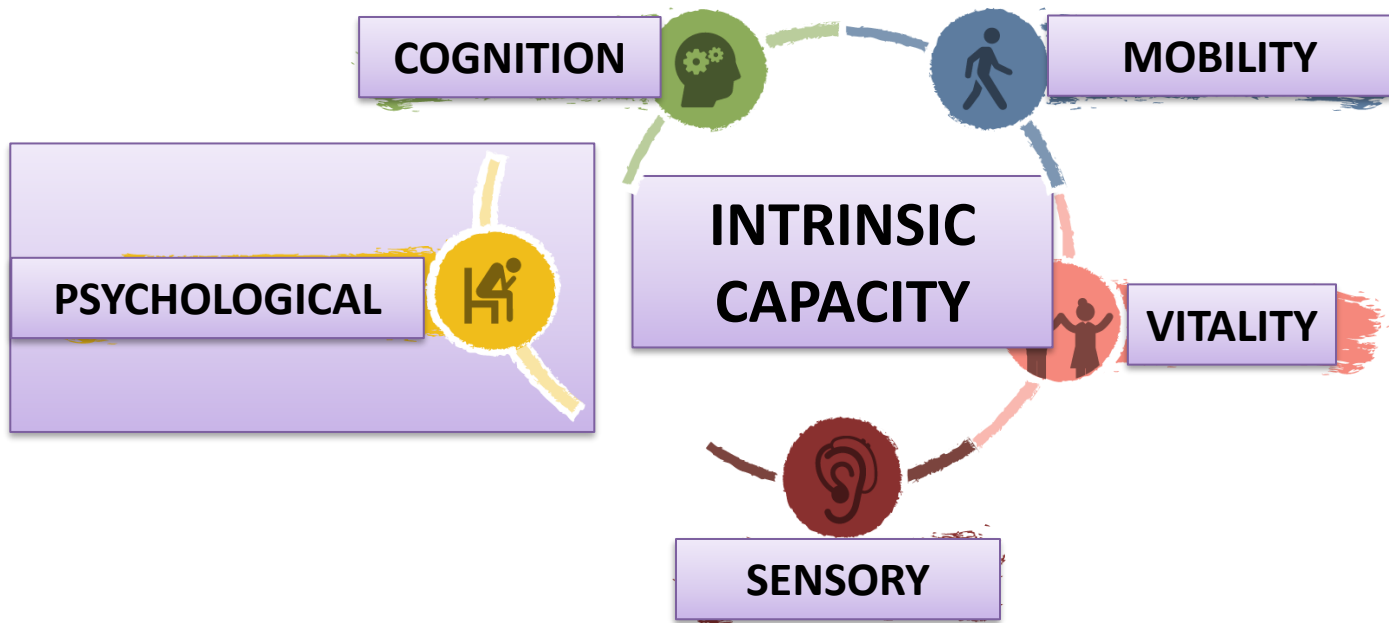
Combination and interaction of IC with the environment a person inhabits



# Concept of Health Status and Intrinsic Capacity

- ✓ There is a need for health care to shift from detecting diseases in one point in time and treating in fragmented ways, to assess function longitudinally across the life course
- ✓ All phases of older age are a reflection of the continuous trajectory of intrinsic capacity and functional ability

# DOMAINS OF INTRINSIC CAPACITY



# Assessment of Intrinsic Capacity

## WHO ICOPE SCREENING TOOL

Priority conditions associated with declines in intrinsic capacity

Tests

Assess fully if any answer in each domain



### COGNITIVE DECLINE

(Chapter 4)

1. Remember three words: flower, door, rice (for example)

2. Orientation in time and space: What is the full date today?  
Where are you now (home, clinic, etc)?

Wrong to either question or does not know

3. Recalls the three words?

Cannot recall all three words



### LIMITED MOBILITY

(Chapter 5)

Chair rise test: Rise from chair five times without using arms.  
Did the person complete five chair rises within 14 seconds?

No

### MALNUTRITION

(Chapter 6)

1. Weight loss: Have you unintentionally lost more than 3 kg over the last three months?

Yes

2. Appetite loss: Have you experienced loss of appetite?

Yes



### VISUAL IMPAIRMENT

(Chapter 7)

Do you have any problems with your eyes: difficulties in seeing far, reading, eye diseases or currently under medical treatment (e.g. diabetes, high blood pressure)?

Yes

### HEARING LOSS

(Chapter 8)

Hears whispers (whisper test) *or*

Screening audiometry result is 35 dB or less *or*

Passes automated app-based digits-in-noise test

Fail

### DEPRESSIVE SYMPTOMS

(Chapter 9)

Over the past two weeks, have you been bothered by

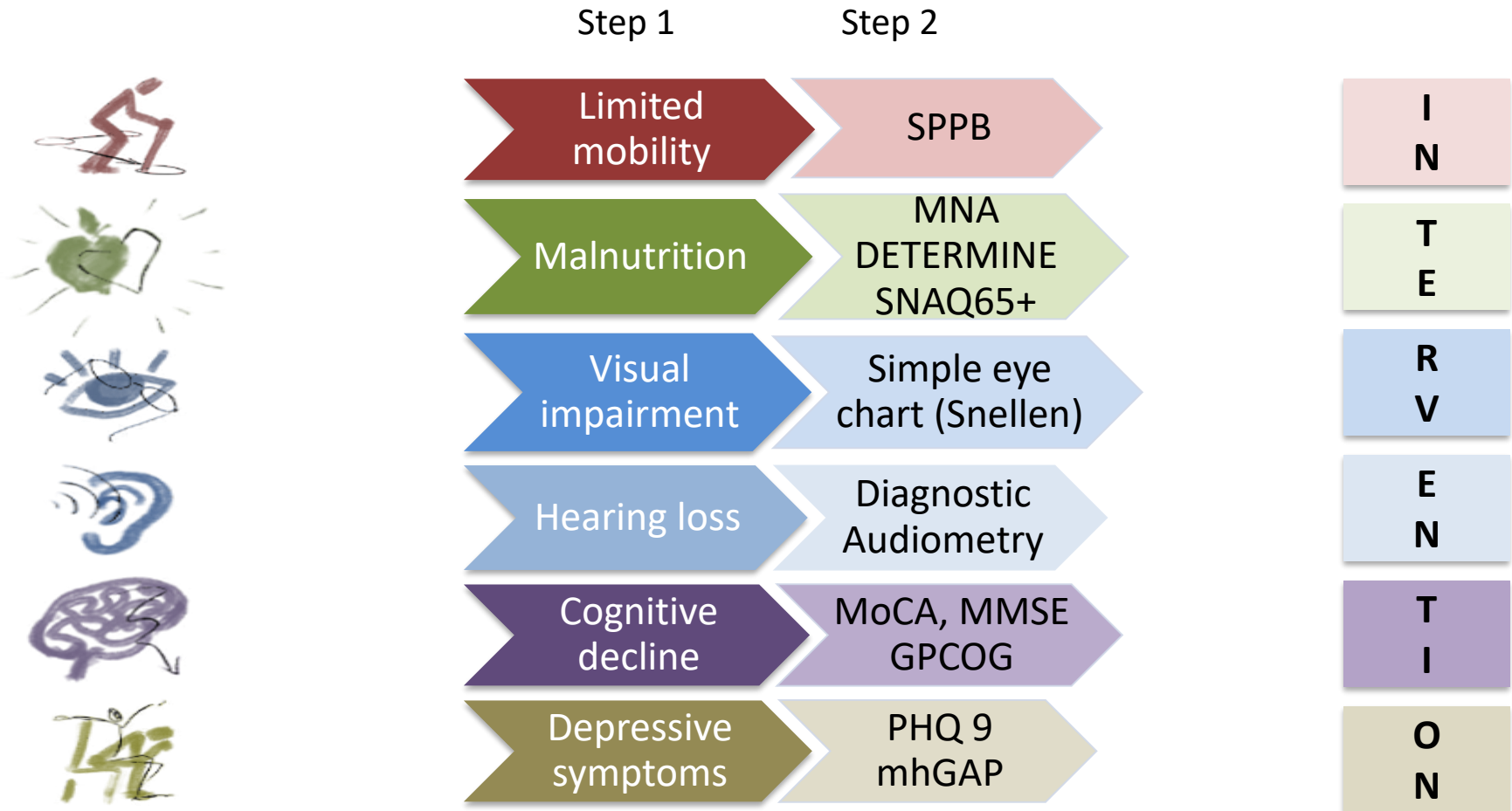
- feeling down, depressed or hopeless?

Yes

- little interest or pleasure in doing things?

Yes

# Assessment of Intrinsic Capacity



**But where is the clinical utility?**

# **A Clinical Construct of Intrinsic Capacity**

- **Functional Ability = Intrinsic capacity + interacting environment.**
- **Intrinsic Capacity = Physical + Mental abilities (cognition and psychological)**
- **Can a clinical construct of IC can be developed from commonly measured biomarkers that can provide an objective measurement in form of a score.**
- **This IC score and individual domain scores can predict functionality (IADL and ADL), mortality and hospitalization.**

Clin Interv Aging. 2022 Oct 25;17:1569-1580.  
doi: 10.2147/CIA.S371793. eCollection 2022.

## **Establishment of Clinical Construct of Intrinsic Capacity in Older Adults and Its Prediction of Functional Decline**

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Affiliations

- PMID: 36304176
- PMCID: PMC9594878
- DOI: 10.2147/CIA.S371793

# **Intrinsic Capacity and Survival among Older Adults in India: LASI-DAD study (WAVE 1 AND WAVE 2)**

**Accepted for publication in The Lancet Regional Health- Southeast Asia**

# **Evolving health challenges in the very old**

- **Excessive ageing and frailty**
- **Sarcopenia**
- **Cognitive decline**

**These are the manifestations of diseases and disabilities of old age and are over and above the chronic diseases of adult life.**

# Frailty of Old Age

Frailty is a clinically recognized state of increased vulnerability and reduced physiological reserve in older adults, making them susceptible to rapid health decline from minor stressors. It involves a loss of muscle mass, strength, and endurance, leading to higher risks of disability, falls, and mortality.

# Components of Frailty

- **Physical and Functional Decline:** Common signs include slow walking speed, low grip strength, unintentional weight loss, and low physical activity.
- **Distinction from Aging:** While associated with aging, it is not an inevitable part of it; it is a separate syndrome of decreased functional capacity
- **Assessment:** Two pathways of assessment:
  - Frailty phenotype (Lind Fried 2001)
  - Accumulation of deficits (Rockwood 2001)
  - Many more scales combining both concepts
- **Reversibility:** Generally considered irreversible. However recent interventions through targeted interventions appear to be successful in reversing frailty.

# Sarcopenia

Sarcopenia is the age-related, progressive loss of skeletal muscle mass, strength, and function, often starting around age 40 and accelerating after 60, resulting in reduced mobility and frailty. It is driven by sedentary behavior, poor nutrition, and nerve deterioration. Symptoms include weakness, slow walking speed, and falls.

# What causes sarcopenia?

- **Aging: A natural decline in muscle mass**
- **Physical Inactivity**
- **Neuromuscular Decline**
- **Hormonal Changes**
- **Reduced Protein Muscle Synthesis (low intake and less efficient anabolic process)**

# Cognitive Decline

Cognitive decline is a gradual reduction in mental functions such as memory, reasoning, and processing speed, ranging from normal age-related changes to serious neurodegenerative diseases like dementia.

# Manifestations of Cognitive Decline

- **Memory Loss:** Forgetting important information, appointments, or recent events.
- **Reduced Mental Sharpness:** Difficulty following conversations, storylines, or complex tasks.
- **Navigation Issues:** Getting lost in familiar places.
- **Language Difficulties:** Frequently struggling to find the right words.
- **Impaired Judgment:** Trouble making decisions or managing tasks.
- **Behavioral Changes:** Increased confusion or emotional changes

# Cognitive Decline: Aging Process or Pathological State

1. **Normal Aging:** Minor, slow changes in processing speed.
2. **Preclinical/Subjective Decline:** Changes are noticed by the individual but not necessarily by tests.
3. **Mild Cognitive Impairment (MCI):** Noticeable, measurable decline.
4. **Dementia:** Severe, progressive decline affecting independence.

**New Terms as per DSM 5:**

**MCI – Mild Neuro Cognitive Disorder**

**Dementia- Major Neuro Cognitive Disorder**

# **New Challenges in Care of Older Persons**

- **How aggressive the diagnostic approach should be**
- **Vaccination strategy**
- **Eligibility and preparedness for surgery & interventions**
- **Hip fracture management**
- **Management of cancer in late life**
- **New treatment for Alzheimer's Disease**
- **Long term care as a necessity in the health system**

# Geriatric Care: Way Forward

- **Acceptance of functional capacity as a measure of health and disease beyond organ-centric approach**
- **Practice guidelines for holistic management keeping functionality as the deliverable outcome**
- **Change in education and training parameters for medical and paramedical health professionals**
- **Incorporating essentials of healthy ageing interventions in existing programs and schemes (NPHCE, IPOP, Health & Wellness Centers)**
- **Age friendly environment in designs and structures in public places; and in regulatory framework**
- **Provision for long term care in health programs, social welfare policies and health care financing**

***There are some good news in Geriatric  
Medicine practice***



**Magic potion for  
ameliorating the ravaging  
effect of age is far away.**

**Till that day enjoy old age.**

**It is good to be alive and old than  
remaining young and dead.**



***Thank you for your patience***