



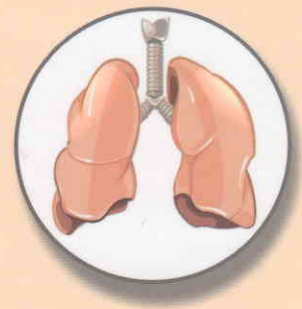
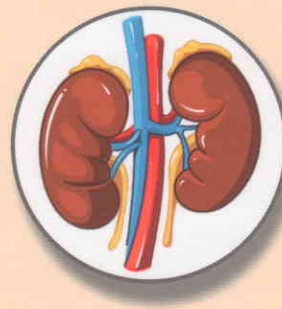
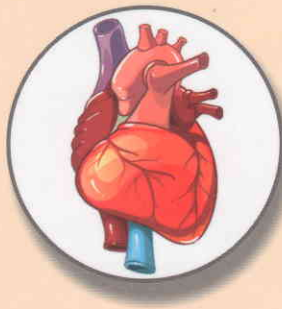
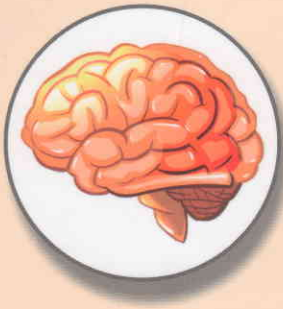
*An Official Publication of  
Association of Physicians of India*

VOLUME  
**2**

Member's Copy

# MEDICINE UPDATE 2021

VOLUME 31 2021



Get the digital access at  
[evangel.digital](http://evangel.digital)

EDITOR-IN-CHIEF

Kamlesh Tewary

 Evangel

The publication of this book has been made possible by unconditional educational grant from



# MICRO LABS LIMITED

**Medicine Update 2021**

*Volume 31-2021*

ISBN: 978-81-948742-8-7

The scientific committee is also thankful for the unconditional grants from:

**Alkem Lab Aristo Pharma Zuventus Ltd. Daxin Pharma**

All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission in writing of the publishers/ editor(s)/author(s).

Edited by  
**Kamlesh Tewary**

Design, Typeset, Print and Distributed by

**Evangel Publishing (P) Ltd**

277, Second Floor, Aggarwal Millenium Tower II

Netaji Subhash Place, Pitam Pura

New Delhi-110034, India

Phone: +91-11-42637878

E-mail: [info@evangelpublications.com](mailto:info@evangelpublications.com)

Webstie: [www.evangelpublications.com](http://www.evangelpublications.com)

## CHAPTER

# 221

## Comprehensive Approach in Providing Geriatric Care in India

OP Sharma, AP Ambali

### Abstract

The population of elderly (>60 years) is steadily rising in India, and health-care system is not yet ready to provide comprehensive geriatric health care. The more important issue is the elderly shall be living 17 added years after retirement age. The health and social issues in elderly people are challenging issues for the treating clinician. The presence of communicable disease, non-communicable diseases and their complications, degenerative diseases, and disabilities in elderly make them special group and requires multidisciplinary team to provide the comprehensive assessment and care. The role of preventive geriatrics like immunization, falls prevention should be emphasized before there is outbreak of health catastrophe in this segment of population.

The year 2021 will witness rise in number of medical colleges opting to start MD in Geriatric Medicine. As evident in any specialty, there is bound to be shortage in trained manpower. Hence, there is need to sensitize existing undergraduate and postgraduate students regarding geriatric medicine. The National Medical Council has already included geriatric medicine in undergraduate curriculum.

The majority of elderly are living in rural areas and seek health services from primary health centers. There is also need to sensitize medical officers of primary health centers regarding geriatric care. The National Program for Health Care of Elderly (NPHCE) is conducting training program for medical officers in few districts which needs to be across our country.

The clinician must restrain Ageism in all possible ways. We need to develop care system that meets the needs of elderly of India and not to copy western style. This chapter has reviewed the issues and possible solutions in providing comprehensive geriatric care.

### Introduction

Ageing is progressive, generalized impairment of function resulting in loss of adaptive response to stress and in increasing risk of age-related diseases.<sup>1</sup>

The elderly constitutes the fastest growing age segment all over the world. Providing healthcare for the older people (>60 years) is a biggest challenge, the medical fraternity is facing today all over the world. The older people are blended with multiple diseases and are also associated with psychological, financial, and social issues. The approach toward healthcare in this set of population

is holistic and multidisciplinary with a strong team coordination.

The majority of the older people reside in rural India. Hence, the healthcare services should concentrate more for older people residing in rural area. Now the scenario of family physician is slowly vanishing and there are specialist and super specialist to treat diseases of each organ in the body. This comes with riders for older people as this leads to multiple consultations and polypharmacy, which again need to be corrected by a geriatric physician or family physician.



The 542 medical colleges in India can become a role model for providing low cost, and quality healthcare for older people by initiating geriatric clinic in each college hospital.

The National Program of Health Care Elderly (NPHCE) has been launched in 100 district hospitals by Government of India from the year 2010-2011 with huge budgetary allocation.

Though the medical council of India had made it mandatory for all medical colleges to have geriatric clinic in their teaching hospital, unfortunately it has not been followed, citing shortage of doctors qualified in geriatric medicine.

The availability of palliative care, physiotherapy, and rehabilitation units should be ensured in all medical college hospitals, which will help provide comprehensive healthcare for older people of all walks of life.

## Aging Situation and Projections around the World and in India

The elderly (>60 years) population in the world has been rising rapidly and the longevity is due to many factors, which include increasing health awareness and developments in medical field. In the year 1980, elderly population was 382 million, which by the year 2017 became 962 million and it is expected to be 2.1 billion by

the year 2050. The 320 million people aged 60 years or over in upper-middle-income countries in 2015 represented a 64% increase over 2000 when older persons in those countries numbered 195 million. Between 2015 and 2030, upper middle-income countries are anticipated to continue to experience rapid growth in the number of older persons: the projected 545 million people aged 60 years or over in 2030 marks a 70% increase over the number in 2015<sup>2</sup> (Fig. 1).

The age division of Indian population (0-14) is 30.8%, (15-59) is 60.3%, (60+) is 8.6%. According to Population Census 2011, there are nearly 104 million elderly persons in India. It has increased from 5.5% in 1951 to 8.6% in 2011 and projected a rise up to 19% in 2050.<sup>3</sup>

As regards rural and urban areas, 71% of elderly population resides in rural areas while 29% of elderly population resides in urban area. Among the challenges which India faces, UNFPA report says the feminization of ageing remained a key one.<sup>4</sup>

At age 60, average remaining length of life was found to be about 18 years (16.7 for males and 18.9 for females) and that at age 70 was less than 12 years (10.9 for males and 12.4 for females). About 65% of the aged had to depend on others for their day-to-day maintenance. Less than 20% of elderly women and majority of elderly men were economically independent.<sup>4</sup>

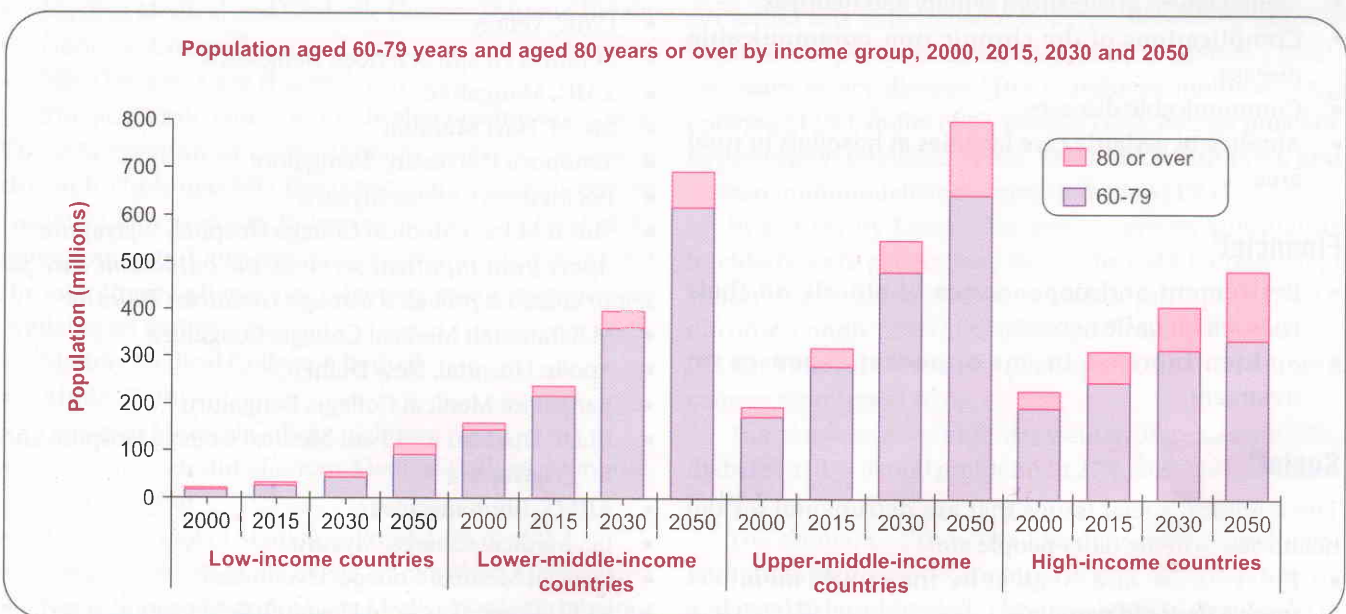


Fig. 1: United Nations (2015). World Population Prospects. The 2015 Revision

In rural areas 55% of the aged with sickness and 77% of those without sickness felt that they were in a good or fair condition of health. In urban areas the respective proportions were 63% and 78%.

The population of 80-plus people is on rise "with a predominance of widowed and highly dependent very old women" and so the special needs of such old women would need significant focus of policy and programs.<sup>5</sup>

### Comprehensive Approach

The older people in India are diverse spread over 28 states. Their cultural background, economic status, lifestyle, behavior, nutrition, beliefs, family status, and disease pattern differ, hence 'there is no one solution to all the problems' for the older people in India.

The broad measures that can contribute toward comprehensive care to the older people are discussed here. Let us look at the health, financial, and social issues of the older people in India.

#### Health

The factors related to health of older people are:

- Multiple disabilities like blindness, locomotor disabilities, and deafness are most prevalent
- Multiple comorbidities, polypharmacy, and iatrogenic diseases
- Mental illness arising from senility and neurosis
- Complications of the chronic non-communicable disease
- Communicable diseases
- Absence of geriatric care facilities at hospitals in rural area.

#### Financial<sup>4</sup>

- Retirement and dependence of elderly on their children for basic necessity
- Sudden increase in out of pocket expenses on treatment.

#### Social<sup>4</sup>

The common social issues that are detrimental for the health status of the older people are:

- Elder Abuse and Neglect by the family members toward their old parents
- Disillusionment due to retirement

- Feeling of powerlessness, loneliness, uselessness and isolation, and widowhood

The geriatric care involves taking care of all the four aspects of the health, that is, physical, mental, social, and spiritual wellbeing. The challenge is during post discharge, as our social network and home services are still in nascent stage.

Apart from these four aspects, the care should continue to ensure quality of life, end of life care, and dignified death.

The most important issue in providing geriatric care is to prevent a disability. Because the older people fear disability more than death, it hampers the quality of life and makes them more dependent on family members. All these factors contribute of mental illness and social isolation. So, the main goal in providing the comprehensive care is to prevent a disability!

### Services Available in Geriatric Care in India

The various medical colleges and district hospitals in India listed here are having geriatric care wards in their respective hospital. This has added special wards for senior citizens. The colleges are:

- Government Medical College, Chennai
  - AIIMS, Delhi
  - AIMS, Cochin
  - CMC, Vellore
  - St John's Health Sciences, Bengaluru
  - KMC, Mangalore
  - MGM, Navi Mumbai
  - Yenepoya University, Mangalore
  - JSS Medical College Mysuru
  - Shri B M Patil Medical College Hospital, Vijayapura
- Apart from inpatient services, the outpatient care for senior citizen is provided through Geriatric Clinics at:*
- M S Ramaiah Medical College, Bengaluru
  - Apollo Hospital, New Delhi
  - Bangalore Medical College, Bengaluru
  - BLDE DU, Shri B M Patil Medical College Hospital and RC, Vijayapura
  - AIIMS, Bhubaneshwar
  - JSS Medical College, Mysuru
  - Deccan Medical College, Hyderabad
  - KLEU Prabhakar Kore Hospital, Belagavi
  - Bharati Vidyapeeth Medical College, Pune

- GMCH, Miraj
- BJGMC, Pune
- Osmania Medical College, Hyderabad
- SVS Medical College, Mahabubnagar, Telangana
- St John's Health Sciences, Bengaluru
- Baptist Hospital, Bengaluru
- Manipal Hospital, Bengaluru
- Yenapoya Medical College, Mangalore.
- S N Medical College, Bagalkot, Karnataka
- J J Hospital, Mumbai
- MGM, Aurangabad
- SMS Medical College, Jaipur
- AFMC, Pune
- Geriatric Psychiatry, NIMHANS, Bengaluru
- Jubilee Mission Medical College and Research Institute, Thrissur
- JLNH Hospital, Srinagar
- District Hospital, Lakhimpur Kheri, UP
- Kasturba Medical College, Mangalore

Doctors who are trained in geriatric care and are not attached to medical college are also contributing in health care for senior citizens through private clinics. The important aspect of these services is that these clinics are in rural areas. To mention a few clinics:

- Dr. P. R. Patgiri Elderly Care Clinic, Guwahati
- Dr Pathak Geriatric Clinic, Gokak, Karnataka
- Anand Hospital, Vijayapura
- Masters Medical and Geriatric Centre, Thirssur, Kerala
- Gericare, Chennai
- Neo Geriatric Care Hospital, Haridwar

The academic contribution is also picking up slowly. There is creation of consultants in geriatric medicine through Diploma/MD Geriatrics courses and DM in Geriatric Psychiatry in following colleges. A total of 45 consultants and 400 diploma degree holders pass out through these colleges or University every year and are available for geriatric care.<sup>6</sup>

- Madras Medical College, Chennai
- AIIMS, Delhi
- Christian Medical College, Vellore
- Mahatma Gandhi Missions Medical College, Kamothe, Navi Mumbai
- Amrita School of Medicine, Ponekkara, Kochi
- Government Medical College, Aurangabad, Maharashtra
- Netaji Subash Chandra Bose Medical College, Jabalpur
- DM - Geriatric Psychiatry - NIMHANS, Bengaluru

- Institute of Medical Sciences, BHU, Varanasi
- All India Institute of Medical Sciences, Rishikesh, Uttarakhand
- Indira Gandhi National Open University  
The *Indira Gandhi National Open University (IGNOU)* is providing postgraduate diploma courses in geriatric medicine all over India for MBBS and above degree holders. The duration of the course is 1 year. The exam conducted is at par of MD degree standards. It is recognized by Government of India. The IGNOU has been creating 400 qualified geriatricians every year in India for last 15 years.<sup>7</sup> The need of the hour is to give due recognition for this huge cadre of geriatricians and utilize their services in primary health care centers across India with handsome salary.

### Diseases Pattern among Elderly in India

The main presenting symptoms in one hundred older people presenting to geriatric clinic when analyzed by Ambali et al,<sup>8</sup> it was found that the 30% of elderly presented with breathlessness as the main symptom, followed by pain abdomen (17%), fever, and loose stools (10%) each, chest pain and giddiness (4%) each. The other symptoms were seizures, hemiparesis, cough, joint pain, headache, and lack of sleep.

The common comorbid conditions either in single or multiple were noted in all the patients. The commonest comorbid was hypertension in 21%, followed by chronic obstructive pulmonary disease (17%), anemia (12%), coronary artery disease (10%), diabetes mellitus (9%), epilepsy (11%), frailty (1%), obesity (1%), benign prostatic hypertrophy, fractured spine, hypothyroidism (5%), and human immunodeficiency virus infection (1%).<sup>8</sup>

In a study by Eram,<sup>9</sup> the most common complaints in elderly were generalized bodyache (53%), diminished vision due to refractive error (60%), joint pain (30%), chronic cough (25%), Asthma and impaired hearing (21%), Gastrointestinal upset symptoms (11%), and urinary symptoms (10%).

The common comorbidities were hypertension in 22%, diabetes in 8%, dental problems in 27%, and cardiac illness in 5%.<sup>9</sup>

The mental health issues like depression, loneliness, and attempted suicide are also on rise in Indian elderly and need to be addressed. The prevalence of depression in older people with chronic disease was highest among the



stroke patients (56.5%), coronary artery disease (47.8%), chronic obstructive airway disease (39.1%), diabetes mellitus (34.7%), and hypertension (26.1%).<sup>10</sup>

The older people attempting suicide too is matter of concern. In a study by Ambali et al.,<sup>11</sup> organophosphorus compounds were commonly used by 70% of participants to end their life and factors like depression and abuse were common precipitating factors to attempt suicide. These need to be addressed are primary care level as well as tertiary care.

The Government of India has passed stringent law to curtail elder abuse. The act "Maintenance and Welfare of Parents and Senior Citizens Act, 2007" has been passed and is been implemented in few districts of India.<sup>12</sup>

## Approach

From healthcare point of view this group can be divided in three subgroups. Young old (60–74 years), who are independent and gainfully employed. Their Medical and Health needs are like young people and they may be looked after by physicians/geriatricians. Old old (75–84 years) need more of assistance and nursing care rather than medical help. Very old (>85 years) and above are mostly dependent requiring domiciliary Care or Hospital Care.

All the above three categories may be managed by a good general practitioner with an extra briefing on ageing, the clinical differences between adults and elderly, Geriatric syndromes, geriopharmacy and drug interaction, physiotherapy, diet, preventive aspects, and social issues like elder abuse needs to be carried out. **Figure 2** describes that the briefing can be by short courses, telemedicine, bulletins and Mass Mailing Service in regional languages. Help centers established in five areas of the country managed by Central Government/State Government/NGOs/Pharma industry.

## For the Population who is Approaching 60 Years

Regarding second category, that is, the people who are approaching old age; one can attempt to herald the process of ageing and prevent the diseases by:

- Lifestyle changes, which include a healthy lifestyle comprising of nutritious food, restrictions of calories to maintain proper body weight, regular exercises, adequate sleep, avoidance of alcohol, tobacco and other narcotics, and positive thinking.

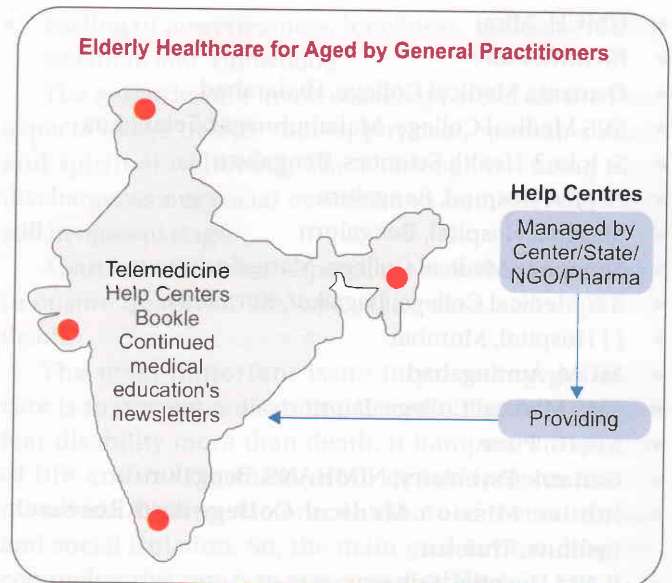


Fig. 2: Planning for the aged

- Appropriate management of comorbidities like diabetes, hypertension, etc.
- Prevention of diseases and risk factors by medicines (lipid lowering, antiplatelet drugs, etc.) and vaccinations.

For those who are getting aged, the planning may be done by adding geriatrics in the medical curriculum as shown in **Figure 3**. We may sensitize budding doctors about special aspects of geriatrics in their teaching and training.

## General Measures

- Ageing will continue and number of elderly populations will rise. Number of comorbidities will also rise, due to changes in lifestyle. Accidents and falls will also increase. Due to change in social setups and migrations, the family support will dip and the cost of living as well as treatment will continue to rise.
- We have to have improvements in nutrition by making diet a balanced one, improving cooking, minimizing the effects of insecticides and pesticides, check the adulteration and improve the process of storage. Use of local foods should be encouraged.
- Housing for elderly need provisions for sunlight, adequate ventilation, water, sewage, and non-skid flooring.
- The transport system should be elderly friendly.



**Fig. 3:** Planning for the health care of getting aged

- People should be educated about the Misuse of over the counter drugs like analgesics, painkillers, and antibiotics. The polypharmacy should be minimized/avoided in elderly as it causes increased incidents of drug interactions.
- The use of vaccines like Hepatitis B, Influenza, Pneumococcal, T-dap, and Zoster, which are advised in elderly, should be encouraged.<sup>13</sup>
- Reach the unreached—healthcare services should reach the older people in villages with special attention to those who are bed-ridden, and differently abled.
- Yearly they should undergo consultation with ENT, ophthalmology, and dental surgeon.

### National Program for Healthcare of Elderly

The NPHCE provides free, specialized healthcare facilities exclusively for the elderly people through the state health delivery system. It also provides training services in geriatric care to the medical officer of primary health centers.

The main objectives of NPHCE<sup>14</sup> are to provide comprehensive healthcare to the elderly by preventive, curative, and rehabilitative services and build capacity of the medical and paramedical professionals as well as the care-takers within the family for providing healthcare to the elderly.

### Role of Caregiver and Training

The caregivers in our country are either a family member or relative or member of society without formal training. It is now recognized as very important service.

There is need to train the nurses in geriatric care. In fact, the trained nurses in geriatric care are in huge demand in urban areas.

The family members can be trained to a specific disease pattern like care of person with dementia, stroke, or person who is bed ridden. The larger aspects are rendered by nurse. The main goal is to assist in activities of daily living.

The caregiver should uphold the dignity of the elderly receiving the care.

### Conclusion

The western countries became rich first and then their population grayed, while in India, its population is graying fast while we are yet to be a rich country.

We are still not prepared to face the so-called tsunami of older population and related problems. We need to provide services to the elderly who are above 80 years, bed ridden, and living with disabilities, dementia, and Parkinson's disease.

The Government of India has priority for health issues related to infants, pregnant mothers, immunization in children, communicable diseases like tuberculosis to mention a few. The projects for older people are in process of implementation through regional research center across India.

The various programs for the benefit of older people have been launched a decade ago, but yet to reach the rural elderly population.

The new curriculum has included geriatric medicine in MBBS course. The postgraduate students in clinical subjects must undergo short course training in geriatric care.

The overall care should be promotive, protective, and preventive so that, active ageing is achieved.

The caregiver plays a vital role in providing care.

A holistic approach is need of the hour in providing comprehensive care for the elderly in India.

### References

1. Sharma OP. Principles & Practice of Geriatric Medicine. Delhi: VIVA Books. 2015.
2. United Nations, Department of Economic and Social Affairs, Population Division. World Population Ageing, 2015 (ST/ESA/SER.A/390). 2015;14.
3. Situation Analysis of the Elderly in India. Central Statistics Office, Ministry of Statistics & Programme Implementation, Government of India. 2011.



4. United Nations Population Fund 2017. 'Caring for Our Elders: Early Responses'-India Ageing Report-2017. UNFPA, New Delhi, India.
5. Help Age India. The State of Elderly in India, 2014, HelpAge India, New Delhi. Available from: <https://www.helpageindia.org/images/pdf/state-elderly-india-2014.pdf>. 2015
6. Available from: <https://www.mciindia.org/CMS>
7. Available from: HYPERLINK "<http://www.ignou.ac.in/>" \t "\_blank" <http://www.ignou.ac.in>
8. Ambali AP, R Sonam, MS Mulimani, et al. Clinical profile of one hundred elderly patients admitted in geriatric care. J Indian Acad Geriatrics. 2018;14:119-23.
9. Eram U, Nawab T, Khalique N, et al. Study of morbidity pattern in geriatric population in rural areas of Aligarh. Int J Curr Trends Eng Tech. 2016;2(6).

10. Sachin, Ambali AP, Shashikant, et al. Prevalence of occult depression in elderly with chronic co-morbid. J Evid based Med Healthcare. 2015;2(8):1008-13.
11. Ambali AP, RP Pranay K. Clinical study of attempted suicide among fifty older people. Int J Scientific Res. 2020;9(1).
12. Available from: <http://socialjustice.nic.in/writereaddata/UploadFile/Annexure-X635996104030434742.pdf>
13. Sharma OP, Shankar PS, Sharma M, et al. Vaccines at a glance. Geriatric Soc India. 2015.
14. Available from: HYPERLINK "[https://www.nhp.gov.in/national-programme-for-health-care-of-the-%20%20elderly\(nphce\)pg](https://www.nhp.gov.in/national-programme-for-health-care-of-the-%20%20elderly(nphce)pg)" [https://www.nhp.gov.in/national-programme-for-health-care-of-the-elderly\(nphce\)pg](https://www.nhp.gov.in/national-programme-for-health-care-of-the-elderly(nphce)pg)



Fig. 3: Prevalence of occult depression among elderly with chronic co-morbid.

**Conclusion**

The study highlights the need for a comprehensive geriatric assessment and care for elderly patients. It emphasizes the importance of identifying and addressing the unique needs of this population, particularly in rural areas. The findings suggest that a multidisciplinary approach involving medical, psychological, and social services is essential for providing holistic care to the elderly. The study also points to the need for further research and the implementation of targeted interventions to improve the quality of life and health outcomes for the geriatric population.

**For the Population who is Approaching 50 Years**

The study also addresses the needs of the population approaching 50 years of age. It highlights the importance of early identification and management of geriatric conditions to prevent complications and ensure a healthy aging process. The findings suggest that proactive health care, including regular medical check-ups, lifestyle modifications, and mental health support, is crucial for this age group. The study emphasizes the need for healthcare providers to be aware of the signs and symptoms of geriatric conditions and to provide timely and appropriate interventions.

The study also addresses the needs of the population approaching 50 years of age. It highlights the importance of early identification and management of geriatric conditions to prevent complications and ensure a healthy aging process. The findings suggest that proactive health care, including regular medical check-ups, lifestyle modifications, and mental health support, is crucial for this age group. The study emphasizes the need for healthcare providers to be aware of the signs and symptoms of geriatric conditions and to provide timely and appropriate interventions.

The study also addresses the needs of the population approaching 50 years of age. It highlights the importance of early identification and management of geriatric conditions to prevent complications and ensure a healthy aging process. The findings suggest that proactive health care, including regular medical check-ups, lifestyle modifications, and mental health support, is crucial for this age group. The study emphasizes the need for healthcare providers to be aware of the signs and symptoms of geriatric conditions and to provide timely and appropriate interventions.