Chapter

Importance of Geriatric Health Care in India during Covid 19 Pandemic

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Abstract

World is facing a dual challenge of deadly Covid 19 pandemic and economic instability with its best health care facility and advanced science & technology. We need to support and protect our physically and economically vulnerable population like geriatric or elderly people during this difficult time. India has nearly 120 million elderly people with various physical, mental, social, economic, and spiritual problems. Ministry of health has created geriatric centers and geriatric clinics in most of the states. Routine care clinics cannot handle the burden of geriatric population to address their co-morbidities. Rapid training of healthcare professionals of various disciplines in geriatric care, home nursing is now of utmost importance. Government must provide financial support to nongovernmental organizations (NGOs) and other agencies for helping geriatric population by providing affordable health care.

Keywords: Health care, aged, Covid 19, pandemic, India, Geriatric, vulnerable population

1. Introduction

India has developed tremendously in providing health care delivery to the beneficiaries in many folds but not sufficient enough to fulfill the need of its huge population of more than 130 crores. Still we are lacking behind in meeting the health needs of our vulnerable population like elderly, pregnant mother etc. It may be due to lack of adequate number of manpower like doctors, nurses, paramedics, laboratory technician etc., sufficient fund allocated for health in budget and proper health infrastructure development.

Population aging is an inevitable and irreversible process due to improvements in health and medical care. With advancement in medical science and increased life expectancy, elderly population (60 years and above) is growing faster than young population globally [1].

The corona virus disease (COVID-19) pandemic has brought about unprecedented fear and uncertainty, especially among elderly population. The elderly population depends on social connection more than other generations and they are deprived of this socialism due to sudden pandemic and subsequent lockdown in the world. India is also practicing nation-wide lock down and advising social distancing measures to prevent the spread of this infectious disease among

vulnerable populations like children, pregnant women and older people (more than 65 years). It has been seen, with aging immune system becomes weak and thus elderly are more prone to develop infectious diseases compared to younger generation. Geriatric populations are more affected with non communicable diseases like diabetes mellitus, hypertension, heart diseases, kidney diseases, chronic obstructive pulmonary diseases (COPD), cancer etc. Recoveries are usually slower and complication arises rapidly in older people compared to adults. They face anxiety and depression simultaneously due to their loneliness and burden of household expenditures, routine health checkups. For millions of elderly, COVID-19 has amplified their already-existing anxieties and turns them into panic mood [2].

The elderly constitutes about 11.5% of the total population of seven billion globally. This proportion of elderly is projected to be double (22%) by 2050 and it will be more than children below fifteen years of age. The proportion of the elderly will increase from 22.4% (as on 2012) to 31.9% in 2050 in developed countries. The proportion of the elderly is projected to be below 11% in least developed countries by 2050. The rapid aging of developing countries is not followed by the increase in personal incomes of that country. The proportion of the elderly is expected to double up from 10.5% to 22.4% in Asia during 2012–2050. Three countries in Asia, Japan (41.5%), South Korea (38.9%), China (34%) predicted to have the highest proportions of the elderly population in the region by 2050. The South Asian Association for Regional Cooperation (SAARC) countries, are likely to have only about 21% elderly population by 2050. The proportion of the elderly in India has been increasing at an increasing rate in recent years and the trend is likely to continue in the coming decades. The elderly population accounted for 7.4% of the total population in 2001, 8.6% in 2011 and has been projected to increase to 19% by the year 2050 in India. It is predicted that, the elderly will constitute about 34% of the total population in the country by the end of the 21st century. Therefore, relatively young India today will turn into a rapidly progressing aging society in near future. The sex ratio of the elderly has increased from 938 women to 1,000 men in 1971 to 1,033 in 2011 and is projected to increase to 1,060 by 2026 given the insignificant decline in mortality among males particularly during adult and older years [1, 3, 4].

2. Geriatric problems in India

2.1 Health problems of elderly

In India, the elderly people suffer from dual medical problems, i.e. both communicable as well as non-communicable diseases. It is estimated that one out of two elderly in India suffers from at least one chronic disease like diabetes mellitus, dyslipidemia, hypertension, COPD, thyroid disorders, heart diseases which requires life-long medication. This is further complicated by impairment of special sensory functions like vision and hearing. A decline in immunity as well as age-related physiologic changes leads to an increased burden of communicable diseases or infectious diseases like influenza, pneumonia, tuberculosis (TB) in the elderly population. Most common disabilities among the aged were locomotor and visual, almost half of the elderly disabled population was reported to be suffering from these two types of disabilities (2011 census). Cardiovascular disorders account for one third of elderly mortality followed by respiratory disorders mortality (10%) and infections including TB (10%). It has been reported that a geriatric individual takes an average of six prescription drugs concurrently and often suffers from adverse drug reactions [1, 3, 5, 6].

A key clinical issue in geriatric mental health is the heterogeneity in clinical presentations that confounds diagnosis and treatment of these problems. Patients usually deny the presence of mental health problems and are reluctant to seek help. Geriatric patients have multiple co-morbidities including psychological problems like depression. Few factors contributing to geriatric depression are female sex, widowed status, nuclear families, and stressful life events. Research indicates comparatively higher prevalence of geriatric depression in India, with a median prevalence rate of 21.9%. Symptoms of geriatric depression affect behavioral, physical, and cognitive domains of an individual, while many elderly do not seek help as a stereotype myth prevails that geriatric depression is normal in old age. Dementia is the most common neuropsychiatric illness besides depression as the major contributor to disability in people above 60 years of age, accounting for one quarter of all disability adjusted life years (DALY). It has been shown in different studies that, many environmental factors as well as caregiver approach towards elderly population with dementia are responsible for development of various psychiatric behaviors in elderly like agitation, irritability, restlessness, emotional distress and sleep disturbance. There is urgent need of sufficient number of dementia care homes, rehabilitation centers along with dementia daycare centers to manage the huge number of dementia patients in India [7–12].

2.2 Socioeconomic challenges for the elderly

Elderly or geriatric populations have different socioeconomic problems in their life in the forms of loss of spouse, economic insecurity, social isolation, not getting pension timely etc. Elderly people in India not only work to support themselves but also make economic contributions to their households. Nearly 66% of those over 60 years of age are currently married, 32% are widowed and nearly 3% are separated or divorced (2011 Census). The proportion of those who have lost their spouse is much higher among women compared to men with 48% of older women and only 15% of the older men being widowed. Since women are more likely to be dependent on men for financial security, women face more adversities due to loss of spouse compared to men. Living arrangements among the elderly was not a problem in India till a few years ago because elderly people were given special respect and care in their family. Majority of the elderly are still living with their children in India, about one fifth either live alone or only with the spouse and hence have to manage their material and physical needs on their own. Financial dependency also increases with age. Around 50% of the elderly have some type of personal income after their retirement in the form of social security measures like pension scheme, provident fund, life insurance policies, post office deposits, savings bank interests and non service people of rural as well as urban India get some amount of incentives as part of different national health programs, schemes for elderly population; which will be discussed in subsequent sections. This income earned by the elderly is not sufficient sometimes to fulfill their basic needs and wishes to buy some gifts for their grandchildren on some special occasions. Most of the time, they are seen dependent financially on their offspring. Almost three fourth of the elderly are either fully or partially dependent on others like relatives, friends and neighbors and such dependency is more for elderly women than men. Overall, it appears that elderly still depend greatly on their earnings to support themselves and their family. Presently, lower class and middle class families are facing a great challenge to take care of elderly population due to reduction in economic activities following sudden Covid19 pandemic and subsequent lock-down [1, 6].

3. Covid-19 pandemic situation in India and globally

Corona virus outbreak was first reported in Wuhan city, Hubei province of China at the end of December 2019. Then Italy was affected by this infectious disease followed by multiple countries due to continuous movement of people across the globe by international air travel. The World Health Organization (WHO) declared this Covid outbreak to be a Public Health Emergency of International Concern (PHEIC) on 30th January, 2020. It was declared a pandemic subsequently on 11th March, 2020 when it affected more than hundred (113) countries world-wide [13].

Globally, there have been near about 3 crores (28918900) confirmed cases of COVID-19, with more than 9 lakh (922,252) deaths, reported by WHO with case fatality rate of 3.18% as on, 14 September 2020. Presently, the United States of Americas is at number one position in terms of number of Covid 19 cases, having more than one fifth of total confirmed cases (22.2%) of Covid 19 followed by South-East Asia (18.9%), European region (16.7%), Eastern Mediterranean region (7.3%), African region (3.9%) and Western Pacific (1.9%), being the least affected region globally as on 14th September, 2020. There were more than 1.8 million new cases of COVID-19, with over forty thousand (40,600) deaths reported in the second week of September, 2020.The African Region also showed a decline in Covid 19 cases this week and was the only region to report a decline in deaths due to Covid 19. The European region has reported the third highest number of new cases in this week, accounting for about 16% of global cases and 25% of the deaths, with the second-highest cumulative number of Covid 19 cases per million populations (5,172 cases per million populations). In the South-East Asia Region, three countries namely; India, Indonesia and Bangladesh continue to report the highest number of Covid-19 cases, with the Maldives accounting for the highest number of cumulative cases (16,746 per million populations) in the second week of September, 2020. This region suffered 22% of all new deaths but retains low cumulative deaths in terms of population (46 per million populations). Myanmar is continuing to show increasing number of cases with mortality of less than 1 per million populations. Presently India has the highest number of Covid 19 cases (88.4%) in South-East Asia Region as on 14th September 2020. Indonesia has the highest case fatality rate (4.02%) followed by Thailand (1.67%), India (1.65%), Bangladesh (1.39%), Nepal (0.63%), Myanmar (0.57%), Srilanka (0.37%) and Maldives (0.34%) in South-East Asia Region. Currently, two countries from this region, Bhutan and Timor-Leste have not reported any death due to Covid 19. India has a very good recovery rate of more than 78% till now which is better than many countries compared to huge number of populations affected by Covid 19 [14].

4. Geriatric health care service -need and present scenario in India

Many programmes targeting geriatric population came to act in our country in last few decades but still we do not have the sufficient number of geriatric health clinics, geriatric physicians and caregivers to take care of our elderly. It's high time to look forward in a positive way to deal with these problems of deficiency during this challenging time of Covid 19 pandemic. Geriatrics is relatively a new branch in India with most practicing young physicians having limited knowledge of the clinical and functional implications of aging. India's old, their caregivers and healthcare providers admit ill health as part of senility. Geriatric care is not only concerned with the physiological phenomenon, but also with the medical health problems and specific diseases of an elderly [5].

Increasing elderly population in India together with enhanced awareness on health issues is expected to put considerable pressure on the health care system in general and geriatric care in particular. The United Nations Population Fund (UNFPA) conducted a survey across seven states (Himachal Pradesh, Kerala, Maharashtra, Odisha, Punjab, Tamil Nadu and West Bengal) in India in 2011 to build a knowledge base on the socio-economic and health implications of aging and the ability of the elderly to access and use various welfare initiatives of the government. The survey showed that about 7.6% of the elderly in India (approximately 7.9 million persons) had difficulty in accomplishing activities of daily living (ADLs) and were in need of assistance. In general, elderly women have greater difficulty in performing ADLs than elderly men [1].

Aging of population affects economic development of society as economic productivity is usually carried out by youths and adults - the productive forces. Aging problems vary across different geographical regions depending on demographic diversity, socioeconomic status, cultural and traditional practices. India is a country of demographic heterogeneity and geographical diversity, still one thing is common among its population i.e.; love and respect for each other especially for their elderly population. The family provides social and economic support to individuals at various stages of life. Family transition from joint to nuclear structure affected not only the status of elderly but also the family's capability to care for elderly. Family structure changes were brought out by increased mobility for job opportunity, urbanization, capitalism, division of labor and industrialization. Community based voluntary support and viable formal support systems for elderly with chronic diseases and disabilities might address this issue. Creating provisions for elderly housing, domiciliary care systems, communication technologies might bridge the gap between young and old generations. Demographic factors like very old, women, those living alone and unmarried are more likely to enter long term care institutions. Predictors of social placement of an elderly to an institution are mainly social selection and allocation processes in health delivery systems (theoretical perspective) and risk factors that delay nursing home placement (policy perspective). Important reasons for entry into institutions are unavailability and unwillingness of family members to take care of geriatric population as well as availability of caretaker in private as well as government institution. Conditions viz., living arrangement, perception that institutions are good alternatives and persons involved in decision making in family influence institutionalization of elderly. Institutionalized elderly are heterogeneous in terms of demographic characteristics, physical and mental conditions, service utilization patterns, prognosis and life expectancy. Few factors facilitating entry of elderly people in institution are status of elderly within the family, social issues, existence of nursing home, heterogeneity of nursing homes, behavioral ethnography of nursing home life and resident outcomes and attitude and behavior of nursing home personnel [15].

Over the years, government has launched various schemes with the intention of providing health, care, and independence of the elderly around the country. In the domain of public systems, there are two overarching initiatives that are large in coverage, more comprehensive or integrated in design and backed by financial and administrative resources. These are National programme for Health Care for Elderly (NPHCE) and Integrated Programme for Older Persons (IPOP). They facilitate and create an environment for different kinds of elder services. NPHCE is meant to be implemented in convergence with the National Health Mission, Ministry of AYUSH (Ayurveda, Yoga, Unani, Siddhi and Homeopathy) and the Ministry of Social Justice and Empowerment (MOSJE). The Government of India launched National Policy on Older Persons (NPOP) in 1999 with the primary goal of overall wellbeing of the elderly, ensuring them a legitimate position in the society.

The same Year 1999 was observed as the International year for older persons by the United Nations general assembly. The MOSJE has started the Integrated Programme for Older Persons (IPOP) since 1992, with the aim of improving the quality of life of elderly people by providing basic amenities like food, shelter, medical care and entertainment opportunities. The IPOP provides financial assistance (up to 90%) to Panchayati Raj Institution (PRIs) or local bodies, NGOs, educational institutions, charitable hospitals or nursing homes etc. for initiation of different facilities for elderly like old age homes, mobile medical units for older persons living in rural and isolated areas, day care centers, physiotherapy clinics, provision of disability aids, running help lines and counseling centers and sensitization of school and college students to aging issues [1, 16].

5. National Programme for health Care for Elderly (NPHCE)

Ministry of Health and Family Welfare (MOHFW) is responsible for implementing the National Programme for Health Care of Elderly (NPHCE) through primary, secondary and tertiary services, dedicated for older persons. NPHCE functions under the control, coordination and monitoring and supervision of the national, state and district cells for non-communicable diseases (NCD). NPHCE was launched to provide referral services through district hospitals and regional medical colleges for elderly population and to promote a community based approach for integration of existing primary health centers and capacity building [1, 15, 17].

The Vision of the NPHCE are: (1) Provision of accessible, affordable, and high quality long-term, comprehensive and dedicated care services to elderly population (2) Creation of a new "architecture" for Aging (3) Building a framework for creation of an comfortable environment for "a Society for all Ages;" (4) Promotion of the concept of Active and Healthy Aging.

Specific objectives of the programme are: (1) Provision of an easy access to promotional, preventive, curative and rehabilitative services through community based primary health-care (PHC) approach. (2) Identification of health problems in the elderly and provide appropriate health interventions in the community with a strong referral backup support. (3) Capacity building of the medical and paramedical professionals as well as the caregivers within the family for providing health care to the elderly (4) Provide referral services to the elderly patients through district hospital and regional medical institutions cum colleges.

Few strategies to achieve the above mentioned objectives of the NPHCE are given as mentioned below:

1. Community based PHC approach including domiciliary visits by trained health-care workers (2) Dedicated services at PHC/Community Health Center (CHC) level including provision of machinery, equipment, training, additional human resources, Information, Education and Communication (IEC), etc.

2. Dedicated facilities at the district hospital with 10 bedded wards, additional human resources, machinery and equipment, consumables and drugs, training and IEC

3. Strengthening of Eight Regional Medical Institutes to provide dedicated tertiary level medical facilities for the elderly, introducing PG courses in geriatric medicine, and in-service training of health personnel at all levels

4. Increase use of Information Education Communication (IEC) activities using mass media, folk media and other communication channels to reach out to the vulnerable population

5. Continuous monitoring and independent evaluation of the Program and research in geriatrics and implementation of NPHCE

6. Promotion of public private partnerships in geriatric health-care

7. Mainstreaming AYUSH (Ayurveda, Yoga, Unani, Siddhi and Homeopathy) by revitalization of local health traditions and convergence with programs of Ministry of Social Justice and Empowerment in the field of geriatrics

8. Reorienting traditional medical education to competency based medical education to deal with the problems of geriatric health

Expected outcomes of NPHCE are given as mentioned below:

1. Initiation of Regional geriatric centers (RGC) in eight Regional Medical Institutions by setting up RGCs with a dedicated geriatric out-patient department (OPD) and thirty (30) bedded geriatric ward for management of specific diseases of the elderly, training of health personnel in geriatric health-care and conducting research

2. Generation of Post-graduates in geriatric medicine from the eight regional medical institutions

3. Starting Video Conferencing Units in the eight (8) Regional Medical Institutions to be utilized for capacity building and mentoring

4. Provision of District geriatric units with dedicated geriatric OPD and ten (10) bedded geriatric ward in 80–100 District Hospitals

5. Starting Geriatric clinics or rehabilitation units set up for domiciliary visits in community or primary health centers in the selected districts

6. Strengthening Sub Centers by provision of appropriate logistics like medicines, vaccine carrier etc. and adequate infrastructure like provision for safe drinking water, clean toilet facility, electricity etc.

7. Training of Human Resources in the Public Health-Care System in geriatric care.

8. NPHCE is expected to provide preventive, promotional, curative and rehabilitative services in an integrated manner for the elderly in various Government health facilities. Districts will be linked to Regional Geriatric Centers (RGCs) for providing tertiary level care. Package of services for elderly in different levels of health care delivery system under NPHCE are given in **Table 1**.

5.1 Geriatric health care services in private sector

There are four essential features of an integrated package of elder services in private sector as given below [1]:

1. Affordable medical care at home

2. Improved access to institutional health care while linking home-based care with institution-based services

3. Training staff and family in home-based rehabilitation services

4. Greater participation of the elderly into the society, increasing the level of acceptance by fighting against ageism and continued enjoyment of home life.

While NPHCE and IPOP address aspects related to institutional health care, the rest of the aspects are facilitated by NGOs all over the country with public and private funding. Few NGO initiatives to deal with the health and social problems of elderly in India are as mentioned below:

i. Agewell Foundation

ii. Alzheimer's and Related Disorders Society of India

iii. Calcutta Metropolitan Institute of Gerontology

iv. Ekal Nari Shakti Sangathan (ENSS)

v. Guild for Services

vi. HelpAge India

vii. Heritage Foundation

viii. The International Longevity Centre-India (ILC-I) Elder Care Services

ix. Janaseva Foundation

x. Nightingale Medical Trust

xi. Silver Innings Foundation

xii. Sulabh International services for Widows in Ashrams

6. Conclusion

India is fighting strongly to mitigate the Covid 19 pandemic situation with its limited manpower and economy. Many government programmes and initiatives were launched and coming forward to develop to meet the needs of its vulnerable population like pregnant mother, adolescent, children and elderly since its independence. Public Health Foundation of India has recently launched another programme for training primary health care professionals in Geriatric health care among this most challenging time of Covid 19 pandemic which shows the distant vision of decision makers of health care delivery system in our country. We need to motivate and encourage our young medical graduates to enhance their knowledge and skills in geriatric health to decrease mortality and morbidity in elderly with such types of pandemic in future.

Health facility level	Package of services
Sub-Center (SC)	• Health Education related to healthy ageing
	• Domiciliary visits for attention and care to home bound/bedridden elderly persons and provide training to the family care providers in looking after the disabled elderly persons
	• Arrange for suitable calipers and supportive devices from the PHC to the elderly disabled persons to make them ambulatory
	• Linkage with other support groups and day care centers etc., operational in the area
Primary Health Center (PHC)	• Weekly geriatric clinic run by a trained Medical Officer
	• Maintain a record of the elderly using the standard format during their first visit
	• Conducting a routine health assessment of the elderly persons based on simple clinical examination relating to eye, blood pressure, blood sugar, etc.
	• Provision of medicines and proper advice on chronic ailments
	• Public awareness on promotional, preventive and rehabilitative aspects of geriatrics during health and village sanitation day/camps
	• Referral for diseases needing further investigation and treatment, to CHC or the District Hospital as per need
Community Health Centers (CHC)	• First Referral Unit for the elderly from PHCs and below
	• Geriatric clinic for the elderly persons twice a week
	• Rehabilitation Unit for physiotherapy and counseling
	• Domiciliary visits by the rehabilitation worker for bed ridden elderly and counseling of the family members on their home-based care
	• Health promotion and prevention
	• Referral of difficult cases to District Hospital/higher health-care facility
District hospitals (DH)	• Geriatric clinic for regular dedicated Out Patient Department (OPD) services to the elderly
	• Facilities for laboratory investigations for diagnosis and provision of medicines for geriatric medical and health problems
	• Ten bedded Geriatric Ward for in-patient care of the elderly
	• Existing specialties like General Medicine; Orthopedics, Ophthalmology; ENT services etc., will provide services needed by elderly patients
	• Provide services for the elderly patients referred by the CHCs/PHCs, etc.
	• Conducting camps for Geriatric Services in PHCs/CHCs and other sites
	• Referral services for severe cases to tertiary level hospitals
Regional Geriatric Centers (RGC)	• Geriatric clinic (Specialized OPD for the elderly)
	• Thirty bedded Geriatric Ward for in-patient care and dedicated beds for the elderly patients in the various specialties viz. Surgery, Orthopedics, Psychiatry, Urology, Ophthalmology and Neurology etc.
	• Laboratory investigation required for elderly with a special sample collection center in the OPD block
	• Tertiary health care to the cases referred from medical colleges, district hospitals and below

Table 1.
Package of services for elderly in different levels of health care delivery system under NPHCE are given below.

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