Emerging Geriatric Challenge

HL Dhar

Abstract
India is a vast country with diversity, both physical and cultural. 72% of World’s second largest population live in rural experiencing varying degrees of socioeconomic change. However, there is no nationwide registry of older people and exact statistics about elderly population is not available. Community-based data on morbidity and disability are also not available. India is one of the few countries in the world where men out number women at all ages till about 70 years and only in very old age (80+) there are more women than men. One of the main social effect of extension of life in later years is the extended period of widowhood for women mainly due to cultural practice of men marrying younger women and widow marriage as well as divorce are uncommon. Much progress has been made in the health care services in the last 50 years giving much emphasis to mother and child programme with special emphasis on controlling population. But elderly population has been neglected, there is no separate ward for elderly in hospitals, no specialized courses in the Universities for training doctors and nurses for elderly care. Recently, Indian Medical Association has organized an ambitious project for rural elderly with emphasis on Geriatric care. Still recently, emphasis has been given for developing infrastructural facilities including creating training, courses on Geriatric Medicine and integrating with alternative system for better care of elderly. However, due to increasing awareness of policy makers to multiple issues related to aging, some progress has been made like old age pension scheme, income tax rebate for elderly, old homes and day care centers and law to help retired citizens in evicting tenants etc. but environment is not as elderly-friendly as in European countries, as the State is not likely to have adequate resources in the presence of other priorities in the country. ©

INTRODUCTION
Study of the physiological and psychological changes which are incident in old age is called Gerontology. The care of aged is called clinical gerontology or geriatric. No one knows when old age begins. The biological age of a person is not identical with his chronological age. Certain disabilities and chronic diseases are most frequent among older people. Psychological problems, impaired memory, rigidity of outlook, and dislike of change are some of the mental changes found in the aged. Further, emotional disorders result from social maladjustment. The degree of adaptation to the fact of aging, means happiness, failure to adapt can result in bitterness, inner withdrawal, depression, weariness of life and even suicide.

The aging population is both medical and sociological problem. The physical deterioration due to chronologically advancing age makes a person ‘aged’. There are both intrinsic as well as extrinsic changes in the individual. The intrinsic changes are those which take place within the functioning of body or genes. Extrinsic changes among the aged are the effects of disorganized social institutions, values and norms arising out of surroundings.

Population: As on 1st March, 2001, population of India stood at 1.03 billion, only second country in the world cross one billion mark. Sex ratio stands at 933 M and 927 F per 1000.

Structural dynamics: Although India occupies 2.4% of the world’s land area, it supports over 15% of the world’s population, 72% of whom live in villages. Over thousands of years of it’s history, India has been invaded from Iranian plateau, Central Asia, Arabia, Afghanistan and the West; Indian people and culture have absorbed these changes resulting in remarkable cultural synthesis. Although 83% of the people are Hindus, India is also home for more than 120 million Muslims (2nd largest Muslim population in the world). The population also includes Christians, Sikhs, Jains, Buddhists, and Parsis.

India adds almost the total population of Australia or Sri Lanka every year. Since independence, India’s population has more than doubled, life expectancy has risen to 65 in 2001 from 32 during British rule.

Improved public health and medical services have led to substantial control of specific infectious diseases
which translated into significant decrease in mortality rates. Improved sanitation, increased attention to maternal health and better child care facilities have greatly reduced infant mortality. Govt. sponsored family planning measures made some impact, especially in urban areas. Total fertility rates decreased from 5.97 in 1950 to 3.56 in 1990. It has been estimated that in 2001 birth rate was around 25 and death rate 9 per 1000 resulting in increased life expectancy in elderly (Table 1). In India there are about 45,000 babies born everyday while 23,000 people pass away i.e. 22,00 new lives added everyday.²

Table 1: Crude birth rate, crude death rate and expectations of life at age 60

<table>
<thead>
<tr>
<th>Census Year</th>
<th>CBR</th>
<th>CDR</th>
<th>Expectation of life at age 60</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>41.7</td>
<td>22.8</td>
<td>11.8</td>
</tr>
<tr>
<td>1971</td>
<td>41.2</td>
<td>19.0</td>
<td>13.6</td>
</tr>
<tr>
<td>1981</td>
<td>33.9</td>
<td>12.5</td>
<td>13.8</td>
</tr>
<tr>
<td>1991</td>
<td>29.7</td>
<td>10.7</td>
<td>14.5</td>
</tr>
<tr>
<td>2001</td>
<td>23.7</td>
<td>8.4</td>
<td>15.2</td>
</tr>
</tbody>
</table>

DEFINING AGES IN INDIA

In most gerontological literatures, people above 60 years of age are considered as ‘old’ constituting the ‘elderly’ segment of the population also called senior citizen. As per WHO guideline people aged 60 to 74 are called elderly, between 75-84 old and 85+ old old.

CURRENT SCENARIO AND FUTURE PROJECTION

The Indian aged population is currently the second largest in the world. The absolute number of the over 60 population in India will increase from 7.6 million in 2001 to 137 million by 2021. It has been estimated that from 5.4% in 1951, the proportion of 60+ people grew to 6.4% in 1981 and is close to 8.1% in 2001.

The decadal percent growth in the elderly population for the period 1991-2001 is close to 40, more than double the rate of increase in the general population. Demographers have worked out dependency ratio, which basically takes into account the working versus non-working sections in the population and found it rising steadily. This means, the burden of a larger group of older people will have to be born by a relatively smaller younger adult working group.³

Majority of the elderly in both rural (50.78%) and urban (57.35%) areas are totally dependent on others for economic support. About 15.20% of the elderly in the urban areas are partially dependent on others. The lower rate of total dependency among the elderly in the rural areas can be explained by the fact that the rural families are more supportive to the elderly. There are many reasons for the phenomenon. In rural areas, there is greater continuity in the occupational and familial roles of the elderly particularly among the males. They continue to be active until physical incapacity prevents them from working. Whether a man is self employed as a cultivator or an artisan or is working as a farm laborer, the chances are that he will continue to remain ‘employed’ longer in the rural areas than in urban areas.

PROFILE OF AGING POPULATION

Demographic changes influenced health, economic activity and social condition of people. As the age structure of developing countries changes, demands on resources by different segments of population are expected to grow. The life expectancy which was 42 years in 1947 has increased to 65 years today but sadly geriatric care continues to be one of the neglected sectors. Reports states that special problems of the elderly are best dealt within a geriatric unit, a unit comprising of high proportion of trained geriatricians and nursing staff giving intensive care for a short period with special emphasis on early rehabilitation and adequate accommodation, equipments and staff for physical medicine, remedial exercise, occupation therapy, diversional therapy and recreation.⁴ While other countries are moving ahead in providing these facilities, India is lacking behind. There are no separate wards in the hospitals except mere OPD geriatric services in a few hospitals, no intensive care unit, except in Heritage Medical Centre, in Hyderabad. Experts say India needs specialized medical education in Geriatric care. As of now there is only one hospital in Chennai which gives postgraduate (MD) education in Geriatric Medicine. Recently it has been emphasized that Integrated Geriatric Medicine including recognized disciplines other than allopathy e.g. ayurveda, unani, homeopathy and naturopathy as well as yoga, meditation and spiritual healing is the answer to all round health care of elderly.

HEALTH AND MORBIDITY

The leading cause of death in old age in India is cardiovascular disease (CVD). Earlier in life, infections are still the leading cause of death but among the older people most deaths are due to non-communicable diseases.⁵ The Indian Council of Medical Research (ICMR) has attempted to compile data on morbidity from different sources. The total number of blind persons among the older population was around 11 million in 1996, eight percent of them due to cataract.⁶ The consequences of blindness are not limited only to physical disability that ensues, but also impinge on economic, social and psychological domains of the affected individuals’ life. The calculated economic cost for maintenance of blind is Rs.432,000 million over a decade. Nearly 60% of older people are said to have bearing impairment in both urban

868 www.japi.org © JAPI • VOL. 53 • OCTOBER 2005
and rural areas. The hearing loss and resultant communication problems adversely affect the well being of older people. Disability in elderly in different age groups of 60, 70 and 80+ in male and female has been shown in Fig. 1. It shows that disabilities increases as age advances in both males and females.

In 1996, the number of hypertensives among the elderly population was nearly nine million. The prevalence rate of coronary heart disease among the urban population was nearly three times higher than rural population and the estimated number of cases was around nine million. An estimated five million were diabetic and prevalence rates were about 177 for urban and 35 per 1000 for rural elderly people. Individual estimates show the incidence of these conditions are much higher but exact statistical data is not available. In a recent survey of elderly population around Mumbai shows that people of low socio-economic status are more prone to diabetes than high socio-economic groups (personal observation). Crude prevalence rate of strokes is estimated to be about 200 per 100,000 persons. Older persons, surviving through peak years of stroke (55-65 years) with varying degrees of disability are already a major medical problem. Population-based cancer registries were initiated by ICMR in 1982. The number of older persons with cancer in 1996 was 0.35 million. The reports show that in coming years as the number of aged increases, the problems associated with cancer in older age will require increased attention and resources.

Morbidity and disability due to various causes in elderly has been shown in Table 2. It is interesting to note that many elderly suffer from more than one disability at a time.

Age-related changes in immune system render people susceptible to variety of infections, and tumours. Though tuberculosis related mortality has declined, it is still not eradicated effectively and the prevalence rate is reported to be higher in older age group. In a recent study from urban area of Udaipur out of 300 elderly, 70% had some problems out of which 49% had vision defect, 48% hypertension, about 4% neurological disorders (neuritis 2%, cerebral infarction/epilepsy/hemiplegia 66%, anxiety/depression/dementia 1.3%) followed by respiratory disorder (mostly asthma, tuberculosis, chronic bronchitis) and musculoskeletal problems (arthritis, spondylitis and kyphosis).

HIV/AIDS

Older persons constitute a small but significant proportion of HIV/AIDS cases as a whole. In India percentage of HIV cases in the group aged 50+ is around 11%. No exact data of HIV/AIDS infection is available in Indian elderly. However, in a recent survey of neurological disorders in 102 HIV infected patients, 8% belonged to elderly (60+).

NUTRITION

Undernutrition is also common in these population. We from Bombay Hospital in a survey of population of this cosmopolitan city reported deficiency of vitamins and minerals particularly vitamin B and iron.

Elderly people in low socio-economic groups, in urban slums or among those living alone are at higher risk of poor dietary intake. The nutrients least adequately supplied in the diet of the aged Indian are Ca, Fe, vitamin A, B1 and B2. Health is a key contributory factor to quality of life and is therefore closely associated to low socio-economic conditions.

MENTAL HEALTH

Prevalence rate of mental morbidity among those 60+ was estimated at 89 per 1000 population, about 4 million for the country as a whole. The risk of specific geriatric illness increases with age. Overall prevalence rate rises to 71.5 percent for those over 60 years. Other illnesses like senile dementia (Alzheimer’s disease) may become a major health problem in near future. Affective

Table 2: Morbidity and disability in elderly (%)
disorders, like depression, dementia as well as substance abuse, schizophrenia and anxiety form bulk of total mental morbidity. A special situation arises in women reaching menopause when most may feel aging has started with varied effects due to diminished estrogen level (e.g. vaginal dryness and pain during intercourse) which may affect sexual activity and result in depression.

The suicidal rate among the elderly is higher than the national rate, data from Govt. of India statistics from suicide prevention centre shows that depressive disease is the leading cause of suicide followed by physical disabilities and poverty.

**ADVERSE DRUG REACTION**

Almost 1/3 of drugs prescribed today are taken by elderly who represent only 12% of the population. It has been shown that 10-20% of hospital admission is due to drug reactions.

**ECONOMIC CONDITION AND SOCIAL SECURITY**

India with its predominantly agrarian-based economy has inadequate social security provisions for its older people. Although since independence, India has been making efforts to achieve desirable goal of being a welfare state, social security still covers only a small population. For govt. employees, pension scheme and contributory provident fund are major security provisions, about 90% of total work force is employed in unorganized sector. Only 40% are wage earners.

Govt. in 1972, has introduced insurance schemes for personal accident and medical illness including cancer insurance. For poor, destitute and infirm persons above 65 years, the govt. provides pension at the rates ranging from Rs.50 to 150 per month under the National Old Age Pension Scheme.

It has been estimated that nearly one half of the aged persons are fully dependent economically on others. Studies put dependency rate at 1:2 and 25:8 percent of the population as being below poverty line.

**FAMILIES AND LIVING ARRANGEMENT**

Generation of older Indians have found shelter in the extended family system during crisis, be these social, economic or psychological. However, the traditional family is fast disappearing even in rural areas. With urbanization, families become nuclear, smaller, not capable of caring for older relatives. Still, older people in India are cared by the families. Living in old age homes is neither popular nor feasible. According to a national sample survey, 8% of urban and 5.9% of rural elderly live alone mostly due to widowhood, childlessness or migration of children.

**SOCIAL STATUS OF OLDER INDIANS**

With the modernization of the country, older values are being replaced by individualization in non-organized societies. Older persons who are economically unproductive, do not have the same authority and prestige they used to enjoy the extended families where they had control over family resources.

Interesting fact in elderly is the clubbing of physical, mental and social status unlike in adult (Fig. 2). When an adult falls ill, say suffering from coronary thrombosis, he will try to come back to his family and friends, and resume his duty. Under the same situation elderly will try to stay in the hospital. His physical illness will affect his social and economic well being.

**GENDER AND AGEING IN INDIA**

India is one of the few countries in the world where men outnumber women at all ages till about 70 years. Only in very old age group 80+, there are more women in the population than men. Most women perceive themselves as old by the time they are 50 years.

One of the main social effect of extension of life in later years is the extended period of widowhood for women. Percentage of widows is disproportionately higher than that of widowers due to cultural practice of men marrying younger women and widow remarriage being uncommon. The rate of divorce is negligible in their age group.

**EXISTING PROGRAMMES**

The constitution of India encourages the State to shield older people from undeserved want in their old age. An old age pension scheme has been introduced to meet the needs of people who have no means to support themselves. The ministry of welfare makes financial assistance available to voluntary agencies to run day-care centers, often called activity centre, hobby club or golden age centers. However, even in urban areas, many older people do not have any idea of the relevance of such centers. The scheme of giving rebate on income tax was introduced in 1992. Law also helps retired citizens...
in evicting tenants who occupy their houses and concessions in train and airfare but environment is not as elderly-friendly as in developed countries. There is no serious efforts to redesign public transport, public buildings, govt offices to make their use easier for older people. However, India today has a vast network of governmental, voluntary and private infrastructure manned by large number of medical and paramedical persons. Current problems faced by the healthcare services has been listed but no special emphasis has been given in the 9th five year plan for elderly health. However, integrated program for older persons through Panchayati Raj resulted in financial assistance to 323 old age homes, 281 daycare centers and 42 mobile units in different parts of the country during 2003-04.

**Future Responses to Population Aging**

The practical implications of the population aging for India are far reaching. The first step is advocacy to raise policy maker’s awareness to multiple issues related to aging in the country.

Since, economic security is of primary importance, the State is being requested to introduce an Old Age Pension Scheme for all needy, especially the rural aged, windows and people in urban slums.

Scheme to keep elderly people economically active has also been mooted. Tax incentives for families providing long term care to elderly family members are also recommended. Though some suggest that the retirement age should be raised, there are counter-arguments, due to vast unemployment among young population.

Training voluntary workers and family members for elderly care has also been suggested.

However Geriatric Medicine has not yet developed strong roots within Indian medical schools, in only few of them, are there academic department for this speciality.

National conference held in New Delhi recommended that a National institute of ageing be established in order to

1. Undertake multidisciplinary research on all basic issues related to ageing.
2. Train gerontological workers.
3. Evaluate such training programmes.
4. Monitor work of old age home.
5. Initiate and maintain networking among institutions involved in gerontological works.
6. Act as a documentation centre and dissemination centre.

Still recently, Indian Medical Association has launched a rural health plan with an ambitious project “Aao Gaon Chalen” to provide health to every village in the country. Major emphasis has been on the control of epidemics and endemics, maternal and child health, geriatric care and adolescent health (Rural health plan / Indian Medical Association.htm.18/06/05).

**Future Challenge**

Projection studies indicate that the number of 60+ in India will increase to 100 million in 2013 and to 198 million in 2030. The special features of the elderly population in India are (a) a majority (nearly 80%) will be in the rural areas, thus making service delivering a challenge, (b) increase in the number of old (85+) and (c) a large percentage (30%) below poverty line.

However, the state is not likely to have adequate resources to meet the demands in its services created by large number of elderly people. India, as one of the largest and most stable democracies in the Asian region, has its share of developmental problems. There are many priorities that may push the interest of the older people into the background.

**References**

2. Samiran Chakrawati. God gives and takes away, Times insight group. The Times of India. 1.1.05.
4. Geriatric Care continues to be neglected by hospitals, Medicare management. 1st to 15th June 2003:1-4.

**Announcement**

**1st Sir Ganga Ram**

**INDO-PAK Diabetes Conference**

**Sunday, 23rd October 2005**

**Venue**: Le Meridian, New Delhi - 110 001.

**Theme**: Diabetes in Women

**Scientific Programme**

- Challenges of Diabetes in developing countries
- Metabolic Syndrome : 2005, What is New?
- Diabetes in Women is different
- Contemporary issues in Diabetes
  - Emerging therapies in management of Type 1 - Diabetes
  - Advances in Technology
  - New Pharmacological agents for Type 2 Diabetes
- Gestational Diabetes
  - Screening for GDM
  - Impact of GDM on maternal and neonatal health
- Panel discussion : Management of diabetes (Type 1 & 2) in pregnancy
- Strategies to reduce cardiovascular risk in T2DM
- Big brother (Liver) in Diabetes
- Management of T2DM in 2010
- Alternative therapies in diabetes. Are they effective?

**International Faculty**

- Prof. Abdul Basit (Karachi)
- Prof. Abdul Jabbar (Karachi)
- Prof. M Akbar Chaudhry (Lahore)
- Prof. Mrs. Nighat Bilal (Islambad)
- Prof. Mrs. Talat Naheed (Lahore)
- Prof. Rakshanda Tayyab (Lahore)

**Conference Secretariat**

**Dr. Surender Kumar**

Organising Secretary

INDO-PAK Diabetes Conference

Department of Endocrinology and Metabolism

Sir Ganga Ram Hospital,
New Delhi - 110 060.
Ph. : 91-11-5225 1551, 5225 1383,
Fax : 91-11-2586 1002
E-mail : surenderkumar@sgrh.com
Website : www.SGRH.com

**Registration Details**

Upto 31st August Rs.300/-
Upto 30th September Rs.500/-
1st October onward registration Rs.1,000/- (Please send DD in favour of "Endocrinology Update, SGRH")

Registration form can be downloaded from www.SGRH.com

Note: Kindly register early. Limited registration.

For hotel booking & travelling assistance

kindly contact:

Neumech Events - Professional
Conference Management
51, Mandakini Enclave, New Delhi - 110 019.
Tel. : + 91 11 5569 8950, 2627 5066
Fax : + 91 11 2627 4349
Mobile : (0) 9810563234
Email : neumech@nda.vsnl.net.in