Introduction

Declining mortality rates and total fertility rates increase in the proportion of elderly individuals. Despite a higher life expectancy in developing nations, there has also been an escalation in the risk of having chronic ailments during the increased years; is a reflection of life-long accumulation of risk factors.\(^{(1)}\)

A population is classified as ageing when older people become proportionately larger share of the total population. Decreasing fertility rates over the last few decades and increasing survival have led to population ageing. A recent report by the United Nations Population Fund released recently indicates that 80% of the world’s older people will be living in the developing world by 2050 and those over 60 will outnumber the under-15 age group by that year.\(^{(2)}\) In this background, geriatric medicine and gerontology must be brought into the focus of medical education. This is a trend accepted globally, and geriatricians are the single most numerous internal medicine specialists.\(^{(3)}\) However, the change remains limited in developing countries, especially in the South-East Asian Region. The total dependency ratios of the developed and developing nations are comparable. Still, the elderly dependency ratio in the developed countries (>20) is much higher than that of the South-East Asian population (<10).

Geriatrics is a specialty that provides expanded expertise in the ageing process, the impact of ageing on illness, drug therapy, health maintenance and rehabilitation.\(^{(3)}\) The model of care focuses on working closely with other disciplines including nurses, pharmacists, therapists and social workers.

Experts usually set curricular standards in medical education after the evaluation of the perceived needs of students at the ground level in different specialities. How trainee perceptions influence, the development of curricula is often challenging to address.\(^{(4)}\) It has been found that trainees in other specialities often express and identify gaps in knowledge of Geriatric Medicine, leading to frustration and potential adverse outcomes.\(^{(4)}\) Geriatric Medicine is perceived to be significantly different from Internal Medicine and the other areas of Medical Sciences due to its multifactorial nature of causation of disease in older people, including the new dimensions added by the polypharmacy. Further, a high prevalence of cognitive disorders in this group of patients introduces the need to involve the families and care-givers into the communication process, unlike the younger patients in clinical practice. Several issues that become important among older people such as frailty falls, andropause, polypharmacy and many others are not taught or discussed in conventional medical training programs.
Country specific Ground level situation of Academic Geriatric Medicine in the South East Asia Region

We did an internet search with pre-defined search terms related to the status of Academic Geriatric Medicine in individual countries in the South-East Asia Region. The aim was to look for data regarding different search points vis-à-vis availability of Diploma or Degree courses in Geriatric Medicine, short term training programs in various areas of Gerontology, certificate programs in the subject, availability of social inclusion and involvement methods, presence of a national plan on older people and existence of established departments of Gerontology and Geriatric Medicine in Medical Institutions and Universities. A summary of our results is presented in Table 1.

Bangladesh

Bangladesh ranks 135 out of the 177 countries in the UNDP's Human development index. With annual cyclones, floods and overpopulation, most of the people live in abject poverty. Presently over 6% of Bangladesh's population is over 60 years of age, and 40% of its population lives below the poverty line. Almost half of the people in rural areas suffer from chronic energy deficiency, and a larger number is at risk of malnutrition. The national policy for older people in Bangladesh was developed in 2006. Medical colleges in Bangladesh do not have specified departments of geriatric medicine, and no specialization opportunities are available in the form of degree programs. Shorter duration certificate or informal training courses are available. A Bangladesh Association of Geriatrics has probably been constituted. Still, activities of this association are not widely available on the internet besides the publication of a book on contemporary issues of older people. Research on the elderly population in Bangladesh has been conducted in recent times.

Bhutan

Bhutan is mostly a hill state with little known about its Medical Education and Health Care systems. The first Medical College in Bhutan was established in 2011 in association with the All India Institute of Medical Sciences in New Delhi. The curriculum is unlikely to have much emphasis on Geriatric Medicine or Gerontology. The Bhutanese government has no specific policy for older people. The national policy so developed includes all ages.

Table 1: Comparison of Country profiles in South East Asia Region in Academic Geriatric Medicine

| Country      | Bangladesh | Bhutan | East Timor | India | Indonesia | Maldives | Myanmar | Nepal | Sri Lanka | Thailand |
|--------------|------------|--------|------------|-------|-----------|----------|---------|-------|-----------|----------|
| Population   | 148,692,000| 726,000| 1,124,000  | 1,224,614,000 | 239,871,000 | 316,000  | 47,963,000 | 29,959,000 | 20,860,000 | 69,122,000 |
| Life Expect (M/F) | 64/66 | 62/65  | 64/69      | 63/66 | 66/71     | 74/76   | 61/67    | 65/69 | 65/76     | 66/74    |
| % 60+        | 7         | NA     | 5          | 8     | 8         | 7       | 6       | 12    | 13        |
| Formal Geriatric Dept in Med Colleges | No       | No     | No         | Mostly No | No       | No      | No      | No    | No        | NA       |
| Ger Med in UG Curriculum PG | No | No | No | No | No | No | No | No | No | NA       |
| Degree/Diploma course in Geriatric Med available | No | No | No | Yes | No | Starting | No | No | Yes | NA       |
| National plan document in Geriatrics | Yes | No | No | Yes | Yes | Yes | Yes | Yes | Yes | NA       |
| Certificate course in gerontology | NA | No | No | Yes | Yes | No | NA | Yes | Yes | NA       |
| Association in Gerontology/Ger Med | No | No | No | Yes | Yes | No | No | No | No | Proposed Oct 13 |
| Nursing Homes | NA | No | No | No | No | No | No | No | No | NA       |
| Residential Homes | NA | No | No | Yes | Yes | Yes | Yes | Yes | Yes | NA       |
| Research in Ger Med published (recent) | Yes | No | No | Yes | Yes | No | No | Yes | Yes | Yes       |
East Timor

The constitution of Timor-Leste provides that the state shall promote the establishment of a social security system to guarantee for special protection of older citizens and those with disabilities. The Ministry of Social Solidarity has been entrusted with the overall responsibility of older people's support scheme. The implementation of the program is the responsibility of the National Directorate of Social Security. Little data is available from the state regarding the available academic options in Geriatric Medicine. A Pubmed search for research papers in old age care from Timor-Leste does not reveal any results over the last five years. A medical college has recently been developed, but formal training in Geriatric Medicine is limited.

India

Not only has the share to the total population increased from 6.5% in 1981 to 7.4% in 2001 but also the old-age dependency ratio has risen from 89 to 119 in the same period, indicating the number of older persons to be supported by every 1000 of the commonly believed 'productive' population. Emergency health care is the principal showcase and most critical unit for any health care system. In providing early and accessible care at the most crucial moment for the individual and the society, emergency care is an important show window of the health care system of the country. However, pre-hospital and emergency care remain poorly developed in our country where independent departments not only of Geriatrics but also Emergency Medicine are an exception rather than a rule. Geriatric Clinics held in several public hospitals have been reduced to drug dispensing units. As of today, five medical colleges in the country provides a postgraduate degree in the field of geriatrics and have a separate Geriatric unit. These include All India Institute of Medical Sciences in Delhi, Christian Medical College in Vellore, Madras Medical College in Chennai, MGM Medical College in Mumbai and Amrita Institute of Medical Science and Research Centre in Kerala. Also, a postgraduate diploma in Geriatric Medicine is awarded by Indira Gandhi National Open University and Post Graduate Certificate Course in Geriatrics IMA AKN Sinha Institute in Delhi.

Maldives

Maldives is an island nation in the Indian Ocean consisting of a double chain of 26 atolls which has maintained an independent existence for most of its history. The National Maldives Policy of Health for the older people is committed to ensuring the physical, mental and social wellbeing of older people. No formal degree programs are currently in place. Malfa and Maldives Senior Citizens are two nongovernment organizations that aim at improving geriatric care in the country. There is no research association in Geriatrics. A Pubmed search for research in the subject from the Maldives did not yield any results in recent times.

Myanmar

Most of the people in Myanmar reside in rural areas. The share of older people has increased from 6.37% in 1980 to nearly 8.3% in 2005. The National Health Policy in Myanmar was developed in 1993, which aims to increase the average life expectancy from 61 years to 75 years in 2030. Older people who are poor are given free medical care as an exemption from cost-sharing.

There are at five medical universities providing undergraduate medical education in Myanmar. However, training in Geriatric Medicine remains limited in Myanmar. It is not formally a part of the undergraduate curriculum, and no postgraduate degree programs are available. There are several homes for the older people in the community which accept older persons over 65 years as inmates.

Nepal

Nepal though larger than Bhutan, has a similar mountainous profile making health care delivery challenging and stressful. Studies from Nepal have advocated the inclusion of Geriatric Medicine into the curriculum of teaching. While Nepal has more than 20 medical teaching institutions, departments of Geriatric Medicine are not yet established in these. Geriatric Medicine is not a part of the undergraduate teaching curriculum, and a formal post-graduate degree program is not available in the subject. A national policy for older people does exist, but the implementation of this remains limited. Short term programs in-home care, nutrition and psychology are available but not hugely popular. There is no academic association or organization in Geriatric Medicine or Gerontology that is active in Nepal. Residential homes for older people have limited use and often remain in a state of neglect.

Sri Lanka

The Sri Lankan government claims to be striving to ensure independence, participation, care,
self-fulfilment and dignity among the older people." However, in over a dozen medical schools in Sri Lanka, Geriatric Departments are not formally established. An association in Geriatrics and Gerontology is under formation and may be formalized later this year. Opportunities for postgraduate studies in Geriatric medicine are limited in Sri Lanka through short-term certificate courses in several aspects of gerontology are available.

**Thailand**

Among the South East Asian countries, Thailand has a unique situation with nearly 14% of the population older than 60 years already. Thailand is ageing faster than other countries in South East Asia and is likely to have more than 20 million older people by the year 2050. The percentage of the oldest old is also like to increase faster in Thailand. Thailand is also witnessing a feminization of the older population since women tend to live longer than their male counterparts. Another significant feature about the older people in Thailand is that the older population is concentrated along the North and the Northeastern areas of Thailand due to the migration of younger family members away from these rural areas to the cities leaving the older persons behind. There are over 20 medical schools in Thailand, but there are no independent departments of Geriatric Medicine. There are no formal degree programs available in Geriatric Medicine through short term programs are pursued by individual students.

**Problems in the establishment of Academic Geriatric Medicine and views to the future**

The establishment of Academic Geriatric Medicine in Medical curricula across the developing world is a difficult exercise due to several important considerations. While the society in our nations is riddled with ageism, it is often fraught with misconceptions. Many doctors do not believe that Geriatric Medicine needs special attention and insist that it is a part of Internal medicine with little difference if any. Societies with low life expectancy believe that it is not relevant to teach students about the care of older people because most of the population would not reach that age anyway. Geriatric medicine is perceived to be a low paying, un-glamorous branch of medicine associated with senile and old patients with poor prognosis with low returns. It is essential to clear these issues and make the teaching of Geriatric Medicine relevant to developing countries. In a survey of physicians in China, it was found that lack of emphasis on Geriatric medicine in undergraduate and postgraduate courses was one of the major challenges faced while treating the elderly. It was observed that the mortality rates decreased from 10.1 percent to 1.9 per cent in patients with delirium when intervened by Geriatrics Evaluation and Management unit in the United States. It was also seen that Acute Care unit was associated with a decrease in falls, delirium, functional decline and length of hospital stay.

The future of medicine certainly belongs to the care of older people, and it is essential to identify areas of research in Geriatric Medicine. Further, it is necessary to identify areas of further specialization while caring for and dealing with the diseases of the older population. The multidisciplinary team approach adopted by Geriatric Medicine towards the comprehensive assessment and management of an older patient will become increasingly important, relevant and even detrimental in the twenty-first-century practice of medicine.

**References**

1. World Health Organization. The global burden of disease: 2004 update: World Health Organization; 2013 [Available from http://www.who.int/ healthinfo/ global_burden_disease/2004_report_update/en/index.html].
2. Ageing in the Twenty-First Century: A Celebration and A Challenge: UNFPA; 2012 [Available from http://www.unfpa.org/webdav/site/global/shared/documents/publications/2012/UNFPA-Main-Report-Part2.pdf].
3. Geriatrics: Wikipedia; 2013 [Available from: http://en.wikipedia.org/wiki/Geriatric_medicine].
4. Drickamer, MA, Levy B, Irwin KS, Rohrbaugh RM. Perceived needs for geriatric education by medical students, internal medicine residents and faculty. *J Gen Intern Med.* 2006; 21(12):1230-1234.
5. Age demands action in Bangladesh: Helpage International; 2007 [Available from http://www.globalaging.org/agingwatch/Madrid.pdf].
6. Kabir ZN, Ferdous T, Cederholm T, Khanam MA, Streatfied K, Wahlin A. Mini Nutritional Assessment of rural elderly people in Bangladesh: the impact of demographic, socio-economic and health factors. *Public Health Nutrition.* 2006; 9(8): 968-974.
7. Kabir ZN, Sattar. The Elderly: Contemporary Issues. *Bangladesh Association of Gerontology,* 2003.
8. Kabir ZN. The Emerging Elderly Population in Bangladesh: Aspects of their Health and Social Situation Stockholm: Karolinska Institutet; 2001. Available from: https://openarchive.ki.se/xmlui/handle/10616/42625.
9. Health of the Elderly in South East Asia - A Profile
New Delhi: World Health Organization; 2004
[Available from: http://203.90.70.117/PDS_DOCS/B1462.pdf.

10. Response to Questionnaire on social protection of
older persons addressed to Governments by the
Independent Expert on the question of human rights
and extreme poverty: Permanent Mission of the
Democratic Republic of Timor-Leste to the United
Nations Office and other International organizations
in Geneva; 2010 [Available from: http://www.ohchr.
org/Documents/Issues/EPoverty/older/Timor_Leste.p
df.

11. Country Report (Myanmar) to The 5th ASEAN &
Japan High Level Officials Meeting on Caring
Societies: Collaboration of Social Welfare and Health
Services and Development of Human Resources and
Community Community Services for the Elderly;
2007 [Available from: http://www.mhlw.go.jp/bunya/
kokusaigyoumu/asean/asean/kokusai/siryou/dl/h19_my
anmar.pdf.

12. List of Medical Schools in Asia: Wikipedia; 2013
[Available from: http://en.wikipedia.org/wiki/List_of_
medical_schools_in_Asia.

13. Medical Universities (Burma): Wikipedia; 2012
[Available from: http://en.wikipedia.org/wiki/Medical
_Universities_(Burma).

14. Gautam PC. Introducing geriatric medicine to Nepal:
an outline of a training programme and a model for
the delivery of service. Kathmandu Univ Med J
(KUMJ). 2008; 6(1): 135-140.

15. Population Ageing in Thailand: UNFPA; 2006
[Available from: http://thailand.unfpa.org/documents/
thai_ageing_englishversion.pdf.

16. Li Y, Wang S, Li J, Dong BR, Li ZX, Yu JM, et al. A
survey of physicians who care for older persons in
Southwest China. The Journal of Nutrition, Health &
Aging. 2013; 17:192-195.

17. Fox MT, Persaud M, Maimets I, O’Brien K, Brooks D,
Tregunno D, et al. Effectiveness of acute geriatric
unit care using acute care for elders components: a
systematic review and meta-analysis. Journal of the
American Geriatrics Society. 2012; 60(12):2237-2245.