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Editorial

Filling the Geriatric Education Gap Around the World

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"The impossible of today is the history of tomorrow"
Marguerite Duras

Geriatric medicine does not deserve the reputation it holds among medical students as a medical discipline with little prestige, low scientific interest, and bad pay. It is thought to be highly complex,[1,2] albeit extremely personally rewarding.[3,4] Geriatric medicine is a young, beautiful, and challenging discipline.[5–7] Too many of our colleagues, and a significant proportion of current medical students, do not have the privilege of being trained in geriatrics during their medical studies.

Nowadays, it is impossible not to know that geriatric medicine helps people to achieve healthier aging, and it helps elders to better cope with chronic clinical conditions, and to remain pain-free, while functioning more easily, and benefitting from holistic, humanistic, and ethical approaches right up until their last breath. In addition to implementing high quality personalized patient health care, academic geriatrics has also been engaging in "bench to bedside" research,[8] developing new assessment tools,[9–13] advancing our understanding of the concept of geriatric syndromes,[14] defining new clinical entities,[15] and proving their reversibility.[16,17] Moreover, research in academic geriatrics has contributed to favoring appropriate drug prescriptions,[18,19] and improving long term-care,[20–24] while stimulating health care and research strategies,[15] dealing with ethical issues,[25] and promoting medical geriatric education.[26]

Furthermore, geriatrics is set to be the most promising medical discipline in the coming years, bearing in mind that by 2025–2030, projections indicate that the population over 60 will be growing 3.5 times as fast as the total population (2.8% compared with 0.8%).[27] By the year 2050, it is estimated that in developed regions, 1 in every 4 people alive is likely to be 65 or older, while in less developed regions, nearly 1 in every 7 will be over 65. In parallel, the over-80 age group is projected to reach almost 379 million worldwide; this is about 5.5 times as many as in the year 2000 (69 million) and 27 times more than in 1950 (14 million).[28]

By 2050, it is projected that 6 countries will also have more than 10 million people age 80 years or over, namely China (99 million), India (48 million), the United States of America (30 million), Japan (17 million), Brazil (10 million), and Indonesia (10 million). Together, these 6 countries will account for 57% of all persons age 80 years or more in the world.

It is well known that more than one-half of all older people are likely to experience more than 1 chronic condition at the same time, a concept termed "multimorbidity."[29] Multimorbidity increases the complexity of treatment, affects functioning, well-being, and survival, while increasing health care utilization and care costs.[29] In Europe, the ratio of geriatricians to 80-year-old persons varies widely, from 1:3139 in Denmark (2006), 1:2987 in Spain, and 1:1711 in Ireland to 1:810 in Austria.[30,31] These data contrast widely with Asia or the Middle East, where geriatric medicine is not yet recognized.

In this context, how can we fill the gaps in geriatric education around the world, considering that education, in its general sense, is a form of learning in which the knowledge, skills, and habits of a group of people are transferred from 1 generation to the next through teaching, training, or research?[32] However, in many countries around the world (and not only lower-resource regions), geriatric medicine does not exist as a discipline, or was not considered worthy of constituting a discipline in its own right. Education may take several forms.

- For example, it may be autodidactic, based on health literacy (eg, the degree to which individuals can obtain, process, and understand basic health information and all the services they need to make appropriate decisions). This is a means to experience better individual health outcomes.[33]
- More frequently, education is accrued under the guidance of others.[32] In this way, geriatric education represents an excellent pathway toward improving societal health care delivery (through better management and implementation strategies) and indeed, health and socioeconomic outcomes.[34]

Many challenges related to geriatric education lie ahead of us.[35,36] Multiple and simultaneous approaches are needed to prepare the next generation to better cope with the exponential growth in the number of elders around the world and to improve current care of old people, not only by physicians, but by all categories of health care professionals.

Developing Basic Medical Geriatric Education Is Absolutely Essential in the Short Term to Better Prepare to Care for the Graying World

A systematic worldwide review of surveys of undergraduate education published from 2000 to 2013 showed that only 41% of the

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countries report some geriatric content in the curricula of their medical schools. In Europe, among 31 countries surveyed, undergraduate teaching of geriatrics was available in 13 countries surveyed in 1999, in 14 countries in 2002, and 24 in 2006, and courses were mandatory in only 62%. Specialists in geriatric medicine were responsible for teaching geriatrics in 50% of Austrian medical schools, 50% in the United Kingdom, 21% in Spain, and 49% (2004) to 65% (2011) in Germany. In the United States, the Institute of Medicine recommended the presence of 9 or more geriatric physicians as faculty; this criterion was met in 30% of medical schools in 2000 and in 49% in 2010. The main topics taught included geriatric syndromes and geriatric assessment. However, only 21% to 65% of the persons responsible for this teaching were geriatricians.[37]

A concerted effort has been made at the European level to put together a consensual core curriculum in geriatric medicine, with a set of minimal requirements that each medical student should achieve by the end of medical school.[38,39] However, up to now in Europe, medical training is regulated either by the Ministry for Health, national doctors' assemblies, or even universities. Therefore, there is significant variability between national curricula and certificates.[40] At this time, this issue is generally addressed by numerous European and national organizations and societies, with a view to setting up a European graduate examination in geriatric medicine.[41] While awaiting official approval by all the national geriatric societies and scientific governing bodies, several new attempts at modifying the undergraduate geriatric curriculum have been published.[42,43] However, it is clear that the specialty of geriatric medicine needs to train larger numbers of medical researchers, encouraging more young physicians to become clinician-educators qualified to train young geriatricians and pursue academic careers.[44]

The "Train the Trainers" Geriatric Education

In the early nineties, a small group of European professors in "medical gerontology" set up a "train the trainers" course, to raise the global standard of geriatric medicine among junior faculties.[26,45] The European Academy for Medicine of Aging (EAMA), with four 1-week courses over a period of 2 years, succeeded in attracting promising fellows selected by their own national geriatric societies from across Europe, and then from Central, North and South America, Eastern European countries (including Russia), Hong Kong, and the Middle East, among others. The successive self-evaluations of the participants testified that this interactive "post-post" graduate teaching activity enhanced and updated their knowledge, made it easier to recognize their own weak points, improved their skills in gathering data, established research priorities, expressed important messages, and led discussions.[46–48] Moreover, more than 50% of the former EAMA participants are now Professors of Geriatric Medicine in a range of prestigious universities around the world (Basel, Bordeaux, Brussels, Helsinki, Lisbon, Lyon, Madrid, Paris, Rio de Janeiro, Sao Paulo, San Jose, etc) and some are even Dean of their home university (Istanbul, Krakow, Lodz, Sfax, etc). Indeed, a strong, wide international network of geriatric medicine now exists and is renewed every 2 years, especially when celebrating the 20-year anniversary of this continuing high level education program.[49]

The success of the EAMA (http://www.eama.eu/mvc/index.jsp) is also reflected by the leadership initiatives of participants from far and wide who were courageous and numerous enough to organize the same type of "train the trainers" course on their own continents. For example, in 2002, the Academia Latinoamericana de Medicina del Adult major was created (http://www.almageriatria.info/htm_files/quienes.html), followed by the inception in 2004 of the Middle East Academy for Medicine of Aging (http://www.meama.com/). At the request of 2 successive presidents of the International Association of Gerontology and Geriatrics-World (IAGG World), namely Bruno Vellas (President from 2009–2013) and then Heung Bong Cha, (term from 2013–2017) (http://www.iagg.info/), a shorter form of the "Train the trainers" course was created in 2011, and entitled "Asian Master Class on Aging" (http://www.aplcgg.org/mca/). This 2-day masterclass has been successfully organized in Beijing, Taipei (twice), Hong Kong, Kyoto, and Seoul (http://iagg.info/xe/iagg_news/1264); (http://www.jpn-geriat-soc.or.jp/international/pdf/6th_iagg_mca.pdf), and future editions will continue through 2016 under the label of the IAGG-World, Asian Academy for Medicine of Aging. The IAGG-World support is essential to enable continued expansion of this high quality geriatric and gerontology teaching activity around the world. The next target countries, suggested by the IAGG-World and World Health Organization, will likely be South East Asia and Sub-Saharan Africa.

Other Important Initiatives in Geriatric Education

The "train the trainers" courses are extremely valuable to spread knowledge to other health care professionals working with old patients. A simple example is the "Total Nutrition Therapy—Geriatrics" 2-day residential course developed by the European Union Geriatric Medicine Society, with the support of the nutrition industry. The first 5 teaching activities (held in Spain, Argentina, Singapore, Turkey, and the United Kingdom) focused on 200 geriatricians and helped to improve the level of nutrition education of 1600 other health care professionals (http://www.eugms.org/research-cooperation/task-finish-groups/tnt-geri-ii.html).

Multiple other initiatives are also emerging. Given the low level of specific geriatric education among nursing home staff, particularly in certain countries,[50] geriatric training for nursing home physicians[51] and multidisciplinary teams[52,53] appears to be essential. Well-targeted themes should be preferred, such as diabetes care,[54] appropriate drug prescriptions,[55,56] flu vaccination,[57] care transitions,[58] and for many, end of life issues.[59] It seems indispensable to develop and roll out a true core curriculum for future nursing home medical directors,[60,61] which would achieve several goals, namely to (1) provide leadership and guidance to clinical staff; (2) guide clinical care from a policy perspective; (3) participate in quality improvement of endeavors; and (4) champion education and effective communication.[62]

The Future of Geriatric Education

As previously detailed, the number of initiatives in geriatric education is considerable; many are structured and extremely successful, such as the various academies, supported by the IAGG-World. Others need to be better structured, such as core curricula for undergraduates and nursing home staff and medical directors. Moreover, rapid and consensual harmonization of the geriatric speciality is needed. We geriatricians have to rise to some important challenges, to better organize, harmonize, and promote our own discipline as one that is dynamic and scientifically based.

We must keep in mind 3 major issues:

- The need to attract young fellows with academic potential to enter the discipline of geriatrics. Preclinical exposure to elders living within the community or in institutions appears to enhance the motivation of young medical students to become geriatricians.[63,64] In parallel, teaching specific skills in the first year of medical school may improve the attitude of medical students toward older patients.[2,65]
- The need to train a growing number of health care professionals in the care of older patients in the community and in the different types of elder care facilities. A greater number of coordinated program are needed based on previous successful experiences.