

Coping With Population Aging in the Old Continent—The Need for European Academic Geriatrics

J.-P. Michel and G. Gold

Geriatrics Department, University Hospitals of Geneva, Switzerland.

IN 1999, Europe had a total population of 728 million, of which 14% was over 65 years of age (Table 1) (1). Between 1999 and 2050, the expected increases of the 60+ and 80+ European populations should rise by 160% and 158%, respectively (Table 2) (2).

These demographic changes affect Europe as a whole. However, European aging research has traditionally not been coordinated by a single centralized agency but by multiple local, national, or multinational organizations. New initiatives, such as the ongoing 5th European Community program, “Improving the Quality of Life and Management of Living Resources,” have attempted to address this issue by requiring concerted international efforts in research and data collection that necessitate closer collaboration between institutions and researchers across Europe. Similar projects and further development of European-funded programs should be encouraged.

The new generation of academic geriatricians will need to be freely mobile across European borders. Yet, teaching and training programs in geriatrics and gerontology vary markedly from one country to another. European organizations that are currently active in geriatrics and gerontology (e.g., the International Association of Gerontology, the Geriatric Medicine Section of the European Union of Medical Specialists, the European Academy of the Yuste Foundation, and the European Academy of Medicine of Aging) will need to work together to ensure recognition of the field and unified accreditation processes across Europe.

In the 1980s, the United Nations Economic Commission for Europe (UN/ECE) was among the first UN bodies to recognize the importance of population aging as a social, economic, and demographic phenomenon (3). This formidable demographic change will result in increased demands for health care services from an ever-increasing elderly population. Although the European Community (EC) may serve as a catalyst to harmonize existing health care policies for the elderly population, current health care systems differ markedly among different European countries (4). Furthermore, most European countries do not yet belong to the EC. Further public health research and increased knowledge of geriatric diseases and syndromes are required to help determine the best options for the future. At the same time, physicians will need to develop improved knowledge and skills in the medicine of aging, and medical schools urgently need to strengthen the geriatrics content of undergraduate and postgraduate curricula. Most will need to hire qualified teach-

ers in the field. Unfortunately, the number of skilled researchers and trained academicians in gerontology and geriatrics is currently insufficient to respond to this challenge.

AGING RESEARCH IN EUROPE

European Experience in Aging Research

In 1998, the Population Activities Unit of the UN/ECE published an important report devoted to the past three decades of population aging-related research in Europe (5). During this period, support for European aging research was not coordinated by a single centralized agency but by multiple local, national, or multinational organizations. These may be:

- National aging research projects initiated and sponsored by governments or other national agencies. Examples include the Netherlands program of research on aging (1989) comprised of three projects entitled “Living Arrangements and Social Networks of Older Persons,” “Economic Aspects of Aging,” and “The Groningen Longitudinal Aging Study.” The Italians targeted a project on aging (1991) corresponding with the “Italian Longitudinal Study of Aging,” and in 1992 the Swiss National Science Foundation sponsored the “National Research Program on Aging,” which focused on the gerontological prospects of the Swiss population (6).
- Other national research programs initiated by individual scholars and financed by national or local agencies and private foundations. The life course study of two cohorts of retirees of greater Paris (1972), the Bonn Aging Study (1979), The Basle Aging Study (1985), and the Berlin Aging Study (1992) are examples of these successful private initiatives.
- Cross-national research initiated by international organizations. The World Health Organization was involved in the European longitudinal study on aging (1979) and in the study on nutrition of old persons (Survey in Europe on Nutrition and the Elderly, a Concerted Action of the 3rd European Framework Program [SENECA]; 1991)
- Privately funded cross-national research programs such as the Nordic research on aging and the International network of Healthy Life Expectancy.
- National research projects where the UN, the National Institute of Aging, or the EC coordinated methodologies to allow cross-national comparisons. For example,

Table 1. Main European Demographic Data in 1999

Area	Total Population (in millions)	Total Fertility Rate (Avg. no. of births per woman)	Male Life Expectancy at Birth (y)	Female Life Expectancy at Birth (y)	Percentage Aged ≥65 y	GNP per Capita (1997 US\$)
Europe	728	1.4	69	78	14	13,890
Northern Europe	95	1.7	74	79	15	21,500
Western Europe	183	1.5	74	81	15	27,900
Eastern Europe	306	1.3	63	74	13	2,510
Southern Europe	145	1.3	74	80	16	15,480

Notes: Data are from Reference 2. GNP = gross national product; Northern Europe = Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Sweden, and the United Kingdom; Western Europe = Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, the Netherlands, and Switzerland; Eastern Europe = Belarus, Bulgaria, Czech Republic, Hungary, Moldavia, Poland, Romania, Russia, Slovakia, and Ukraine; Southern Europe = Albania, Andorra, Bosnia-Herzegovina, Croatia, Greece, Italy, Macedonia, Malta, Portugal, San Marino, Slovenia, Spain, and Yugoslavia.

a common set of questions was included in national censuses conducted in several Western and Eastern European countries in the 1990s.

The major themes of this research were (i) health and mortality (e.g., healthy life expectancy, functional health, and health behaviors), (ii) the social aspects of aging (e.g., the transformation of family patterns, the evolving status and role of women, social networks, household and living arrangements, social psychology, and human development), (iii) economic issues (e.g., retirement and the aging of the labor force, retirement migration, and the future of the welfare state), and (iv) the use of health care services (e.g., long-term care, institutionalization, and health care expenditures).

Compared with research on the aging U.S. population, European studies have smaller samples, are mostly descriptive, and are more focused. They rarely lead to secondary data analyses. This raises the issue of European or worldwide validity of the collected data. Interestingly, telephone or e-mail questionnaires are rarely used, and face-to-face interviews are preferred for data collection (5).

The current funding system does not encourage multinational studies. Filling this gap requires concerted international efforts in research and data collection that necessitate closer collaboration between national and international institutions and researchers across Europe. A single European agency for aging research could greatly enhance opportunities for multinational collaboration.

Table 2. Aging in Europe in 1999 and Estimated for 2050

Area	Total Population >60 y (1999)	Total Population >60 y (2050)	Percentage of the Population >60 y		Percentage of the Population >80 y	
			1999	2050	1999	2050
Europe	146,431,000	217,775,000	20	35	15	26
Northern Europe	19,293,000	28,586,000	20	32	19	29
Western Europe	38,934	57,899	21	34	17	31
Eastern Europe	59,902,000	86,996,000	18	34	11	20
Southern Europe	31,302,000	44,593,000	22	39	15	30

Notes: Northern Europe = Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, and the United Kingdom; Western Europe = Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, the Netherlands, and Switzerland; Eastern Europe = Belarus, Bulgaria, Czech Republic, Hungary, Moldavia, Poland, Romania, Russia, Slovakia, and Ukraine; Southern Europe = Albania, Andorra, Bosnia-Herzegovina, Croatia, Greece, Italy, Macedonia, Malta, Portugal, San Marino, Slovenia, Spain, and Yugoslavia.

The 5th EC Program (1999–2002)

The 5th EC program, "Improving the Quality of Life and Management of Living Resources," was published several months after the UN/ECE report (7). The strategy of this program was to focus on specific areas where a growing knowledge base could provide solutions to the pressing needs of the European society while respecting its fundamental ethical values.

The 5th EC program was built around six specific key actions, one of which is "The Aging Population and Disabilities." Its purpose is to raise awareness of the factors contributing to healthy aging and independence in old age and to promote an improved quality of life for aged persons. Research and development priorities include:

- Age-related illnesses and health problems and strategies to prevent and treat them or delay their onset.
- The determinants of healthy aging and the mechanisms leading to disability.
- Demographic and epidemiological research on aging and disability trends.
- Delaying the onset of disability and improving the social and physical environment of older persons.
- Delivery and financing of health and social care services to older persons.

Moreover, aging research can also be included in four other key actions of the program:

- Food, nutrition and health.
- Control of infectious diseases.
- The "cell factory."
- Environment and health.

The global funding budget of the 5th EC research program is 2413 million Euro (\$2,442 million). This should have a strong impact on European aging research in the EC but not in other European countries.

TRAINING THE NEXT GENERATION OF EUROPEAN MEDICAL DOCTORS IN GERIATRICS

Undergraduate training programs vary markedly from one European country to another (8). The importance and probably the quality of undergraduate training are linked to the presence of professorial departments in geriatrics (S.A. Dursma and colleagues, unpublished data, 2000). In France, a special course in medical gerontology is mandatory in all medical universities, whereas in Germany, Italy, and Spain,

as well as in a number of Eastern European countries, teaching in geriatrics is often integrated in other medical courses, as described by S.A. Duursma and colleagues (unpublished data, 2000) and by others (9). In Switzerland, curriculum reform has led to the inclusion of problem-based undergraduate geriatric training at the University of Geneva (10). Similarly, postgraduate training is well developed in some countries (e.g., UK) and incipient in others (9).

Specific qualifications in geriatrics and gerontology are recognized in some European countries (e.g., UK, Italy, Spain, and Switzerland). Elsewhere, local university diplomas may be available (e.g., France). Many countries do not offer nationally accredited training programs. This state of affairs is related more closely to historical trends and the relationship with other fields of medicine, in particular to internal medicine, than to societal needs (9). Physicians may practice in the country of their choice within the EC. However, because geriatrics is not recognized at a European level, specialists trained in one country may not be accredited in another (11). This has stimulated the Geriatric Medicine Section of the European Union of Medical Specialists (GMS-UEMS) to attempt to harmonize the multiple geriatric training initiatives around Europe (9). The GMS-UEMS is linked to the national medical specialist's societies and to the governments and the board of the EC. Its goals include the development of guidelines for specialist training and the promotion of an accredited European program for continuing professional development and continuing medical education in geriatrics and gerontology (9).

Private initiatives include the European Academy of the Yuste Foundation (EAYF) and the European Academy for Medicine of Aging (EAMA). The EAYF encourages training in geriatrics, including an introductory course and a program for specialty training, in all European medical universities. The main goal of the EAMA is to train the next generation for academic leadership in geriatrics (12,13). Each course includes four 1-week sessions where future leaders are brought together for teacher or student state-of-the-art lectures, group discussions, and expert reports (14). More than 100 junior faculty from 15 different European countries (including Germany, Belgium, Holland, France, Switzerland, Poland, Romania, Czech Republic, Ukraine, and others), as well as persons from countries outside Europe (e.g., Argentina, Brazil, Israel, Lebanon, Mexico, and South Africa) (15,16), have participated in the course and are now members of the EAMA network. More than half of the graduates have already obtained an academic position in geriatrics in their own countries. An Internet site (www.healthandage.com/eama), constituting a virtual classroom and a discussion forum between the EAMA members, facilitates daily contacts. Furthermore, the EAMA members organize a formal reunion of the network every 2 years.

The European section of the International Association of Gerontology organizes regular conferences in clinical, biological, and sociological gerontology that stimulate contact between researchers and professionals in the field. The recently created European Union Geriatric Medicine Society (EUGMS) may provide the opportunity to gather all these geriatric medicine activities under a single banner, which should also include non-EC countries.

CONCLUSIONS

The European Community has provided a strong impetus for the development of geriatrics and gerontology by stimulating research and attempting to harmonize education. The GMS/UEMS has deployed its efforts to introduce geriatric training in European countries. The EAMA provides training to the teachers and future professors of Geriatrics. The EUGMS has recently been founded in Heidelberg to further reinforce European geriatrics with strong academic programs, which are absolutely necessary for Europe to respond to the demographic and health imperatives of the current aging wave.

ACKNOWLEDGMENT

Address correspondence to Jean-Pierre Michel, MD, Chair, University of Geriatric Institute-Geneva, Route de Mon-Idee CH, 1226 Thonex-Geneve, Geneva, Switzerland. E-mail: jean-pierre.michel@hcuge.ch

REFERENCES

1. World population data sheet—Europe. Population Reference Bureau. Available at: http://www.prb.org/pubs/wpds99/wpds99_europe.htm. Accessed May 2000.
2. United Nations Population Aging. Available at: <http://www.undp.org/popin/wdtrends/a99/fa99.htm>. Accessed May 2000.
3. Economic Commission for Europe's Population Activities Unit. Available at: http://www.unece.org/ead/pau/a_home1.htm. Accessed May 2000.
4. Michel JP, Rubenstein LZ, Vellas et Albareda JL. *Geriatric Programs and Departments Around the World: Facts, Research and Intervention in Geriatrics*. Paris: Springer; 1998.
5. United Nations Economic Commission for Europe. Population Activities Unit. *Aging Related Research Survey*. New York: UN/ECE; 1998.
6. Stuckelberger A, Höpflinger F. *Aging in Switzerland at the Dawn of the XXIst Century: Main Results and Findings of the National Research Programme on Aging*. Berne, Switzerland: Swiss National Science Foundation; 2000.
7. European Community Framework Programme. Improving the Quality of Life and Management of Living Resources. Available at: <http://www.cordis.lu/fp5/home.html>. Accessed May 2000.
8. Staehelin HS, Beregi E, Duursma SA, et al. Teaching medical gerontology in Europe: group of professors of medical gerontology (GEPMG). *Age Ageing*. 1994;3:197–198.
9. Ministère des Affaires Sociales et de la Santé et de la Ville. *The Role of Geriatrics/Gerontology in the Training and Practice of Doctors in Europe*. Paris: Société Française de Gérontologie; 1995.
10. Huber PH. Integration of geriatrics in a new problem-based undergraduate curriculum at the medical school of Geneva. *Interdiscipl Top Gerontol*. 1999;30:217–223.
11. Grimley Evans J. Geriatrics in a new Europe. *Age Ageing*. 1994;23:177–178.
12. Michel JP, Staehelin HS, Duursma SA, et al. Raising the level of medical gerontology: evaluation of the European Academy for Medicine of Aging (EAMA) course. *Ageing*. 1997;9:224–230.
13. Van Nes MC, Kressig R. The European Academy for Medicine of Aging: training the next generation for academic leadership in geriatrics. *Interdiscipl Top Gerontol*. 1999;30: 229–234.
14. Michel JP, Staehelin H, Duursma SA, et al. Un enseignement innovant, une création réussie: l'European Academy for Medicine of Aging (EAMA). Le point de vue des enseignants et des étudiants. *Rev Med Intern*. 1999;20:531–535.
15. Verhaar HJJ, Becker C, Lindberg OIJ. European Academy for Medicine of Aging: a new network for geriatricians in Europe. *Age Ageing*. 1998;27:93–94.
16. Kressig R, Grob D. L'European Academy for Medicine of Aging (EAMA): un nouveau réseau de collaboration pour gériatres en Europe. *Bull Méd Suisse*. 1998;79:786–787.

Received September 6, 2000

Accepted September 8, 2000

Decision Editor: John E. Morley, MB, BCH