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Degenerative musculoskeletal disease

O Ethgen, J-Y Reginster

Is the demographic transition impacting on the perception of degenerative musculoskeletal disease?

AGING PROCESS

The world is witnessing an unprecedented, irremediable, and longlasting aging process.^{1,2} Table 1 provides population decennial growth rates by 10 year age groups and shows marked differences across age groups. Figures 1 and 2 display the projected population distribution by 10 year age group. The graphs evidence quite well the “baby boomers” wave that is going to extend continuously the numbers of people over the age of 60 years.

Western Europe should see the numbers of its inhabitants aged below 50 decrease dramatically, while those above 60 should sharply increase. The number of Europeans older than 60 is projected to rise from 84 570 thousands (21.8% of Europeans) at present to 107 592 thousands (32.8%) in 2050. The increase is even more pronounced for the old-old (80+) with the highest growth rate (124.4%). Those aged 80+ would rise impressively from 14 610 thousands (3.8%) in 2000 up to 38 394 thousands (10.7%) in 2045 and then stabilise. In North America, all age groups should increase in number until 2050, but growth rates are notably higher for those aged 60–69 (112.7%), 70–79 (104.3%) and, particularly, 80+ (234.3%). Whereas 50 876 thousands

(16.2% of northern Americans) people were aged 60 in 2000, the number would be 118 974 thousands (27.2%) in 2050. Even faster than in Europe, those aged 80 and above would dramatically increase from 10 094 thousands (3.2%) in 2000 up to 33 743 thousands (7.7%) in 2050.

“The outstanding achievement of a longer life span is now one of the greater challenges for the current century”

Aging represents a major societal progress characterising the continuous and remarkable expansion of life span over the past century. This outstanding attainment is now one of the greater challenges for the current century—that is, ensuring the quality of life of an unparalleled wide number of elderly people.³ As these latter have been the agents of that achievement, they must also be its beneficiaries.

HEALTH AND QUALITY OF LIFE IN THE ELDERLY

Health is the core of this challenge of quality of life in later years. Modern societies should be willing to afford the elderly a blooming health to ensure that they have every opportunity to remain

active and productive. In modern societies, most communicable diseases are nowadays controlled or eradicated. Apart from changes in medical technology and individual factors, future healthcare management and costs will result from an increase in the prevalence of age related chronic and disabling conditions such as arthritis, which belongs to the most prevalent age related chronic conditions^{4–6} and which has been consistently found to be a leading cause of disability through wide population health survey.^{7–9} The large projected growth of the population aged above 60 suggests a sharp increase in the prevalence of arthritis for at least the four forthcoming decades.

Concern surrounding future arthritis prevalence is intensified when looking at the demographic dynamic. Global aging means that the increase in the number of elderly people occurs concomitantly with relatively minor changes (even decreases in Europe) in the size of the younger population. Dependency ratios (number of 60+/number of 20–59) are expected to rise dramatically between 2000 and 2045, from 0.39 to 0.81 in Western Europe and from 0.29 to 0.55 in Northern America. The smaller proportion of people of working age will have major social implications for the supply of care and support to the even greater number of disabled people.^{10,11} Typically, formal care for the disabled elderly is often substantially complemented by informal care and assistance provided by the family such as children.^{12,13} With global aging, those supporting their elders would tend to be aged themselves (that is, over 60 years old) and so, they would be likely to develop arthritis and disabilities as well. Moreover, arthritis has been reported as an important cause of days lost from work.^{14–16} If we look at the

Table 1 Population decennial growth rates by age groups from 2000 to 2050 (%)

	Age groups									Total
	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80+	
Western Europe										
2000–2010	–13.1	–6.9	–9.4	–15.2	13.5	12.4	10.5	6.8	34.4	0.4
2010–2020	–6.3	–13.1	–6.6	–9.1	–15.1	13.9	13.4	13.0	19.1	–1.0
2020–2030	–0.8	–6.2	–12.9	–6.8	–9.3	–15.1	14.7	15.9	20.7	–1.9
2030–2040	–4.7	–0.6	–5.8	–12.2	–5.9	–8.3	–14.2	15.5	21.0	–3.2
2040–2050	–2.2	–4.6	–0.6	–5.9	–12.2	–6.1	–17.6	–29.5	–4.1	–10.3
2000–2050	–24.7	–27.9	–31.1	–40.7	–27.8	–6.3	1.7	13.8	124.4	–15.4
Northern America										
2000–2010	–5.4	5.9	13.7	–8.4	2.3	35.7	42.7	1.3	23.5	8.8
2010–2020	7.5	–5.3	5.3	12.5	–8.0	2.7	36.8	46.8	11.7	8.2
2020–2030	6.0	7.1	–4.9	5.1	12.3	–7.5	3.5	38.9	45.9	7.1
2030–2040	4.8	5.7	6.7	–4.5	5.1	12.4	–6.7	4.4	45.2	5.5
2040–2050	6.3	4.6	5.4	6.4	–4.3	5.2	12.9	–5.2	14.4	4.7
2000–2050	20.0	18.8	28.2	10.0	6.3	52.5	112.7	104.3	234.3	39.3

Source: Population Division of the Department of Economic and Social Affairs of the United Nations.² Western Europe: Euro zone countries, United Kingdom, Sweden, Denmark, Norway and Switzerland; Northern America: USA and Canada.

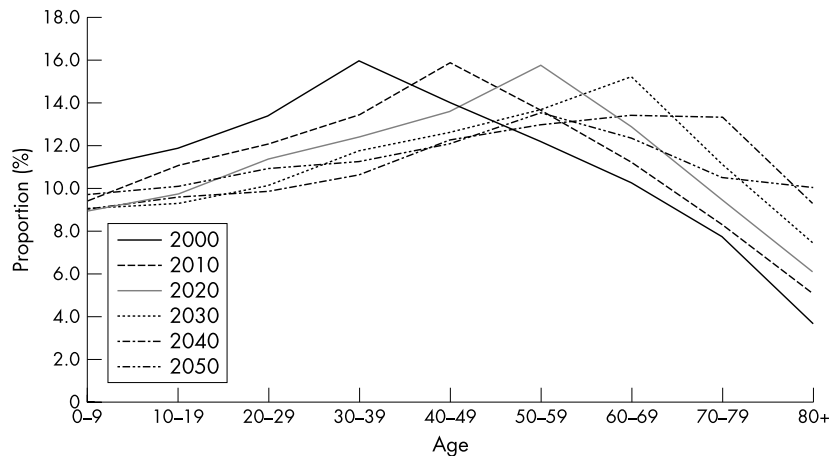


Figure 1 Population distribution by 10 year age group in Western Europe from 2000 to 2050.²

working segment of the population, aging suggests that the size of the older working population (that is 50–60 years) has increased as well. Societies would be faced with an increasing part of their labour force affected by arthritis.

“Global aging will mean that those supporting their elders will be old and, possibly arthritic, themselves”

The socioeconomic burden attributable to arthritis is tremendous. Patients report significant impairment in their ability to perform activities of daily living and in their quality of life.^{17–18} The psychosocial dimension is also altered, with symptoms of depression having been noticed.^{19–20} As a consequence, arthritis results in towering healthcare costs.^{21–22} Non-medical costs are substantial as well.^{14–16} A thorough and recent review from national studies indicates that the economic costs of

arthritis represent 1.5–2.5% of the gross national product (GNP), and total healthcare expenditure among those reporting arthritis approaches 3% of the GNP.²³

ARTHRITIS: A NEGLECTED HEALTH PRIORITY

However, the importance of the burden of arthritis on society remains underappreciated. Arthritis is too often viewed as a normal and irremediable part of the aging process. The “legitimacy” of arthritis seems firmly rooted in general opinion. Numerous patients believe that nothing, or very little, can be done against arthritis.^{24–25} Arthritis, and musculoskeletal conditions in general, remain low in national healthcare and research priorities.²⁶ In the United States, a study investigating the relationship between funding by the National Institute of Health and the burden of diseases included neither arthritis nor any other musculoskeletal

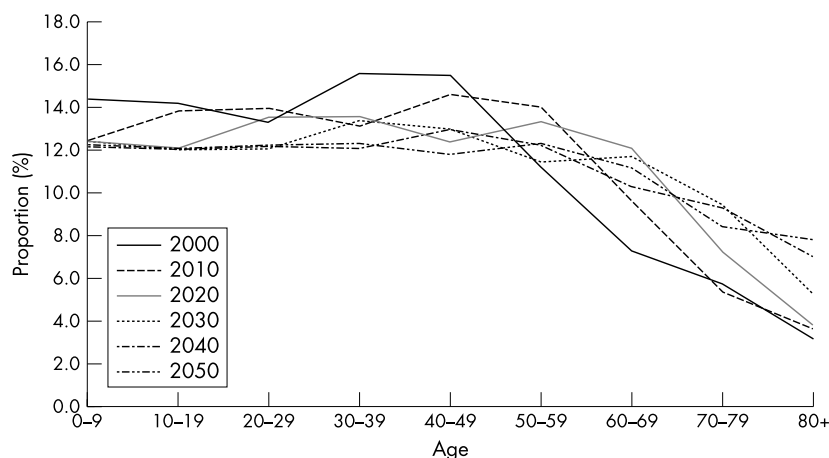


Figure 2 Population distribution by 10 year age group in Northern America from 2000 to 2050.²

condition.²⁷ A recent bibliometric study showed that measured by literature citation, musculoskeletal diseases ranked ninth among 12 major Medline disease categories in 1991 and 1996.²⁸ Authors concluded that arthritis and rheumatism are neglected health priorities, receiving far less attention in the scientific literature than is warranted by their burden. These deductions emerge despite the fact that several attempts have been made to highlight arthritis as an extending public health problem in a demographic transition era since the early nineties.^{10–29–32}

In line with demographic changes and in view of the poor awareness of the burden of arthritis, the United Nations, the World Health Organisation, and national governments have launched, concomitantly with health professionals and patient organisations, the “Bone and Joint Decade” for the years 2000–2010.^{33–34} This large worldwide campaign aims at improving the health related quality of life for people with musculoskeletal conditions by giving patients knowledge and information and by advancing research on prevention, diagnosis, and treatments.

There is growing evidence that we are now better armed to reduce the impact of arthritis. Risk factors for arthritis, other than age and sex, have been identified.^{4–35} Modifying the risk factors may have direct preventive applications.^{35–37} As an example, interventions such as weight control,^{38–39} promotion of physical activity, and behavioural changes^{39–44} have been shown to slow the progression of arthritis. In addition, early diagnosis^{45–46} and appropriate therapeutic management^{47–48} may help to improve the quality of life of arthritic patients. As a last resort, joint arthroplasties are available to relieve pain and return patients to better physical function.^{49–50} Recent reports emphasised the underuse of hip and knee arthroplasties⁵¹ and misperception about the nature of arthritis which may prevent arthroplasty being carried out.⁵²

It is important to change current opinion on arthritis and to increase knowledge of the possibilities available at each level (prevention, therapeutics, and education) for controlling symptoms, postponing disability, and giving patients the ability to cope daily with the disease. A lack of awareness about effective interventions for arthritis might have prevented both patients and health professionals from implementing effective intervention.²⁵ Economic considerations and health insurance policies cannot be ignored, and health professionals should continue in their efforts to identify and support cost effective actions.

LEADER

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