Bone and Joint Diseases Around the World. Sweden: A Brief Update on Burden and Priority

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ABSTRACT. Musculoskeletal conditions are increasingly common with advancing age. The life expectancy increased early and rapidly in Sweden, and today 17% of the population is over age 65. Musculoskeletal problems are therefore common but in general are receiving low attention, despite enormous costs for society. The indirect costs for musculoskeletal conditions vastly exceed direct costs (80% vs 20%). This is obviated by the fact that in 2001, of all persons receiving disability pension or taking longterm sick leave, 60% had a diagnosis related to the musculoskeletal system. Further, in a population of 9 million, 70,000 fragility fractures occur each year, 18,000 of the hip and 25,000 of the forearm, corresponding to a hip fracture incidence of 20.14/10,000, among the highest in the world. Government policy is implemented through several agencies, national and local. State of the art reports are currently available in 12 areas of musculoskeletal condition, including osteoarthritis, rheumatoid arthritis, osteoporosis, and hip fracture, while no national evidence-based guidelines have been developed for these conditions. The Swedish Council on Technology Assessment in Health Care provides the scientific foundation of present methods for treatment through evidence-based evaluations. National registers are continuously evaluating orthopedic implant procedures, of which the Swedish Hip Register has provided valuable information on total hip replacements since 1979. For the future, there is a need for setting of priorities with regard to musculoskeletal conditions, including development of guidelines of mechanism of implementation. (J Rheumatol 2003;30 Suppl 67:38–40)

Key Indexing Terms:
MUSCULOSKELETAL CONDITIONS GUIDELINES BURDEN COST

Demographic Background

Musculoskeletal conditions are increasingly common with advancing age and thus closely related to life expectancy. The life expectancy increased early and rapidly in Sweden and today the mean lifetime of a Swedish woman is 82 years, which incidentally is the same as the mean age for hip fracture in women. The life expectancy for men is 77 years. The increase in life expectancy has been most marked during the past century. Between 1900 and 2000, life expectancy increased by 25 years in women and 23 years in men, which to a large extent is attributable to improved housing, sanitation, and food. An additional 4 year increase for both men and women is expected by the year 2050 (Table 1). This means that an increasing percentage of the population is over the age of 65. At present, 17% of 8.9 million inhabitants is above this age, and the further increase also includes the very elderly, the centenarians. Musculoskeletal problems are therefore common but in general receiving low attention, despite the enormous cost to society.

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Costs

It is estimated that the indirect costs for musculoskeletal conditions represent about 80% of the total costs of these conditions, with 20% as direct cost[1]. The distribution is made obvious by the fact that of all persons receiving disability pension or taking longterm sick leave, 60% had a diagnosis related to the musculoskeletal system in 2001[2]. Operative procedures incur high direct costs; of the 40 most expensive operations of any type, only 3 were related to bones and joints[2].

The Burden of Musculoskeletal Conditions

It is more difficult to quantify the burden even if statistics are regularly collected in Sweden. Population surveys indicate that 18% of the population between age 16 and 64 years report longterm illness or symptoms related to the muscu-

Table 1. Life expectancy in Sweden.

	Women, yrs	Men, yrs
Life expectancy in:		
2050	86	81
2000	82	77
1950	74	71
1900	57	54
1850	44	40
1750	37	34

loskeletal system (Figure 1)[2]. This is second only to reported problems related to the circulatory system.

The incidence of fragility fractures is high in Sweden, and 70,000 fragility fractures occur each year — 18,000 fractures of the hip, corresponding to a hip fracture incidence of 20.14 per 10,000, which is among the highest in the world. One can speculate about the reasons for this: Swedish women are taller and leaner than women of other regions, Sweden has a northern location between the 56th and 70th latitude with virtually no sun in the northern parts during winter, and lifestyle changes already evident in the mid-1950s because of increased wealth are probably contributing.

Osteoarthritis (OA) of the hip leads to 11,000 total hip replacements per year. National data suggest that OA of the knee is even more frequent, with a reported prevalence of radiographic changes ranging from 4 to 30% in populations over 45 years of age, and an even further age related increase above age 75 (40 to 60%) with a predominance of women suffering[3].

Severe trauma is often caused by road traffic accidents. Much effort has been put into preventive measures, including development of safe cars, but also improvement of road quality. Nevertheless, between 500 and 600 persons per year die in traffic accidents. This corresponds to 6.6 deaths per 100,000 inhabitants, which is a very low figure by international standards, e.g., the number per 100,000 inhabitants in the USA was 15.3 and in Greece 20.2. The effect of traffic accidents is, however, only partially described by mortality, since injury, severe or less severe, affects 10 and 40 times more persons, many suffering from bone and joint trauma[4] (Figure 2).

Health Care Delivery and Action by National Agencies

Health care is delivered through a national finance system with the aim of equal care for all and equal quality of care for all. The proportion of gross national product spent on health care is, however, relatively low, only 7.4% (1998). National health insurance covers sick leave and early retirement. Government policy is implemented through several agencies, national and local, obtaining their directives from the department of Health and Welfare.

The main objectives of the National Board of Health and Welfare are supervision of medical care and social services as to quality and safety. The Board is responsible for official statistics on social services, public health, health care and medical services, and causes of death. The Board is continuously producing national guidelines for appropriate care; clinical guidelines are available for hip fracture and OA of the hip and knee. In addition, comprehensive state of the art documents are produced and 12 are currently available on musculoskeletal conditions. The Board has developed the Swedish Medical Information Data Base, MARS, where current information and statistics are easily accessible through the World Wide Web. The Medical Product Agency evaluates the effectiveness and safety of pharmacological treatment. The agency also produces recommendations in various areas. Pharmacological treatment is evaluated for 6 to 9 conditions per year and the publications are automatically sent to all doctors.

Another agency, the Swedish Council on Technology Assessment in Health Care (SBU) generates evidence-based reports on surgical treatment and diagnostic tools. Several are in the area of musculoskeletal conditions, e.g., "Surgical Treatment of Rheumatic Diseases"[5], "Longer Life and Better Health — Report on Prevention"[6], and "Measuring Bone Density"[7]. Recently, the agency evaluated the scientific foundation of the present methods for treatment of low back pain, "Back and Neck pain"[8], and an assessment is in progress of evidence for prevention, diagnosis, and treatment of osteoporosis and the risks and benefits of estrogen treatment.

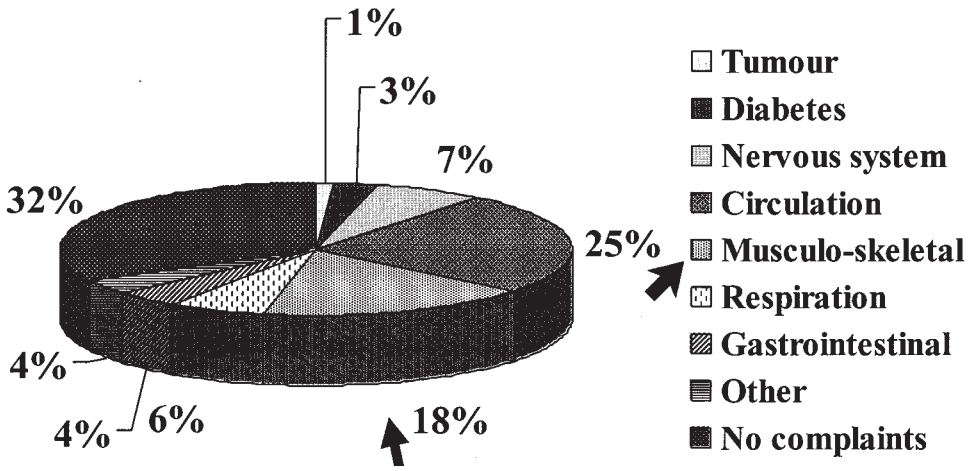

Figure 1. Reported incidence of longterm illness or symptoms in the Swedish population aged 16–84 years (it was possible to report complaints in more than one area) (source: National Board on Health and Welfare, 2001).

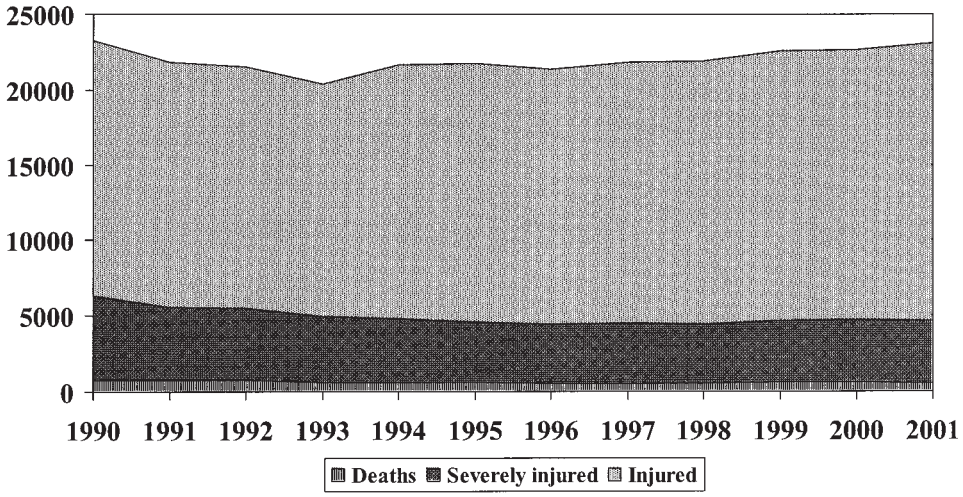

Figure 2. Traffic accidents in Sweden 1990–2001: deaths and injuries. The injured are classified as severely injured or less severely injured (source: Swedish National Road Administration, 2002).

Every Swedish person has a unique identification number based on the birth date. The usefulness of the number is evident from epidemiological studies but can also be used for followup through International Classification of Diseases (ICD) coded registers. In addition, several national registers are continuously evaluating surgical methods and survival rate of orthopedic implants; of these, the Swedish National Hip Register has provided extremely valuable information on total hip replacement since 1979, with an influence on policy and clinical practice. Updated information is returned to all orthopedic surgeons and poorly-performing implants can be discontinued.

At a national level, data are collected based on the ICD coding for diagnosis, procedures, and mortality. Waiting time to consultation and to surgery is continuously followed and used as a measure of efficacy and indirectly of patient satisfaction, as is utilization of hospital beds. Systematic use of validated outcome instruments is not performed.

For the Future

For the future there is a need for setting priorities with regard to musculoskeletal conditions. Priorities are necessary for development of guidelines and for development of mechanisms of implementation, including education and cost-effective use of available treatment. The most important mechanisms driving implementation are, however, either monetary or legislative. Legislation plays an important role for implementation of road traffic safety, but for health care, economic reality is the most powerful force. In a nationally funded system, the government provides the resources, and therefore the Department of Health and Welfare is in the position to choose target areas and to make the ultimate decision on what to prioritize. One of the tasks during the Bone and Joint Decade is to make facts and evidence available for the best possible decision-making.

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