RHEUMATOLOGY TODAY

# Bone and Joint Decade

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**Introduction**

The launch of the WHO Bone and Joint Decade (BJD) 2000-2010 is a culmination of the efforts put in by numerous experts and visionaries to curb the growing menace of the rheumatic and musculoskeletal diseases (RMSD). These disorders, inclusive of the traumatic aetiology, predominantly contribute to the morbidity across the globe, in terms of impaired quality of life (QOL).

After having effectively launched -several programs to control numerous communicable infectious diseases with a fair measure of success over the decades, WHO has now begun to increasingly focus on the non-communicable diseases. Amongst the latter, the cardiovascular disorders and cancers have preoccupied the health planners for reasons obviously connected to human longevity. But having realized that reduction in mortality must be matched with improved QOL, WHO has now launched one of its most ambitious programs, the WHO-BJD 2000-2010.

Initiated by the medical faculty of the Swedish University at Lund, the inaugural consensus meeting was held in April 1998 to. setup an international BJD International steering group. Further, a proposal for a global collaboration by the latter was accepted by WHO.

*Secretary General Kofi Annan, on behalf of the United Nations, has offlcially welcomed the WHO-BJD initiative, and has appealed to the World community in stating that 'there are effective ways to prevent or treat these disabling conditions. But we must act on them (RMSD) now.*

The BJD is actually an umbrella organization of over 750 patient and professional organizations in the World concerned with bone and joint disorders. It is endorsed by the International League of Associations for Rheumatology (ILAR) and its components in Asia-Pacific (APLAR), and rest of the World. Numerous national organizations, including the Indian Orthopedic Association and the Indian Rheumatism Association, have been listed amongst the organizations supporting the BJD movement. Over 17 Governments have endorsed the WHO-BJD project. The Government of India has yet to offer its official support.

The WHO proceeded to organize a scientific expert group meeting in Geneva, Switzerland, in Jan. 2000 for the official launch of the BJD. To begin with, this meeting focussed on 5 major disorders amongst the many that constitute RMSD. These were rheumatoid arthritis (RA), osteoarthritis (OA), osteoporosis, spinal disorders and severe limb trauma.

**Background Information & Inaugural Addresses**

Arthritis accounts for over 50% of all chronic conditions in persons aged 60 years and above.In over 25% of the latter community, OA of the knees and spine, causes dominant pain and disability. Back pain, one of the commonest cause of seeking medical consultation, is the second leading cause of sick leave from work. About 10-20 % of population visit the doctor for all kinds of soft tissue rheumatism and trauma related MSD, and the latter are often related to occupational overuse and/or misuse.

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Dr Jie Chen, Director, Non-Communicable Diseases Division, WHO, in her inaugural speech stated that currently there are about 12 million cases of rheumatic heart disease (RHD) reported annually all over the World. It must be added that RHD is caused by rheumatic fever which if diagnosed early and treated appropriately is curable. Rheumatic fever, a post bacterial disorder, is a preventable and a major scourge of young population in the developing countries.

It is anticipated that based on current trends, road traffic accidents (RTA), already in epidemic proportions, would compete with cardiac and vascular disorders and cancers to be amongst the 3 leading causes of human mortality and morbidity by 2020.Almost, 700,000 people are killed globally by RTA, which are estimated to be the tenth leading cause of death (World Health Report, 1999). Twenty-five per cent of the health expenditure in the developing countries is expected to be spent on trauma related care by the year 2010. Fragility fractures, due to osteoporosis, have doubled in the last decade, and it is estimated that over 40% of all women over the age of 50 years (as women are more likely to suffer ftom osteoporosis after menopause) will suffer from an osteoporotic fracture. Prof. Lars Lidgren, Chairman, BJD International Steering Committee, in his inaugural address stated that the number of hip fractures will further rise from 1.7 million in 1990 to 6.3 million by 2050 unless aggressive preventive programs are started.

**In the inaugural address to the meet, Dr. Gro Harlem Brundtland, Director General, WHO, stated that "the increased life expectancy recorded in recent decades, together with changes in life style and diet, have lead to a rise in non-communicable diseases (NCD), also in the developing countries.NCD now cause nearly 40% of all deaths in the developing countries, where they affect younger people than in industrialized countries."** ***The latter underscores the significance of the NCD, including WHO-BJD, all over the World.***

**Scientific Meeting Program & Deliberations**

Over 70 expert participants, belonging to different fields (Rheumatology, orthopedics, epidemiology, social sciences, statistics, economics, health planning, etc), from all over the world were invited. Prof. Anthony Woolf, a rheumatologist from UK, was elected chairman of the meeting.

*Prof. Shanmugasundaram, (Madras Orthopedic Surgeon), Dr. Arvind Chopra (Pune, Rheumatologist), Dr. A Miltal (Delhi, endocrinologist), and Prof. D. Mohan (Delhi, Trauma Expert), were invited from India.*

The participants were divided into 5 working groups, one each for RA, OA, trauma, osteoporosis and spinal disorders.

The 2 day program consisted of key lectures and workshop-brain storming sessions to

(i) review the existing epidemiological data on RMSD.
(ii) achieve consensus on disease definitions, staging and natural history.
(iii) identify health and socioeconomic indicators of RMSD.
(iv) identify gaps in the knowledge and understanding of RMSD.
(v) raise awareness of the BJD.

The currently available validated instruments to measure health status, disease outcome and overall QOL were discussed in detail for future adoption to measure the burden of disease, with particular reference to socio-economics. The disability adjusted life year methodology (DALY), based on health and socio-economic indicators, was presented by WHO experts with a view to measure the RMSD burden quantitatively in a standardized manner from all countries, irrespective of their development status. Similarly, DALY could be calculated for all other diseases, and then be used to allot health expenditure priorities.

The WHO also presented the new classification nomenclature of diseases, and their functioning and disability. The well known WHO model paradigm of impairment-disability-handicap to describe disease

consequences will be replaced by the 'impairment-activity-participation' model for better humane connotations and acceptance.

The conclusions of the 5 working groups, one for each of the major RMSD disorders described above, were presented, discussed and a consensus of the participants obtained. Differences in opinions were recorded. A research agenda was conceptualized.Items to be contained in the future strategy of BJD were discussed with a view to fill the 'gaps' identified during this meeting through organized global effort, devise appropriate interventions for reduction in the RMSD burden and provide better health care and health.

The WHO will publish the proceedings of this scientific meeting through a WHO Technical Report.

**The Indian Participation & Data**

*The epidemiological data on RMSD generated by the WHO COPCORD (community oriented programme for control of rheumatic diseases) project in village Bhigwan, District Pune, India was accepted and listed in the BJD global data inventory.*

The Bhigwan COPCORD, the first of its kind in India, and seventh in the World, was launched in 1996, under the auspices of the WHO-ILAR-APLAR COPCORD by Dr. Arvind Chopra, a consulting rheumatologist in Pune, India. The Bhgiwan COPCORD 1996-2004 is the first ongoing prospective study of its kind in the World, and has provided prevalence and incidence figures of various types of RMSD from a 7000 rural population.

*It was recognised during the WHO meeting under reference that the Bhigwan COPCORD had amply shown :–*

*(i) about 13-14 % of population reported RMSD symptoms and required medical care*

*(ii) besides the 5 major RMSD entities under focus, soft tissue rheumatism problems (STR) are dominantly reported by almost 55% of the RMSD rural patients, a fact that was endorsed by the partcipants for evaluation on and inclusion in the BJD agenda.. STR problems, dominantly reported by working female class, were largely due to occupational overuse, also called repetitive stress syndrome in this village. Psychofunctional factors, especially anxiety, can also lead to a form of STR, often called fibromyalgia but the latter through searched in the village population was much less. Overall, STR problems are preventable and amenable to treatment largely by appropriate health education.*

*(iii) almost 10% of the RMSD patients had inflammatory arthritis, and that the prevalence of RA was almost 5.5-0.6% in the Bhigwan population; the highest ever reported from a rural study of this kind*

*(iv) almost 5.5-6% of the village population suffer from osteoarthritis.*

*(v) Further, the COPCOPD Bhigwan modelfor the study of the epidemiology of RA in a prospective manner, presented by Dr. Chopra initially to the working group on RA and later to the participants of the meeting, was adopted by the WHO BJD, in place of the proposed model for future application.*

The Bhigwan COPCORD is also carrying out the *immunogenetic studies of the rural patients and* community in collaboration with Prof. Alan Silman & colleagues at the University of Manchester, UK. The Bhigwan COPCORD will also identify risk factors in causation of MSD, and design and evaluate control strategies.

Dr. N. Khaltaev, Co-ordinator, Non-Communicable Diseases, WHO, and Secretary to the WHO-BJD meeting, had earlier visited village Bhigwan to evaluate the COPCORD project, and further endorsed a WHO sponsorship to publish and distribute basic health education material in the village.

*Prof. Sunderam, presented his statistics on spinal disorders based on hospital experience in Madras, with special reference to spinal injuries and tuberculosis.* He further described the problems of collecting hard core epidemiological data in the Indian scenario.

Dr. Mittal expressed his concern on the lack of data on osteoporosis in developing countries, and further

state, though the lack of technology did not allow precise diagnosis, *the disease was rampant and often in association with vitamin D deficiency. The latter was accepted by the participants.*

Prof. D. Mohan, an engineer from IIT, New Delhi, and incharge of a WHO collaborating center on transportation injuries and prevention, cited his socio-economic cultural data from village surveys carried out in North India, and further highlighted the aetiology and prevention of limb trauma. *Besides RTA, he also emphasized the need to curb agriculture-related trauma in the developing countries.*

**At present, India does not have a national programme of any kind concerning RMSD/ rheumatic diseases.**

**The WHO-BJD future strategy**

The key goal is summed up in its slogan **"keep people moving"**. Based on the proceedings and conclusions of the recently conducted scientific expert group meeting in Geneva, and available world wide statistics, the WHO BJD hopes to accomplish the following goals in the current decade :–

(1) raise awareness of the growing burden of RMSD in society:
This will be done through translation of the epidemiological global burden of RMSD into financial costs. This will be further communicated to the national decision makers in different countries, who will then devise methods and means to reduce the RMSD burden to society by shifting indirect to direct health care costs.

(2) promote prevention of RMSD and empower patients through education campaigns:
The BJD national action networks (NAN), in close laison with the national Govt health authorities and agencies, and the International WHO-BJD Steering Group, will design public awareness and education campaigns. Patients must be empowered to participate in their own health care.

(3) advance research in prevention diagnosis and treatment of RMSD, including rheumatic disorders.
It is expected to tripple the existing research funding during the decade

(4) improve diagnosis and treatment of RMSD.

The specific goal would be to influence the medical schools and colleges to impart a better and practical training program, of at least 6 months, to the undergraduates.The diagnostic and treatment skills of the GP need to be improved. Similar proposals will be made for other medical groups engaged in care of RMSD.

Finally, it is hoped that at the end of the current decade there will be 25% reduction in expected increase in joint destruction by arthritis, osteoporotic fractures, severly injured people, and indirect health cost for spinal disorders.

**To begin with, the WHO BJD Steering Group expects at least 100 countries to be actively participating in achieving some of the above mentioned objectives of the BJD decade by 2002.**

**The BJD national action network (NAN) for India**

In close liaison with the International Steering Committee, a NAN committee for India has been proposed and accepted. The committee will consist of Prof. T. K. Shanmugasunderam (Chairman), Prof. D. Mohan(Co-ordinator), Dr. Arvind Chopra (Secretary), Dr. A. Mittal, Dr. S. Goyal.

The committee will initiate dialogue with Government Health authorities and other concerned national associations and agencies to promote the activities of the WHO-BJD in India. It will co-opt experts from related medical disciplines from different parts of India.

The initial attempt will be to create a national data base on some of the RMSD, and encourage data collection through well organised epidemiologically driven multicentric studies.

In all earnest and at the earliest, the Indian NAN committee will try to obtain an official endorsement of the WHO BJD project by the Government of India.