

## Implementing osteoarthritis prevention in China: An urgent priority

Daren Zhao<sup>1,2\*</sup>

<sup>1</sup>Faculty of Social Sciences and Humanities, Mahidol University, Salaya, Nakhon Pathom 73170, Thailand.

<sup>2</sup>Quality Control Management Department, Sichuan Provincial Orthopedics Hospital, Chengdu, Sichuan 610041, China.

**\*Corresponding author: Daren Zhao**

Quality Control Management Department, Sichuan Provincial Orthopedics Hospital, Chengdu, Sichuan 610041, China.

Email: cdzhaodaren@163.com;  
daren.zha@student.mahidol.ac.th

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### Short commentary

The world is undergoing a pronounced demographic shift toward population aging, a trend that China is also experiencing. By the end of 2024, China's population aged 60 and above reached 310.31 million, accounting for 22.0% of the total population, while those aged 65 and older numbered 220.23 million, representing 15.6% of the population [1]. As China's population progressively ages, the chronic disease burden has markedly increased, presenting significant challenges to geriatric healthcare systems [2].

Osteoarthritis (OA) is a prevalent chronic degenerative joint disorder that poses a major global health challenge, particularly among aging populations. It is characterized by a high incidence in elderly demographics, where it significantly contributes to chronic pain, loss of function, [3] and diminished quality of life, [4] as well as substantial healthcare costs and productivity losses.

As indicated by epidemiological data from the Global Burden of Disease (GBD) Study, the prevalence of OA worldwide has shown a significant upward trend from 1990 to 2021. The Age-Standardized Prevalence Rate (ASPR) increased from 4,801.18 per 100,000 population in 1990 to 7,691.83 per 100,000 population in 2021, reflecting a 60.2% rise over this period [5]. Notably, China experienced an even more pronounced increase

in OA incidence, escalating from 395.61 per 100,000 person-years in 1990 to 819.03 per 100,000 person-years in 2021, a striking 107.0% surge, substantially exceeding the global average [5]. These epidemiological findings underscore OA as a critical public health challenge in China, particularly against the backdrop of a rapidly aging population. Given this escalating disease burden, integrating OA prevention and management into national public health priorities and formulating targeted intervention strategies have become imperative for health policymakers.

To address this issue, the Chinese government has already launched a special effort. In 2019, the Central Committee of the Communist Party of China and the State Council promulgated the Healthy China 2030 Plan Outline, a policy document that established a health and wellness policy focused on prevention, emphasizing the importance of disease prevention and maintaining health [6]. It clearly identified chronic diseases with high mortality and disability rates as a priority, with the prevention and treatment of OA being one of the key tasks in chronic disease prevention and treatment. In 2021, the Disease Control Bureau of the National Health Commission of China promulgated the "Notice on Continuing to Promote Key Tasks of the 'Three Reductions and Three Health' Special Action," which proposed active prevention and intervention for osteoporosis and OA in the elderly population [7].

These policies reflect the Chinese government's high priority on the prevention and treatment of OA diseases. However, as the medical model shifts from a "disease-centered" approach to a "health-centered" one, and with the accelerating pace of population aging, China's efforts to prevent and control osteopathic joint diseases face new challenges. First, significant disparities persist in orthopedic healthcare resource allocation across regions due to China's vast geographical expanse, with pronounced imbalances between eastern, central, and western areas [8]. Second, the continuum of care for bone and joint diseases—encompassing prevention, screening, treatment, and rehabilitation—remains inadequately developed within the current healthcare system. Third, public awareness of OA prevention and health management remains incomplete, especially in rural areas of China [9]. These factors all pose significant challenges to China's efforts to prevent and control bone and joint diseases.

To address the above challenges, we propose the following policy recommendations. Given the pressures of a rapidly aging population, China's government must prioritize three key reforms in the allocation of orthopedic healthcare resources. First, the allocation of orthopedic healthcare resources across different regions of China should be optimized by implementing a hierarchical diagnosis and treatment mechanism [10]. The allocation of orthopedic healthcare resources in western regions should be strengthened, including increasing the number of orthopedic physicians and enhancing training in osteoarthritis-related techniques. Second, improve the healthcare service system and increase the supply of osteoarthritis healthcare services. The government should promote the establishment of specialized treatment centers for osteoarthritis and osteoporosis in tertiary hospitals, as well as rheumatic and osteoarthritis specialty departments in secondary and above hospitals, and construct a screening and referral network for bone and joint diseases in primary healthcare institutions.

To improve OA management, healthcare institutions should focus on three key strategies. First, multidisciplinary collaboration among orthopedics, rehabilitation, and rheumatology departments should be strengthened to ensure early diagnosis, standardized treatment, and high-quality care [11]. Second, health management and prevention should be enhanced by establishing efficient referral systems with community hospitals for screening, follow-up, and early intervention in high-risk populations (e.g., elderly and obese individuals). Third, systematic health education should be expanded through professional lectures, posters, and educational videos to raise public awareness of OA prevention and treatment. These measures aim to optimize clinical outcomes and promote proactive joint health management.

At the public level, improving health literacy and self-management skills is crucial for OA prevention, especially in rural areas. First, the government should strengthen public health education [10], especially in rural areas, and strengthen the promotion of OA so that villagers can have a basic grasp of the relevant knowledge about OA. Second, it is recommended that the public adopt a scientifically healthy lifestyle, including a balanced diet, adequate intake of calcium and vitamin D, regular moderate exercise, and avoiding unhealthy habits such as prolonged sitting or standing and excessive joint strain.

Third, the public should monitor joint health closely and seek timely medical attention for symptoms like pain, stiffness, or limited mobility. Lastly, the public could leverage health apps and wearable devices to track physical activity and joint load to facilitate evidence-based self-management. These integrated measures can significantly improve public awareness and proactive OA management.

### Declarations

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### References

1. National Bureau of Statistics of China. Statistical bulletin on national economic and social development of the People's Republic of China in 2024. 2025.
2. Su B, Li D, Xie J, Wang Y, Wu X, Li J, et al. Chronic disease in China: geographic and socioeconomic determinants among persons aged 60 and older. *J Am Med Dir Assoc.* 2023; 24: 206-212.e5.
3. Glyn-Jones S, Palmer AJ, Agricola R, Price AJ, Vincent TL, Weinans H, et al. Osteoarthritis. *Lancet.* 2015; 386: 376-387.
4. Martínez-Puig D, Costa-Larrión E, Rubio-Rodríguez N, Gálvez-Martín P. Collagen supplementation for joint health: the link between composition and scientific knowledge. *Nutrients.* 2023; 15: 1332.
5. Chen XC, Gao ZH, Xu SG, Zou YG, Qin J, Wei JT. Disease burden of osteoarthritis in the world, China, and regions with different socio-demographic index from 1990 to 2021. *Chin Gen Pract.* 2025; 28: 2172-2178.
6. The State Council of the People's Republic of China. The Central Committee of the Communist Party of China (CPC) and the State Council issued the Outline of the "Healthy China 2030" Plan. 2016.
7. National Health Commission of the People's Republic of China. Notice on continuously promoting the key work of the "Three Reductions and Three Health" special campaign. 2021.
8. Li M, Xia Q, Nie Q, Ding L, Huang Z, Jiang Z. Burden of knee osteoarthritis in China and globally: 1990-2045. *BMC Musculoskelet Disord.* 2025; 26: 582.
9. Wang L, Lu H, Chen H, Jin S, Wang M, Shang S. Development of a model for predicting the 4-year risk of symptomatic knee osteoarthritis in China: a longitudinal cohort study. *Arthritis Res Ther.* 2021; 23: 65.
10. Qiu GX. Healthy China and the prevention and control of orthopedic chronic diseases. *Chin J Bone Joint Surg.* 2017; 10: 468-469.
11. Wu HT, Lin JH. The disease burden and harm of osteoarthritis. *Med J Peking Union Med Coll Hosp.* 2025; 16: 5-12.