Healthy China

Implications of International and Domestic Strategies, Policies, and Practices for Obesity Prevention and Control — China, 2023

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ABSTRACT

Introduction: Obesity has emerged as a critical public health challenge in China, with prevalence rates rising steadily across all age groups and threatening both long-term health outcomes and economic sustainability. This study examines China's current obesity prevention and control landscape, comparing it with international practices to provide evidence-based recommendations for strengthening national strategies.

Methods: Between July and October 2023, we conducted a comprehensive literature review and engaged 19 experts (9 from China; 10 from the United States (US), Japan, the United Kingdom (UK), and Spain) through purposive, criterion-based sampling. collected data using a semi-structured questionnaire covering personal information, obesityrelated policies and service status. and recommendations for China. Quantitative underwent descriptive analysis, while qualitative data were examined using thematic analysis.

Results: Experts identified persistent barriers in China's obesity control efforts, including fragmented policies, insufficient public awareness, suboptimal service quality, and limited healthcare facilities. Compared with high-income countries, China's approach lacks robust regulatory frameworks and effective multisectoral coordination mechanisms.

Conclusions: These findings underscore the urgent need for China to strengthen evidence-based, integrated approaches to obesity prevention and management. Adapting successful international experiences to local contexts will be essential for enhancing national obesity control efforts and advancing the *Healthy China* initiative goals.

The global obesity pandemic represents one of the

most pressing public health crises of the 21st century. China confronts escalating challenges, with 50 million children (20% prevalence) and 600 million adults (50% prevalence) currently affected by overweight or obesity (1), and projections indicating these rates will reach 30% and 70% respectively by 2030. Despite implementing multiple national initiatives, current interventions have demonstrably failed to reverse the rapid increase in obesity prevalence. High-income countries have successfully integrated obesity-related comprehensive, within multisectoral frameworks that incorporate both regulatory measures (such as marketing restrictions) and fiscal interventions (including sugar taxes) (2). In contrast, China's approach remains in development, characterized by fewer binding regulations, enforcement challenges, and ongoing efforts to strengthen intersectoral coordination (3). These critical gaps highlight the urgent need for evidence-based strategies that effectively balance proven global practices with China's unique sociocultural context to achieve Healthy China objectives (2). We therefore conducted targeted literature reviews and expert consultations to systematically compare international strategies, identify key implementation challenges, and develop tailored policy recommendations for China's obesity prevention framework.

METHODS

We implemented a comprehensive dual-approach methodology combining a systematic literature review with targeted expert consultations to gather comprehensive data on domestic and international obesity-related policies, service delivery systems, and clinical guidelines. The literature review fulfilled two strategic objectives: first, informing the development of our semi-structured questionnaire instrument, and second, identifying relevant official policy documents

that directly supplemented the policy and guideline information presented in Tables 1 and 2, alongside questionnaire-derived data. Our finalized semistructured questionnaire comprised 17 carefully designed items organized into three distinct modules: demographic professional and background information (age, country, education level, professional of obesity-related positions, years experience, specific obesity prevention and treatment projects); (2) a comprehensive assessment of obesity prevention and control status within respondents' respective countries (existing policies, service utilization patterns and quality metrics, clinical guidelines, primary implementation challenges); and (3) strategic recommendations (specific recommendations China's context, successful international practices for potential adaptation). Between July and October 2023, we employed a purposive sampling methodology to engage 19 experts selected from an initial pool of 33 qualified candidates (Supplementary Table S1. available at https://weeklv.chinacdc.cn/). To ensure professional authority and geographic representativeness, we included experts from five countries representing diverse institutional sectors,

including government agencies, academic research institutions, and international health organizations. Questionnaire responses were systematically entered into Excel databases and organized for comprehensive analysis. Open-ended qualitative responses underwent thematic analysis, while quantitative multiple-choice data were evaluated using descriptive statistical methods.

RESULTS

As summarized in Table 1, a cross-national analysis reveals divergent policy approaches to obesity prevention, with the included policies reflecting those explicitly highlighted by experts during consultations, thus representing authoritative consensus priorities rather than a comprehensive catalogue of all measures. Experts from China, the UK, the US, and Spain consistently reported established national policies explicitly targeting obesity. In contrast, Japanese experts indicated their nation currently lacks dedicated obesity-specific policies. However, based on expert consultations, one relevant national health policy

TABLE 1. Domestic and international key components of obesity prevention and control policies from 2000 to 2025.

Country	Obesity- specific policy	Obesity-related policy	Core content
China	Yes	2016, The State Council of the People's Republic of China, Healthy China 2030	Implement comprehensive public health campaigns to promote healthy living practices, expand counseling and intervention programs targeting healthy lifestyle adoption among families and high-risk populations, and initiate targeted strategies addressing key health priorities, including weight management, dental hygiene, bone health, and other essential wellness areas.
		2017, The State Council of the People's Republic of China, China's Medium-to-Long Term Plan for the Prevention and Treatment of Chronic Diseases (2017-2025)	Promote nationwide health education on chronic disease prevention, advocating healthy and civilized lifestyles. Encourage government agencies and workplaces to organize fitness breaks, employee sports events, walking campaigns, and health knowledge competitions. Mobilize volunteers, community sports instructors, and health lifestyle counselors through local committees to guide self-management of health. Advance the National Healthy Lifestyle Campaign, including the "Three Reductions and Three Health".
		2019, The Standing Committee of the 13th National People's Congress, Law of the People's Republic of China on Basic Medical and Health Care and the Promotion of Health	Integrate health education into the national education system, requiring schools to deliver health, fitness, and first aid education, raise students' awareness of disease prevention, and foster healthy habits to reduce problems such as myopia and obesity.
		2024, National Health Commission of the People's Republic of China, Implementation Plan for the "Year of Weight Management" Campaign	Cultivate a comprehensive weight management culture that encourages universal participation and delivers population-wide benefits. Promote healthy lifestyles by establishing supportive environments for weight management, ensuring widespread accessibility to resources and information. Enhance public awareness and competency in effective weight management strategies to reduce the prevalence of weight-related abnormalities across diverse population groups.
		2025, Ministry of Health of the People's Republic of China, National Food Safety Standard - Standard for Nutrition Labelling of Prepackaged Foods	Advance public health by regulating labeling content and encouraging the food industry to optimize the nutritional composition of products.

Continued

Country	Obesity- specific policy	Obesity-related policy	Core content
The United States	Yes	2018, The United States Food and Drug Administration, <i>Menu</i> <i>Labeling Requirements</i>	Mandate that consumers have access to calorie and nutrition information in designated chain establishments subject to regulatory requirements. These establishments must prominently display calorie content of standard menu items on menus and menu boards.
		2020, The United States Department of Agriculture, Nutrition Education Programs	Leverage the collective strengths and contributions of individuals, families, communities, organizations, and diverse societal sectors to drive meaningfu changes in dietary behaviors while promoting health equity and overall wellbeing.
		2020, The Office of Disease Prevention and Health Promotion, <i>Healthy People 2030</i>	Healthy People 2030 aims to catalyze, strengthen, and systematically evaluate nationwide initiatives designed to enhance population health outcomes and well-being across all demographic groups. This comprehensive framework establishes 357 quantifiable targets, strategically prioritizing reductions in pediatric and adult obesity prevalence alongside decreased consumption of added sugar compounds.
		2023, Obesity Action Coalition, The Treat and Reduce Obesity Act (TROA)	Critical policy recommendations include expanding Medicare beneficiaries' accessibility to specialized healthcare providers optimally qualified to delive intensive behavioral therapy interventions, while simultaneously modifying Medicare Prescription Drug Benefit (Part D) coverage parameters to encompass U.S. Food and Drug Administration-approved anti-obesity pharmacotherapeutics.
		2025, The United States Food and Drug Administration and the National Institutes of Health, Nutrition Regulatory Science Program	This collaborative scientific initiative seeks to investigate and address the fundamental etiological factors underlying diet-related chronic diseases through rigorous evidence-based methodologies. Priority research domains encompass: comprehensive assessment of ultra-processed foods' (UPFs) physiological impact; elucidation of specific food additives' mechanistic roles in metabolic dysregulation potentially precipitating chronic disease pathogenesis; and systematic examination of maternal-infant nutritional patterns as determinants of longitudinal health trajectories across the lifespacontinuum.
Japan	No	2000, Ministry of Health, Labor and Welfare, <i>Health Japan 21</i>	Establish a comprehensive national framework to enhance population health through targeted interventions in workplace environments, educational institutions, and community settings, emphasizing the promotion of regular physical activity, balanced nutritional practices, smoking cessation programs and responsible alcohol consumption behaviors.
Spain	Yes	2006, The Ministry of Health and Consumer Affairs of Spain, Strategy for Nutrition, Physical Activity and the Prevention of Obesity (NAOS)	Implement a comprehensive lifelong approach to obesity prevention and control through coordinated action plans across four strategic domains: fam and community engagement, educational institutions, private sector partnerships, and healthcare system integration. Prioritize the enhancement of dietary behaviors and promotion of consistent physical activity across all population segments, with particular emphasis on pediatric populations.
The United Kingdom	Yes	2016, Department of Health (Ireland), A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016 – 2025 2018, Scottish Government, Diet and Healthy Weight	Increase the proportion of individuals maintaining healthy weight status and establish pathways toward normalizing healthy weight across populations while eliminating obesity-related stigma, particularly among pediatric populations. Implement comprehensive restrictions on promotional activities and marketing strategies for foods and beverages with elevated fat, sugar, or sa
		2019, Welsh Government, Healthy Weight Strategy (2019)	content. Develop healthy environments, establish supportive settings, promote healt populations, and provide leadership while enabling transformative change to prevent and reduce obesity prevalence throughout Wales.
		2022, Department of Health and Social Care, <i>Tackling Obesity:</i> Empowering Adults and Children to Live Healthier Lives	Develop and deploy evidence-based digital tools and mobile applications to guide individuals through effective weight reduction strategies and sustainable long-term weight maintenance protocols. Expand comprehensive weight management services within the <i>National Health Service</i> , ensuring broader population access to essential support systems for achieving and maintaining optimal weight status.
		2024, Public Health Scotland, Improving Scotland's Diet and Weight	Provide strategic leadership to promote optimal dietary practices and health weight maintenance; ensure children receive the most advantageous foundation for lifelong health; prioritize environments where people live, wor learn, receive care, and engage in recreational activities to emphasize healthier food options and physical activity opportunities; guarantee population access to effective weight management support services and comprehensive care programs.

Note: This table summarizes domestic and international obesity-related macro policies in China, the US, Japan, Spain, and the UK, outlining key measures and their implementation details. Data are derived from expert responses and official documents. An obesity-specific policy is defined as a national policy or program that explicitly targets obesity prevention, treatment, or management as a primary objective; in the case of Japan, the listed policy is a relevant national health policy identified during expert consultations.

(Health Japan 21) that addresses obesity-related risk factors was included in Table 1.

Expert responses to the "service utilization and quality" section revealed significant cross-national variations in obesity treatment service availability and utilization, reflecting distinct differences in healthcare priorities, resource allocation. and policy commitments. The US and Japan maintain wellestablished obesity management services, while UK experts reported insufficient national prioritization of obesity treatment. International experts consistently highlighted substantial regional and individual disparities in both service access and utilization patterns. China's obesity treatment infrastructure remains in early developmental stages, characterized by limited service availability, absence of standardized treatment protocols, and marked inconsistencies in service quality. Although existing interventions may yield short-term benefits, experts emphasized the critical need to prioritize long-term outcomes while enhancing nationwide accessibility and service uptake.

Health insurance coverage for obesity treatment demonstrates pronounced international disparities. The US incorporates obesity treatment within its national health insurance framework. However, the UK, Japan, and Spain provide no comparable coverage. China exhibits highly fragmented insurance coverage for obesity management. Experts noted that the lack of an official disease classification for obesity excludes it from National Healthcare Security Administration coverage. Nevertheless, reimbursement remains available for specific procedures, including bariatric surgery, under particular clinical circumstances such as morbid obesity or metabolic syndrome.

2 summarizes selected domestic Table and international guidelines for obesity diagnosis and implementing However, these recommendations encounters substantial challenges, inadequate funding, including poor patient compliance, and multifactorial etiology of obesity. China faces additional implementation barriers, including insufficient healthcare professional training, limited institutional guideline adoption, and the absence of government-led initiatives to promote and enforce standardized treatment practices.

International experts identified three major challenges in obesity management: difficulty in maintaining weight loss, limited economic affordability, and low levels of patient participation and adherence (Figure 1). Notably, eight experts emphasized long-term weight maintenance as a particularly significant

hurdle. Similar challenges exist in China, where obesity treatment faces barriers including poor patient adherence, suboptimal long-term outcomes, insufficient public recognition of obesity's metabolic risks, and systemic constraints from the shortage of specialized treatment facilities.

DISCUSSION

This study provides a comprehensive examination of expert perspectives on current obesity prevention and control strategies, focusing on the implementation of global policy frameworks. The findings reveal that despite variations in national approaches, countries face common structural and systematic challenges when addressing obesity. In China, key obstacles include fragmented policies, insufficient public awareness, suboptimal service quality, and limited treatment facilities, all of which significantly hinder the effectiveness of prevention and management efforts.

Our findings highlight the inadequacy of China's current obesity treatment policies, which remain fragmented and inconsistently implemented across regions. Currently, no dedicated health insurance policy covers obesity treatment, and bariatric medications are excluded from the Interim Measures for the Administration of Basic Medical Insurance Drugs. As documented in Liang Hui's study, although bariatric surgery is gaining recognition in China, its acceptance remains limited, with significant regional disparities in health insurance reimbursement (4). Furthermore, the obesity treatment market lacks effective regulatory oversight. government-led, coordinated, multisectoral framework has yet to be established, and the persistent gap between policy formulation and implementation continues to constrain meaningful progress.

Public awareness of obesity in China remains inadequate, with poor treatment compliance presenting significant barrier effective to management. Many individuals fail to recognize obesity as a serious medical condition and frequently overlook its long-term health consequences (5). Weight loss motivation is often driven by aesthetic rather than health considerations, reducing what should be a medical necessity to a cosmetic concern (6). widespread misconceptions Additionally, available treatments and concerns regarding potential risks lead many patients to resist medical interventions (7-8). A lack of confidence in long-term weight management and self-regulation frequently results in

TABLE 2. Domestic and international clinical guidelines for obesity diagnosis and treatment from 2004 to 2025.

Country	Publishing organization	Guidelines/Consensus		
China	China Obesity Working Group	2004, Guidelines for the Prevention and Control of Overweight and Obesity in Adults in China		
	Obesity Group of Chinese Society of Endocrinology	2011, Consensus of Experts on Prevention and Treatment of Obesity in Adults in China		
	Chinese Society of Health Management	2018, Expert Consensus & Standard on Weight Management for Overweight or Obese People		
	Chinese Society of Medicine	2019, Guidelines for Primary Care of Obesity		
	Chinese Society of Surgery	2019, Guidelines for the Surgical Treatment of Obesity and Type 2 Diabetes in China (2019 Edition)		
	Chinese Society for Metabolic and Bariatric Surgery	2019, The Clinical Guideline for Surgical Treatment of Childhood and Adolescent Obesity in China (2019 Edition)		
	Chinese Nutrition Society	2019, China Blue Paper on Obesity Prevention and Control		
	Chinese Research Hospital Association, Society for Diabetes and Bariatric Surgery	2019, Expert Consensus on Perioperative Management in Bariatric and Metabolic Surgery		
	National Health Commission of the People's Republic of China	2021, Chinese Guidelines for Prevention and Control of Overweight and Obesity in Adults (2021)		
	Chinese Nutrition Society Clinical Nutrition Section	2021, Chinese Guidelines on Medical Nutritional Therapy for Overweight/Obesity (2021)		
	Association for Maternal and Child Health Studies	2021, Guidelines for the Evaluation, Treatment and Prevention of Childhood Obesity in China		
	Chinese Nutrition Society Obesity Prevention and Control Section	2022, Expert Consensus on Obesity Prevention and Treatment in China		
States	American College of Cardiology / American Heart Association / The Obesity Society	2013, Guideline for the Management of Overweight and Obesity in Adults		
	American Association of Clinical Endocrinologists / American College of Endocrinology	2016, Clinical Practice Guidelines for Comprehensive Medical Care of Patients with Obesity		
	American Society for Metabolic and Bariatric Surgery	2018, Pediatric Metabolic and Bariatric Surgery Guidelines		
	American Gastroenterological Association	2022, Clinical Practice Guideline on Pharmacological Interventions for Adults with Obesity		
Japan	Ministry of Health, Labour and Welfare	2017, Guidelines for the Treatment of Childhood Obesity		
	Japan Society of Internal Medicine	2018, Obesity Diagnosis and Treatment Guidelines		
	Japan Obesity Society	2022, Guide to Improving Lifestyle Habits in Obesity		
Spain	-	-		
Kingdom	National Institute for Health and Care Excellence	2014, Weight Management: Lifestyle Services for Overweight or Obese Adults		
	Public Health England	2017, Health Matters: Obesity and the Food Environment		
	National Institute for Health and Care Excellence	2017, Obesity: Working with Local Communities		
	Office for Health Improvement and Disparities	2022, Adult Obesity: Applying All Our Health		
	National Institute for Health and Care Excellence	2023, Obesity: Identification, Assessment and Management		
	National Institute for Health and Care Excellence	2025, Overweight and Obesity Management		

Note: This table compares national clinical guidelines for obesity diagnosis and treatment issued by health authorities and professional societies in China, the United States, Japan, and the United Kingdom. Data are based on expert responses and official publications.

irregular medication adherence or non-compliance with medical recommendations, contributing to weight regain following initial loss (9).

The overall quality of obesity treatment services in China remains suboptimal despite various initiatives promoting lifestyle modifications. Persistent issues include "insufficient prevention and treatment efforts" and "limited systematic diagnostic and treatment capabilities." The healthcare system lacks professional

organizations dedicated specifically to obesity care, authoritative clinical guidelines, and standardized treatment pathways. No national interdisciplinary obesity treatment centers have been established. Furthermore, a comprehensive, tiered obesity diagnosis and treatment network has yet to be developed. Regional disparities in economic development and uneven distribution of healthcare resources further compound these challenges, leaving certain areas

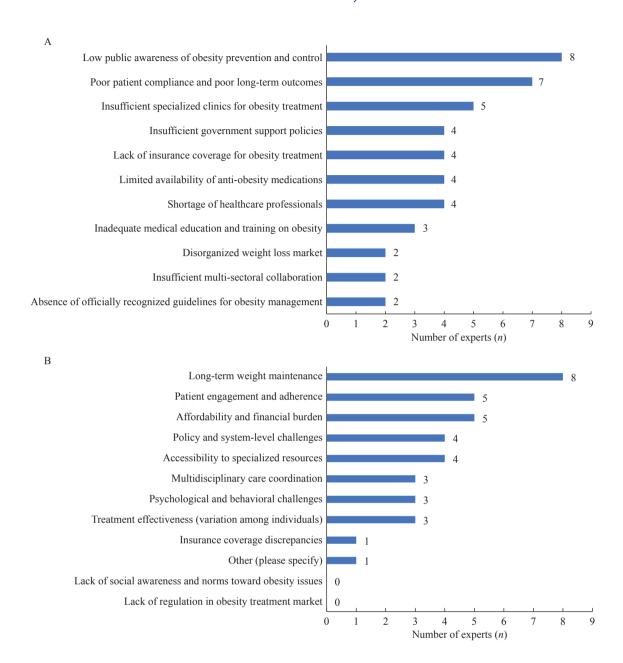


FIGURE 1. Major challenges in obesity treatment identified by domestic and international experts (July–October 2023). (A) Opinions of Domestic Experts; (B) Opinions of International Experts.

Note: Bar heights represent the number of consulted experts who cited each challenge in obesity treatment. Data were collected via semi-structured questionnaires between July and October 2023.

significantly underserved.

To effectively improve obesity prevention and control in China, several key policy recommendations were proposed. First, relevant laws and regulations should be strengthened. This includes implementing taxes on unhealthy foods, restricting or banning advertisements for high-sugar and high-fat products, and introducing a dedicated medical insurance program for obesity treatment. Improving monitoring and evaluation mechanisms is also essential to ensure efficient allocation of healthcare resources. Second,

public education on obesity prevention should be reinforced, with greater emphasis on patient-provider communication. A comprehensive policy framework should support nationwide health education efforts and reduce obesity-related stigma. Medical institutions should provide evidence-based guidance and share success stories to boost patient confidence and improve treatment adherence. Finally, medical services must be better equipped to address obesity prevention and treatment. A multi-sectoral collaboration platform should be established, including the development of

multidisciplinary weight management clinics and the integration of digital technology into diagnostic and therapeutic processes (10).

This study has several strengths. It provides a comparative analysis of obesity prevention and treatment policies and practices in China and other countries, offering a global perspective. By reviewing the experiences across multiple contexts in obesity prevention policies, treatment services, and guideline development, the study provides valuable insights for optimizing obesity-related policies in China.

The study also has limitations. First, the sample size was relatively small, and the consulted experts may not fully represent the global landscape. Second, regional variations in China's obesity prevention and control efforts were not thoroughly explored. Lastly, as a qualitative study, the interpretation of open-ended responses relied on researchers' subjective analysis. Future research should adopt larger sample sizes and mixed-methods designs to provide more comprehensive and data-driven insights.

CONCLUSIONS

In conclusion, there is an urgent need for China to strengthen obesity-related policies and regulations, enhance public education, and improve the accessibility and quality of healthcare services. Comprehensive and coordinated strategies must be developed to curb the rising burden of obesity and related chronic diseases. Lessons learned from China's experience can also provide valuable guidance for other countries facing similar public health challenges.

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SUPPLEMENTARY MATERIALS

SUPPLEMENTARY TABLE S1. Demographic characteristics of 19 domestic and international experts (July-October 2023).

Expert number	Age (years)	Education/Degree	Key job positions/Titles	Years of working experience on obesity	Country
Domestic experts	•				
C-1	40–64	Master of Science (MS)	Associate Researcher	≤10	China
C-2	40–64	Doctor of Philosophy (PhD)	Chief Physician	23	China
C-3	40–64	Doctor of Philosophy (PhD)	Chief Physician	12	China
C-4	40–64	Doctor of Philosophy (PhD)	Associate Researcher	≤10	China
C-5	40–64	Master of Science (MS)	Professor	33	China
C-6	40–64	Doctor of Philosophy (PhD)	Chief Physician	≤10	China
C-7	40–64	Doctor of Philosophy (PhD)	Chief Physician	28	China
C-8	40–64	Doctor of Philosophy (PhD)	Researcher	≤10	China
C-9	40–64	Doctor of Philosophy (PhD)	Professor	20	China
International experts					
F-1	65–	Doctor of Philosophy (PhD)	Professor	33	The United States
F-2	65–	Doctor of Philosophy (PhD)	Emeritus Professor	33	The United States
F-3	40–64	Doctor of Philosophy (PhD)	Associate Professor	12	The United States
F-4	40–64	Doctor of Philosophy (PhD)	Deputy Chief Physician	≤10	Japan
F-5	65–	Doctor of Philosophy (PhD)	Professor	30	Japan
F-6	40–64	Master of Science (MS)	Officials of international institutions	≤10	The United Kingdom
F-7	32	Doctor of Philosophy (PhD)	Researcher	≤10	The United Kingdom
F-8	40–64	Doctor of Philosophy (PhD)	Director of the Institute	20	The United Kingdom
F-9	40–64	Doctor of Philosophy (PhD)	Senior Lecturer in Clinical Nutrition	10	The United Kingdom
F-10	40–64	Doctor of Philosophy (PhD)	Professor	30	Spain

Note: Demographic data were collected from the 19 experts participating in this study.