Key Laboratory of Health Technology Assessment, National Health Commission (Fudan University)

WHO Collaborating Centre for Health Technology Assessment and Management

NEWSLETTER

June 2023 / Issue 2

HIGHLIGHTS

- KLHTA/WHOCC Faculty and Students Participated in HTAi 2023 Annual Meeting.
- Professor Yingyao Chen published articles in The BMJ related to health technology assessment in China

KLHTA/WHOCC Faculty and Students Participated in HTAi 2023 Annual Meeting

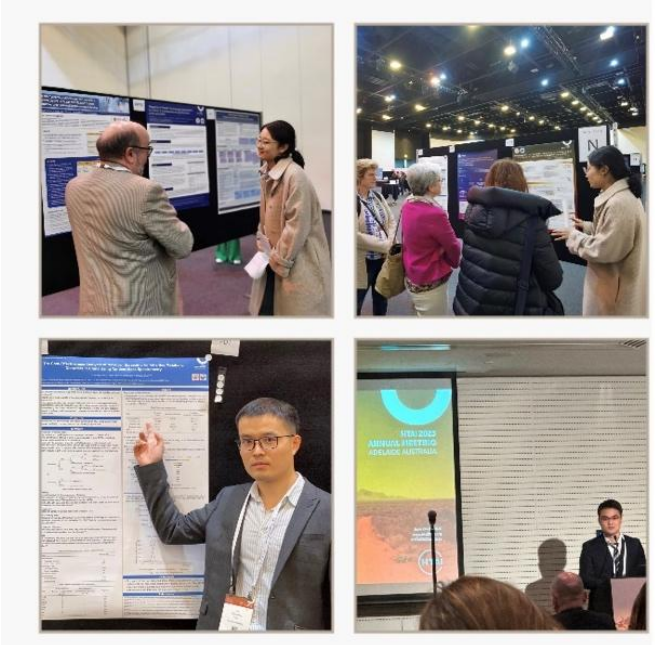
Health Technology Assessment international (HTAi) is the global scientific and professional society for everyone who produces, uses or encounters Health Technology Assessment (HTA) to support optimal policy and decision making. Its mission is to support the growth of the HTA community by providing a neutral, global forum for the exchange of information, methods, and expertise. With members from over 60 countries and across six continents, HTAi is a thriving global network.

The HTAi 2023 Annual Meeting was held in Adelaide, Australia from June 24-28, 2023. The in-person meeting brought together global HTA stakeholders to discuss and debate the role of HTA in leading health innovation. With the discussions surrounded with the theme of "The Road to Policy and Clinical Integration", the Annual Meeting organized three plenary sessions titled "Fast-Tracking Clinical Innovation: The Balance of Speed and Rigour", "Making HTA More Efficient: What Can we Learn about Harmonization, Work Sharing and Adaptation?" and "Feasibility of Aligning Technology Evaluation Processes and Decision in an Era of Sustainable Development", respectively.

The Annual Meeting also provided a range of workshops, panels, oral presentations and posters, which gathered international attendees to share the latest research progress, advancing discussions in policy and methods and building global networks deeply and extensively.

Prof. Yingyao Chen led KLHTA/WHOCC faculty and students to attend the Annual Meeting in Australia. The Key Lab faculty and students successfully organized and presented three panels titled "Legal Structure for Establishing an HTA Organization: Low-and-Middle-Income Countries' Perspective", "How to Balance Benefits and Risks on Cellular and Gene Therapies: HTA Perspective from Selected Countries?" and "Using quantitative patient preference data to assist HTA decision-making". Heated discussions were occurred between presenters and audiences after presentations.

The Key Lab graduate students also presented 7 oral presentations and 3 poster presentations, covering topics of health economic evaluations, patient preference, cancer overdiagnosis, health-related quality of life, treatment and effects assessment etc., which provided valuable insights and recommendations to address health problems in practice. The presenters interacted actively and were highly recognized by the audience and the judges.



KLHTA/WHOCC faculty and students not only gain insight into the most advanced health technology assessment research, but also successfully demonstrated the latest research findings of the KLHTA/WHOCC. In the extensive communication with leading academics from around the world, we have discussed the path of health technology assessment to clinical decision-making and policy translation and broaden the network of international collaborators. The faculty and students of the Key Lab have

improved the global influence of the KLHTA/WHOCC, Fudan University and China's Health Technology Assessment, and have set the stage for future advancements in the quality of research conducted at the lab and in its ability to translate findings into practice.

Titles of the KLHTA/WHOCC's Presentations at the Annual Meeting:

Panel:

PN28 - Legal Structure for Establishing an HTA Organization: Low-and-Middle-Income Countries' Perspective

PN32 - How to Balance Benefits and Risks on Cellular and Gene Therapies: HTA Perspective from Selected Countries?

PN46 - Using quantitative patient preference data to assist HTA decision-making

Oral Presentations:

OP03 - Comparative Safety and Efficacy of PD-(L)1 Inhibitors for Advanced Non-Squamous Non-Small Cell Lung Cancer: A Bayesian Network Meta-Analysis (Yi Yang; fd_yangyi@fudan.edu.cn)

OP11 - Cost- effectiveness of atelizeomub as the first line treatment for metastatic non- squamous non-small cell lung cancer (Liu Liu; liuliu20@fudan.edu.cn)

OP12 - Cost-effectiveness comparison of PD-(L)1 inhibitors in first-line treatment of advanced non-squamous non-small cell lung cancer in China (Yi Yang; fd_yangyi@fudan.edu.cn)

OP13 - Cost-effectiveness Analysis of Sintilimab plus Chemotherapy for the First-line Treatment of Non-Squamous Non-small-cell Lung Cancer: Societal Perspective (Fuming Li; fmli20@fudan.edu.cn)

OP24 - Preferences Of Depressed And Depression-Prone Groups With Regard To Antidepressants In China: A Best-Worst Scaling Survey (Shimeng Liu; smliu19@fudan.edu.cn)

OP74 - Analysis of literature and research foci in overdiagnosis based on citespace (Juntao Yan; 20111020061@fudan.edu.cn)

OP143 - Association of Different Venous Access Device and Health-Related Quality of Life among Patients with Breast Cancer in China (Liu Liu; liuliu20@fudan.edu.cn)

Poster Presentations:

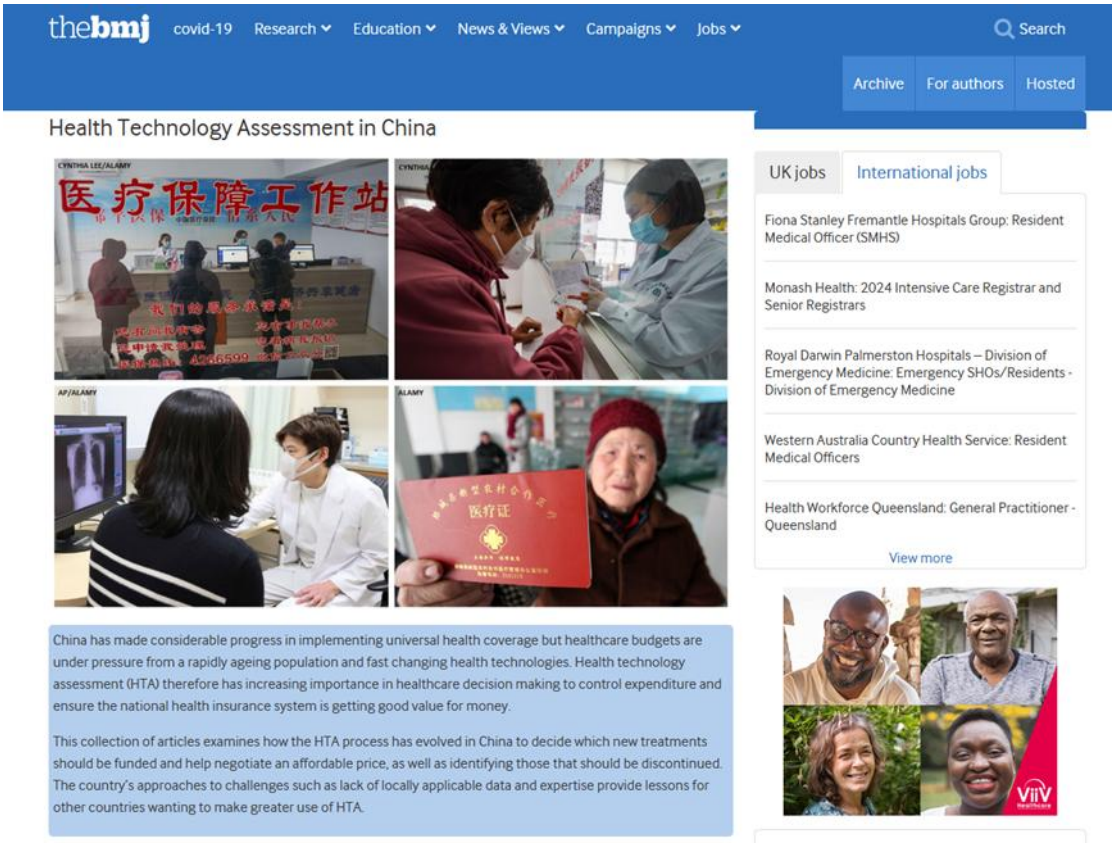
PP70 - Mapping of health technology assessment in China: A comparative study between 2016 and 2021 (Yu Xia; 20111020060@fudan.edu.cn)

PP71 - Hospitalization costs associated with advanced non-small cell lung cancer in China: real world evidence from Jiangsu (Yu Xia; 20111020060@fudan.edu.cn)

PP349 - Cost-effectiveness Analysis of Tandem Mass Spectrometry in Screening Inherited Metabolic Diseases in Shanghai China (Dunming Xiao; 21111020079@m.fudan.edu.cn)

Professor Yingyao Chen and colleagues published articles in The BMJ related to health technology assessment in China

China has made considerable progress in implementing universal health coverage but healthcare budgets are under pressure from a rapidly ageing population and fast changing health technologies. Health technology assessment (HTA) therefore has increasing importance in healthcare decision making to control expenditure and ensure the national health insurance system is getting good value for money.



The BMJ launched a collection of articles examines how the HTA process has evolved in China to decide which new treatments should be funded and help negotiate an affordable price, as well as identifying those that should be discontinued. China's approaches to challenges such as lack of locally applicable data and expertise provide lessons for other countries wanting to make greater use of HTA.

In one of the articles, Professor Yingyao Chen and colleagues gave an overview of HTA activities in China, summarising the development and current status of HTA, identifying challenges and opportunities for HTA, and discussing how it can be strengthened. They noted that HTA has an increasingly important role in healthcare decision making in China, and further development of HTA in China faces potential challenges, including lack of policy arrangements for using HTA to support decision making, insufficient HTA staff and expertise, difficulties with data availability/accessibility, lack of standardised methodology and quality control measures, and challenges of integrating multidimensional assessments into deliberative processes. They also recommended strengthening the institutionalisation of HTA at national

level, establishing more HTA agencies with arm's length funding, using multi-channel resources and inputs, ensuring local data availability, and developing indigenous HTA methodology and evidence informed deliberative processes to enhance HTA in China. (doi: https://doi.org/10.1136/bmj-2021-068910)

In another of the articles, Professor Yingyao Chen and colleagues examined what can be learnt from China's approach to funding expensive high technology medicines with uncertain long-term benefit. They described that HTA has been applied to assist health insurance reimbursement decisions on expensive cancer immunotherapies in China by evaluating drugs through clinical benefit, cost-effectiveness, and budget impact analyses, and negotiating their price based on evidence and budget constraints. They also point out that China has ensured accessibility and affordability of cancer immunotherapies, but HTA could be improved by better data on long term outcomes, local utility, and comparative effectiveness, and costs might be further reduced by a risk sharing approach for reimbursing oncology immunotherapies. (doi: https://doi.org/10.1136/bmj-2022-069963)

HEALTH TECHNOLOGY ASSESSMENT IN CHINA

Health technology assessment to inform decision making in China: progress, challenges, and sustainability

Yingyao Chen and colleagues examine China's health technology assessment system and suggest how it can be strengthened

China has made considerable achievements in social and economic development during the past four decades, yet it is an upper middle income country, albeit the largest, according to World Bank classification.[1 2] Achieving universal health coverage has gained momentum, and the Chinese government has committed to it by providing financial risk protection; access to quality essential health services; and safe, effective, and affordable essential medicines and vaccines for a population of 1.4 billion.[3 4] To attain universal health coverage, decision makers need to ask: What services and technologies should be covered? Who pays for those services and technologies? What cost sharing arrangements should be adopted? They need to find a balance between services that are covered and those that are not, low or high out-of-pocket expenses, generic or brand name pharmaceuticals, a focus on common diseases or rare diseases, generosity or solvency of insurance funds, and so on. Universal health coverage in China also needs to take into account the increasing need to deal with communicable and non-communicable diseases,[5] a rapidly ageing population, and fast changing health technologies. Escalating investment in healthcare resources (likely to exceed predicted gross domestic product growth) will be a major challenge.

As a widely used decision making tool, health technology assessment (HTA) is a multidisciplinary activity used to determine the effectiveness or cost effectiveness of a health technology to inform decision making for achieving a high quality healthcare system.[6]

Since its introduction to China in the 1990s, HTA has had an increasingly important role in healthcare decision making. However, HTA development and its roles in decision making has not been examined in depth. In this article we give an overview of HTA activities in China, summarising the development and current status of HTA, identifying challenges and opportunities for HTA, and discussing how it can be strengthened. Other articles in this BMJ collection, written by experts in various HTA subfields, will consider specific areas in more detail (www.bmj.com/hta-in-china).

KEY MESSAGES

- Health technology assessment (HTA) has an increasingly important role in healthcare decision making in China.
- Further development of HTA in China faces potential challenges, including lack of policy arrangements for using HTA to support decision making, insufficient HTA staff and expertise, difficulties with data availability/accessibility, lack of standardised methodology and quality control measures, and challenges of integrating multidimensional assessments into deliberative processes.
- We recommend strengthening the institutionalisation of HTA at national level, establishing more HTA agencies with arm's length funding, using multi-channel resources and inputs, ensuring local data availability, and developing indigenous HTA methodology and evidence informed deliberative processes to enhance HTA in China.

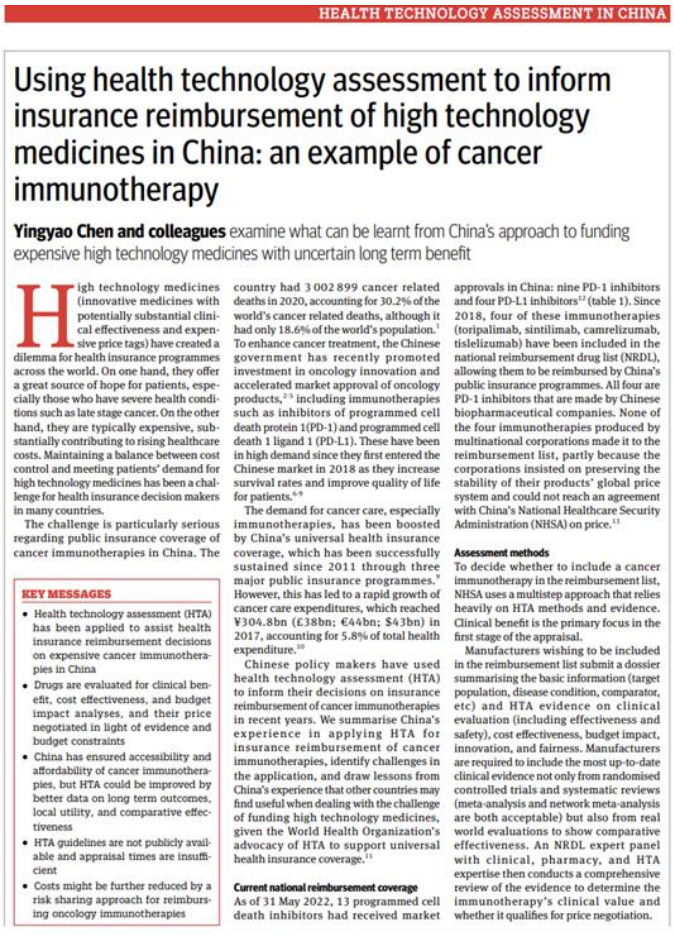
Current state of HTA development

Growth of HTA agencies

The 1990s and early 2000s were the formative years of HTA in China. The first wave of HTA development, from 1990 to 2006, was marked by the establishment of academic HTA centres, some HTA pilot projects, and attempts to use HTA findings to inform policy making. The first HTA centre was founded at the Shanghai Medical University (subsequently merged with Fudan University) in 1994, with support from the Ministry of Health and help from international experts. In 2002, the Centre for Pharmacoeconomic Evaluation and Research was established at Fudan University, kick starting pharmacoeconomic research activities in China. This stage was characterised by fragmented HTA activities, initial capacity building, and case based knowledge translation by a partnership of academics, policy makers, and charitable foundations (eg, the China Medical Board).[7]

In the second stage of development, from 2006 to 2016, more HTA organisations emerged and more activities took place. In 2007, the China National Health Development Research Center, a think tank affiliated with the Ministry of Health, set up a Division of Health Policy Evaluation and Technology Assessment, reflecting the government's intention to institutionalise HTA in policy making. The Pharmacoeconomics Technical Committee of the Chinese Pharmaceutical Association released, in April 2011, the first set of pharmacoeconomic evaluation guidelines, the *China Guidelines for Pharmacoeconomic Evaluations*, which provided a methodological framework for doing pharmacoeconomic research.[8]

Although activities proliferated, HTA was not well positioned for an advisory role[9] as it had few institutional linkages with policy making units until the establishment of the National Centre for Medicine and Health Technology Assessment under the National Health Commission (formerly the Ministry of Health) in 2018. There are now dozens of HTA centres and units at different levels of government, universities, professional associations, public hospitals, foundations, and consulting companies. In addition, many HTA allied groups exist in areas such as evidence based medicine and health systems and policy research. The focus of the third stage (2017 to the present) is to explore approaches to inform policy making and to apply HTA evidence to updating the National Reimbursement Drug List.



HEALTH TECHNOLOGY ASSESSMENT IN CHINA

Using health technology assessment to inform insurance reimbursement of high technology medicines in China: an example of cancer immunotherapy

Yingyao Chen and colleagues examine what can be learnt from China's approach to funding expensive high technology medicines with uncertain long term benefit

High technology medicines (innovative medicines with potentially substantial clinical effectiveness and expensive price tags) have created a dilemma for health insurance programmes across the world. On one hand, they offer a great source of hope for patients, especially those who have severe health conditions such as late stage cancer. On the other hand, they are typically expensive, substantially contributing to rising healthcare costs. Maintaining a balance between cost control and meeting patients' demand for high technology medicines has been a challenge for health insurance decision makers in many countries.

The challenge is particularly serious regarding public insurance coverage of cancer immunotherapies in China. The country had 3 002 899 cancer related deaths in 2020, accounting for 30.2% of the world's cancer related deaths, although it had only 18.6% of the world's population.[1] To enhance cancer treatment, the Chinese government has recently promoted investment in oncology innovation and accelerated market approval of oncology products,[2 3] including immunotherapies such as inhibitors of programmed cell death protein 1(PD-1) and programmed cell death 1 ligand 1 (PD-L1). These have been in high demand since they first entered the Chinese market in 2018 as they increase survival rates and improve quality of life for patients.[4-9]

The demand for cancer care, especially immunotherapies, has been boosted by China's universal health insurance coverage, which has been successfully sustained since 2011 through three major public insurance programmes.[9] However, this has led to a rapid growth of cancer care expenditures, which reached ¥304.8bn (£38bn; €44bn; $43bn) in 2017, accounting for 5.8% of total health expenditure.[10]

Chinese policy makers have used health technology assessment (HTA) to inform their decisions on insurance reimbursement of cancer immunotherapies in recent years. We summarise China's experience in applying HTA for insurance reimbursement of cancer immunotherapies, identify challenges in the application, and draw lessons from China's experience that other countries may find useful when dealing with the challenge of funding high technology medicines, given the World Health Organization's advocacy of HTA to support universal health insurance coverage.[11]

KEY MESSAGES

- Health technology assessment (HTA) has been applied to assist health insurance reimbursement decisions on expensive cancer immunotherapies in China
- Drugs are evaluated for clinical benefit, cost effectiveness, and budget impact analyses, and their price negotiated in light of evidence and budget constraints
- China has ensured accessibility and affordability of cancer immunotherapies, but HTA could be improved by better data on long term outcomes, local utility, and comparative effectiveness
- HTA guidelines are not publicly available and appraisal times are insufficient
- Costs might be further reduced by a risk sharing approach for reimbursing oncology immunotherapies

Current national reimbursement coverage

As of 31 May 2022, 13 programmed cell death inhibitors had received market approvals in China: nine PD-1 inhibitors and four PD-L1 inhibitors[12] (table 1). Since 2018, four of these immunotherapies (toripalimab, sintilimab, camrelizumab, tislelizumab) have been included in the national reimbursement drug list (NRDL), allowing them to be reimbursed by China's public insurance programmes. All four are PD-1 inhibitors that are made by Chinese biopharmaceutical companies. None of the four immunotherapies produced by multinational corporations made it to the reimbursement list, partly because the corporations insisted on preserving the stability of their products' global price system and could not reach an agreement with China's National Healthcare Security Administration (NHSA) on price.[13]

Assessment methods

To decide whether to include a cancer immunotherapy in the reimbursement list, NHSA uses a multistep approach that relies heavily on HTA methods and evidence. Clinical benefit is the primary focus in the first stage of the appraisal.

Manufacturers wishing to be included in the reimbursement list submit a dossier summarising the basic information (target population, disease condition, comparator, etc) and HTA evidence on clinical evaluation (including effectiveness and safety), cost effectiveness, budget impact, innovation, and fairness. Manufacturers are required to include the most up-to-date clinical evidence not only from randomised controlled trials and systematic reviews (meta-analysis and network meta-analysis are both acceptable) but also from real world evaluations to show comparative effectiveness. An NRDL expert panel with clinical, pharmacy, and HTA expertise then conducts a comprehensive review of the evidence to determine the immunotherapy's clinical value and whether it qualifies for price negotiation.

As the first independent HTA academic institution in China, KLHTA/WHOCC has always been dedicated to scientific research, instruction and training, technical services, exchange and collaboration, and knowledge dissemination of HTA, and has been striving to promote the development of the discipline of HTA, methodological innovation, talent cultivation, and decision-making transformation in China. China's

experience in HTA will offer more practical benchmarks for global healthcare decision-making and rational allocation of health resources, which will accelerate the global transition to universal health coverage.

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