ANNUAL REPORT

HIPER 2019 -2020

Health Intervention Policy Evaluation Research

NUS National University of Singapore | Saw Swee Hock School of Public Health

WHO WE ARE

As governments around the world continue the fight against the COVID-19 pandemic and pursue the Sustainable Development Goals (SDGs), many are confronted with the challenge of rising health expenditures, coupled with the fiscal impact brought about by the pandemic. Against the backdrop of such circumstances, Health Technology Assessment (HTA) is playing an increasingly crucial role in guiding the evidence-informed decision-making, particularly in the resource-constrained settings.

Health Technology Assessment (HTA) aims to bridge research and real-world decision-making by systematically evaluating scientific evidence and wider social and ethical implications of health technologies. HTA helps guide policy decisions involving priority-setting, designing benefits packages for effective and equitable resource allocation for the populace.

The Health Intervention and Policy Evaluation Research unit, HIPER, was launched by the Saw Swee Hock School of Public Health in January 2019. HIPER's vision, "Evidence Empower Decisions", was established with the aim to grow HTA capacity for healthcare priority-setting in developing countries.

Our activities and services include local capacity building, consulting and advisory work, development of software tools to support HTA research, and networking at domestic and international levels. We believe that better evidence can be generated through better research capacity, which will empower decision-making for sustainable health systems and eventually, better population health outcomes.

VISION

Evidence
Empower
Decisions

CORE VALUES

Honest
Impactful
Pragmatism
Expertise
Reliability

Message from

OUR LEADERS

DR YOT TEERAWATTANANON

An assumption that good quality knowledge that has been properly researched will be sought out and used by decision-makers is an outdated and simplistic linear model of knowledge translation. This is justification for HIPER's establishment. At the Saw Swee Hock School of Public Health, our team members recognise the need for contextualised and high-quality evidence and the complexity of the knowledge translation process within the problem-solving cycle.

"I hope that you appreciate the first step of our long journey to grow our young talents, to deliver policy relevant studies, to bring world-class academic services (to our clients) as well as to improve people's health in Singapore and elsewhere."

DR WEE HWEE LIN

The Mission Statement of the Saw Swee Hock School of Public Health reads "Turning discovery into healthier communities through education, research and partnership". HIPER is determined to contribute to this mission through fostering cross-organisational and cross-country knowledge sharing and discussion on HTA.

With the strong support from our partners including the Agency for Care Effectiveness (ACE), the Health Intervention and Technology Assessment Program (HITAP), the REALISE Working Group, the Center for Health Services and Policy Research (CHSPR), the Centre for Innovation in Healthcare (CIH), the Singapore Biodesign and many more, we have in the short 2 years since our establishment conducted 9 workshops and secured an estimated $780,000 in research funding. These would not have been possible if not for the youthful energy, eagerness and nimbleness of our young team as well as the incredible support of our Dean and the Senior Management of SSHSPH.

COVID-19 has shown us the importance of collaborative partnerships to weather through any uncertainties and to turn a crisis into opportunities. As Year 2020 comes to a close, we would like to say thanks to our many great partners and supporters. We look forward to more exciting times ahead in 2021 despite its many uncertainties.

HEALTH TECHNOLOGY ASSESSMENT: SELECTING THE HIGHEST VALUE CARE

8-9 January 2019, Singapore

The launch of HIPER witnessed an exciting two-day training programme from 8-9th January 2019, On the overview and application of HTA to support health policy decision-making at the national level. The course was targeted for policymakers, healthcare professionals and managers, researchers and professionals from the pharmaceutical industry or consulting services. The programme was attended by around 80 participants from more than 10 countries including Ghana, Hong Kong, Thailand, India, Indonesia, Malaysia, Philippines and Singapore.

Organised in collaboration with HITAP (Health Intervention and Technology Assessment Program), Thailand, the covered topics include the definitions of HTA, its application in informing national health policy, and health investments and disinvestments decisions. Workshops also equipped participants with the technical skills such as evidence synthesis, costing, identification of required outcome measures (DALY/ QALY), with an elaboration of the different health-state evaluation techniques. Participants were also introduced to the modelling techniques, budget impact analysis and the social and ethical considerations in HTA. Discussions were conducted to understand the practical challenges in conducting HTA and an HTA impact evaluation drawing on experiences in India, Indonesia, Singapore and Thailand.

WORKSHOP ON EARLY HTA FOR SINGAPORE BIODESIGN, A*STAR

4 April & 27 May, 2019, Singapore

Modelled after the established Biodesign Programme at Stanford University, the Agency for Science, Technology and Research (A*STAR)'s Singapore Biodesign (SB) is a capability development initiative that aims to train and nurture the next generation of health-tech innovators for Asia. It is a dedicated health-tech innovation talent development and knowledge platform essential for health technology innovation startup creation. The synergy between SB and HIPER brought us together on 4th April 2019, where HIPER conducted a seminar for SB fellows and participants from other A*STAR institutions on how HTA is linked to health technology development and utilization.

As a follow-up, HIPER co-organised a full-day workshop on 27th May 2019 focusing on early HTA processes in the development of medical technologies. The workshop started off with priority setting exercise from a decision maker's perspective, introducing the participants to the bigger picture of resource constraints as well as different approaches for decision making. Taking the perspective of HTA researchers, the participants worked through the model-based economic evaluation and worked out the ICERs using deterministic and probabilistic sensitivity analyses. Finally, the participants used threshold analyses to identify 3 scenarios where the technology would dominate the market ('ideal scenario'), produce better value for money compared to current best practice ('acceptable'), or give some value compared to standard of care ('minimally acceptable') to develop a target product profile (TPP) for health technology developers. The workshop was attended by 18 participants from healthcare institutions and the pharmaceutical industry. The collaboration with SB continues with HIPER providing three in-person consultations to four selected SB fellows to guide them on their design of an ideal TTP in the area of ophthalmology.

NUS INITIATIVE TO IMPROVE HEALTH IN ASIA (NIHA) -LEADERSHIP DEVELOPMENT PROGRAMME (LDP)

24-28 June 2019, Singapore

Together with the Leadership Institute for Global Health Transformation (LIGHT), HIPER was involved extensively in providing content development for the NIHA leadership development program (NIHA-LDP) 2019, organised by the Saw Swee Hock School of Public Health. The main theme of this event focused on advancing universal health coverage in Asia through the use of HTA for healthcare priority-setting and reimbursement. Topics covered include priority benefit setting, value tools to generate evidence to improve efficiency and equity in UHC policies, engaging with private sector and pricing negotiations. The event was attended by subject experts from renowned institutions such as the World Health Organisation, United Nations Development Programme, Ministry of Health, Singapore, London School of Hygiene and Tropical Medicine, Imperial College London and SSHSPH. Over 50 participants from Asia who are leaders in their health ministry or HTA unit attended this event.

WORKSHOP ON CONDUCTING ECONOMIC EVALUATION USING PERSON-LEVEL DATA

24-25 July 2019, Singapore

In an environment with constrained resources, understanding the 'Value for Money' of a health intervention can support the funding and resource allocation decision-making process. One of the analytical approaches to assessing the 'value for money' of health interventions is to make use of person-level data such as those obtained from administrative databases, clinical trials, or observational studies. This workshop on Conducting Economic Evaluation Using Person-level Data was organised by HIPER, together with HITAP under the Ministry of Public Health, Thailand, with the support from the Singapore Population Health Improvement Centre (SPHERiC).

The 2-day workshop comprised of lectures, group discussions and hands-on exercises to build participants' capacity to conduct cost-effectiveness analysis using person-level data and regression technique, and characterise uncertainty within the analysis.

The workshop was attended by 58 participants from various countries such as Myanmar, Indonesia, Malaysia and Italy, across various institutions including government ministries, academia, private sector and non-governmental organizations. The diversity in the background of the participants greatly helped to enrich the group discussions and learning.

OPTIONSX PRECONFERENCE WORKSHOP: HTA FOR VACCINES

28 August 2019, Singapore

HIPER organised the pre-conference workshop on Health Technology Assessment (HTA) for Vaccines in August 2019. The aim of the workshop was to provide knowledge on the use of HTA methods and processes for policy development to support universal access to vaccinations and their contribution to Universal Health Coverage policies. Prof Mark Jit and Dr Kiesha Prem from London School of Hygiene and Tropical Medicine, Prof Joseph Wu from the University of Hong Kong, Dr Yot Teerawattananon and Ms Waranya Rattanavipapong from HITAP and Dr Raymond Hutubessy from the World Health Organization were invited as the instructors of the workshop. The workshop was attended by 56 overseas and local participants from various organisations such as the Ministry of Health, the Centres for Disease Control and Prevention, as well as academic and private institutions. The workshop served as a platform for technical and policy exchange among stakeholders from both public and private sectors, and to learn from experienced experts working in universities, governments and the World Health Organization.

UPH-NUS JOINT WORKSHOP ON HEALTH POLICY

11 - 13 September 2019, Myanmar

UPH-NUS Joint Workshop on Health Policy' was jointly organised by HIPER and the University of Public Health (UPH), Yangon, Myanmar, supported by Helpage International and the World Health Organization. The workshop was attended by over 20 UPH faculty members across disciplines such as epidemiology, biostatistics, nutrition, and others.

SSHSPH Dean, Professor Teo Yik Ying delivered a keynote address on the importance of translating evidence to policy on the first day. The workshop was conducted by SSHSPH founding Dean, Prof Chia Kee Seng and Dr Yvette van der Eijk, postdoctoral fellow at SSHSPH. The 2.5-day workshop comprised a series of lectures, case studies on health systems reform and tobacco control, group discussions, and presentations grounded in comparing and contrasting Singapore and Myanmar's health policy contexts and experiences.

"It has been a great experience learning about policy processes, policy analysis, writing a policy paper and executive summary,"
"These knowledge and skills are essential in implementation of policy processes. I learnt a lot from group work, under the guidance of experienced professionals."

- Dr Ei Mon Phyo, UPH Assistant Lecturer

VACCINOLOGY FOR CLINICAL AND PUBLIC HEALTH PRACTICE

18 –20 November 2019, India

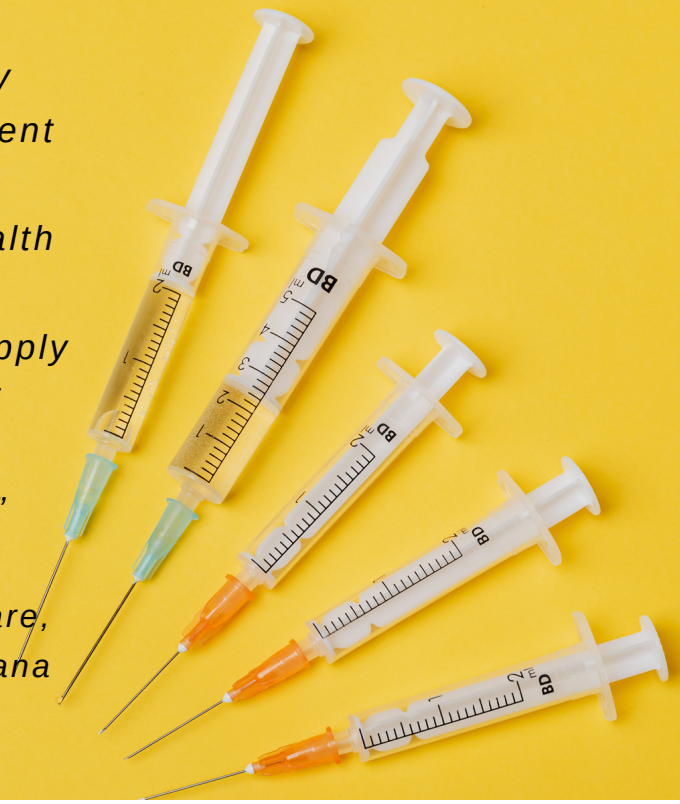
Planning the effective use of vaccines requires public health professionals with multi-disciplinary skills who can understand issues around the immunological mechanism, safety, efficacy, effectiveness, population impact, effects on microbiological ecology, delivery, cost-effectiveness and public trust of vaccines.

Developing capacity within LMICs for research and for the institutionalization of evidence-informed policy on immunization is increasingly important as countries look to the future beyond Gavi support. In this context, a short course on Vaccinology for Clinical and Public Health Practice was held in Faridabad, India at the Translational Health Science and Technology Institute (THSTI). This course was jointly organised by SSHSPH, the London School of Hygiene & Tropical Medicine (LSHTM), HITAP Thailand, THSTI, and the Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER).

The event comprised of policy symposium on the first day followed by three-day workshop, and was attended by over 60 participants from 10 countries. 19 distinguished speakers shared their expertise on vaccine related subjects and rich policy experience from their home countries. Key highlights include the role-playing activity organized by Prof. David Heymann from LSHTM, infectious disease modelling exercise led by Prof. Mark Jit from LSHTM and all the active and lively discussions thanks to the proactive participants.

"I was quite surprised by how comprehensive content structure cuts across different topics, from health economics, fundamental vaccine sciences and supply chain issues, all kinds of perspectives so far as vaccines are concerned."

- Brian Asare,
Ministry of Health Ghana



REALISE WORKING GROUP MEETINGS

April and October 2019

The REAL World Data In ASia for HEalth Technology Assessment in Reimbursement (REALISE) working group is an international collaboration among academics and HTA agencies in the region, with an aim to align policies within the region on the use of real-world data/real-world evidence (RWD/RWE) to inform health technology assessment (HTA).

Two meetings were held in 2019, to provide opportunities for both learning and building potential collaborations among the different countries. The group continued to work together beyond these meetings, to develop a foundation of the non-binding guidance document which was launched in September 2020.

The first meeting on 27th Apr 2019 provided an opportunity for the working group to share and gather experiences of using RWD of clinical effectiveness to inform reimbursement decisions across 14 health systems. It was attended by 20 representatives from the region including Bhutan, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand. Three International Advisory Panel (IAP) members from Canada, UK and Australia, as well as 10 observers from five other health systems attended the meeting..

The aim of the 2nd meeting on 15th – 16th October 2019 was to finalize Theme One of the guidance document and to obtain inputs from the each WG member on Themes Two ('Collecting RWD') and Three ('From RWD to RWE') of the guidance document. The group further discussed the effective dissemination strategy of the document. The REALISE guidance document draft was finalised in 2020 after further virtual discussions, and currently undergoing final review by the WG.

HEALTH TECHNOLOGY ASSESSMENT: SELECTING THE HIGHEST VALUE CARE & INTRODUCTION TO POLITICAL ECONOMY OF UNIVERSAL HEALTH COVERAGE

7-8 January 2020, Philippines

In line with their responsibilities as signatories to the Sustainable Development Goals (SDGs), many low- and lower-middle income countries are working hard to provide better health and well-being for their people. As governments struggle to keep up with rising health expenditures, especially in resource-constrained settings, the need for evidence-informed decision-making for improved health provisioning is growing more critical. There has been expanding interest in HTA as an important method of guiding these policy decisions, especially in terms of priority-setting and designing benefits packages, which effectively and equitably serve the entire populace.

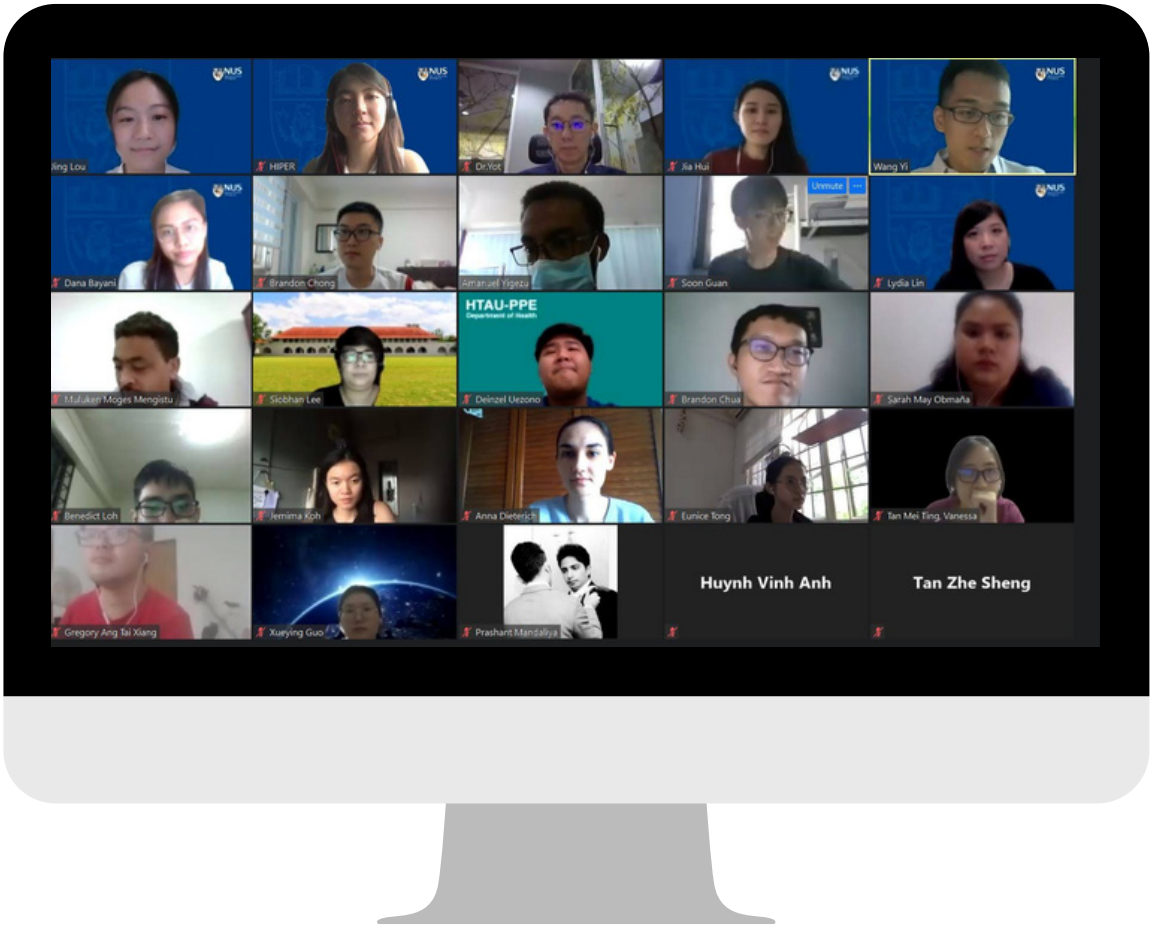
In January 2020, SSHSPH and HITAP, Ministry of Public Health, Thailand, came together to convene the annual HTA training and policy symposium in Manila, Philippines, as a follow-up to the successful run of the workshop in Singapore in 2019. Working closely alongside their local partner, the Philippine Department of Health, and encouraged by their commitment to Universal Health Coverage (UHC) which was formalised into legislation in the first quarter of 2019, this three-day event was convened as part of the ongoing effort to build capacity in HTA. The Philippine UHC Law is one of the few that lays explicit emphasis on HTA as a means of decision-making within its mandate, helping to recognise and institutionalise it, as well as providing legal basis for its application. A total of 56 participants attended the workshop and symposium, representing the private sector, government agencies, non-governmental organisations and academic institutions from countries around the world.

ADVANCING ECONOMIC EVALUATION MODELLING SKILLS IN THE TIME OF COVID-19

13 – 17 July 2020, Online

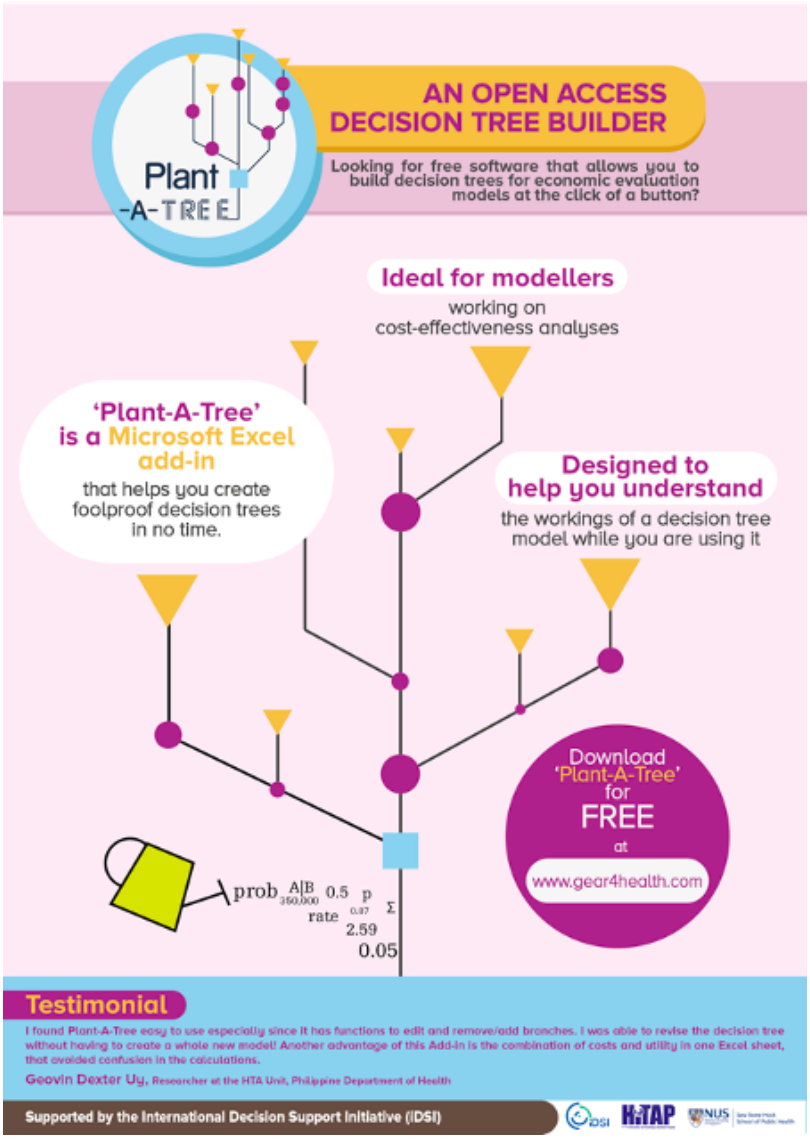
HIPER organised our its first online course between 13- 17 July 2020 together with the Health Intervention and Technology Assessment Program (HITAP), Thailand, under the aegis of the International Decision Support Initiative (iDSI) and the Access and Delivery Partnership (ADP).

The 5-day workshop delved into advanced methods in economic evaluation using Excel, focusing on the design and construct of models based on real-case scenarios, performance of uncertainty analysis, as well as appropriate presentation of study findings to meet the requirements of international standards. The closed-door workshop was attended by 24 participants from African region, Singapore and Philippines. The workshop was well received by the participants, with many sharing positive responses such as the workshop being well organised and informative and also requested for increased frequency of such capacity building sessions.



PLANT-A-TREE

Plant-A-Tree is an open-source, open-access Microsoft® Excel Add-In with which one can build decision trees for use in economic evaluations or any decision problem you are facing. Compared to other decision tree makers, Plant-A-Tree supports the creation of unlimited branches (nodes) and can seamlessly add or remove branches when revising the model. This feature is particularly useful for those still conceptualising or visualising their decision problem and all the possible outcomes and sources of costs. In addition, branches can easily be copied and pasted as needed to replicate nodes across multiple comparators. Lastly, Plant-A-Tree presents both costs and outcomes together in a single tree (spreadsheet), making it easy for users to compare and calculate final outcomes (e.g. incremental cost-effectiveness ratios).



The Add-In was developed by the Health Intervention and Policy Evaluation Research (HIPER) together with the Health Intervention and Technology Assessment Program Thailand (HITAP) with support from the International Decision Support Initiative (iDSI). It is a response to the growing needs of researchers in low- and middle-income countries where access to modelling tools is limited.

Plant-A-Tree is free and simple-to-use.

Try it for yourself! It can be downloaded at www.gear4health.com. Currently available for Windows OS and used with Microsoft® Excel 2013 or later.

REALISE GUIDANCE DOCUMENT

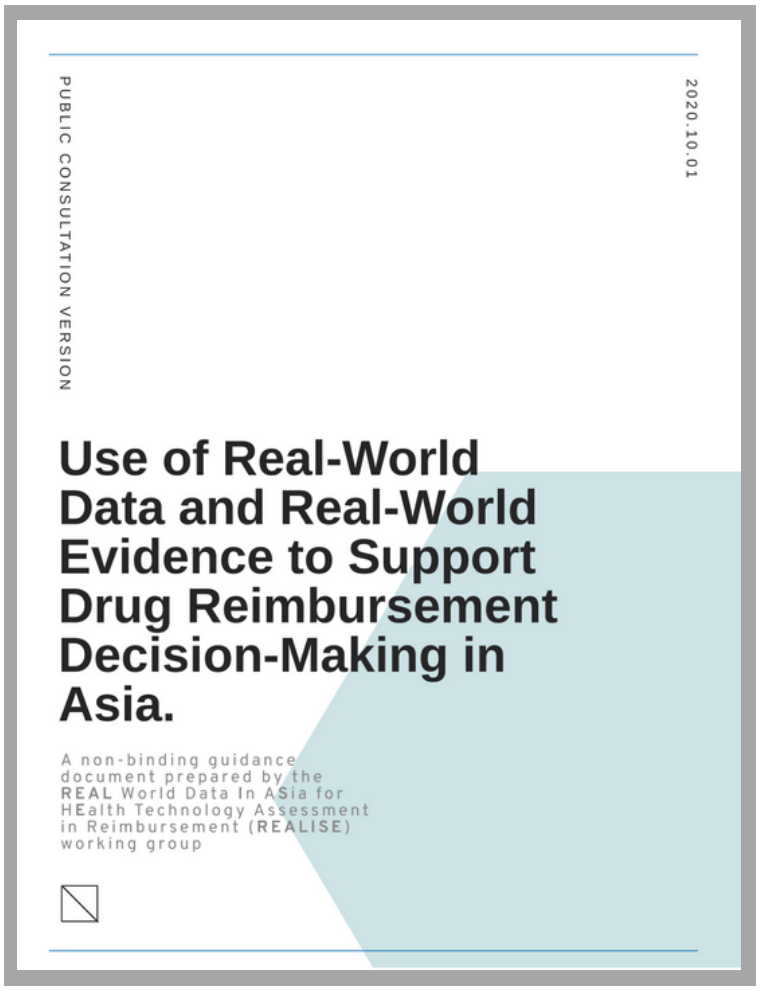
Use of Real-World Data and Real-World Evidence to Support Drug Reimbursement Decision-Making in Asia

REALISE is a collaboration between global experts and 11 Asian health systems, established with the aim of developing a framework to generate and use real-world data (RWD) / real-world evidence (RWE) in a consistent and efficient manner for drug reimbursement decision-making in Asia. The guidance document is the product of collaborative efforts through two working group meetings and continuous discussions conducted online. The Guidance document focuses on drug assessments and the use of RWD/RWE as complementary evidence to randomized controlled trials (RCTs), the current gold standard for generating evidence on treatment efficacy.

In addition to the full Guidance Document, 2 abridged versions are available:

- Abridged version for generators of RWD (e.g. clinicians, clinical administrators, hospital researchers)
- Abridged version for users of RWD (e.g. policy makers)

The documents can be downloaded from HIPER website.



NETWORK AND PARTNERSHIPS

JOINING IDSI NETWORK

HIPER is part of the International Decision Support Initiative (iDSI), a network of institutions funded by the Bill and Melinda Gates (BMGF). As a member of iDSI, HIPER strives to work with the network partners to support countries to make better decisions about how much public money to spend on healthcare and how to make that money go further. Currently, iDSI is focusing on scaling up and sustaining of the HTA capacity especially in low- and middle-income countries to facilitate evidence-informed decision making.

MOU WITH NUHS CIH

With a mission to build Health Technology Assessment (HTA) capacity through a range of activities, including consulting services and advisory work, development of software tools to support HTA research, education, and networking at domestic and international levels, HIPER has signed a Memorandum of Understanding with the Centre for Innovation in Healthcare (CIH). This is to facilitate collaboration involving building up CIH's HTA capacity and supporting local innovators that require HTA expertise/research to assess their suitability for clinical adoption.

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