



HEALTH
INTERVENTION AND
POLICY
EVALUATION
RESEARCH



Saw Swee Hock
School of Public Health

HIPER Annual Report

2021

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MESSAGE FROM OUR DIRECTOR

2021 is still very much defined by COVID-19 challenges and highlights the importance of public health, especially in the aspect of health technology assessment (HTA). Nonetheless, it has also provided opportunities for us to apply HTA tools to address policy-relevant questions. The Chinese characters for crisis "危机" has often been interpreted to suggest that a crisis (危) may also carry opportunities (机). This was indeed how HIPER has responded to COVID-19 in 2021. To respond to the need to apply HTA tools to inform policy decisions, HIPER has moved our workshops online. This has enabled us to reach out to a wider audience globally, spreading the knowledge to 17 countries within this year. Our online workshops have received very positive responses with many voicing that they found the workshops useful and would recommend it to others.



Quoting Dr Daisaku Ikeda, "Even in the face of the severe crisis confronting humanity today, I cannot side with the advocates of apocalypse. Rather than the spurs and promptings of fear, we can best negotiate the challenges we face when guided by a vision of hope.", and this is what HIPER seeks to do. We seek to demonstrate the hopeful feasibility of navigating through COVID-19 with a careful balance of lives versus livelihood. Together with our colleagues and partners in the fight against the pandemic, we generated evidence on the cost-benefits of COVID-19 vaccination prioritization strategies, alternative COVID-19 testing and quarantine policies to aid in Singapore's economic recovery, as well as the psychological impact and the unintended consequences that COVID-19 and its outbreak response measures have brought to people. However, even as COVID-19 pandemic continues to dominate the world's attention, we are mindful of other public health issues that still plagues the world. Issues like antimicrobial resistance (AMR) and increased threats to mental health have driven us to make the topic of AMR and well-being part of our priority work areas as we move forward into 2022. The team has also been shortlisted for three projects funded by the PRECISE Clinical Implementation Pilot grant and will be working on HTA of precision medicine over the next two years to examine the most cost-effective approach of implementing genetic testing in routine clinical practice at scale. At the moment, 2022 is already looking exciting and we certainly hope that it will be better than 2021.

All of the above work would not have been possible without the strong support that we received from our partners, our Dean and the senior management of the school, as well as the motivated team members at HIPER who worked tirelessly to address all the challenging tasks that came our way. Echoing the words of American poet Mattie Stepanek, "when there is teamwork and collaboration, wonderful things can be achieved". These are not easy times and I'm extremely grateful for all the support received to strive for betterment of the society. With this, we wish everyone a great 2022!

Wee Hwee Lin

Dr Wee Hwee-Lin, Associate Professor
at Saw Swee Hock School of Public Health

OUR PARTNERS

Regional and Global Partnerships

Academic institutions

Erasmus University Rotterdam
Ewha Womans University
Hitotsubashi University
Mahidol Oxford Tropical Medicine Research Unit (MORU)
Postgraduate Institute of Medical Education and Research (PGIMER)
Stanford University
University of Adelaide
University of Sheffield
University of Warwick
University of York
Universiti Sains Malaysia

Non-profit organisations

Center for Global Development Europe
National Health Foundation, Thailand

Government agencies

Health Intervention and Technology Assessment Program (HITAP)
Ministry of Health (Bhutan)
Ministry of Health and Welfare (Taiwan)
The Department of Health (DOH), the Philippines

Multilateral Agencies

United Nations Population Fund (UNFPA)
WHO Regional Office for South-East Asia (WHO SEARO)

OUR PARTNERS

Local Partnerships

Government and its related agencies

- Civil Service College (CSC)
- Ministry of Health (Singapore)
- MOH Office for Healthcare Transformation (MOHT)
- Precision Health Research Singapore (PRECISE)

Public Health Institutions

- Institute of Mental Health
- Khoo Teck Puat Hospital (KTPH)
- KK Women's and Children's Hospital
- National Centre for Infectious Diseases (NCID)
- National Kidney Foundation Singapore (NKF)
- National University Hospital (NUH)
- National University Polyclinics (NUP)
- NUHS Centre for Innovation in Healthcare (CIH)
- Singapore General Hospital (SGH)
- Tan Tock Seng Hospital (TTSH)

Academic institutions

- Duke-NUS Medical School
- Massachusetts Institute of Technology (MIT)
- Nanyang Technological University (NTU)

Industry

- APACMed
- Becton Dickinson (BD)
- Johnson & Johnson
- Mobio Interactive
- Novartis
- Roche
- Pfizer

Non-profit organisations

- PleaseStay Movement

ABOUT HIPER

Who we are

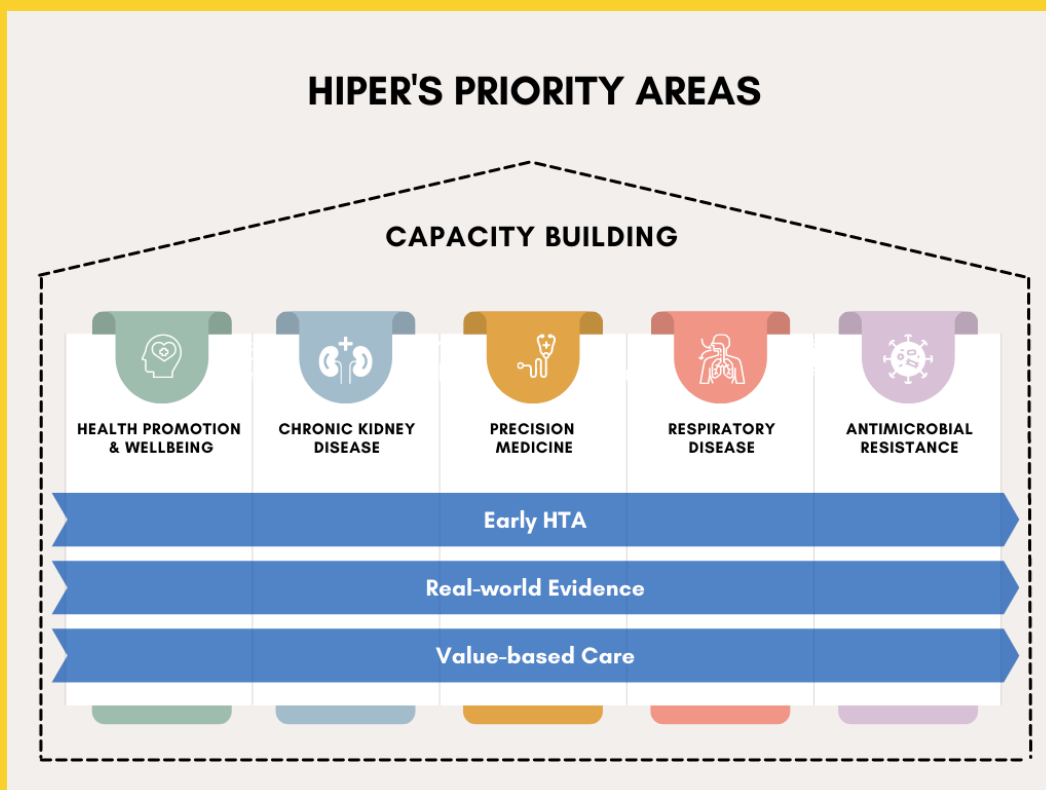
The Health Intervention and Policy Evaluation Research unit, HIPER, was launched by the Saw Swee Hock School of Public Health in January 2019. HIPER's vision, "Evidence Empower Decisions" represents its aim to strengthen Health Technology Assessment (HTA) capacity for healthcare priority-setting in developing countries. Our efforts to build HTA capacity include 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.

We believe that better evidence can be generated only through better research capacity. Eventually, these evidence will empower decision-making resulting in sustainable health systems.

Our Work

HIPER's areas of expertise include HTA, Health Economics, Health Services Research, Qualitative Research and Global Health. As part of our efforts in building HTA capacity, HIPER has provided its expertise to partners regionally and globally. We organise trainings and events to build HTA capacity for governments, funding agencies, non-governmental organisations (NGOs) and other organisations.

HIPER currently focuses on *five* areas within healthcare research: Health Promotion and Wellbeing, Chronic Kidney Disease, Precision Medicine, Respiratory Disease and Antimicrobial Resistance. We've refined our skills and built a strong multi-disciplinary team to approach our research areas in *three* ways: Early Health Technology Assessment (HTA), Real-world Evidence, and Value-based Care.



Grants and Projects 2021

BIG DATA TEAM

Project Title	Status/Funder
Addressing the challenges in Case identification, Cascade Screening, Genetic testing and Treatment in Familial Hypercholesterolemia—a cross-cluster clinical implementation program by FHCARE	Ongoing PRECISE
Adolescent Idiopathic Scoliosis Screening Program in the 21st Century: A cost-benefit analysis	Ongoing MOH
Clinical Implementation of Pre-emptive Pharmacogenomic Testing as a Precision Medicine Tool in Routine Clinical Practice in Singapore	Ongoing PRECISE
Comparative bleeding outcomes between P2Y12 inhibitors in acute coronary syndrome patients on dual antiplatelet therapy: A South East Asian database study (SEA DAPT)	Ongoing HIPER
Cost of managing COVID-19 in NCID	Ongoing HIPER
Cost-effectiveness analysis of breast cancer screening using mammography in Singapore (ICE SCREEN)	Completed National Medical Research Council (NMRC)

An economic analysis to optimize COVID-19 testing and quarantine policies between Thailand and Singapore for economic recovery

Funded by the National Research Council of Thailand (NRCT), HIPER conducted an economic analysis to optimize COVID-19 testing and quarantine policies between Thailand and Singapore for economic recovery. The cost-benefit analysis of testing and quarantine policies showed that the Pareto Optimal bilateral policies are characterized by (1) no quarantine on both sides, (2) no testing or having ART pre-departure and upon arrival on each side. The receipts in the tourism sector and the cost/profit of implementing quarantine and testing have bigger economic impact than costs and health loss associated with COVID transmission. The work was presented on multiple occasions including to COREASIA, a 10-country working group, at the 1st International Student Conference in Indonesia, and a webinar held jointly by HITAP and HIPER and attended by representatives from WHO and International Air Travel Association (IATA), among others.

Cross-border travel in the COVID-19 era:

Discussing evidence from Asia on policies for safe re-opening

December 3, 2021

2:00 - 3:30 PM (ICT)
3:00 - 4:30 PM (SGT)



REGISTER NOW



Thai translation will be available



Assoc. Prof. Wee Hwee Lin
NUS Saw Swee Hock School
of Public Health (SSHSPH)



Prof. Gagandeep Kang
Christian Medical College (CMC),
Vellore, India



Prof. Dr. Awang Bulgiba
Awang Mahmud
Academy of Sciences Malaysia
& University of Malaysia



Dr. Ningnan Wang
World Health Organization
(WHO)



Mr. Vinoop Goel
International Air Transport
Association (IATA)



Ms. Natschja Ratanaprayul
World Health Organization
(WHO)



Dr. Borame L. Dickens
NUS Saw Swee Hock School
of Public Health (SSHSPH)



Dr. Lou Jing
NUS Saw Swee Hock School
of Public Health (SSHSPH)



Mr. Sarin KC
Health Intervention and Technology
Assessment Program (HITAP)
Ministry of Public Health, Thailand



Grants and Projects 2021

BIG DATA TEAM

Project Title	Status/Funder
Cost-effectiveness analysis of COVID-19 vaccine distribution policy	Ongoing NMRC
Cost-effectiveness analysis of ODX genetic test for early-stage Breast Cancer Patients	Ongoing HIPER
Develop and Implement An Integrated Care Pathway to Improve Coronary Artery Bypass Graft Surgery (CABG) Outcome	Ongoing MOH
Evaluation of the clinical and cost effectiveness of the OCD clinic at the Institute of Mental Health, Singapore	Ongoing IMH
Impact of COVID-19 responses among patients on renal replacement therapy in the National Kidney Foundation	Ongoing HIPER
Medication Management among Diabetes Patients: Question Disclosure Model (QDM)	Ongoing HIPER
Shifting paediatric urgent care into the community – pilot program to right-site patients in Urgent Care Centres (UCC)	Ongoing MOH
Meta-analysis on HRQoL of COVID patients	Ongoing HIPER
Remote Monitoring of Cardiac Implantable Electronic Devices (RECEIVE) : Leveraging Telemedicine To Create New Models Of Care With Improved Patient Outcomes	Ongoing MOH
Review and valiation of APACMed market access database	Completed APACMed

Provision of a Resource Utilisation Study on the use of Next Generation Sequencing (NGS) Technologies in Familial Hypercholesterolemia (FH)

Funded by Precision Medicine Steering Committee, HIPER conducted a Resource Utilisation Study on the use of Next Generation Sequencing Technologies in Precision Medicine for Familial Hypercholesterolemia. The cost-benefit analysis of several screening protocols identified that screening clinically possible/ probable/ definite FH patients using NGS (with multiplex ligation-dependent probe amplification as a complimentary test but without capillary sequencing as a confirmatory test) followed by cascade screening is most cost-beneficial. Increasing the number of family members who come forward for screening could further improve the cost benefit of the screening.

Grants and Projects 2021

SOCIAL AND BEHAVIOURAL RESEARCH (SBR) TEAM

A Qualitative Study on the Perspectives of End-Stage Kidney Disease Patients, Caregivers and Healthcare Providers on Choice of Renal Replacement Therapy and Associated Indirect Costs

With the long term aim of designing a value-based care model for chronic kidney disease and end-stage kidney care, HIPER is conducting a qualitative study to explore the views of end-stage renal disease patients, their family members who support them, dialysis service providers, nephrologists and hospital administrators on the gaps and chokepoints in the current care model. The study will enable us to determine possible components of an effective value-based care model that would contribute to both efficient utilisation of financial and human resources and at the same time improve patient satisfaction and quality of life for ESKD care in Singapore.

Project Title	Status/Funder
ASEAN CDC (SEACID)	Ongoing HIPER
Assessing Burn-out in type 1 Diabetes	Ongoing Alexandra Health
Barriers and facilitators to cervical cancer screening in Singapore	Ongoing HIPER
Care Gaps – Designing a model for community-based mental health intervention for youths	Ongoing HIPER
Establishing COVID-19 Vaccination Policy Research and Decision Support Initiative in Asia (CORESIA) and a Regional Study on Vaccination Certificates	Ongoing National Research Council of Thailand (NRCT)
Patient Activation through Community Empowerment/Engagement for Diabetes (PACE-D)	Ongoing NUP
Evaluation of National Strategic Action Plan on Antimicrobial Resistance	Ongoing HIPER
Gender-based Violence and COVID-19	Ongoing HIPER
Implementation of Pre-emptive Pharmacogenomics Services in Clinical Practice in Singapore	Ongoing HIPER
Industry Alignment Fund - Pre-Positioning Programme (IAF-PP) - Communicating and Counselling on Secondary Genetic Finding detected in Multi-Ethnic Cohort Study (MEC)	Ongoing HIPER
NAC-3 Child and Adolescent Rehabilitation Subprogram	Ongoing MOH

Grants and Projects 2021

SOCIAL AND BEHAVIOURAL RESEARCH (SBR) TEAM

Project Title	Status/Funder
Perceptions of COVID-19 among Singaporeans using WhatsApp Focus Groups	Ongoing HIPER
Psychological Impact of COVID-19 on Primary Care Professionals & Emergency Room Doctors	Ongoing HIPER
REGEN-COV Rapid Cost Effectiveness Analysis	Ongoing HIPER
Socioeconomic Impact of COVID on Sexual and Reproductive Health in Asia-Pacific	Completed HIPER
Systematic Review – “Community Mental Health Models Around the World”	Ongoing HIPER
Tele-rehabilitation Program: An innovative and sustainable Early Intervention service for children with Autism Spectrum Disorders	Ongoing MOH
Unintended Healthcare Consequences of Disease Outbreak Response Measures: The Case of Coronavirus Infectious Disease 2019 (COVID-19)	Ongoing NUH
Value-Based Care for Kidney Dialysis	Ongoing HIPER
Wellbeing in Singapore Before and During COVID-19: A Look at Psychosocial Resilience in a Pandemic	Ongoing Civil Service College Singapore (CSC)
Western Network STEMI Evaluation	Ongoing HIPER

Let's talk about well-being!

Inviting all youths (age 15-24) to take part in a 45-60min interview to share your views about well-being and how to increase youth well-being in Singapore.

To participate, you have to be a Singapore Citizen or Permanent Resident, aged between 15-24, be familiar with using Zoom and agree to have the interviewers perform audio recording or take down notes throughout the interview. Parental consent will be required if you are below 21 years old. You will receive a \$25 voucher for your time and effort in participating in this research.

To participate, please visit <http://bit.ly/youthwellbeingSG> or scan the QR code to indicate your interest and we will contact you if you are eligible for the study.



Wellbeing among SingApoorean Youths (WE SAY)

While much has been done overseas, there is a dearth of research seeking to understand well-being amongst youth locally. HIPER conducted an exploratory qualitative study to investigate how youths in Singapore understand well-being. This included factors associated with high and low well-being (i.e push factors associated with low well-being, and protective factors associated with high well-being). We also explored areas of change to create safer spaces for youths in Singapore. This study will potentially help to inform future study designs regarding promoting youth well-being in Singapore.

Project Title: Understanding Perceptions of Well-Being among Youths in Singapore: A Pilot Qualitative Study | NUS-IRB Reference Code: NUS-IRB-2020-450 | Contact Person: Pearlyn Neo | pearlyn.neo@nus.edu.sg



Grants and Projects 2021

HEALTH TECHNOLOGY ASSESSMENT (HTA) TEAM

Systematic review and meta-analysis of cost-effectiveness of personalised medicine

As funded by PRECISE, our team performed a systemic search in Embase and Medline databases for studies published between Jan 1, 2011 and Jul 8, 2021, on the topic of cost-effectiveness analysis of precision medicine (PM) at both market access and early stage (i.e., before first clinical use). A total of 41 methodology articles and 341 cost-effectiveness analyses (CEA) were included. So far, we have summarized the methodological challenges, theoretical remedies and practical solutions of performing economic evaluation on PM from early stage to market-access stage in 8 domains: patient population, intervention, comparator, outcome, time, equity/ethics, adaptability and modelling (PICOTEAM). We will continue to systematically review the PM interventions and country capacities of these CEAs, and meta-analyse their cost-effectiveness profiles.

Project Title	Status/Funder
COVID-19 vaccine hesitancy among health care workers in Thailand	Completed HIPER
Cost-effectiveness analysis for the Primary Technology Enhanced Care-Hypertension Scaling Programme	Ongoing MOHT
COVID-19 discrete event simulation for hospital resource utilization	Ongoing HIPER
COVID-19 Vaccine: Early HTA	Completed National Research Council of Thailand (NRCT)
Early HTA of a Venous Assistance and Contracture Management (VACOM) Intervention for Robot-Assisted Ankle-Foot Mobility in Post-Stroke Patients	Completed National Research Foundation (NRF)
Elicitation of contact tracing preferences	Ongoing World Health Organization (WHO)
Hospital at Home: provided consultation and supported ISPE workshop	Ongoing HIPER
Managing Cavities in Children and Institutionalized Elderly: Cost-effectiveness and Acceptance of Silver Diamine Fluoride Treatment	Ongoing NMRC
Spinal Muscular Atrophy (SMA) Costing	Ongoing Novartis
Understanding financial and non-financial barriers to chronic disease management in Singapore: a natural experiment	Ongoing Ministry of Education (MOE) Tier 1
Population-based miRNA screening for gastric cancer	Ongoing HIPER

Grants and Projects 2021

HEALTH TECHNOLOGY ASSESSMENT (HTA) TEAM

Project Title	Status/Funder
Precision medicine: Development of grant selection criteria and reference case study	Ongoing PRECISE
REAL World Data In ASia for HHealth Technology Assessment in Reimbursement (REALISE)	Completed International Decision Support Initiative (iDSI)
Sewage-based surveillance for rapid outbreak detection and intervention in Singapore	Ongoing National Research Foundation Singapore (NRF)
Social and Economic Cost of NPI - COVID-19	Ongoing HIPER
Social Impact of Universal Health Coverage in Thailand	Completed iDSI
Systematic review and meta-analysis of cost-effectiveness of personalised medicine	Ongoing PRECISE
Thai High Cost User	Completed Thailand Research Fund
Thai Quality Outcome Framework (QOF)	Ongoing HIPER
Real World Dataset for Economic Evaluations of Oncology Drugs (RODEO) Workshop	Completed Johnson & Johnson, Novartis, Pfizer
Cost-effectiveness analysis of daratumumab	Ongoing HIPER

Stakeholder Preferences for COVID-19 Contact Tracing: a Discrete Choice Experiment

HIPER conducted a discrete choice experiment (DCE) to understand practitioners' and policymakers' preferences for contact tracing policies, in collaboration with researchers from HITAP Thailand, WHO SEARO, and London School of Economics and Political Science. The study focused on examining the trade-offs between efficiency and equity. Six features of contact tracing policy were selected and used to construct the DCE questionnaire, including timeliness, completeness, mandatory, privacy, number of contacts, and vulnerability. Vulnerability was used to measure the equity of the contact tracing policy. The survey was sent to policymakers and contact tracers in different countries. A blog of the study can be found in the following link: <http://eprints.lse.ac.uk/111656/>.

PUBLICATIONS 2021

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<https://www.cgdev.org/publication/health-systems-impact-covid-19-philippines>

Chootipongchaivat, S., Wong, X. Y., Ten Haaf, K., Hartman, M., Tan, K. B., van Ravesteyn, N. T., & Wee, H. L. (2021). Cost-effectiveness Analysis of Breast Cancer Screening Using Mammography in Singapore: A Modeling Study. *Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology*, 30(4), 653–660.
<https://doi.org/10.1158/1055-9965.EPI-20-1230>

Chugh, Y., Premkumar, M., Grover, G. S., Dhiman, R. K., Teerawattananon, Y., & Prinja, S. (2021). Cost-effectiveness and budget impact analysis of facility-based screening and treatment of hepatitis C in Punjab state of India. *BMJ open*, 11(2), e042280.
<https://doi.org/10.1136/bmjopen-2020-042280>

Lin, L. W., Ananthakrishnan, A., & Teerawattananon, Y. (2021). Evaluating traditional and complementary medicines: Where do we go from here?. *International journal of technology assessment in health care*, 37, e45.
<https://doi.org/10.1017/S0266462321000179>

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<https://doi.org/10.1016/j.vaccine.2021.01.051>

Marshall, A. I., Archer, R., Witthayapipopsakul, W., Sirison, K., Chotchoungchatchai, S., Sriakpokin, P., Srisookwatana, O., Teerawattananon, Y., & Tangcharoensathien, V. (2021). Developing a Thai national critical care allocation guideline during the COVID-19 pandemic: a rapid review and stakeholder consultation. *Health research policy and systems*, 19(1), 47.
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Ning, Y., Ho, P. J., Støer, N. C., Lim, K. K., Wee, H. L., Hartman, M., Reilly, M., & Tan, C. S. (2021). A New Procedure to Assess When Estimates from the Cumulative Link Model Can Be Interpreted as Differences for Ordinal Scales in Quality of Life Studies. *Clinical epidemiology*, 13, 53–65.
<https://doi.org/10.2147/CLEP.S288801>

Painter, C., Isaranuwatthai, W., Prawjaeng, J., Wee, H. L., Chua, B., Huynh, V. A., Lou, J., Goh, F. T., Luangasanatip, N., Pan-Ngum, W., Yi, W., Clapham, H., & Teerawattananon, Y. (2021). Avoiding Trouble Ahead: Lessons Learned and Suggestions for Economic Evaluations of COVID-19 Vaccines. *Applied health economics and health policy*, 19(4), 463–472.
<https://doi.org/10.1007/s40258-021-00661-5>

Sharma, M., Teerawattananon, Y., Dabak, S. V., Isaranuwatthai, W., Pearce, F., Pilasant, S., Sabirin, J., Mayxay, M., Guerrero, M., Phuong, N. K., Sastroasmoro, S., & Htoo, T. S. (2021). A landscape analysis of health technology assessment capacity in the Association of South-East Asian Nations region. *Health research policy and systems*, 19(1), 19. <https://doi.org/10.1186/s12961-020-00647-0>

Tan, R., Wang, Y., Prem, K., Harrison-Quintana, J., Teo, A., Kaur, N., Cook, A. R., Chen, M. I., & Wong, C. S. (2021). HIV Pre-Exposure Prophylaxis, Condoms, or Both? Insights on Risk Compensation Through a Discrete Choice Experiment and Latent Class Analysis Among Men Who Have Sex With Men. *Value in health : the journal of the International Society for Pharmacoeconomics and Outcomes Research*, 24(5), 714–723.
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<https://doi.org/10.1177/10901981211014428>

Tay, J., Ng, E., Nair, R., Tan, Z. S., & Tan, S. (2021). Economic evaluations in the treatment and evaluation of patients with periodontal disease: A critical review. *Journal of clinical periodontology*, 48(5), 679–694.
<https://doi.org/10.1111/jcpe.13456>

Teerawattananon, Y., Tungsanga, K., Hakiba, S., & Dabak, S. (2021). Dispelling the myths of providing dialysis in low- and middle-income countries. *Nature reviews. Nephrology*, 17(1), 11–12.
<https://doi.org/10.1038/s41581-020-00346-7>

Wai, K. S., Khine, W. Y. K., Lim, J. M., Neo, P. H. M., Tan, R. K. J., & Ong, S. E. (2021). Malaysia, Myanmar and Singapore: common threads, divergences, and lessons learned in responding to the COVID-19 pandemic. *The Round Table*, 110(1), 84–98.
<https://doi.org/10.1080/00358533.2021.1875693>

PUBLICATIONS 2021

Wang, Y., Rattanaipapong, W., & Teerawattananon, Y. (2021). Using health technology assessment to set priority, inform target product profiles, and design clinical study for health innovation. *Technological forecasting and social change*, 172, 121000. <https://doi.org/10.1016/j.techfore.2021.121000>

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Yeoh, E., Tan, S. G., Lee, Y. S., Tan, H. H., Low, Y. Y., Lim, S. C., Sum, C. F., Tavintharan, S., & Wee, H. L. (2021). Impact of COVID-19 and partial lockdown on access to care, self-management and psychological well-being among people with diabetes: A cross-sectional study. *International journal of clinical practice*, 75(8), e14319. <https://doi.org/10.1111/ijcp.14319>



NEWS AND EVENTS 2021

01

REALISE Guidance Document Official Launch



As part of a collaboration with experts from various Asian health systems, HIPER co-led the REAL World Data In ASia for HEalth Technology Assessment in Reimbursement (REALISE) project. Through this collaboration, a non-binding guidance document was developed that covers the 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 non-binding guidance document was officially published on the HIPER website in January 2021 for public access and its use has been promoted at several events, garnering a total of around 400 pageviews and 166 downloads since its publication by users from around the world.

02

Workshop on Simulation for Health Technology Assessment

SHORT MODULE COURSE : SPH5423

Simulation for Health Technology Assessment



Instructors



Jaime Caro
Adjunct Professor
Faculty of Medicine and
Health Sciences
McGill University



Jörgen Möller
Vice President
EVIDERA

4-9 January 2021
**12.00pm - 9.00pm*
(GMT+8)**

*2.30-9.00pm on 4 Jan (Mon)
*12.00-2.00pm on 9 Jan (Sat)

Course Coordinator:
Wee Hwee Lin
Assistant Professor,
NUS SSHSPH



4 - 9 Jan 2021

HIPER hosted a 6-day intensive online course on DICE (Discretely Integrated Condition – Event) simulation with Honorary Visiting Professor Jaime Caro (McGill University) and Honorary Visiting Associate Professor Jörgen Möller (EVIDERA), the two pioneers of this method. DICE is a transparent and elegant alternative to traditional modelling methods, and the course entailed both lectures on theory and practical group sessions to build a Markov model in DICE, conduct uncertainty analysis, and debug their models. Participants came from diverse geographical and professional backgrounds and the diverse perspectives enriched class discussions and group work sessions.

NEWS AND EVENTS 2021

03


Workshop on Introduction to Health Technology Assessment

9 - 12 March 2021


HIPER, together with Health Intervention and Technology Assessment Program (HITAP) and Hitotsubashi Institute for Advanced Study, Hitotsubashi University, organised an introductory workshop on health technology assessment (HTA). The workshop provided an overview of conducting and using HTA to support decision-making on technology and health policy at the national level. A total of 53 participants attended from different countries such as Thailand, Rwanda, the Philippines, Vietnam and India. Participants commented that it has helped to present the topic of HTA in a coherent and structured manner.

SHORT COURSE

Introduction to Health Technology Assessment



Instructors

 **Dr Yot Teerawattananon**
HITAP, NUS Saw Swee Hock School of Public Health (SSHSPH)

Date 9-12 Mar 2021
Time 2:30pm - 6:00pm* (GMT +8)
Format Via Zoom

Other Instructors

- Dr Shamima Akter, Assistant Professor, Hitotsubashi University
- Dr Wee Hwee Lin, Assistant Professor, SSHSPH
- Dr Luo Nan, Associate Professor, SSHSPH
- Dr Joseph Brian Babigumira, Associate Professor, SSHSPH

04

Workshop on Advance Modelling for Economic Evaluation using Excel

22, 23, 29 & 30 March, 2021

As an extension of the introductory course in HTA, HIPER co-organised with HITAP an advance 4- day training in economic evaluation to delve into greater technical aspects of designing, constructing, and validating economic evaluation models based on real-life scenarios. The participants not only learned the methods but also applied the methods to case studies of interest and learnt how to present their study findings to meet the requirements of international standards. 57 participants joined from countries in Asia and Africa, the majority expressing their high satisfaction with the course, voicing they would strongly recommend it to others.



Advance Modelling for Economic Evaluation Using Excel

NEWS AND EVENTS 2021

05

Workshop on Distributional Cost-effectiveness Analysis



ABOUT THIS COURSE

Distributional CEA (DCEA) analyses equity in the distribution of costs and effects alongside value for money. It can be used to quantify health equity impacts and help organisations make fairer decisions with better outcomes. This course is for CEA analysts who wish to learn how to conduct DCEA and includes practical exercises in Excel.

TOPICS COVERED

1. Introduction and principles of equity
2. Distributions of effects and costs
3. Distributions of net health benefit
4. Equity-efficiency trade-offs and inequality aversion
5. Direct equity weights

INSTRUCTORS:



Richard Cookson
Professor,
Centre for Health
Economics,
University of York,
England



Ole F. Norheim
Professor, Department
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Centre for Health
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University of York,
England

Organised by NUS Health Intervention and Policy Evaluation Research (HIPER) and
NUS Centre of Health Service and Policy Research



Saw Swee Hock
School of Public Health

Scan for more details!
For enquiries, please
contact Hui Lan at
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19 - 23 April 2021

HIPER hosted a workshop on Distributional Cost-effectiveness Analysis (DCEA) in collaboration with a team of experts led by Prof Richard Cookson of the University of York. By modelling the changes to the baseline health distribution of a general population that arise due to the health interventions in consideration, and incorporating various sources of inequality, the DCEA framework not only allows us to estimate the change in health outcome, such as the Health-Adjusted Life Years (HALYs), of each intervention, but also how each decision will change the level of unfair inequality that affects the population in question. The online workshop attracted 37 participants from around the world, including Laos, Nigeria, Philippines, Rwanda and United Kingdom.

06

Workshop on Social Media Analytics with Facebook Data

SHORT COURSE

Social Media Analytics with Facebook Data



INSTRUCTOR
Aravind Sesagiri Raamkumar
Senior Research Fellow
NUS SSHSPH

3 - 4 May 2021
2:00pm - 6:15pm (GMT +8)

Learners will have the opportunity to assess data and discern how to analyse Facebook data.



3 - 4 May 2021

Social Media Analytics (SMA) is a development of systems, models and algorithms to gain insights of users and user-generated content in social media. SMA is able to undertake a systematic approach to analyse and explain the phenomena with massive publicly available data on social media platforms. The topics covered during the two-day course include an introduction to SMA, the applications and research areas of SMA, methodologies and approaches of different phases of SMA, and affective computing (sentiments and emotion analyses).

NEWS AND EVENTS 2021

07

Workshop on Modelling Techniques for HTA

SHORT COURSE (MODULE SPH5421)

Modelling Techniques in Health Technology Assessment



Instructors



Alex R Cook
Associate Professor,
NUS Saw Swee Hock
School of Public Health



Alec Morton
Guest Lecturer,
Professor, University
of Strathclyde, UK

Date 17-21 May 2021

Time 2pm – 9pm
(GMT +8)

Format Online Live
via Zoom

* There may be slight change in
the date and timing.

17 - 21 May 2021

HIPER brought together two distinguished professors, Associate Professor Alex Cook and Professor Alec Morton from the University of Strathclyde, Glasgow, Scotland. The course provided an overview of dynamic transmission modelling and discrete event simulation (DES). The lectures were followed by practical group sessions, where participants developed a model on how to prioritise COVID-19 vaccination on target groups with the R software and how to simulate hospital bed capacity constraint scenarios using the DES model in Simul8 program. The course demonstrated how to model complex HTA research questions and addressed the limitations of conventional modelling techniques.

08

WAVE, a Hybrid Epidemiologic Model for Forecasting the Course of the Pandemic at Highly Local Level

WEBINAR

WAVE, a Hybrid Epidemiologic Model for Forecasting the Course of the Pandemic at Highly Local Level

30 June 2021 (Wed) | 730PM-830PM (SGT)



SPEAKER

Jaime Caro

Professor in practice, Health Policy, London
School of Economics

Professor, Faculty of Medicine and Health
Sciences, McGill University
Chief Scientist, Evidera

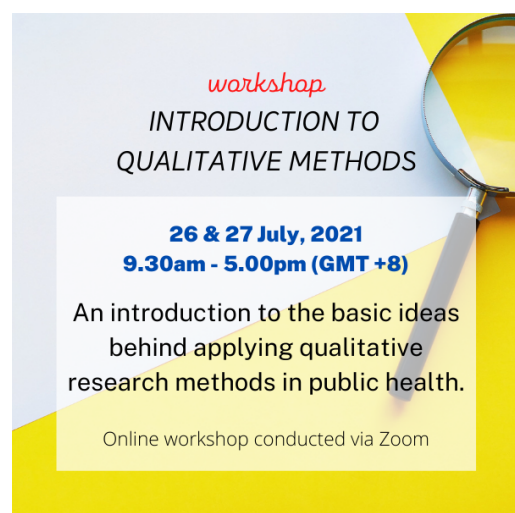
30 June 2021

HIPER had the privilege of hosting a webinar by the Honorary Visiting Professor Jaime Caro (McGill University), which introduced WAVE, a Hybrid Epidemiologic Model for Forecasting the Course of the Pandemic at Highly Local Level which was created to simulate the trajectory of COVID-19 at a local level. The webinar featured the design of WAVE model, the predictions obtained from the model, and scenario definitions through several case studies. 74 participants from Asia, Africa and Russia learned the concepts and implementation of a customizable epidemiologic model, its use for forecasting and planning during COVID-19, and how to specify analyses and scenarios.

NEWS AND EVENTS 2021

09

Introduction to Qualitative Methods Workshop



26 & 27 July 2021

HIPER's first Introduction to Qualitative Methods Workshop was conducted with the support of Dr Rayner Tan, Dr Jane Lim and Dr Ong Suan Ee of SSHSPH, together with Ms Pearlyn Neo from HIPER. The workshop was designed to equip participants with the paradigms underpinning qualitative research and various qualitative methods, such as interviews, focus group discussions and observation methods. Through the hands-on exercises, participants crafted an interview guide, conducted interviews and analysed qualitative data. Over 15 participants from various sectors and countries participated, and overall, they found the workshop to be extremely helpful for beginners interested in exploring qualitative methods in public health research.

10

Evidence Synthesis for Health Technology Assessment



Weekly, 13 August - 5 November 2021

Over the course of twelve weeks, experts from the field of HTA - from Faculty members of SSHSPH, to guest lecturers from Ipsos and Agency for Care Effectiveness (ACE), equipped participants with the skills to generate good quality evidence for use in HTA.

The live online course was a blend of online lectures, practical exercises and group discussions. Although we were joined by students of varying degrees of familiarity with HTA, the class gelled excellently and more experienced participants were able to lead and share their knowledge with the rest of the students.

NEWS AND EVENTS 2021

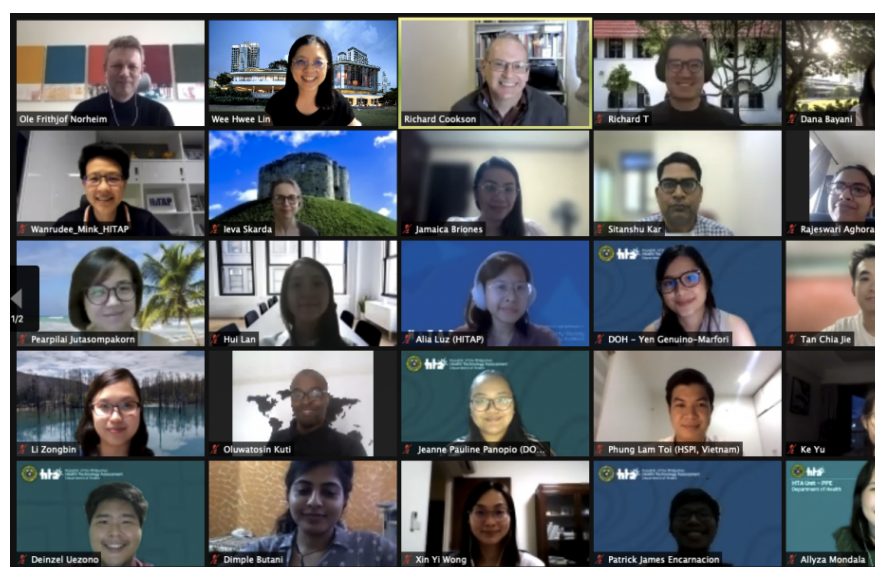
11

Workshop on Impact Evaluation of Health Interventions



25-28 October 2021

HIPER, together with its partner Hitotsubashi Institute for Advanced Study, Hitotsubashi University, organised a 3-day online workshop Impact Evaluation of Health Interventions from 25-28 October 2021. The workshop featured introductions to the analytical methods used to evaluate the impacts of health interventions, with a statistical toolset useful to assess if an intervention is truly making a difference. In total, the workshop saw 47 participants from around the world. The workshop was conducted as a combination of lecture sessions and coding demonstrations based on published case studies. Participants were highly satisfied with the workshop, one of whom commenting, "A great course with targeted content and skills for specific methods for impact evaluation."



Participants and lecturers from Workshop on Distributional Cost-effectiveness Analysis

"Informative and opened up a new field of knowledge for me!"

Tan Chia Jie
Graduate student, National University of Singapore

"This was a well-organised and hugely informative workshop on an important and understudied (but growing) body of research. It was great to have hands-on technical exercises as part of the workshop to get to grips with the practicalities of conducting distributional cost-effective analyses. I look forward to conducting research using these methods in the future!"

Phung Lam Toi
Researcher, Ministry of Health, Vietnam

Get to know us! - Our PhD candidates

We had a virtual interview with two of our PhD candidates - read more to find out why they joined HIPER, what their research is about, and what they would like to do in future.



"My current focus is to sharpen my technical skills in conducting HTA and to gain more experience with novel methods in the field. Eventually, I plan to return home to the Philippines and continue building the HTA capacity there. In the future, I hope to continue advocating and supporting the use of high-quality evidence in health policy making in the region and beyond."

- Diana Bayani, PhD candidate

Q: What is your research about?

My thesis involves interrelated mix-methods studies in the area of multiple myeloma and value-based payment. I am currently exploring the use of RWD and novel methods for modelling and indirect comparison for HTA, as well as various risk-sharing models in the Singapore context. I have completed the required coursework and am currently collecting data for my thesis in preparation for the PhD Qualifying Exam.

Q: Any advice or message to someone considering the programme?

Being one of the few HTA-focused research centres in Southeast Asia, I believe that HIPER would be an exciting environment for early-career researchers with an interest in HTA and health systems research. There will be opportunities to not only work on different policy relevant projects but also learn from the leading academics in the field.

Q: Why did you choose to do PhD with HIPER at SSHSPH?

Before starting my PhD, I worked as a Research Associate at HIPER. This gave me an opportunity to work with the team on various research projects and workshops, gain exposure to the Singapore health system, and meet my supervisor, A/Prof Wee Hwee Lin.



Q: Why did you choose to do PhD with HIPER at SSHSPH?

HIPER has an extensive reach in lower-middle-income countries to support them with capacity building. Having supported some healthcare work in west Africa previously, the possibility of working in similar settings again first drew me to HIPER! As a PhD candidate under the Economic Development Board Industrial Postgraduate Programme (EDB-IPP), I am excited to see how public-private partnerships could support capacity building in lower-middle-income countries.

Q: What is your research about?

I am working on improving cervical cancer screening uptake, which remains suboptimal across Southeast Asia, including Singapore. This would include understanding the barriers and facilitators to screening uptake, as well as evaluating the impact and cost-effectiveness of interventions to improve screening uptake. (Southeast Asia has one of the highest burden of cervical cancer in the world!)

Q: Any advice or message to someone considering the programme?

Be open to learn and be challenged. The journey will no doubt be challenging, but definitely rewarding!

"I am always inspired by the work of the team at each HIPER meeting, where Dr Wee and Dr Yot would always encourage us to reflect and think more critically about the work that we do. While the pandemic has brought about convenience to attend lessons and conduct research in the comforts of home, we do lose out on the interaction with peers, colleagues and professors that virtual meetings cannot replicate. Nevertheless, I am very pleased that the modules are multidisciplinary in nature, and working closely with students from different disciplines has brought a very different perspective to the health issues that we are dealing with."

- Brandon Chua, PhD candidate

Q: What are your future aspirations?

I would very much like to work in the capacity to improve access to healthcare, especially among women and children! I worked as a pharmacist in a women and children hospital in Singapore prior to pursuing PhD.

Staff List



A/PROF. WEE HWEE-LIN
Director



**DR. YOT
TEERAWATTANANON**
Advisor



DR. CHEN WENJIA
Faculty



**A/PROF. JOSEPH
BRIAN BABIGUMIRA**
Faculty

ADMINISTRATIVE TEAM



CHUA HUI LAN
Assistant Manager



CHEN YU TING
Research Assistant

HEALTH TECHNOLOGY ASSESSMENT (HTA) TEAM



WANG YI
Senior Research Fellow



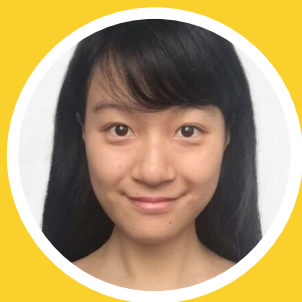
JAMAICA BRIONES
Research Associate



**YAROSLAVA
ZEMLYANSKA**
Research Associate

Staff List

BIG DATA TEAM



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Research Fellow



CHAI JIA HUI
Research Assistant



BRANDON CHONG
Research Assistant



**CELESTINE GRACE
XUETING**
Research Assistant

SOCIAL AND BEHAVIOURAL RESEARCH (SBR) TEAM



MICHIKO HAYASHI
Research Associate



PEARLYN NEO
Research Associate



SARAH GAN
Research Associate



TAN SOON GUAN
Research Assistant

***We bid farewell to
these staff members.
Thank you for your
important
contributions and
friendship to the team.
Wishing you all the
best in your future
undertaking!***



**RICHARD TAN ZHE
SHENG**



**YVONNE TEO
HWEE LING**



**ARAVIND SESAGIRI
RAAMKUMAR**

*We thank you for your continued support
for HIPER's efforts in 2022!*

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