



MAHTAS

E-NEWSLET

New, Emerging and Innovative Health Technologies in The Time of Crisis

By: Dr. Syaquirah Akmal



The unprecedented COVID-19 pandemic has and is still pushing global healthcare systems to and beyond their limits. With millions forced into a state of near or total lockdown, upended employment, limited access to health care and widespread health misinformation, countries must innovate in the way they respond to the crisis. As a result, there has been a surge in demand for innovative digital and other health technology solutions to support outbreak control, manage COVID-19 cases and deliver healthcare services.

With these rapid digital evolutions, having the right evidence at the right time is of paramount importance in health care decision making. The **horizon scanning (HS)** or **early warning system (EWS)** provides early identification, monitoring and assessment of new and emerging health technologies. Successful and effective HS system identifies innovations that has potential impact on clinical and cost of patient care; and disseminates timely information to stakeholders relevant to their needs, to enable appropriate decision making in organisational planning and readiness, facilitate appropriate adoption of the technology, and identify further research requirements.

Soon after Malaysia was hit by its first case of Covid-19, MaHTAS have been actively identifying and assessing over hundreds of new and innovative technologies, most of which developed for screening and testing for Covid-19, such as the Covid-19 breathanalysers, Apolo D SmartCheck AI Rapid Screening System™; home monitoring tool such as Masimo Safetynet Solution™, as well as prevention and treatment innovations such as the Covid-19 Vaccine and oral treatment Paxlovid™. Among challenges that we faced in identifying these technologies are keeping up-to-date with the rapid development of these solutions and the lack of robust scientific evidence to support their adoption into our health care system.

Chairperson: YBhg. Tan Sri Dato' Seri Dr. Noor Hisham Abdullah
Director General, Ministry of Health Malaysia

01 Health Technology Assessment (HTA)

Targeted Therapies in Combination with Neoadjuvant Chemotherapy for HER2-positive Breast Cancer and Economic Evaluation

02 Technology Review (TR)

1. Custodiol Histidine-tryptophan-ketoglutarate (HTK) as an Option for Blood Cardioplegia in Cardiac Surgery
2. Intraarticular Hyaluronic Acid with Sorbitol/ Mannitol for Osteoarthritis
3. Therapeutic Drug Monitoring for Anti-TB
4. Platelet Rich Plasma, Platelet Rich Fibrin and Concentrated Growth Factor Centrifuge Machine for Treatment of Periodontal Therapy
5. Digital Assisted Oral and Cranio - Maxillofacial Surgery
6. Mobile C-arm Fluoroscopy for Cardiothoracic Surgery
7. Virtual Reality for Lazy Eyes
8. Driving Simulator
9. Viscoelastic Haemostatic Assay for Non-Cardiac Surgical Setting

03 Clinical Practice Guidelines (CPG)

1. Management of Gout (Second Edition)
2. Management of Schizophrenia (Second Edition)
3. Management of Tuberculosis (Fourth Edition)

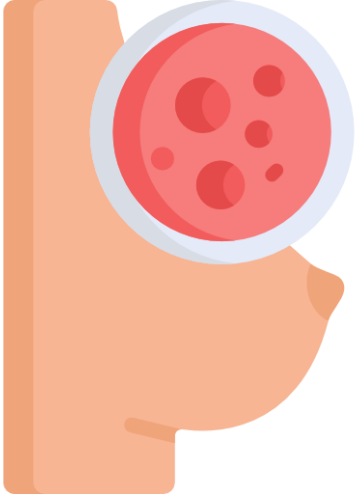
04 Horizon Scanning TechBrief

1. Respiratory Syncytial Virus (RSV) Vaccine
2. Insulin Icodec for Type 2 Diabetes
3. Tirzepatide for Type 2 Diabetes
4. Abrelcimab for Prevention of Venous Thromboembolism
5. Tezepelumab for Severe Uncontrolled Asthma

05 Horizon Scanning TechScan


1. Evinacumab in Patients with Refractory Hypercholesterolemia
2. Scrotal Elevation Support System
3. TTP 399
4. VECTRACK- Artificial Intelligence for Vector Surveillance System
5. Liver4Life Perfusion Machine for Liver Graft Preservation before Transplantation
6. Montelukast to Reduce the Risk of Dengue Shock Syndrome in Dengue Patients
7. Self-Initiated Prone Progression Crawler (SIPPC) for Infants with Cerebral Palsy/ Down's Syndrome or Severe Developmental Delays
8. Stem Cell Educator Therapy
9. Abrocitinib for Atopic Dermatitis
10. Efglenatide for Cardiovascular and Renal Outcomes in Type 2 Diabetes
11. Pembrolizumab for Adjuvant Therapy for Post-nephrectomy in Renal Cell Carcinoma

By Pn. Atikah Shaharudin



Human epidermal growth factor receptor 2 (HER2) is an aggressive subtype that exhibits unique epidemiological, clinical & prognostic differences with poor response to standard chemotherapy regimens compared with HER2-negative

About **15-20% women** with breast cancer overexpression of HER2 (HER2-positive)




Targeted therapies: Monoclonal antibodies (**Trastuzumab, Pertuzumab**), Tyrosine Kinase Inhibitors (**Lapatinib**), Trastuzumab Biosimilar (**Herzuma, Hertraz, Zuhera**)




Results


19 studies were included: 2 systematic reviews & network meta-analysis, 9 randomised controlled trials, 3 cohort studies, 1 cross-sectional study and 4 economic evaluations



Targeted therapies either dual - or **single-targeted therapy** improved outcomes in HER2-positive **early and locally advanced breast cancer** patients.



Dual targeted therapy (pertuzumab & trastuzumab) and **combination chemotherapy** (with or without anthracyclines) was the **most effective** treatment in terms of **Pathological Complete Response Rate, Progression Free Survival, Disease Free Survival and Overall Survival** as compared to single-targeted therapy or mono chemotherapy.



Currently, the **combination of chemotherapy with trastuzumab biosimilar** is the **most cost-effective** treatment for Malaysian population.

Custodial HTK as a Replacement of Blood Cardioplegia in Cardiac Surgery

By En. Syful Azlie Md. Fuzi

Efficacy

Similar rate for myocardial infarction

Similar rate for low cardiac output syndrome

Similar rate for blood transfusion/blood product use

Similar rate for duration of cardiopulmonary bypass and aortic cross-clamping

Less severe endothelial injury and incidence of postoperative SWMA, and shorter mechanical ventilation time

Safety

Similar rate for mortality and postoperative complications

Organisational Issue

Similar rate for lengths of ICU and hospital stay as well as the readmission

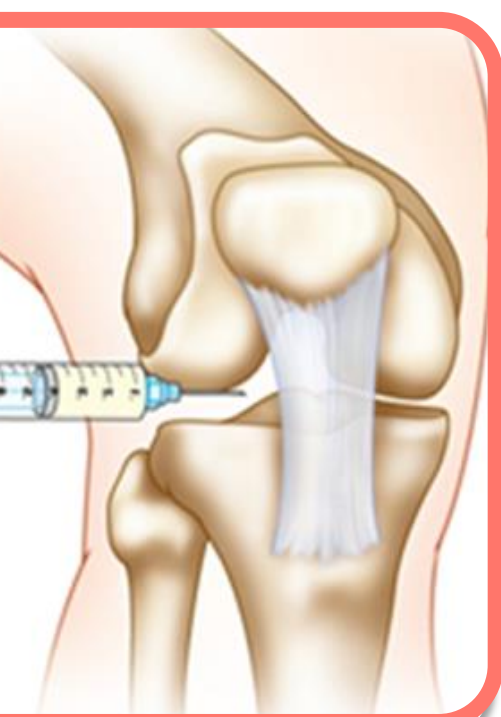
Economic

Potential financial benefits



Intraarticular Injection of Hyaluronic Acid (IAHA) Combined with Sorbitol/ Mannitol for Osteoarthritis

By Dr. Nur Farhana Mohamad; Infographic by Dr. Ana Fizalinda Abdullah Sani



Hyaluronic acid (hyaluronan) is a non-sulfated glycosaminoglycan that contains the repeating disaccharide unit of N-acetyl glucosamine & glucuronic acid. It has the viscoelastic properties of the synovial fluid and cartilage extracellular matrix which act as shock absorber and joint lubricant.

Intraarticular Injection of Hyaluronic Acid (IAHA) is a non-surgical therapy osteoarthritis.

Based from the review, there is limited evidence to suggest IAHA with combination of sorbitol/mannitol.

Therefore, it is not recommended in treating osteoarthritis.

Mobile C-arm Fluoroscopy for Cardiothoracic Surgery

By Pn. Fatin Nabila Mokhtar

Efficacy

Time taken to float and position the pulmonary artery catheter balloon

Fluoroscopy < usual care
p=0.014;
73s (SD65.1) vs. 176s (SD180.6)

The microcoil location was confirmed to carry out the video-assisted thoracoscopic surgery

Surgeries were performed without transferring patients to other rooms

Brilliant fluoroscopy images were the predominantly used images during surgery while using smaller radiation dose

Safety

The composite complication rate (malposition and arrhythmias) was low for fluoroscopy than usual care; p=0.01

Received 510(k) in March 2021



Registered the pre-advanced system in Jan. 2018



Cost

Regardless of the product brands and manufacturers:
~\$15,000 to ~\$130,000

Organisational issue

Multidisciplinary concept, short and simple training session



Viscoelastic Haemostatic Assay (VHA) for Non-cardiac Surgery

By Dr. Roza Sarimin

Efficacy

Trauma: VHA-guided therapy was effective in guiding transfusion, with fewer consumption of blood products, avoidance of allogenic transfusion and reduction of blood wastage, compared to conventional coagulation test. No difference in hospital length of stay or quality of life. Effectiveness in terms of mortality was inconclusive.

Liver transplant: VHA-guided therapy was effective in guiding transfusion with less consumption of blood products, increase avoidance of allogenic transfusion, reduce post-operative mortality despite no difference in ICU or hospital length of stay.

PPH: VHA may be used to guide transfusion and haemostatic therapy in the management of patients with traumas and liver transplant patients. VHA may be used to guide transfusion and haemostatic therapy in patients with PPH. However, outcome data is encouraged in view of limited evidence.

Safety

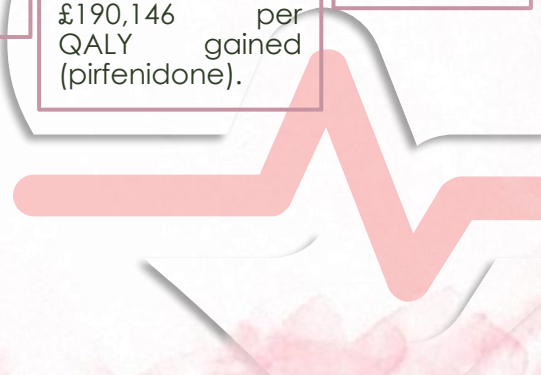
Treatment using pifenidone and nintedanib were reported as safe and well tolerated.

Cost

Compared with best supportive care, ICER ranged from £132,658 to £145,310 per QALY gained (nintedanib) and £172,198 to £190,146 per QALY gained (pifenidone).

Organisational issue

Lower risk of respiratory-related hospitalisation (following pifenidone) over one year.



Paxlovid Oral Treatment for COVID-19

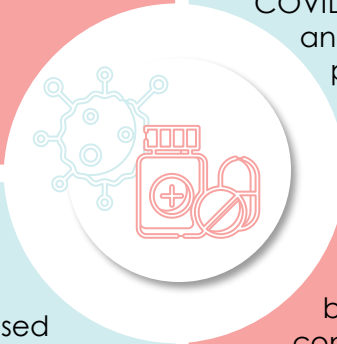
By Dr. Syaquirah Akmal

Paxlovid™ (co-packaged of nirmatrelvir tablets and ritonavir tablets) is a SARS-CoV-2 main protease (Mpro) inhibitor or also known as SARS-CoV-2 3CL protease Inhibitor.

Evidence on the efficacy and safety of Paxlovid™ for the treatment of COVID-19 is limited to an interim analysis of the phase 2/3 study published on the company's website.

Paxlovid™ found to be potentially effective as an oral treatment for unvaccinated non-hospitalised high-risk patients, with acceptable safety profile.

However, cost implication of the treatment needs to be further assessed and considered.



COVID-19 Vaccines and Chronic Myeloid Leukaemia (CML)

By Dr. Asliza Ayub

Findings

There was no retrievable evidence from the scientific databases to prove the effect of COVID-19 vaccines on developing CML.

According to risk-based assessment of AstraZeneca COVID-19 vaccine conducted by NPRA, Ministry of Health Malaysia, during the reporting period of adverse effects following immunisation (AEFI) starting from 1st August 2021 through 30 September 2021, **there was no signal related to cancer/malignancy**. Similarly, there was no information on CML, leukemia or any blood cancer related to Astrazeneca COVID-19 Vaccine in United States of America, Australia, Canada, Switzerland, France, Sweden, United Kingdom, Japan, European Medicines Agency (EMA), South Korea and World Health Organization (WHO).

COVID-19: Intravenous (IV) Vitamin C

By Dr. Syaquirah Akmal

Low level of evidence suggested that IV vitamin C may have potential to be used in patients with moderate to severe COVID-19 disease.

Robust evidence for the treatment of COVID-19 patients with IV vitamin C is not yet available, a randomised controlled trial is underway.

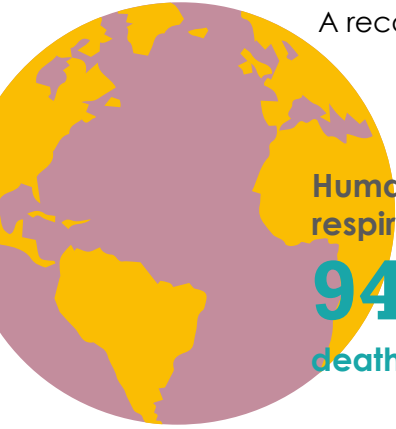
High level of evidence on non-COVID-19 critically-ill patients suggested that IV vitamin C shortened the length of mechanical ventilation and reduced the length of ICU stay.

Until then, evidence from non-COVID-19 suggested that IV vitamin C may be a safe and promising adjunct therapy for critically-ill patients with sepsis and related complications



Respiratory Syncytial virus (RSV) Vaccine

By Pn. Siti Aisah Fadzilah



A recombinant subunit pre-fusion RSV antigen (RSVPreF3) which is believed to trigger the required immune response and prevent RSV infection among infants and older adults



Human RSV is a globally prevalent cause of lower respiratory tract infection (LRTI) in all age groups

94,600 - 149,400
deaths annually (RSV-associated LRTI)

RSV vaccine was tested in older adults and maternal immunisation.

Injectable RSV vaccine available in dosage of 30, 60 and 120 µg .

Phase III GRACE study was initiated following the positive results of Phase I/II study.

2021 - FDA Fast Track Designation

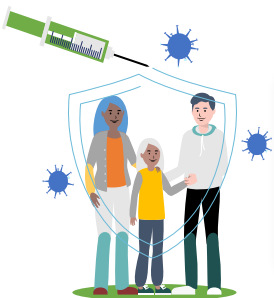


Phase I/II:
1-month post immunisation

High levels of RSVPreF3 IgG antibodies (mean antibody concentrations: 8.4 - 13.5 fold-higher (18 - 40 years old vaccinees), 7.2 - 12.8 fold-higher (60 - 80 years old vaccinees).

RSV-A neutralising antibodies (mean antibody titers: 7.5 - 13.7 fold-higher (18 - 40 years old vaccinees), 5.6 - 9.9 fold higher (60 - 80 years old vaccinees).

All vaccine dose levels were well tolerated, with no safety concerns identified - most frequently reported adverse events were minor & included pain at the injection site & headache.



RSV vaccine was well-tolerated & highly immunogenic in Phase I/II clinical studies. However, the phase III GRACE study is important to evaluate the safety of the candidate vaccine for pregnant mothers and infants, and its efficacy in infants born to vaccinated mothers.

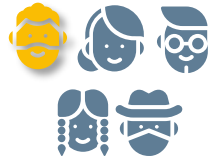
Insulin Icodec for Type 2 Diabetes

By Dr. Norrina Jamaluddin

About 3.9 million people aged 18 years old



Diabetes Mellitus in Malaysia

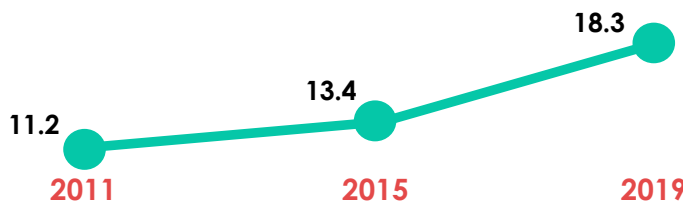


1 in 5



Young Malaysians age 18 to 29 years old were diagnosed to have diabetes

Prevalence Diabetes Mellitus in Malaysia (National Health and Morbidity Survey 2019)



Insulin Icodec: Investigational, long-acting basal insulin analogue, once weekly dose.



Half-life: 196 hours (>8 days).



Injection volume is equivalent to daily insulin glargine U100.



Potential Impact:

Provide glucose lowering effect and similar safety profile with insulin glargine U100 without increasing hypoglycaemia risk, less complication, better adherence, more compliance, and more satisfaction.

Results



Effectiveness (RCT Phase II)

ONWARDS 1 Mean HbA1c	Decreased from 8.09% to 6.69% (-1.33%, 95% CI -0.38 to 0.02)
TITRATION TRIAL 1 44.2%	Patients achieved a target HbA1c <7.0% (<53 mmol/mol; estimated treatment difference, (ETD)], 7.88%-points [95% CI 1.83 to 13.93])
TITRATION TRIAL 2 70.6%	Patients achieved a target HbA1c <7.0% (<53 mmol/mol) with dose adjustment of ±28 units (ETD 7.08%-points; 95% CI 2.12 to 12.04)



Safety

Mild injection-site reaction;
No episodes of severe hypoglycaemia;
No death

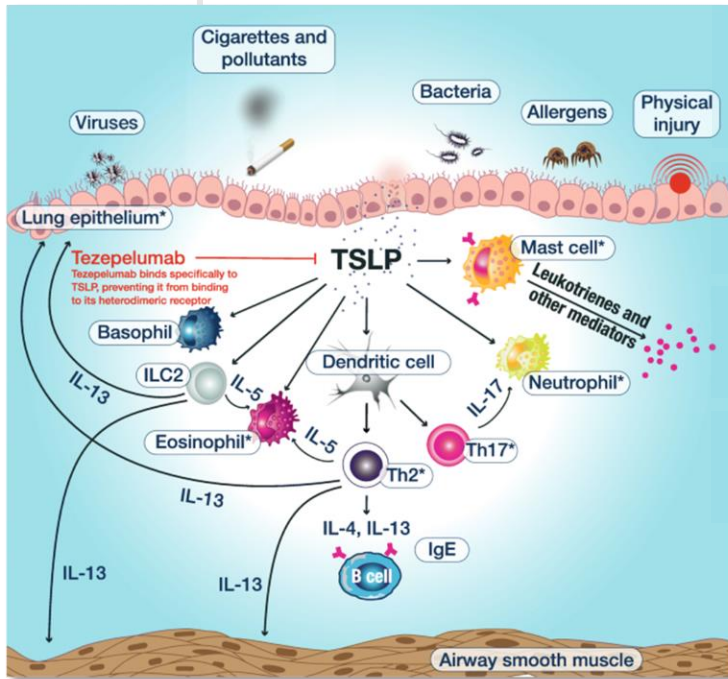


Estimated Cost

The marketed once weekly insulin : USD 28/week;
(~RM 115)/week

Tezepelumab for Severe Uncontrolled Asthma

By Pn. Nurfarah Aqilah Ahmad Nizam



01

About Tezepelumab/Tezpire™

A thymic stromal lymphopoietin (TSLP) blocker, human monoclonal antibody (IgG2λ)

02

Route of Administration

Subcutaneous or intravenously

03

Dosage

210 mg administered once every 4 weeks

04

Developer

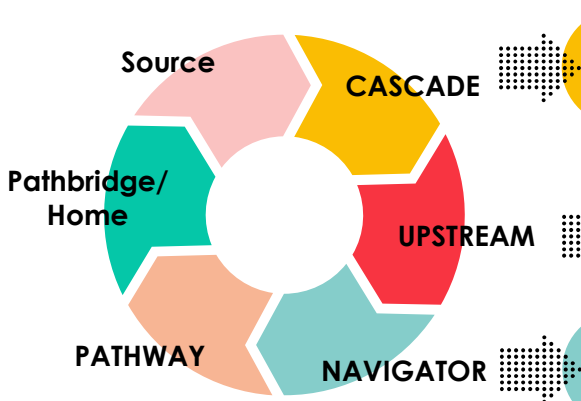
AstraZeneca in collaboration with Amgen

05

Indication

Add-on maintenance treatment of adult and paediatric patients aged 12 years and older with severe asthma

Tezepelumab Trials Finding



In CASCADe trial, tezepelumab reduced eosinophils in airway tissue compared with placebo across subgroups of baseline eosinophils in airway tissue compared to placebo, across subgroups of baseline blood eosinophils count, FeNO level and allergic status.

Improvement in prebronchodilator FEV1 in tezepelumab treatment group was observed in the UPSTREAM trial.

NAVIGATOR and PATHWAY trials showed statistically significant and clinically meaningful reduction in the annualised asthma exacerbation rate compared with placebo.

SAFETY

The most frequently reported adverse events were nasopharyngitis, upper respiratory tract infection and headache.

No clinically meaningful differences in safety results between the tezepelumab and placebo groups.

COST

ICER's health-benefit price benchmark (HBPB) range for tezepelumab is between \$9,000 - \$12,100 per year.

Tezepelumab offers another alternative to severe, uncontrolled asthma patients and has been shown to be effective and safe in clinical trials. However, these benefits need to be weighed with high cost of the treatment.

Management of Gout (Second Edition)

By Dr. Noor Ayuni Bazura Muhamad

Gout is a disease caused by monosodium urate crystal deposition with any of the following clinical presentations (current or prior): gout flare, chronic gouty arthritis, or subcutaneous tophus.

Prophylaxis for gout flares should be used for at least 3 - 6 months when initiating ULT. The preferred choices are stepwise dose increase of ULT and/or concomitant colchicine.

Gout flare should be treated promptly & adequately with colchicine, nonsteroidal anti-inflammatory drugs/cyclooxygenase-2 inhibitors or corticosteroids. The choice of drug is guided by patient's concomitant comorbidities.

For ULT, allopurinol is the first-line therapy (start low, go slow). When allopurinol is contraindicated or not tolerated, febuxostat or uricosuric agents can be considered.

Not all hyperuricaemic individuals develop MSU crystal deposition or gout. There is insufficient evidence to recommend urate-lowering therapy (ULT) to treat asymptomatic hyperuricaemia.

Modifiable risk factors of gout include obesity/overweight, alcohol, high-fructose corn syrup, red meat, seafood (except n-3 polyunsaturated fatty acid rich fish) & medications especially diuretics.

Gout can be prevented by adopting a healthy lifestyle which includes maintenance of a healthy body weight, avoidance of alcohol & adherence to Dietary Approaches to Stop Hypertension diet. Diuretics should be replaced by an alternative drug, if possible, when used as an antihypertensive agent to reduce the risk of gout.

Screening for comorbidities associated with gout e.g. hypertension, diabetes mellitus, hyperlipidaemia, coronary heart disease & renal disease including urolithiasis should be done upon diagnosis & during follow-up.

The ACR-EULAR 2015 Classification Criteria

(<http://goutclassificationcalculator.auckland.ac.nz> or <https://www.mdcalc.com/acr-eular-gout-classification-criteria>) can be used to diagnose gout based on clinical features & serum urate (SU). A score of ≥ 8 classifies a patient as having gout.

Treat-to-target (T2T) strategy aiming for SU $< 360 \mu\text{mol/L}$ should be applied in the treatment of all gout patients including those with chronic kidney disease.



Management of Schizophrenia (Second Edition)

By Dr. Noor Ayuni Bazura Muhamad

Schizophrenia is a major psychiatric disorder that alters an individual's perception, thought, affect & behaviour which are manifested by positive symptoms, negative symptoms, cognitive dysfunction, mood symptoms & motor symptoms.

Awareness towards patient's rights in schizophrenia should be incorporated in the training & service assessment to health care providers.

Pre-pregnancy care which includes counselling & multi-disciplinary care during pregnancy should be offered to all women with schizophrenia.

Service level interventions e.g. crisis intervention, assertive community treatment, intensive case management & early intervention in psychosis services should be offered for people with schizophrenia.

The clinical importance of duration of untreated psychosis is that it is a prognostic factor which can be altered through changes in health service delivery. Thus, health education or promotion, early referral and reducing stigma can address this issue.

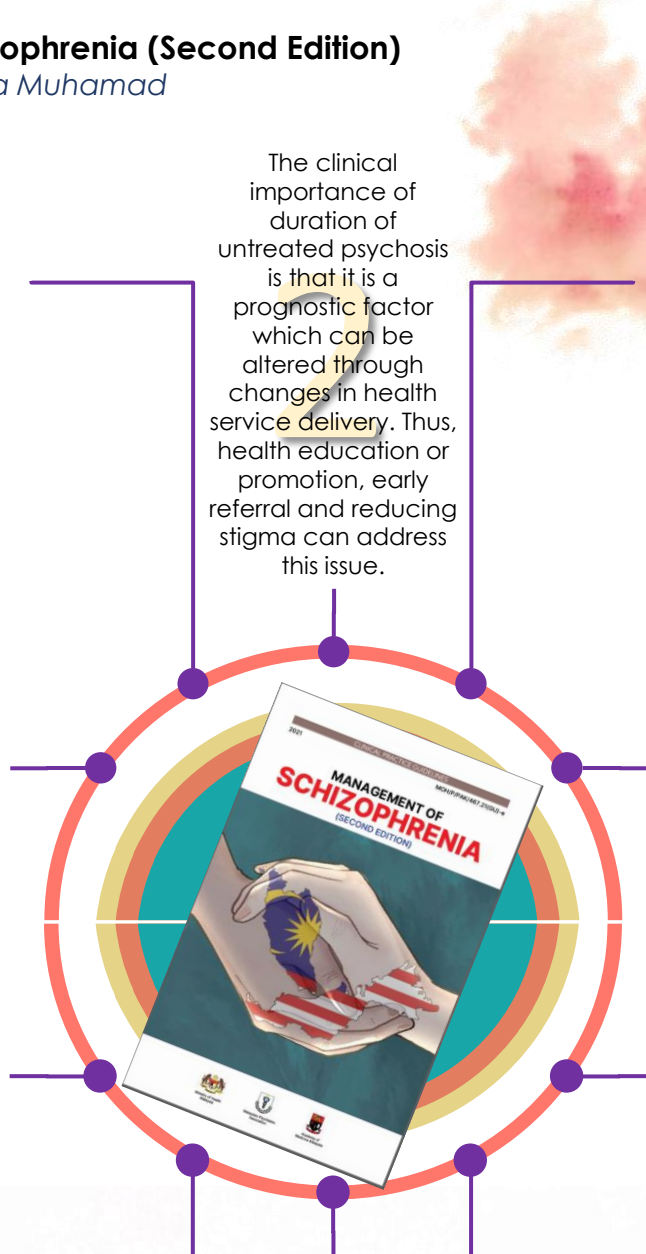
People with possible schizophrenia should be assessed thoroughly by history taking (self-report & collateral), physical examination, mental state examination & relevant investigations.

Substance-induced psychoses associated with cannabis, hallucinogens & amphetamines have an increased risk of transition to schizophrenia. Schizophrenia with co-morbid substance use disorder should be managed by psychiatrist.

In acute & relapse prevention phases, the modalities of treatment in schizophrenia are pharmacological, physical, psychosocial & service level interventions.

Psychosocial interventions should be offered in schizophrenia particularly psychoeducation (which includes early warning signs interventions) & supported employment.

Antipsychotics (APs) should be offered in schizophrenia as it is the mainstay of the treatment in acute & relapse prevention. Second-generation APs are the preferred choice. Clozapine should be offered in treatment-resistant schizophrenia & persistent suicidal risk.



Management of Tuberculosis (Fourth Edition)

By Dr. Noor Ayuni Bazura Muhamad

1
The vision of the Malaysian Tuberculosis (TB) Control Programme is for Malaysia to be a TB-free country by 2035.

10
Isoniazid & rifampicin interact with a broad range of commonly used medications. These medications may need to be switched or have their dose adjusted.

10
Adverse drug reaction (ADR) should be recognised early & managed well to reduce treatment-related morbidity & mortality, & to inspire confidence in the patient.

Active TB must be ruled out before starting latent TB infection (LTBI) treatment. Shorter LTBI treatment regimens are preferred in eligible individuals without contraindications.

Adults with productive cough, haemoptysis, loss of appetite, unexplained weight loss, fever, night sweats & fatigue should be screened for pulmonary TB (PTB).

TB disease in children is mostly paucibacillary with non-specific signs & symptoms. It could be disseminated especially in young children. In children <5 years old, additional symptoms include anorexia, failure to thrive, poor feeding & decreased activities or playfulness. Therefore, a high index of suspicion is needed for the diagnosis.

Testing with Xpert Ultra & mycobacterial culture should be done as part of assessment for the diagnosis of smear negative & extrapulmonary tuberculosis (EPTB). Chest radiograph (CXR) should be done in people with suspected EPTB to rule out concomitant PTB.

The standard treatment regimens for drug susceptible TB are:

- PTB - 2EHRZ/4HR (8 weeks of EHRZ, 18 weeks of HR)
- TB meningitis - 2EHRZ/10HR
- bone & joint TB - 2EHRZ/4 - 7HR
- other forms of EPTB - 2EHRZ/4HR

Adjunctive corticosteroids should be given in tuberculous meningitis & pericarditis.

5
6
Fixed-Dose Combination (FDC) tablets or flavoured, dispersible child-friendly FDC should be used to treat active TB.

Rifabutin should be used instead of rifampicin for HIV-TB co-infected patients on protease inhibitors or integrase strand transfer inhibitors.



INAHTA Impact Story Sharing: David Hailey Award for Best Impact Story (21 September 2021)

By Dr. Erni Zurina Romli

An exceptional moment for MaHTAS as a member of the International Network of Agencies for Health Technology Assessment (INAHTA) for being selected as top three finalists for the David Halley Award for Best Impact Story in INAHTA Congress 2021. INAHTA is a network of 49 international HTA agencies from 31 countries. All members are publicly funded, non-profit organisations producing HTA and linked to either regional or national government. An impact story sharing is an important activity of the INAHTA Annual Congress, showcasing the mechanism of HTA impact on the decision making at various levels of the health system.

Every year, INAHTA member countries are given the opportunity to tell their stories (the success and challenges) which can be used as reference for other members to improve their HTA process. In accordance with year 2021 theme 'Adapting To Changing Times', Dr. Erni Zurina Romli representing MaHTAS, delivered a story of how COVID-19 pandemic has made a significant impact in defining the crucial role of MaHTAS as Health Technology Assessment (HTA) agency in Malaysia especially in tackling COVID-19 infodemic.



The International Guideline Credentialing and Certification (INGUIDE) Program Level I (17 September 2021)

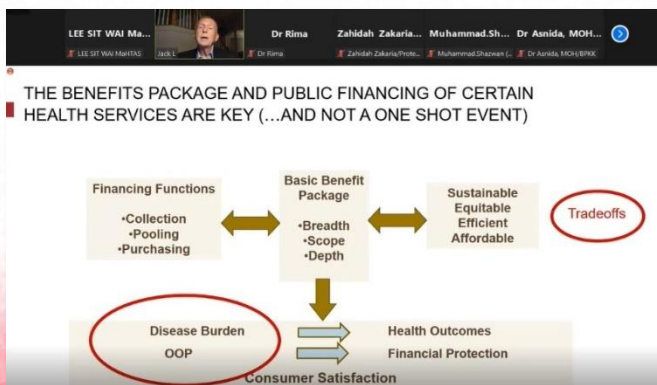
By Pn. Mariam Mohtar

Three MaHTAS staffs had completed the INGUIDE Program Level I. The program consists of four levels and aims to train and certify individuals and groups from around the world to produce high-quality clinical practice guidelines. The program is an, evidence-based, and up-to-date training program for guideline recommendation and development.



Strategic Purchasing Workshop (21 September - 11 December 2021)

By Pn. Ku Nurhasni Ku Abdul Rahim



Eight senior officers from MaHTAS had attended a strategic purchasing workshop organised by National Health Financing Section, Ministry of Health Malaysia and ProtectHealth Corp in collaboration with World Health Organization, and guided by Aceso Global, to understand the basics of strategic purchasing and its used by governments to contract services. In this workshop, the attendees had also learned the basic policy levers available to policymakers that affect purchasing decisions and some challenges from global experiences.

**The 9th HTAsiaLink Annual Conference
Theme of “Global Health Technology
Assessment (HTA) Practices in Asia:
Bridging True Evidence-to-the UHC Benefits
Adjustments”(11 - 13 October 2021)**

By Dr. Aidatul Azura Abdul Rani



An online conference was conducted with most MaHTAS officers were able to attend and benefit from the knowledge shared. MaHTAS presented two studies titled: *Impact of Health Technology Assessment Reports for Evidence-Informed Decision Making in Malaysia* and *Human Papilloma Virus (HPV) Vaccination*.

A board member council meeting was held at the end of the conference. Congratulations to Malaysia for being elected to host the 11th HTAsiaLink Annual Conference 2023 in Kuala Lumpur and the President of HTAsiaLink for 2023.

**Guidelines-International-Network (GIN)
Conference 2021 (25 - 27 October 2021)**

By Dr. Mohd. Aminuddin Mohd. Yusof

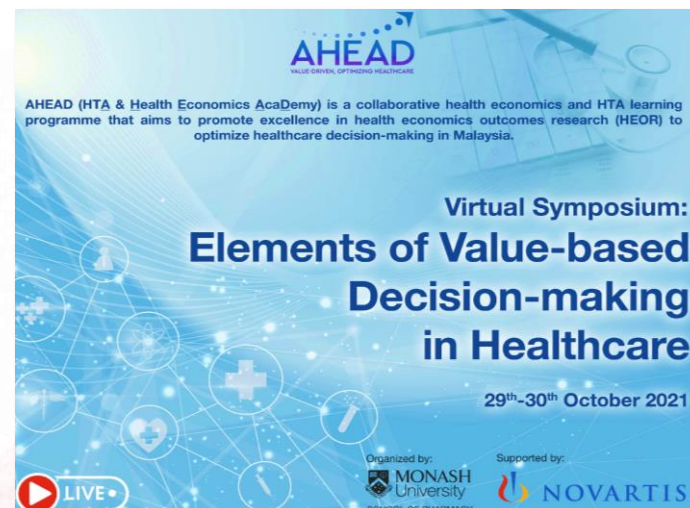
Three staff from CPG Unit attended the above conference virtually. The 15th GIN Conference was the first ever fully virtual event. It's theme was Future Forward; Relevant, implementable and sustainable guidelines. The staff mainly joined parallel sessions on CPG implementation.



**Virtual Symposium: Elements of
Value-based Decision-making in
Healthcare (29-30 October 2021)**

By Pn. Maharita Ab. Rahman

The two-day symposium aimed to contribute a discussion on value by reconciling the various perspectives and approaches towards value-based decision-making and policies in health system. The symposium involved many experts in the region from different specialties including health economics, public health, oncology, immunisation and health technology assessment to discuss the current and future developments of value-based healthcare and its challenges.



**ISPOR Health Technology Assessment (HTA)
Roundtable - Asia Pacific 2021
(9 November 2021)**

By Pn. Siti Aisah Fadzilah

The roundtable focused on the lifecycle HTA approach and innovative contracting panel. It was a platform to exchange information, methods and knowledge among key decision-makers on the development of HTA in the region and share experiences between participants. Dr. Izzuna Mudla Mohamed Ghazali, the Deputy Director of MaHTAS was invited as one of the speakers to provide her perspective and share MAHTAS knowledge in implementing the lifecycle HTA approach with the other organisations who attended the roundtable.



**Introduction to Health Economic Modelling
for Infectious Diseases Workshop
(22 - 23 November 2021)**

By Cik Nurkhodrulnada Muhammad Lateppi

A two-day hands-on training workshop was organised in collaboration with World Health Organization Representative Office for Malaysia, Brunei Darussalam and Singapore, and University of Melbourne. Drawing examples from COVID-19 and tuberculosis, the SPECTRUM and SPARK training team gave a basic understanding of common infectious disease models including approaches in developing and calibrating mathematical models, key input

parameters and identifying of them. Furthermore, participants were also exposed to concepts in health economics and economic evaluation. It was participated by 33 Ministry of Health officers from MaHTAS, Hospital Management Services Unit and two participants from Universiti Kebangsaan Malaysia. This workshop was a great capacity building opportunity for all the participants as infectious disease modelling and economic analysis can be used to evaluate alternative health policies and provide evidence on the expected health impact, cost and value of different strategies available to policy makers and guide their decision making.

**The Economic Modelling of the Impact of
COVID-19 in Malaysia in Collaboration with
University of Melbourne
(October - December 2021)**

By Pn. Ku Nurhasni Ku Abdul Rahim



Medical Development Division in collaboration with The National University of Malaysia, The University of Melbourne and WHO Representative Office for Malaysia, Brunei Darussalam and Singapore had conducted an economic modelling research (NMRR ID-21-02473-GJ7). This research aimed to estimate the direct medical costs associated with COVID-19 on Malaysia's public healthcare system from government perspective, the burden of disease and productivity losses associated with COVID-19 and related premature mortality.

**iHTS Annual Membership Meeting 2021
(10 December 2021)**

By Dr. Asliza Ayub

iHTS Annual Membership Meeting 2021 was successfully held virtually at 5 pm Malaysian Time. The meeting which lasted for about three hours and a half, brought together international governments, health professionals, healthcare providers, health services purchasers, commissioners and also decision makers from all around the world for an exchange dialogue within organisation, with presentation of group activities, financial reports and also the strategic plan for year 2021 till 2025.



International Health Techscan (iHTS) is a public-funded global network of early awareness and alert (EAA) systems for new and emerging health technologies. It functions as an international platform for all the members to share their skills and experience on their horizon scanning activities. This collaboration is important for our organisation to flourish our skills and maintain the standard of our assessment at par with other agencies internationally.

**Asia Policy Forum
(6, 8, 10 December 2021)**

By Pn. Ros Aziah Mohd Rashid

The 9th HTAi Asia Policy Forum was held virtually and attended by 68 participants from HTA agencies and industries from around the region. This platform engaged senior representatives in strategic discussions without the constraint associated with discussion of specific product/ technologies or organisational policies. MaHTAS were represented by Dr. Izzuna Mudla Mohamed Ghazali, the Deputy Director and Dr. Roza Sarimin, the Head of HTA Unit.

The delegates explored impact of COVID-19 on healthcare systems. Three key presentations were delivered titled “Japanese Health System Reforms” by Dr. Takashi Fukuda, “HTA in a Post-Covid Era” by Professor Tracy Merlin and “Healthcare Innovations, HTA and Policy: COVID-19 and Beyond” by Professor Kanchan Mukherjee. The opportunities and challenges faced by HTA agencies and industries during COVID-19 pandemic were also discussed and deliberated during the breakout sessions.

**International Health Techscan (i-HTS)–
MaHTAS collaboration for WHO Compendium
of Innovative Health Technologies for Low
Resource Settings (18 November - 13 December 2021)**

By Pn. Nurfarah Aqilah Ahmad Nizam



Three MAHTAS reviewers had successfully participated in the collaboration between WHO and i-HTS to provide technical evaluation on 33 innovations for inclusion in the 2021 Compendium of Innovative Technologies for Low Resource Settings. The evaluation included assessing the technology's transferability and issues related to the use of these technologies in the low-to-middle-income countries.

Respire Webinar: Is Malaysia Ready for a Digital Transformation in Healthcare? (31 July 2021)

By Pn. Siti Aisah Fadzilah

The half-day online webinar, organised by Respire Malaysia, gathered professionals in digital healthcare who discussed the untapped potential digital health technologies that can be initiated in Malaysia. Dr Izzuna Mudla Mohamed Ghazali, the Head of MaHTAS, was invited as a speaker and panelist, and delivered her talk on accelerating digital transformation in healthcare: the pitfalls and opportunities in Malaysia.

IS MALAYSIA READY FOR A DIGITAL TRANSFORMATION IN HEALTHCARE?

Saturday 31 JULY 2021
10am - 12pm
zoom

Programme

- 9:00 - 9:15 Opening and Introduction
- 9:15 - 10:30 Accelerating digital transformation in healthcare: pitfalls and opportunities in Malaysia
- 10:30 - 10:45 Digital health strategies for management for chronic respiratory disease: the case of asthma and COPD
- 10:45 - 10:55 Future of digital health in Malaysia: forging partnerships with the industry
- 11:00 - 11:00 Development of mobile application for asthma action plan (e-PAAP) for people with limited health literacy
- 11:25 - 11:30 Panel Discussion

Moderator:
A/Prof. Dr. Cheong Ai Theng
Head of Department, Family Medicine, UPM

Speakers:
Dr. Isrena Huda Ghazali
Head of Services Screening, Comm and Info Use MaHTAS, Health
A/Prof. Dr. Andrea Bee Yakin
Senior Consultant Physician & Pharmacologist, UICM UPM, Chairman, CPIC, Management of Asthma in Adults
A/Prof. Dr. Shaiful Jahari Hasbani
Computer & Communication Systems Engineering, UPM
Dr. Hani Syahida Salim
PhD Candidate, University of Edinburgh, Family Medicine, UPM

Register here for FREE!

bit.ly/RESPIEdigital

ORGANISED BY RESPIRE MALAYSIA

Does UV Radiation Kill COVID-19 Viruses? (9 September 2021)

By Dr. Roza Sarimin

A webinar was successfully organised by the Malaysian Nuclear Agency, Ministry of Science, Technology & Innovation (MOSTI) with a line-up of international and local experts on the field. It focused on the use of UVC for disinfection, safety concern, regulatory requirement and current international standard on UV-light application. The aim was to disseminate information and awareness on UV radiation safety and its application. Audiences were mix of scientists, researchers, health practitioners, engineers, suppliers and the public. Dr. Roza Sarimin represented MaHTAS and delivered a topic on 'UVC radiation in health: evidence-based approach'.



National Seminar for Quality in Healthcare (5 October 2021)

By Dr. Roza Sarimin

National Seminar for Quality in Healthcare (NPQH) was held by Institute for Health System Research (IHSR) with the theme 'Bridging silo, accelerating improvements'. In this event, the National Policy for Quality In Healthcare (NPQH) was launched by YBhg. Tan Sri Dato' Seri Dr. Noor Hisham Abdullah who delivered keynote address as well. Several speakers highlighted topics pertinent on quality in healthcare including Dr. Shams Syed from Department of Integrated Health Services, WHO Geneva. MaHTAS contributed to the NPQH

through series of stakeholder engagement together with National Quality Improvement Initiative (QII) Leads, Quality Key Players (State) and Quality Champions, and provided an e-poster to the seminar entitled 'Guidelines in Clinical Practice: the essence of quality in healthcare'. The NPQH is a country level document which provide an official, explicit statement of the policy and strategies required to enhance the quality of Malaysia's health care system. Seven Strategic Priorities Areas were highlighted in the NPQH implementation framework.

Systematic Review on Evidence-based Clinical Practice Guidelines Development & Implementation Workshop (4 October 2021)

By Dr. Parveen Thanabalen

On 4th Oct 2021, a systematic review course on evidence-based CPG was conducted virtually by the CPG Unit of MaHTAS. It was attended by 49 participants virtually consisting of physicians, pharmacists and allied health officers involved in the development of various CPGs (Management of Systemic Lupus Erythematosus, Management of Retinopathy of Prematurity, Management of Thalassemia (Second Edition), Management of Cancer Pain (Second Edition), Management of Geriatric Hip Fracture, Management of Obstructive Sleep Apnoea and Rehabilitation of Adults with Moderate to Severe Traumatic Brain Injury).



Lectures on steps in CPG development e.g. literature search, critical appraisal of different study designs and AGREE II were delivered to the participants. Thanks, and congratulations to all participants, lecturers and the secretariat team on the success of the training.

Training of the Core Trainers (ToT) on CPG Management of Chronic Hepatitis C in Adults (18 November 2021)

By Matron Rosazaddilah Azaddin

MaHTAS conducted the ToT at Everly Hotel, Putrajaya. The objectives of the ToT were to disseminate contents of the CPG and train healthcare providers on it. It was also to deliver all components related to implementations of the CPG systematically and effectively. Thank you to all 71 participants who attended virtually and fully engaged in all lectures and discussions.



Training of the Core Trainers (ToT) on CPG Management of Breast Cancer (Third Edition) (29 - 30 November 2021)

By Dr. Nur Hanani Mat Daud

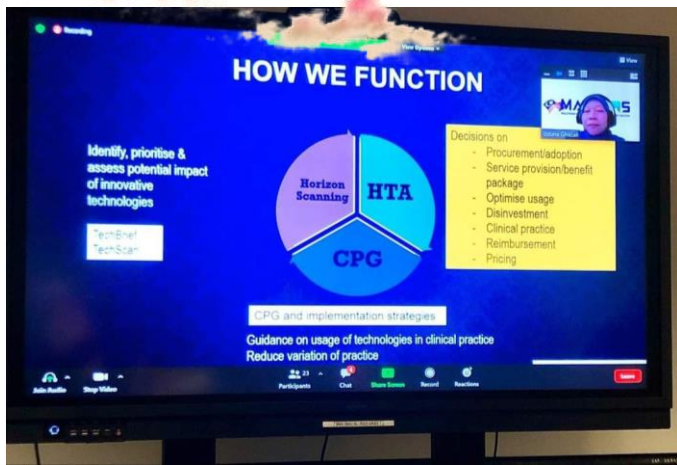
The training was organised by MaHTAS at National Cancer Institute, Putrajaya. The objectives were to actively disseminate the contents of the CPG and train healthcare providers in the management of breast cancer in any healthcare settings in Malaysia. It was also held to assist the 'trainers' in delivering all components related to the implementation of the CPG systematically and effectively.

A total of 59 participants comprising of multidisciplinary specialists (Breast and Endocrine Surgeons, General Surgeons, Oncologists, Radiologists and Family Physicians) from the Ministry of Health and selected local universities attended the training of interactive lectures and case discussions.



Health Technology Assessment Training for Expert Committee Members 2021-2022
(30 November 2021)

By En. Syful Azlie Md. Fuzi



HTA expert committee members usually consist of experts from various clinical fields and professional background who provide technical input on the subject matter pertaining to the technology being assessed. MaHTAS strives to provide an inclusive HTA training which covers topics such as HTA work process, formulating question and search strategy, critical appraisal of different study designs, evidence synthesis and economic evaluation. Such training is part of our capacity building initiative for healthcare professionals under the Ministry of Health Malaysia. It is hope that the new HTA members enjoyed the training and we look forward to working with all of them.

What a great turnout with the first HTA Training for Expert Committee this year which was held in a hybrid mode. This training was organised for new expert committee members who are about to engage in the preparation of report for HTA topics 2021 - 2022.

Launching on CPG Management of Dengue in Children (Second Edition) & CPG Management of ADHD (Second Edition)
(23 December 2021)

By Dr. Karen Sharmini Sandanasamy

Despite the continuance of COVID-19 pandemic situation, the launch of two Clinical Practice Guidelines (CPG) on Management of Dengue in Children and Management of ADHD in Children & Adolescents was virtually conducted by the Honourable Director General of Health Malaysia. The objective of the launch is to actively disseminate on the availability of the CPG and assist healthcare providers in the management of these conditions in various health settings in Malaysia.

It is hope that these evidence-based CPGs improve both the quality or process of healthcare as well as patient outcomes.

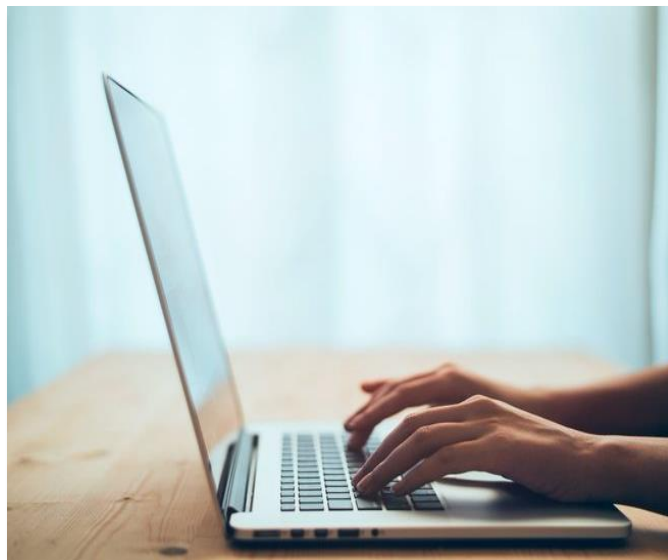
All evidence-based CPG produced by MaHTAS goes through a development process involving multidisciplinary groups based on prioritisation to the disease burden and the availability of reliable good quality evidence.



MaHTAS Writing Guide for Authors (25 August 2021)

By Dr. Ana Fizalinda Abdullah Sani

This guideline has been developed to provide guidance for authors in Malaysian Health Technology Assessment Section (MaHTAS) in writing technical reports including Health Technology Assessment (HTA), Technology Review (Mini-HTA), Information Brief (Rapid Review) or any other type of technical report produced by MaHTAS. This guidance aims to standardise the style of writing by authors in MaHTAS so, the technical reports are uniformly written in MaHTAS style consistently, generating more credible and higher quality reports.



Introduction to Economic Evaluation (27 October 2021)

By En. Lee Sit Wai

An echo training was given to MaHTAS reviewers after some officers attended an online course in decision modelling for health economic evaluation. The reviewers were introduced the concept of economic evaluation, the characteristic of decision tree, Markov models, diagnostic, probabilistic analysis, values of information and presenting results to the policy makers.

ONLINE COURSES IN DECISION MODELLING FOR HEALTH ECONOMIC EVALUATION

LEE SIT WAI

BPharm (USM), MMedSc (Community Health) UKM
Malaysian Health Technology Assessment Section (MaHTAS)
Medical Development Division
Ministry of Health
swlee@moh.gov.my



Introduction to Literature Search (28 October 2021)

By En. Lee Sit Wai

MaHTAS has a systematic search strategy steps to retrieve evidences from the available resources. A brief introduction was given to the reviewers on what are the available tools at MaHTAS and how reviewers can apply the tools systematically. This session equipped the reviewers with the basic knowledge and skills to undergo evidence search for these topics.

Objective

1. To understand search strategy (6 steps of systematic search)
2. To familiar with choices of information sources
3. To utilise the tools available for MaHTAS



**Vice President HTAsialink 2022:
Dr Izzuna Mudla Mohamed Ghazali**

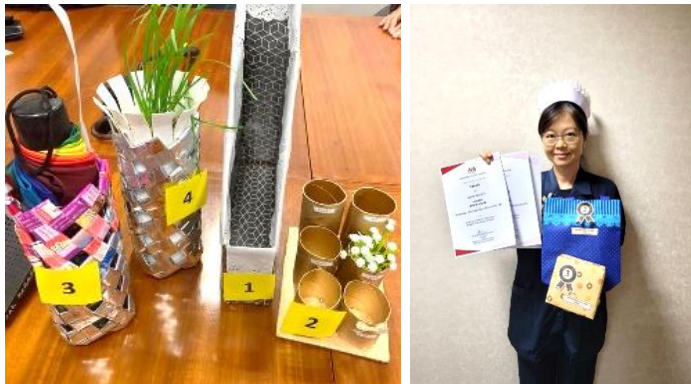
By Pn. Siti Aisah Fadzilah & Pn. Siti Mariam Mohtar

Thousands of congratulation to Dr. Izzuna Mudla Mohamed Ghazali on her appointment as vice president of HTAsialink. She was appointed by the HTAsialink board members in the recent HTAsialink 2021 board meeting. Her efforts and contributions to be representing the country are appreciated and commended. Congratulations again.



EKSA: Pertandingan Mencipta Bahan Kitar Semula & Teka Silang Kata 2021

By Pn. Balqis Abdul Ghani



MaHTAS had participated in these activities organised by JKK Promosi EKSA Zon Perkembangan. Congratulations to all winners!

Pertandingan Mencipta Bahan Kitar Semula

1st winner: Pn Nurul Akhma Abdul Hamid

Stationary Holder

2nd winner: Matron Wong Wai Chee

Umbrella/Bottle holder

3rd winner: Matron Wong Wai Chee

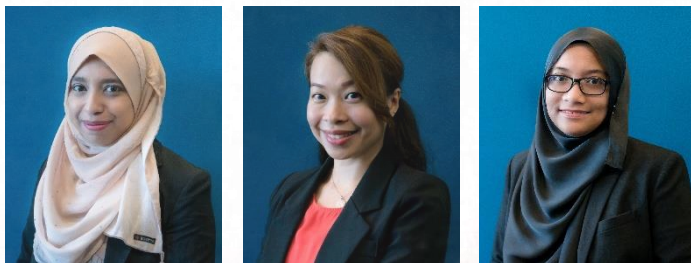
Mosquito-free mini green house

Teka Silang Kata

Consolation prize: Pn Nurul Akhma Abdul Hamid

Capacity Building: Master & PhD

By Pn. Siti Mariam Mohtar



Capacity building is important to enhance competencies and skills. One of MaHTAS staff, Dr. Nur Farhana Mohamad, has won Health Technology Assessment International (HTAi) Educational Scholarship and currently doing her Master in Public Health at Universiti Putra Malaysia.

Ms. Gan Yan Nee has been accepted into Malaysian Implementation Science Training (MIST) Programme. MIST is a joint partnership between Universiti Malaya and Yale University in which the scholars will complete the MIST training concurrently with their PhD training. Another MaHTAS staff, Pn. Siti Mariam Mohtar is currently studying for a Master of Public Health at Universiti Malaya.



MOH Website

Most-viewed Reports

Technology Review:
Phytotherapy for
Autism and Attention
Deficit Hyperactive
Disorder (ADHD)

118

Technology
Review:
Biocompatible
Peritoneal Dialysis
(PD) Solution

75



MOH Website

Most-viewed CPG: by system

Cardiovascular
System

25,497

Endocrine
System

11,384



MOH Website

Most-viewed MaHTAS COVID-19 Rapid Evidence Updates

Antimicrobial Nano-
Silver Sanitizer Spray

117

Facebook

Most-engaged Posts

Reach
5700

MaHTAS COVID-19 Rapid
Evidence Updates:
Ivermectin for Treatment of
COVID-19



Reach
2100

Clinical Practice Guidelines:
Management of Dementia
(Third Edition)



MaHTAS Stories in News



TheRakyatPost.com

Not Sure If Something's
Effective Against COVID-19?
Ask MaHTAS



MyKMU.net

KKM MaHTAS Tegaskan
Tiada Keberkesanan Guna
Nano Mist Spray Cegah
COVID-19

**Health Technology Assessment Training for
TAC Members 2022-2024**
(30 June 2022)

**Training of the Core Trainers on CPG
Management of Gout (Second Edition)**
(23 June 2022)

Business Canvas Model Workshop
(11 - 12 April 2022)

**Training of the Core Trainers on CPG
Management of Dengue
in Children (Second Edition)**
(22 March 2022)

**Health Technology Assessment Training for
Expert Committee Members 2021-2022**
(30 November 2021)

**Introduction to Infectious Disease Modelling
and Economic Evaluation for Infectious
Diseases Workshop**
(22 - 23 November 2021)

**Systematic Review on Evidence-based
Clinical Practice Guidelines Development &
Implementation Workshop 2/2021**
(4 October 2021)

**Training of the Core Trainers on CPG
Management of E-Cigarette or Vaping Product
Use-Associated Lung Injury (EVALI)**
(27 June 2022)

**Training of the Core Trainers on CPG
Management of Dementia (Third Edition)**
(15 June 2022)

**Training of the Core Trainers on CPG
Management of Attention Deficit Hyperactive
Disorder (Second Edition)**
(29 March 2022)

**Systematic Review on Evidence-based Clinical
Practice Guidelines Development &
Implementation Workshop 1/2022**
(14 - 16 March 2022)

**Training of the Core Trainers on CPG
Management of Breast Cancer (Third Edition)**
(29 - 30 November 2021)

**Training of the Core Trainers on CPG
Management of Chronic Hepatitis C in Adults**
(18 November 2021)



Dr. Izzuna Mudla Mohamed Ghazali

Advisor



Dr. Mohd Aminuddin
Mohd Yusof



Pn. Siti Aisah
Fadzilah

Editors



Pn. Fatin Nabila Mokhtar

Designer



Dr. Roza
Sarimin



Dr. Syaquirah
Akmal



Pn. Ku Nurhasni
Ku Abdul Rahim



En. Lee Sif
Wai



Dr. Aidatul Azura
Abdul Rani



Dr. Ana Fizalinda
Abdullah Sani



Pn. Maharita
Ab Rahman



Dr. Noor Ayuni
Bazura Muhamad



Cik
Nurkhodrulnada
Muhammad
Latepi



Dr. Asliza
Ayub



Pn. Afikah
Shaharudin



Dr. Karen Sharmini
Sandanasamy



Dr. Nur Hanani
Mat Daud



Dr. Parveen
Thanabalen



Dr. Norrina
Jamaluddin



Pn. Balqis
Abdul Ghani



En. Syful Azlie
Md Fuzi



Pn. Siti Mariam
Mohtar



Pn. Ros Aziah
Mohd Rashid



Matron
Rosazaddillah
Azaddin



Pn. Nurfarah Aqilah
Ahmad Nizam



Matron Wong
Wai Chee

Contributors

Welcome aboard!

En. Musa Amir
*from Hospital
Kuala Lumpur*



**Welcome
Aboard!**



**Dr. Mohamed
Hirman Abdullah**
*from Procurement &
Privatisation Division*

Pn. Rasenah Jamari
@ Haji Asmuni
*to Dental Health
Program*



Pn. Anita Abd Aziz
*from Planning
Division*



**En. Wan Mohd Nor
Fakarudin Wan Abdullah**
*to Hospital Besut,
Terengganu*

See you again!

**Connect
With
us!**

MaHTAS Malaysia



mymahtas



MaHTASMalaysia

