Ministry of Health Malaysia

MAHTAS e-NEWSLETTER

January 2020 – June 2020 | Volume 26

MALAYSIAN HEALTH TECHNOLOGY ASSESSMENT SECTION

MaHTAS Response to COVID-19

By MaHTAS COVID-19 Team

The COVID-19 pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has hit Malaysia early this year. During this time, MaHTAS has formed a dedicated team for COVID-19, which is a part of the Crisis Preparedness Response Centre (CPRC) for Hospital Services, Medical Programme. The main roles of the team include:

- updating the CPRC team on COVID-19 related guidelines by World Health Organization (WHO), United States Centre of Disease Control (US CDC) and other health organisations/countries.
- providing latest evidence through MaHTAS COVID-19 Rapid Evidence Reviews on various drugs/ interventions/ technologies related to COVID-19.
- projecting of hospital services requirements to support hospital preparedness during COVID-19 pandemic; in collaboration with WHO, University of New South Wales and Monash University, Australia.
- providing technical evaluation for innovations related to COVID-19.

MaHTAS has also formed another team responsible for formatting and designing MaHTAS COVID-19 Rapid Evidence Reviews. With the help of the Information Management Division, the team has created a dedicated site within the official MOH portal to enhance accessibility of the rapid reviews to a wider target audience including the public.

The MaHTAS rapid reviews have received mixed reactions from various parties. A few of the reviews; disinfection tunnels and face recognition temperature measurement terminal has been highlighted and quoted by the Director General of Health, Tan Sri Dato' Seri Dr. Noor Hisham bin Abdullah in his press conferences on updates of COVID-19 .

The team also has received a large number of enquiries from the public and private companies during the pandemic via telephone call, whatsapp, email and direct face-to-face communication. A strategic communication team was assembled to respond accordingly in a prompt manner. A frequently asked questions (FAQ) has been developed to guide other members in responding to the queries appropriately.

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RAPID REVIEW HIGHLIGHTS

IN BRIEF

DISINFECTION BOX/ CHAMBER/ TUNNEL/ BOOTH/ PARTITION/ GATE ON THE TRANSMISSION OF COVID-19

Based on available evidence up to 27 April 2020

By MaHTAS COVID-19 Team

Recently, industries have made various claims on the effectiveness of using disinfection delivered in a particular confined space to reduce the transmission of COVID-19. The disinfection procedure is usually by automated dispersion of disinfectant, activated by infra-red or motion sensors when an individual passes through the devices. There was **no retrievable scientific evidence from the scientific databases on the effectiveness and safety of disinfection box/ chamber/ tunnel/ booth/ partition/ gate on humans to reduce transmission of COVID-19**.

However, systematic search on SARS-CoV and MERS-CoV revealed that **coronavirus is sensitive to ultraviolet and heat**. Exposure to 56ºC for 30 minutes and lipid solvents such as ether, 75% ethanol, chlorine-containing disinfectant, peracetic and chloroform can effectively inactivate the virus. Chlorhexidine has not been effective in inactivating the virus. **The US CDC guidelines recommend the use of the United States Environmental Protection Agency (USEPA) registered disinfectant** to clean and disinfect facilities. The USEPA has listed out disinfectants that can be used against SARS-CoV-2. Among them are thymol, quaternary ammonium, isopropanol, ethanol, L-lactic acid etc. According to USEPA, these products are for use on surfaces but not humans. Most of the products listed **are suitable for hard nonporous surfaces** e.g. glass and metal. In addition, WHO does not recommend spraying the external part of the body using chemicals such as alcohol or chlorine as the process does not kill the viruses inside the human body. Besides, **the disinfectant solutions may also cause damage to the skin and mucosal membranes of the human body** (e.g. eyes and mouth). Hence, the use of disinfection box/ chamber/ tunnel/ booth/ partition/ gate in reducing the COVID-19 transmission **is not recommended yet, given the lack of scientific evidence and unclear risk benefit profile**.

EFFECTIVENESS OF FABRIC MASK IN THE COMMUNITY

Based on available evidence up to 16 June 2020

By Pn. Ku Nurhasni Ku Abdul Rahim

On 5 June 2020, the WHO published a new guidance on the use of masks for control of COVID-19 included an advice for governments encouraged the general public to wear masks in specific situations and settings as part of a comprehensive approach to suppress SARS-CoV-2 transmission. Similarly, the USCDC and the European Centre for Disease Prevention and Control (ECDC) also outlined that the public is encouraged to wear masks where there is widespread transmission and physical distancing is difficult, such as on public transport, in shops or in other confined or crowded environments. **Limited indirect evidence support the consideration of use of non-medical face masks made of various textiles in community settings** especially due to limited supply in which priority is given to healthcare workers and high risk person.

It is important to ensure that the fabric mask is designed to fit closely the nose, cheeks and chin of the wearer. Hybrid fabric, high density weaved cotton and multiple layers of fabric provide better filtration efficiency of a mask. **Fabric mask should not be shared and worn for an extended period** , and **should be changed if wet or visibly soiled**. It should also be washed frequently and handled carefully to avoid contamination. Nevertheless, face masks should always be accompanied with physical distancing, hand hygiene and other public health measures.

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RAPID REVIEW HIGHLIGHTS

IN BRIEF

SEROLOGY TEST FOR COVID-19

Based on available evidence up to 15 May 2020

By Dr. Syaqirah Akmal & En. Syful Azlie Md Fuzi

WHAT IS ALREADY KNOWN ON THIS TOPIC

- Serological tests to detect antibodies against severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) **could improve diagnosis of coronavirus disease 2019 (COVID-19)** and **useful tools for epidemiological surveillance**.
- The number of serological tests has rapidly increased and become available in a short period, including some marketed for use as rapid, point-of-care tests.
- The **evidence** supporting the diagnostic accuracy of these tests, however, **has not been formally evaluated**.

WHAT THIS REPORT ADDS

- **Available evidence does not support the continued use** of existing serological tests for definitive diagnosis of COVID-19.
- In the **acute phase** of illness, serology testing is **not recommended for triage, clinical use and diagnosis in the first 14 days of illness** because of high both false positive and negative rates.
- **Caution** is warranted if serological tests for COVID-19 was used for clinical decision making or epidemiological surveillance.
- **Higher quality clinical studies** assessing the diagnostic accuracy of serological tests for COVID-19 are **urgently needed.**

WALK IN SCREENING BOOTH FOR COVID-19

Based on available evidence up to 6 April 2020

By Dr. Syaqirah Akmal

Various Malaysian-based groups have developed walk-in screening booths for the use in local community clinics or hospitals. These booths; Project I3S cubicle®, COVID MoBile Test Unit (CoMBat®) and Covid-19 Screening Booth applied single booth, double booth and multiple booths concept, with a transparent plastic panel separating patient from medical worker. They are equipped with UV-C LED light operating, sterilisation nozzle to disinfect room and negative air pressure system with HEPA filtration.

There was **no retrievable evidence on effectiveness, safety and cost-effectiveness of walk-in screening booths in comparison to the conventional way of Covid-19 testing in hospital or clinic rooms**. The proposed testing booths seemed to have the potential for more efficient screening time, possibly cost-saving with reduction in PPE requirement while ensuring minimal physical contact between health frontliners and patients. Safety could be an issue should the barrier interface between health personnel and patient as well as the negative air pressure and disinfection mechanism become compromised. There is a quite range of costs estimated in creating and installing the products. On scene test run, incorporating actual workflow and safety procedure before use is recommended. Outcome studies examining the impact of these booths are also recommended. In-depth cost analysis comparing the three products and current screening practice could be helpful.

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RAPID REVIEW HIGHLIGHTS

IN BRIEF

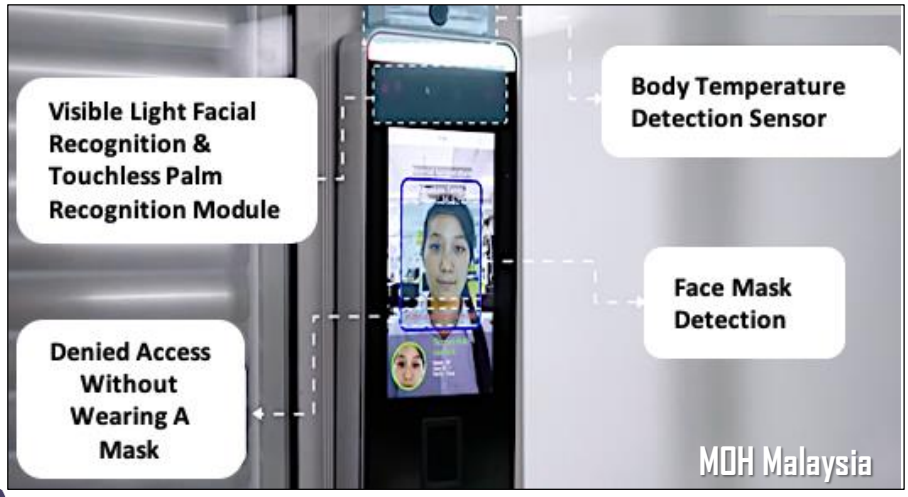
FACE RECOGNITION TEMPERATURE MEASUREMENT TERMINAL

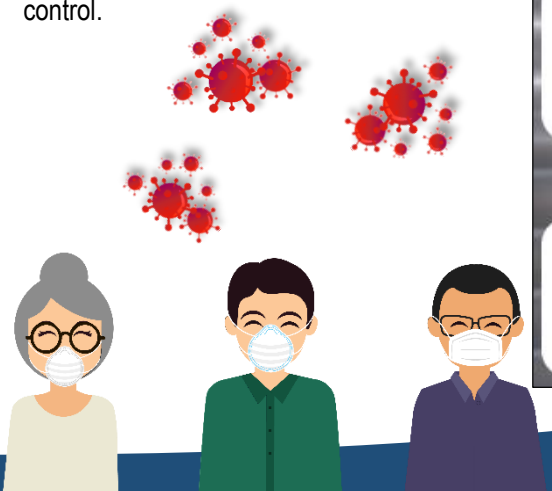
Based on available evidence up to 5 May 2020

By Dr. Erni Zurina Romli

The emergence of technologically advanced, high definition infrared thermal imaging (thermal scanner) with good processing capabilities and sensitivity have helped authorities to screen multiple individuals and automatically produce an alarming sound when the temperature screened exceeds the normal body temperature. Face recognition temperature measurement terminal is a terminal that combines contactless temperature measurement with mask detection and face recognition technology. It comprises of a tablet size device with camera on top and built-in deep learning algorithm for real-time facial recognition and automatic infrared thermal imaging (thermal scanner), even in the low light environment. For contactless temperature measurement, the infrared thermal imaging is able to detect and capture a person's forehead temperature in a very brief time within a distance range of 0.3 - 0.7 meters, with an accuracy of ±0.3 - 0.5°C (values may vary between brand and model). There are multiple installation methods provided, including tall stand, wall-mounted stand, desktop stand and stand for turnstile. This device can be used in any sorts of buildings/area that acquires access control.

The retrievable evidence on the **effectiveness of infrared thermal imaging/scanner has shown to have good performance** in identifying elevated body temperature, comparable to oral, tympanic, axilla and rectal thermometers. **However, it has a tendency to produce false positive result under certain circumstances** associated with metabolic- and environmental-induced heat stress. There was **no retrievable evidence on the safety**. However, **the use of infrared thermography is considered safe as it is non-invasive, contactless and non-radiant.** In conclusion, infrared thermal imaging/scanner can be used for rapid, mass fever detection as part of infection prevention and control measure.





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RAPID REVIEW HIGHLIGHTS

IN BRIEF

DISINFECTION OF OUTDOOR PLACES USING DRONE TECHNOLOGY

Based on available evidence up to 9 April 2020 By Dr. Zawiah Mansor

GENERAL USE OF DRONE TECHNOLOGY

- Used as delivery modality for medical products such as blood samples and microbiological specimens
- Used to spray pesticide in agricultural industries (with limitation in its effectiveness due to weather condition, unpredictable speed and direction of winds)

CONTROVERSIAL USE OF DRONE TECHNOLOGY IN BATTLING COVID-19

- Recently used by few countries for large scale misting of areas with disinfectants especially outdoor places
- Chlorine containing disinfectant such as sodium hypochlorite is commonly used in large scale misting using drones

EFFECTIVENESS & SAFETY

- **No retrievable evidence from scientific databases** such as Medline, EBM Reviews, Pubmed or peer review journal on the effectiveness and safety of large scale outdoor misting with disinfectant using drone technology.
- As the transmission of COVID-19 was through droplets and less frequently fomites, **Centre for Disease Control and Prevention (CDC) recommends cleaning frequently touched surfaces such as doorknob, handles, toilet with liquid disinfectant**.
- **Sodium hypochlorite** used in large area misting disinfection **may cause skin, upper airway and ocular irritation** upon exposure through skin and inhalation.
- **United States Environmental Protection Agency (EPA) does not recommend** use of fumigation wide-area spraying to control COVID-19.
- To date, **World Health Organization (WHO) made no recommendation supporting** the use of spraying/ misting chemical disinfecting agents in relation to COVID-19.

CONCLUSION

There **was no retrievable evidence from scientific databases regarding effectiveness and safety** of large scale outdoor misting with disinfectant using drone technology for COVID-19. CDC recommended cleaning frequently touched surfaces with appropriate disinfectant.

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OTHER COVID-19 RESPONSE & LESSON LEARNT

COVID-19 QUARANTINE & TREATMENT CENTRE (MAEPS)

By Dr. Md Anuar Abd Samad

The COVID-19 pandemic had opened up a lot of doors to the world in finding an innovative and unprecedented ways to combat and overcome the consequences that might arise if it remains unchecked. To complement the comprehensive plan that has been laid out to accommodate for the surge of new cases and its possible consequences, the Malaysian Agro Exposition Park Serdang or MAEPS, was converted into a makeshift temporary hospital to quarantine and treat low-risk COVID-19 patients within three days in late March 2020. It was the brainchild of *YAB* Prime Minister and entailed a multi-agency collaboration which include Ministry of Health (MOH), National Disaster Management Agency (NADMA), *Angkatan Tentera Malaysia* (ATM), *Polis Diraja Malaysia* (PDRM), *Jabatan Bomba & Penyelamat Malaysia* (JBPM), *Angkatan Pertahanan Awam Malaysia* (APM), *Jabatan Imigresen Malaysia*, *Jabatan Penjara Malaysia*, *Jabatan Sukarelawan Malaysia* (RELA), Malaysia Genome Institute (MGI), *Jabatan Kebajikan Masyarakat* (JKM), MAEPS and various private entities and non-government organisations (NGOs). As part of MOH massive mobilization of staff, three of MaHTAS personnel were recruited to assist in the operation of centre. Dr. Md Anuar Abd Samad @ Mahmood was appointed as the centre's director, Sister Rosnani Abdul Latif and Sister Zamilah Mat Jusoh @ Yusof were entrusted to be the nursing team leaders. Throughout the duration of the centre's operations, many milestones were achieved and history was made. From its earlier intention to be a stepdown centre, it was tasked to accept fresh cases and eventually converted to house immigration detainees from the various immigration depots which were affected by the pandemic. It opened its doors for business officially on 16 April 2020 and ceased the operation on 15 July 2020; it managed to treat 1362 patients (94% were males; 69% were *pendatang asing tanpa izin* or *PATI*) with the total workforce of 1157 personnel from various agencies (665 medical and 492 security personnel). The centre also deployed various new technologies in its everyday operation; robotic technology to assist in food serving to the patient, electronic medical record in patients' medical record management as well as thermal and optical scanner in staff health surveillance. It had been a privilege and an invaluable experience for those involved with the hope that their small contribution and sacrifice will help the country to win the battle against the pandemic and ensure that everybody in Malaysia will be safe and can continue to live a normal life within the new normal environment.

COVID-19: LESSON LEARNT & WAY FORWARD

By MaHTAS COVID-19 Team

The COVID-19 pandemic has provided MaHTAS with valuable lessons to be adaptive, agile and responsive in providing evidence to meet the needs of policy makers in this crisis despite the uncertainties and rapidly evolving evidence. This outbreak did inevitably enhance our capacity as a credible evidence provider in the country and provide us with opportunities to be more resilient in the future. To cater for the evidence needed in managing COVID-19, other non-urgent projects have to be re-prioritised and alternative online working platform has been explored.

Moving forward, the team aspires to expand and strengthen the MaHTAS capacity in exploring new possibilities such as developing a model for future disease projection by using advanced data science and software in battling COVID-19 and perhaps other diseases.

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LOCAL ACTIVITIES

SYSTEMATIC REVIEW ON EVIDENCE-BASED CLINICAL PRACTICE GUIDELINES (CPG) DEVELOPMENT AND IMPLEMENTATION 1/2020

By Dr. Noor Ayuni Bazura Mohamad

The above systematic review workshop was organised to train the multidisciplinary development group for the CPG on Management of E-cigarette and Vaping-Related Lung Injury (EVALI) following a request from the Director General of Health Malaysia. It was held on 3 - 5 February 2020 at Block E1, Ministry of Health, Putrajaya. The training aimed to provide knowledge and skills in developing an evidence-based Clinical Practice Guidelines (CPG) and its implementation. Among topics covered were CPG work process, retrieval of evidence, critical appraisal of different study designs, analysis and synthesis of evidence, and also implementation strategies of the CPG.

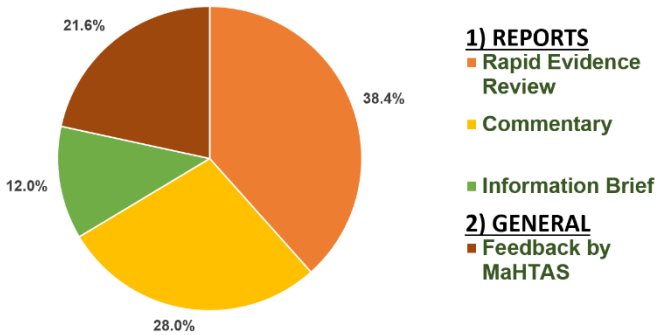
Group works/ presentations and hand-on session were also conducted to enhance the understanding of the participants on the subjects. Participants interacted enthusiastically during the workshop and gave encouraging feedbacks.

MaHTAS SURVEILLANCE RESPONSE

By Dr. Syaqirah Akmal

During the COVID-19 pandemic, MaHTAS became part of the CPRC for Hospital Services, Medical Programme, which was formed on March 15, 2020. Since early 2020, MaHTAS had started receiving an increasing number of requests for assessment on various technologies pertaining to Influenza-like illness. MaHTAS was responsible to explore and provide input in supporting COVID-19 related queries from various stakeholders including MOH's top management, institution/ departments within and outside MOH, companies and also the public. During the COVID-19 pandemic, MaHTAS had received an overwhelming number of requests on product and technology assessment. In response to the requests received, MaHTAS produced three types of reports; Rapid Evidence Review, Commentary and Information Brief based on the nature of technology, confidentiality issues and urgency of the requests while the remaining were responded as general feedback. In addressing the queries regarding product assessments, the team systematically retrieved, synthesised and summarised the evidence to inform policy/decision makers.

COVID-19 Issue: Category of Output
Total number of requests=125
(24 January 2020 to 30 June 2020)



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LOCAL ACTIVITIES

Farewell of Dr. Junainah Sabirin – 17 April 2020 By En. Syful Azlie Md Fuzi

Happy retirement to the Head of MaHTAS, Dr. Junainah Sabirin.

She led MaHTAS for five wonderful years and had been involved in conducting Health Technology Assessment (HTA) especially for facilities under the Ministry of Health Malaysia, as well as contributed a lot to the development and strengthening of MaHTAS as the reference centre for HTA.

You will always be remembered for your passion and hard work throughout the years. Thank you for your dedication to the team. Congrats and good luck to your new found freedom in retirement!

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COURSES AND WORKSHOPS

PLANNED FOR JULY 2020 – DECEMBER 2020

By Matron Wong Wai Chee

01

Costing Analysis Workshop

24 to 25 August 2020

02

HTA Course for HTA Technical Advisory Committee 2020-2021

1 September 2020

03

Healthy Mind @ Work

2 September 2020

04

Strategic Planning Workshop

9 to 11 September 2020

05

Training of Core Trainer of CPG Management of Major Depressive Disorder (MDD) (Second edition)

21 to 22 September 2020

06

Systematic Review on Evidence-Based Clinical Practice Guidelines (CPG) Development and Implementation 2/2020

19 to 21 October 2020

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Dr. Izzuna Mudla Mohamed Ghazali

EDITORS

Dr. Mohd Aminuddin Mohd Yusof

Dr. Noor Ayuni Bazura Muhamad

Pn. Siti Aisah Fadzilah

Matron Wong Wai Chee

DESIGNER

Pn. Fatin Nabila Mokhtar

CONTRIBUTORS

Dr. Roza Sarimin

Dr. Syaqirah Akmal

Dr. Zawiah Mansor

Pn. Ku Nurhasni Ku Abdul Rahim

Dr. Aidatul Azura Abdul Rani

Dr. Md. Anuar Abd. Samad

Dr. Erni Zurina Romli

Dr. Parveen a/p Thanabalen

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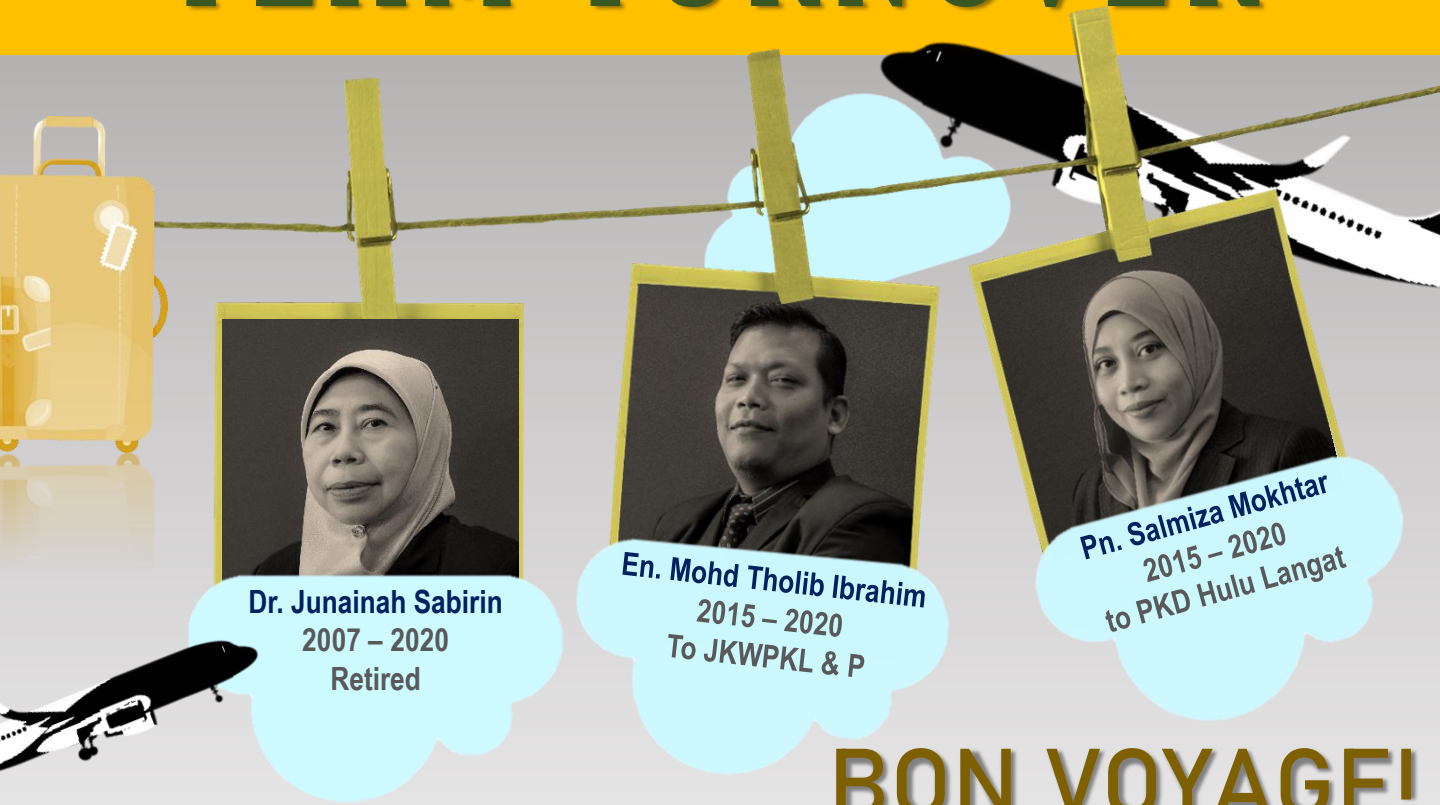
TEAM TURNOVER



Dr. Junainah Sabirin
2007 – 2020
Retired

En. Mohd Tholib Ibrahim
2015 – 2020
To JKWPKL & P

Pn. Salmiza Mokhtar
2015 – 2020
to PKD Hulu Langat

BON VOYAGE!

WELCOME ABOARD!

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from Klinik Kesihatan
Pasir Pinji, PKD Kinta

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