



COVID-19 Pandemic in Malaysia:

The Journey



A Report by
the Pharmaceutical Services Programme,
Ministry of Health Malaysia



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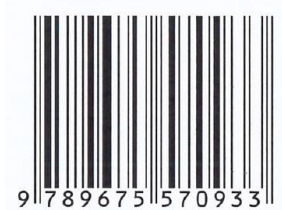
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Foreword



The whole country is striving to combat COVID-19 and we have started to see the impact. Every Malaysian played a significant role in preventing the transmission of the disease and flattening the infection curve.

The preparedness plans initiated by the Ministry of Health Malaysia since the beginning of the outbreak had helped the country to contain the spread of the virus. I wish to dedicate my special thanks to all our fellow MOH pharmacy colleagues who work hard to ensure the adequate supply of medicines for COVID-19 treatment as well as to those who have gone the extra mile to ensure the continuous treatment for all our patients.

The COVID-19 fighting journey, although challenging, had proven that as long as we work together as a team, we can overcome any difficulties. As the battle against COVID-19 is still ongoing, I hope that all pharmacy personnel can continue to stay strong and strive to provide the best pharmaceutical care services for the nation.

DATIN DR FARIDAH ARYANI BINTI MD. YUSOF, RPh 1197

SENIOR DIRECTOR OF PHARMACEUTICAL SERVICES
MINISTRY OF HEALTH MALAYSIA

Preface



The Pharmacy Policy and Strategic Planning Division was honoured to be given the mandate to document the Pharmaceutical Services Programme's journey in battling the COVID-19 pandemic.

Our preparedness plans were lined out since the beginning of the outbreak in December 2019 to ensure adequate supply of medicines for the whole country. Apart from that, we were working closely within the MOH, and with other government agencies and non-governmental organizations to ensure the efficient distribution of personal protective equipment for the MOH front liners. This report documented some of the significant and special events during our battle against COVID-19, and how the pharmacy staffs dynamically adapted to the changes to ensure that pharmaceutical services were not interrupted during the Movement Control Order period.

I hope that this report will serve as a record that we have overcome many obstacles during the COVID-19 pandemic, and to remind us to continuously improve our preparedness for more challenges in the future.

NORHALIZA BINTI A HALIM, RPh 1750

DIRECTOR

PHARMACY POLICY AND STRATEGIC PLANNING DIVISION

MINISTRY OF HEALTH MALAYSIA

List of abbreviations

API	active pharmaceutical ingredients
CPRC	Crisis Preparedness and Response Centre, MOH
CPC	COVID-19 Preparedness Committee, PSP
DBB	take away doses (<i>dos bawa balik</i>)
DIY	do it yourself
DOT	Daily Observational Therapy
EMCO	Enhanced Movement Control Order
HCPS	Home Care Pharmacy Services
HSAH	Hospital Sultan Abdul Halim, Sungai Petani, Kedah
HSB	Hospital Sultanah Bahiyah, Alor Setar, Kedah
HTAA	Hospital Tengku Ampuan Afzan, Kuantan, Pahang
HTAN	Hospital Tuanku Ampuan Najihah, Kuala Pilah, Negeri Sembilan
HTF	Hospital Tuanku Fauziah, Perlis
IP	investigational product
JKN	State Health Department (<i>Jabatan Kesihatan Negeri</i>)
JKWPKL&P	Kuala Lumpur and Putrajaya State Health Department
MAEPS	Malaysia Agro Exposition Park Serdang
MCO	Movement Control Order
MITI	Ministry of International Trade and Industry
MOH	Ministry of Health Malaysia
MTAC	Medication Therapy Adherence Clinic
NGO	non-governmental organization
NPRA	National Pharmaceutical Regulatory Agency
PhIS	Pharmacy Information System
PKRC	COVID-19 Low-Risk Patient Quarantine and Treatment Centre (<i>Pusat Kuarantin dan Rawatan Risiko Rendah COVID-19</i>)
PPE	Personal Protective Equipment
PSP	Pharmaceutical Services Programme
PUI	person under investigation
SARI	severe acute respiratory infections
SOP	standard operating procedures
SPUB	Integrated Drug Dispensing System (<i>Sistem Pendispensan Ubat Bersepadu</i>)
UMP	Medicines by Post (<i>Ubat Melalui Pos</i>)
URTI	upper respiratory tract infection
VAS	Value Added Services

Preamble

A special journey

The Pharmaceutical Services Programme (PSP), Ministry of Health Malaysia (MOH) initiated its preparedness plans for COVID-19 since the announcement of the first positive case in China in December 2019. The plans were then strengthened and improvised from time to time according to the outbreak situation in the country. During the COVID-19 outbreak, especially during the enforcement of Movement Control Order (MCO), PSP had to work extra hard to ensure the availability and continuous supply of medicines for all patients including the COVID-19 patients. At the same time, pharmacy personnel, with the support of various divisions and organisations, play a vital role in ensuring the smooth distribution and handling of Personal Protective Equipment (PPE) and hand sanitizers for the front liners and other healthcare workers. In addition, continuous monitoring and close collaborations with other MOH divisions and the pharmaceutical industry are carried out to ensure that all initiatives are implemented smoothly.

The Journey

Chapter 1

Pandemic Preparedness

Getting ready for the battle

The demand for antivirals, PPE and service delivery was bountiful during the COVID-19 pandemic. The COVID-19 Preparedness Committee (CPC) of PSP was formed in March 2020 to facilitate, monitor and ensure effective communication regarding the access and supply of medicines, PPE and hand sanitizers, human resource needs, and the medicines supply capacity of the domestic pharmaceutical industry. The committee was chaired by the Senior Director of Pharmaceutical Services and represented by the Pharmacy Policy and Strategic Planning Division, Pharmacy Practice and Development Division, Pharmacy Enforcement Division, National Pharmaceutical Regulatory Agency (NPRA) and Pharmacy Board Malaysia.



CPC Meeting at the PSP headquarters

The CPC conducted weekly meetings to ensure a timely effort in concordance with the current condition of COVID-19 in Malaysia. Judicious planning and strategies were carefully carried out by the CPC in coordination with the MOH Crisis Preparedness and Response Centre (CPRC). Regular information sharing between PSP and CPRC MOH were carried out to better understand what were ahead. Under the leadership of CPC, MOH pharmacy personnel worked extra hard to ensure the adequate access to medicines especially for COVID-19 treatment, continuous supply of PPE through constant monitoring and collaboration with the Medical Development Division and Public Health Development Division, and sufficient human resources to maintain the services.



Datin Dr. Faridah Aryani Md. Yusof, the Senior Director of Pharmaceutical Services, MOH, chairing the CPC meeting

During the first wave, or the early containment phase of COVID-19 in Malaysia, PSP had initiated the close monitoring on a list of key medicines, hand sanitizers and PPE. When the second wave of the pandemic hit, from 27 February 2020 until the MCO, the action was further strengthened. Due to the significant increase in medicines usage during the COVID-19 pandemic, an additional budget of about RM35.4 million was allocated to the MOH for the procurement of medicines related to COVID-19 treatment.

Notably, a key challenge pertinent to COVID-19 pandemic was an unprecedented high demand for its treatment. Owing that there was no standard treatment regime available for COVID-19, close communication and discussions with the MOH Infectious Disease Team were carried out to identify the list of drugs used in combatting COVID-19. These medicines were then procured centrally at the MOH headquarters level through the Emergency Procurement Procedure to accelerate the availability of medicines. This special procedure

was also applied to procure hand sanitizers to quickly overcome the stock-out condition in MOH facilities.

The procurement of medicines during the pandemic was taxing and warranted lots of extra efforts mainly due to the travel restrictions that had affected the importation and logistics of medicines and medical supplies. The problems, however, were successfully overcome by the teamwork among all the MOH divisions and cooperation with other ministries. For example, inter-ministerial discussion and collaboration with the Ministry of International Trade and Industry (MITI) were done to obtain the approval for the pharmaceutical manufacturers and related companies to operate like normal at full force during the MCO. Meanwhile, government to government engagement with Japan, India, China and Taiwan was facilitated through the MOH Policy and International Relations Division to allow the exportation of pharmaceutical products as well as active pharmaceutical ingredients (API) to Malaysia.

As the usage of hydroxychloroquine increased, the product registration holder was unable to supply the medicine as required by the MOH. To ensure the adequate and continuous supply of hydroxychloroquine during this critical time, a local pharmaceutical manufacturer was engaged to produce it locally after strict qualification assessment by the NPRA. Another issue and challenge was the unavailability of commercialized hydroxychloroquine sulphate suspension for children and adult patients requiring it. To overcome this challenge, the PSP had updated the formulation for hydroxychloroquine sulphate 25mg/ml suspension in the Pharmacy Information System (PhIS) to enable the facilities to prepare the suspension extemporaneously.

Supply chain management is very crucial during COVID-19 pandemic, hence the monitoring on the stock status of medicine and related consumables, like PPE was done closely. In addition, the stock status at the suppliers' level was also being monitored, in particular for the high usage items so that appropriate countermeasures can be taken immediately to prevent stock disruptions to the MOH facilities. As most of the medicines and antivirals for the treatment of COVID-19 were used as off-label treatment, a special monitoring mechanism was established to supervise the utilization and conduct active surveillance on the safety profile of 15 types of medications that were used in the management of COVID-19 in 76 MOH hospitals. Along with this, PhIS was also improvised to enable the reporting

and monitoring of daily stock balance status at MOH facilities beginning April 2020. These data were presented during the CPC PSP and MOH CPRC meetings every week.

The PSP also facilitated the WHO Solidarity Trial via fast-track approvals of investigational products (IPs) to be used in these clinical trials, including Remdesivir. All IPs were successfully evaluated within four working days without jeopardizing the quality and adherence to the international regulatory requirements. Assurance of quality and safety of all foreign and local products whether for procurement or donations were also verified through the registration status of drugs and cosmetics notification.



Discussion during the CPC Meeting

Chapter 2

Pharmaceutical Care Services

Breaking the boundaries

During the MCO period, Malaysians were encouraged to stay at home and reduce unnecessary hospital visits. Due to the movement restrictions during the MCO, some of the essential pharmaceutical care services in MOH facilities, such as ambulatory pharmacy, Medication Therapy Adherence Clinic (MTAC) and Home Care Pharmacy Services (HCPS), were disrupted. As a result, several measures were taken by the PSP to ensure the continuity of pharmaceutical care services. For instance, patients with appointments for medication refills or any other pharmaceutical services were given longer appointment dates. The medication supplies to patients were also increased to two-month supply or more whenever possible to reduce the patient loads and crowds at the pharmacies in both MOH hospitals and health clinics.

Another initiative to facilitate the supply of refill medications and avoid crowding in the MOH health facilities was the Pharmacy Value Added Services (VAS). During the MCO period, patients were encouraged to utilise the various VAS available in the MOH facilities such as the Pharmacy counter appointment-based system, Medicines by Post (*Ubat Melalui Pos*, UMP), Drive-through Pharmacy (*Farmasi Pandu Lalu*), Locker4U and Integrated Drug Dispensing System (*Sistem Pendispensan Ubat Bersepadu*, SPUB). Information about VAS provided by the MOH was actively promoted to the public and advertised via television, radio station, social media networks, newspapers and online articles. To improve the uptake of UMP, the MOH has decided to bear the delivery charges of UMP from 5 April 2020 to 30 Jun 2020. Following the subsidy of delivery charges and various promotional activities, the usage of UMP has increased tremendously, from 42,422 medication parcels in year 2019 to

194,119 parcels in April to June 2020. In addition, more convenient and easy methods for VAS registration, for example, through email, WhatsApp, telephone and online registrations were developed. The increased utilisation of VAS has successfully reduced the patient crowd and medication refill waiting time at MOH facilities.

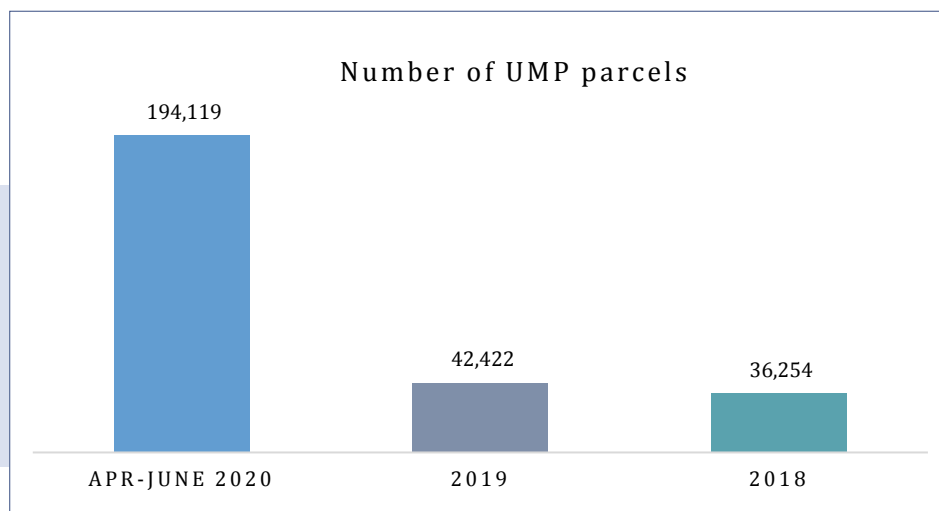
Other pharmaceutical services, such as logistic pharmacy, inpatient pharmacy, sterile and non-sterile production, clinical pharmacokinetic services, counselling and ward pharmacy services, were carried out as usual. Extra precautionary measures, however, were employed especially when providing services that required direct contact with the patients. Various online or virtual methods were also implemented. For example, e-counseling materials such as videos and QR code that links to educational e-pamphlets were prepared. Phone counselling and video call counselling were utilised to ensure the continuity of essential clinical services while securing the safety of both patients and pharmacy personnel.

On the other hand, extra effort has also been made to ensure the constant supply of Methadone for patients on Methadone Treatment Programme. To help patients to minimize travelling during the MCO, more Daily Observational Therapy (DOT) patients who were stable were dispensed with take away doses (*dos bawa balik*, DBB) with the approval from the psychiatrists and Family Medicines Specialists.



Infographic about pharmacy VAS available in the MOH facilities

The number of parcels sent through UMP service from April to June 2020 compared to the previous years



UMP at Hospital Kuala Lumpur

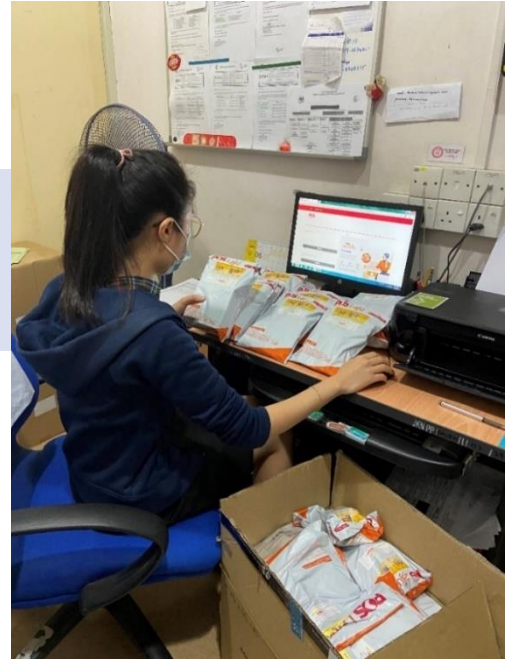


UMP at Hospital Tengku Ampuan Afzan (HTAA) Kuantan, Pahang



UMP at Hospital Putrajaya

UMP at Hospital Kepala
Batas, Penang



UMP at Hospital Tengku Ampuan Rahimah Klang,
Selangor



Pos Malaysia staff collecting the UMP medication parcels at
Hospital Serdang, Selangor



A temporary drive-through pharmacy counter was set up at Hospital Selama, Perak during MCO



Drive-through pharmacy services at Hospital Sultan Abdul Halim (HSAH), Kedah



'Drive-through' pharmacy service at Hospital Kepala Batas, Penang

Drive-through
Pharmacy at Bakri
Health Clinic,
Muar



Hospital Selayang's Drive-
through Pharmacy

Temporary Drive-
Through Pharmacy
counter at Hospital
Tuanku Ampuan
Najihah (HTAN),
Negeri Sembilan



"Park & Take" dispensing counter at Kangar Health
Clinic, Perlis



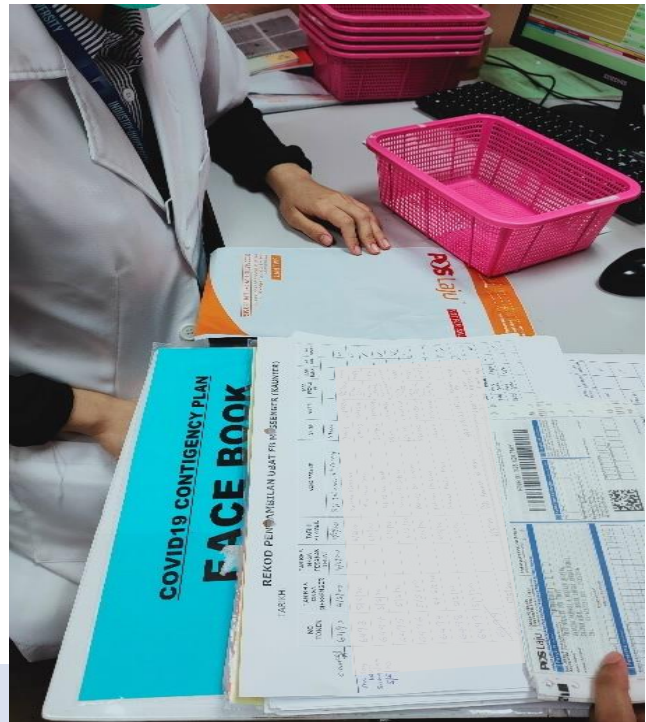
Follow-up medications to be collected at the Drive-Through Pharmacy tent at Hospital Seberang Jaya, Penang



Follow up medications to be collected at the appointment time at Teluk Bahang Health Clinic, Penang

Follow-up medications at Hospital Tunku Azizah (Women and Children Hospital) to be supplied through SPUB





FB Messenger was introduced as a new communication means for VAS services at HSAH, Kedah



The 'Leave and Collect Counter' (*Kaunter Letak dan Ambil*) at HTAA Kuantan, Pahang

Chapter 3

The New Norms in Pharmacy

No more business as usual

With the COVID-19 cases accelerating globally, the safety of healthcare staff and patients remain the utmost priority. In all MOH facilities, various efforts were carried out to ensure the adherence to the guidelines of physical distancing and personal hygiene. In the pharmacies, new norms and standard operating procedures (SOP) were adhered to prevent the transmission of the virus.

For example, the medicines supply procedures to the hospitalised patients, especially for COVID-19 and severe acute respiratory infections (SARI) patients, were modified to prevent the spread of the disease. Only trained pharmacy personnel were allowed to process the prescriptions and supply medications to the COVID-19 and SARI wards. The prescriptions were sent to the pharmacy using online methods such as PhIS, email and WhatsApp. Medications were then supplied individually to the wards instead of using medication trolleys.

For services that require close contact with the patients, such as ward pharmacy services and medication counselling, pharmacy staff should comply with strict personal protection procedures. Furthermore, hand sanitizers were made available at all counters, infra-red thermometers were used to measure the temperature of staffs and patients before entering the pharmacy, and posters of cough etiquette were displayed at the pharmacy area.



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Tarikh : 24 Mac 2020

SEPERTI SENARAI EDARAN

YBhg. Datin/ Tuan/ Puan,

PERKHIDMATAN FARMASI SEMASA WABAK COVID-19

Saya dengan segala hormatnya merujuk perkara di atas.

- Adalah dimaklumkan bahawa Program Perkhidmatan Farmasi, Kementerian Kesihatan Malaysia menerima banyak pertanyaan berhubung status perkhidmatan farmasi semasa wabak Covid-19 pada masa kini.
- Perkhidmatan farmasi merupakan salah satu daripada perkhidmatan *essential* semasa penularan wabak Covid-19 di Malaysia. Program ini mengambil maklum akan situasi sekarang dan hanya sedikit sebanyak menjejaskan perkhidmatan farmasi sedia ada terutamanya di fasiliti-fasiliti yang terlibat secara langsung dalam pengendalian kes-kes Covid-19.
- Sehubungan dengan itu, Program ini memohon pihak YBhg. Datin/tuan/ puan untuk memastikan perkhidmatan farmasi di semua fasiliti di bawah jaguan YBhg. Datin/tuan/ puan dapat meneruskan perkhidmatan mengikut situasi semasa di fasiliti masing-masing demi memastikan kesinambungan perkhidmatan. Bersama-sama ini dilampirkan **Langkah-Langkah Memperkuhkan Perkhidmatan Farmasi Di Fasiliti KKM Semasa Penularan Wabak Covid-19** sebagai panduan dan perhatian YBhg. Datin/tuan/ puan.

Semoga semua pihak terlibat dapat memberikan kerjasama bagi memastikan semua proses berjalan lancar demi kepentingan masyarakat umum.

Sekian, terima kasih.

'BERKHIDMAT UNTUK NEGARA'

Saya yang menjalankan amanah,



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LANGKAH-LANGKAH MEMPERKUHKAN PERKHIDMATAN FARMASI DI FASILITI KESIHATAN SEMASA PENULARAN WABAK COVID-19

Sumber rujukan: Surat KPK bertajuk **MEMPERKUHKAN KESIAPSIAGAAN FASILITI KESIHATAN SEMASA FASA LATE CONTAINMENT DAN MITIGATION COVID-19** (KKM.600-30/12/30 Jld. 2 (43) bertarikh 20 Mac 2020); Surat Bhgn. Kawalan Penyakit bertajuk **Rawatan Methadone Sepanjang Perintah Kawalan Pergerakan** (KKM.600-29/4/123 Jld 2 (29) bertarikh 23 Mac 2020)

- Memastikan *social distancing* sentiasa diamalkan di fasiliti kesihatan. *Social distancing* adalah salah satu kaedah pencegahan dan kawalan penularan COVID-19. Berikut adalah langkah-langkah yang perlu diambil:
 - Mengurangkan kedatangan pesakit ke fasiliti kesihatan dengan menjarakkan tempoh atau menangguhkan temujanji susulan untuk berjumpa doktor bagi pesakit yang stabil:
 - Menjarakkan tempoh atau menangguhkan temujanji susulan untuk berjumpa pegawai farmasi bagi perkhidmatan MTAC/ kaunseling susulan bagi pesakit yang stabil.
 - Pihak Farmasi di fasiliti perlu memastikan mekanisme pelanjaran tempoh masa preskripsi bagi mengelakkan pesakit terputus bekalan ubat-ubatan sehingga tarikh temujanji doktor yang baru.
 - Pemberian dos bawa balik (DBB) kepada pesakit methadone yang stabil boleh dibenarkan untuk tempoh 3 hari sehingga 1 minggu. Bagi kes yang tertentu, DBB untuk tempoh yang lebih panjang boleh dipertimbangkan selepas mendapat kebenaran Pakar Psikiatri/ Pakar Perubatan Keluarga (FMS).
 - Mengurangkan kekerapan kedatangan pesakit untuk bekalan ubat **separa** dengan menggalakkan pembekalan ubat melalui perkhidmatan *Value Added Services* (VAS) seperti Ubat Melalui Pos (UMIP), *Locker4U*, Farmasi Pandu Lalu dan Sistem Pendispensan Ubat Bersepadu (SPUB) mengikut kesesuaian perkhidmatan yang ditawarkan di fasiliti kesihatan.

Pembekalan ubat separa diberi bagi tempoh yang lebih panjang bergantung kepada kapasiti bekalan di peringkat fasiliti. Bagi pesakit warga emas dan berisiko tinggi, disarankan wakil/ waris yang sihat untuk datang mengambil ubat jika perkhidmatan VAS dan lain-lain perkhidmatan tidak dapat digunakan.

Guideline issued by the Senior Director of Pharmaceutical Services to ensure that all essential pharmaceutical services were not interrupted during the COVID-19 outbreak while observing all necessary SOPs



**PANDUAN
PERKHIDMATAN FARMASI SEMASA WABAK
COVID-19**

Program Perkhidmatan Farmasi
Kementerian Kesihatan Malaysia
April 2020

The Guide for Pharmaceutical Services during COVID-19 Outbreak was published by the PSP to further strengthen the pharmaceutical services during the pandemic

Briefing session to pharmacy staff regarding the new SOP in HSAH, Kedah



Practicing physical distancing at the pharmacy counters of HSAH, Kedah



Face masks were prepared and distributed to all pharmacy staffs on duty at HSAH, Kedah





Monitoring body temperature of pharmacy staffs and patients at HTAA, Kuantan

Screening counter was established at the entrance of HTAN pharmacy





Maintaining physical distancing when conducting medication counselling at HTAA, Kuantan



Inpatient bedside counselling at HTAN, Negeri Sembilan is carried out by maintaining physical distancing



Dispensing with physical distancing at Rembau Health Clinic, Negeri Sembilan



Practicing physical distancing at the pharmacy of Hospital Putrajaya



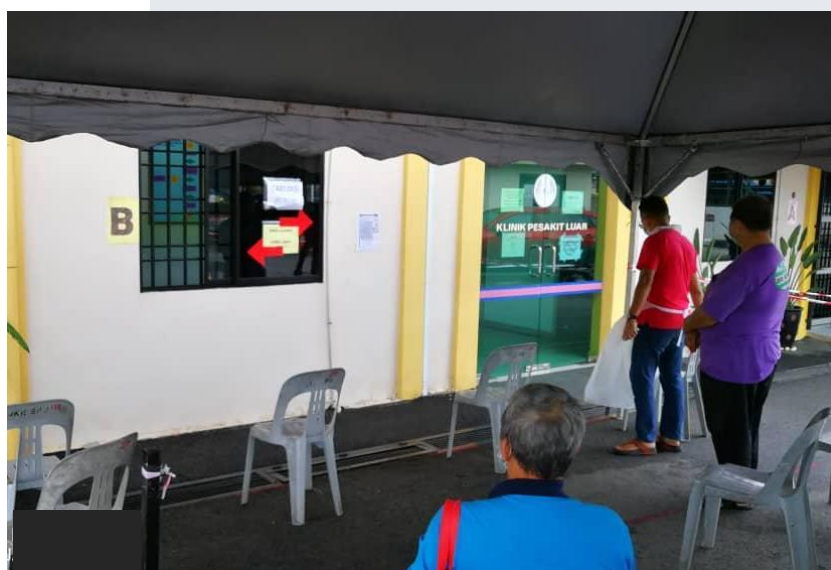
Blocking of the seats to ensure physical distancing at the Specialist Clinic Pharmacy of Hospital Tunku Azizah



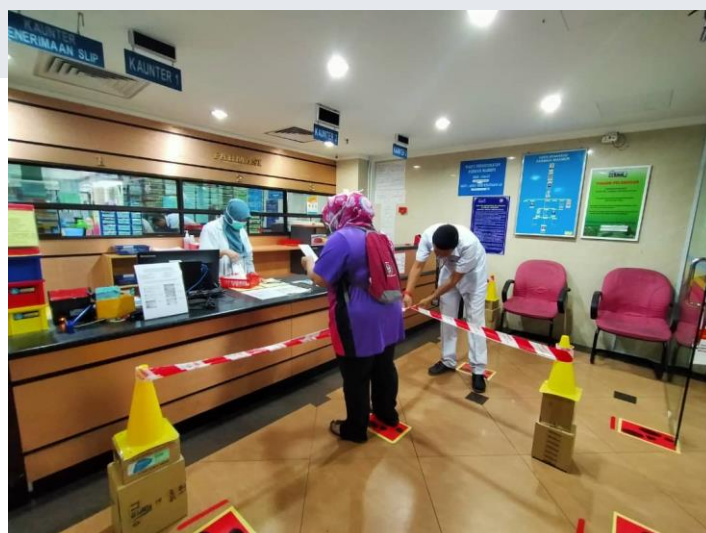
Maintaining physical distancing at the Specialist Clinic Pharmacy of Hospital Tuanku Fauziah (HTF), Perlis



Additional pharmacy dispensing counter and waiting area at Mak Mandin Health Clinic, Butterworth



Setting up the pharmacy at HTAA, Kuantan to ensure physical distancing



Moving the Emergency Pharmacy Unit and Galenical Unit to a new location to give way to the Fever Screening Unit and COVID-19 Ward at Hospital Duchess of Kent, Sandakan



Disinfection activity at Kemabong Health Clinic, Keningau, Sabah



Preparing the pharmacy area of HSAH, Kedah to ensure physical distancing



Mobile pharmacy counter was set up in the Enhanced Movement Control Order (EMCO) zone by Kepong District Health Office



Reviewing patient's prescription at the Medication Reviewing Counter in a quarantine centre in Selangor



Additional pharmacy dispensing counter at the Bukit Jambul Health Clinic, Penang



Additional pharmacy counter at the office vehicles parking area of Hospital Bukit Mertajam, Penang





Pharmacy Counter at the Fever Clinic of Jalan
Angsana Health Clinic, Penang



Pharmacy Counter at the Fever Clinic of
Bayan Lepas Health Clinic, Penang



Pharmacy Counter at the Upper Respiratory
Tract Infection (UTRI) Clinic of Bayan Baru
Health Clinic, Penang



Pharmacy Counter at the Fever Clinic of Maharani Health Clinic, Muar

Chapter 4

Mobilization of Pharmacy Personnel

Kami sedia membantu

Mobilization of pharmacists and other pharmacy personnel was carried out to ensure the continuity of service during the COVID-19 pandemic. Pharmacy staffs from the PSP headquarters, state health departments and MOH health facilities were mobilised to health facilities requiring support during the COVID-19 outbreak.

To speed up the process of receiving and managing the donation items, eight officers from the PSP headquarters were deployed to the Integration Store of Hospital Sungai Buloh from 30 March 2020 to 20 April 2020 to assist the hospital pharmacists and staffs to receive, check and manage the donation items.

When the Low-Risk Patient Quarantine and Treatment Centre (*Pusat Kuarantin dan Rawatan Risiko Rendah* COVID-19, PKRC) was set-up at the Malaysia Agro Exposition Park Serdang (MAEPS), the core team of Pharmacy Unit was formed and MOH pharmacists were deployed accordingly. Six pharmacy staffs from the PSP headquarters, Selangor State Health Department (JKN) and Hospital Serdang were appointed as the core team members of the Pharmacy Unit at PKRC. Beginning 20 April 2020 until July 2020, MOH pharmacy staffs from the PSP headquarters, NPRA, JKWP Kuala Lumpur and Putrajaya (JKWPKL&P), and JKN Selangor were deployed to provide pharmacy services in PKRC.

Besides that, seven officers from the NPRA were sent to the National Public Health Laboratory by rotation to extend a helping hand in the laboratory. In addition, mobilisation of pharmacy staffs also happened at the state and district levels. For example, pharmacists

in JKWPCL&P were deployed to help in the COVID-19 close contact screening, and some pharmacist assistants were deployed to help to conduct temperature screening at the fever clinics in their respective facilities.



Officers deployed from the PSP were helping to receive donation items at Hospital Sungai Buloh



Briefing session for the pharmacy staffs deployed to the PKRC



Sending pharmaceutical items to
PKRC, MAEPS Serdang



Preparing the medical stocks at PKRC





Setting up the medical store at PKRC



Pharmacists from JKWPKL&P were part of the mobile sampling team to obtain sample swabs from person under investigation (PUI) returning from high-risk countries



Pharmacists from JKWPKL&P were assisting the doctors to manage swab samples in EMCO zone



Chapter 5

Managing PPE Supplies

Managing the safety of our front liners

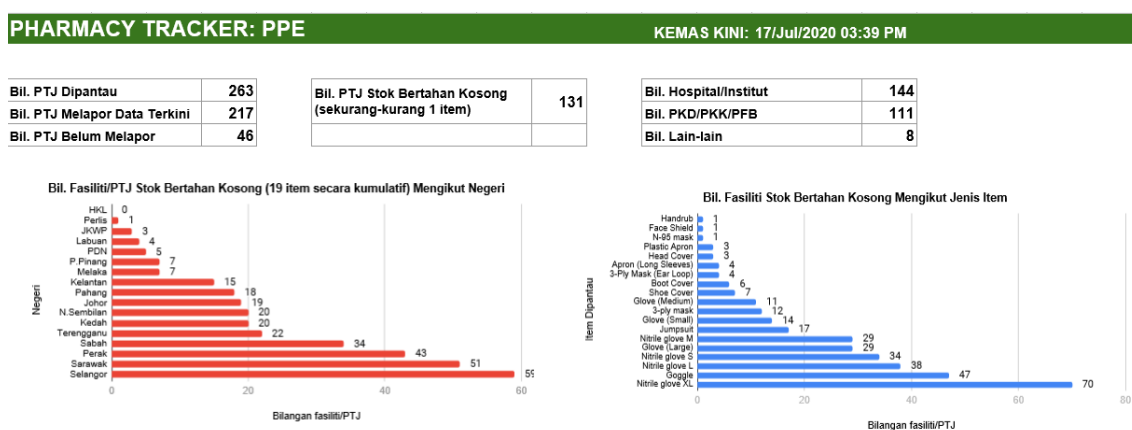
Unprecedented high demand for PPE and hand sanitizers became phenomenal due to the COVID-19 pandemic. Within the MOH, a list of PPEs including hand sanitizers were identified as critical items during the pandemic time. Selected MOH facilities were identified as stockpile centres for PPE around Malaysia. To ensure the efficient distribution of PPE, an online monitoring system, namely the Pharmacy PPE Tracker, was developed by the PSP to monitor the stock supplies and daily usage of PPE. The close monitoring of PPE stocks in 263 MOH facilities was done on daily basis together with the Medical Development Division and Public Health Development Division through this system.

At the state and MOH facility level, the pharmacy personnel have to ensure that PPE procurement, distribution and monitoring were carried out smoothly during the COVID-19 outbreak. In addition, an overwhelming amount of donation items, such as PPE, face shields, face masks and hand sanitizers from the non-governmental organizations (NGO), companies and public were received by MOH. Therefore, the pharmacy personnel have to prepare adequate and suitable storage space for the goods, and evaluate the donation goods before distribution.

To cope with the increasing demand for hand sanitizers in the market, special manufacturing permits were issued to a few reputable local manufacturers after strict assessment by the NPRA. Furthermore, the Emergency Procurement Procedure was in place to centrally procure hand sanitizers for MOH facilities. Following the temporary disruption in the supply of commercial hand sanitizers to MOH, two alcohol-based hand sanitizer

formulation from WHO were adopted to be compounded in all MOH facilities. The PSP has updated the formulations of alcohol-containing hand sanitizer in the PhIS system so that all MOH facilities can compound their own hand sanitizer. While awaiting the commercial product to be available in the market again during the MCO period, pharmacy staffs in the MOH facilities had to do in-house compounding of hand sanitizers for the use of healthcare personnel. The proactive and prompt action had helped to temporarily resolve issues on the insufficient and supply disruption of commercial hand sanitizers in the market.

Besides procuring and receiving donated PPE stocks, pharmacy personnel, together with other MOH staffs, have taken various initiatives to ensure the adequate supply of PPE for the front liners. For example, many 'do it yourself' (DIY) activities or sessions were organised by the healthcare staffs to produce PPE in the healthcare facilities or health offices. Besides that, collaborations or engagements with other governmental agencies or NGOs were also carried out to increase the productions of PPE for MOH healthcare staffs.



Pharmacy PPE Tracker dashboard



Receiving, checking, recording and sorting the donation goods received at Hospital Sungai Buloh

Arranging PPE stocks in the Logistic Pharmacy of Hospital Temenggong Seri Maharaja Tun Ibrahim, Kulai, Johor





High amount of PPE stocks was received at HSAH, Kedah. The PPE stocks that could not be stored in the Logistic Pharmacy store had to be transferred to a temporary storage area at level 2 of the nursing hostel





Management of PPE storage and distribution by the Logistic Pharmacy of HTF, Perlis with the help of hospital support service staffs



Handling PPE in JKN Negeri Sembilan



Receiving PPE at JKN Pahang to be distributed to the districts





Distribution of PPE to the districts in the state of Pahang





Unloading PPE stocks from the Royal Malaysian Air Force airplane to be distributed to all hospitals and health clinics in Sabah



The unloading of PPE stocks at JKN Sabah for temporary storage

The compounding of hand sanitizers in
Bentong District Health Office, Pahang



The compounding of hand sanitizers in Hospital
Putrajaya



Sewing PPE at JKN Kelantan

Procurement of non-woven fabrics by Hospital Sultanah Bahiyah (HSB), Kedah to produce PPE



Collaboration between HSB, Kedah and NGOs to produce PPE

Collaboration between HSB, Kedah with the Pokok Sena Prison to produce PPE





Collaboration between HSB, Kedah with Universiti Utara Malaysia (UUM) to produce PPE



Collaboration between Hospital Duchess of Kent, Sandakan with the Malaysian Prison Department, Sandakan to produce PPE

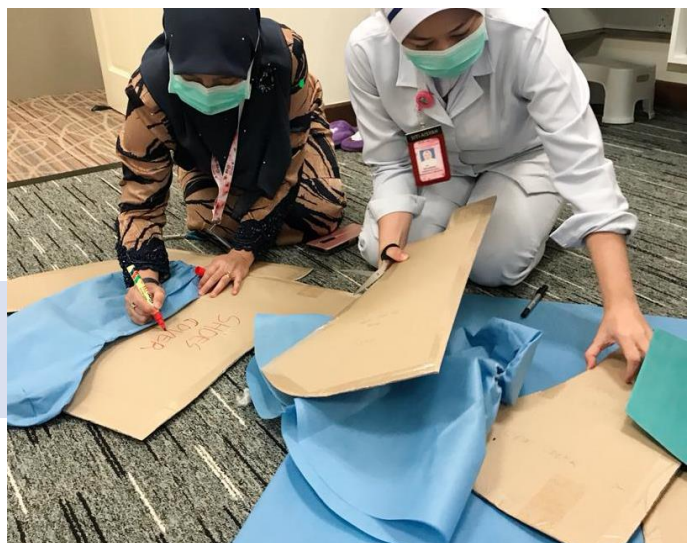


PPE DIY activity at Hospital Kuala Penyu, Sabah



PPE DIY activity at Muar District Health Office

PPE DIY activity at Hospital Tunku Azizah



PPE DIY activity at Hospital Bukit Mertajam, Penang



Staffs from JKWPCL&P organising PPE for front liners carrying out sampling activity





Production of face shields at the PSP headquarters



JKN Kedah



JKN Pahang



JKN Penang

PPE donations to Hospital Tunku Azizah



PPE distributions by the Logistic Pharmacy to all wards in Hospital Tunku Azizah



PPE donations to Hospital
Temenggong Seri Maharaja Tun
Ibrahim, Kulai, Johor



PPE donations to JKN Selangor





JKN Sabah staffs and the donation items



The temporary PPE stock storage at Hospital Mesra Bukit Padang, Kota Kinabalu



PPE donation by NGO to Hospital Seberang Jaya, Penang



JKN Penang received face mask donation from the China Consulate and The Government of Quangang District, Fujian Province, China at KOMTAR on 2 April 2020



JKN Penang received face mask donation from the China Consulate on behalf of several companies in Xiamen, China at KOMTAR on 5 May 2020



PPE donation to Hospital Pulau Pinang



PPE donation to HTF, Perlis



PPE Donation to JKN Kelantan





PPE Donation to JKN Negeri Sembilan



Face shields with motivational notes from the donor

Chapter 6

Pharmacy Educational Activities

We learn, we share

During the COVID-19 pandemic, PSP carried out many pharmacy educational activities related to COVID-19 and Rational Use of Medicines through the production and dissemination of infographics, videos, articles, and interview sessions on TV and radio. The educational materials were disseminated using social media such as the PSP , Know Your Medicines Ambassador, and State Pharmaceutical Services Division Facebook pages, Know Your Medicines Portal (www.knowyourmedicine.gov.my), WhatsApp Group for Know your Medicines Ambassadors in every state, and MOH *Sihat Milikku* Telegram.

These educational activities were carried out from time to time to ensure that the society are empowered with the necessary knowledge and awareness regarding COVID-19. As there were many false claims about medicines, substances, herbal preparations and supplements that can cure COVID-19, it is very important to ensure that the public is aware that there are no vaccines or cure available for COVID-19 yet. Moreover, to ensure patients' medication adherence during the MCO period and to facilitate the collection of follow up medications, promotional activities about VAS services were actively carried out using mass media and social media.

Furthermore, many Continuous Pharmacy Education (CPE) sessions were carried out at the MOH hospitals and health clinics to improve COVID-19 awareness among the healthcare staffs. At the same time, pharmacy staffs were also actively educating the public and patients about COVID-19 including its prevention and hand-washing techniques.

Infographic to educate the netizens on medication adherence during the Ramadan and MCO period

PATUH PENGAMBILAN UBAT 

 **SEPANJANG RAMADAN** & **PERINTAH KAWALAN PERGERAKAN** 

	
Ambil ubat mengikut arahan.	Jangan tinggalkan dos ubat dengan sengaja.
Hubungi doktor atau ahli farmasi jika ada pertanyaan tentang masa pengambilan ubat.	Jangan tukar dos atau masa pengambilan ubat sebelum mendapat nasihat doktor atau ahli farmasi.
Guna Perkhidmatan Tambah Nilai Farmasi (VAS) untuk mengambil ubat susulan jika perlu.	Jangan keluar rumah sekiranya tiada keperluan.

PPF/A&P/IF052020/02

 **DUTA KENALI UBAT ANDA**



Visit the Know Your Medicines Ambassador facebook page for more information (https://www.facebook.com/Duta-Kenali-Ubat-Anda-490989567761791/?ref=page_internal)

Visit the Know Your Medicines portal to access more infographics (<http://www.knowyourmedicine.gov.my>)



**Kementerian Kesihatan Malaysia menyediakan
Perkhidmatan Nilai Tambah Farmasi
(Value Added Services:VAS)**

Anda boleh mendapatkan bekalan
ubat separa/ ubat susulan dengan
pelbagai pilihan.




Video about VAS services available in the MOH facilities
(<https://www.facebook.com/490989567761791/videos/568158107143575>)




The Director of Pharmacy Practice and Deveopment
Division, Madam A'tia binti Hashim, at an interview on
TV1's programme BIZ MALAYSIA entitled "*PKPB:
Cukupkah Bekalan Ubat?* (CMCO: Is the medicines supply
sufficient?)"

PROGRAMME	MEDIA	DATE
<i>Kenali cecair pembasmi kuman</i> (Knowing the types of disinfectants)	TV3 Interview	28 March 2020
<i>COVID-19 boleh dirawat sendiri ke? /</i> COVID-19: can it be self-treated?	IKIM FM Radio Interview	1 April 2020
	Asyik FM Radio Interview	6 April 2020
	Selangor FM Radio Interview	6 April 2020
	Nasional FM Radio Interview	7 April 2020
	TV1 Interview	8 April 2020
	Bernamea Radio Interview	9 April 2020
	Traxx FM Radio Interview	13 April 2020
Don't buy into cure claims	The Star Article	11 April 2020
<i>Cegah COVID-19: elak rawat diri sendiri</i> (COVID-19 prevention: do not self-medicate)	Mingguan Wanita Article	13 April 2020
COVID-19: Self-treatment & other myths debunked	New Straits Times Article	14 April 2020
<i>Putuskan Rantaian COVID-19: gunakan Perkhidmatan</i> <i>Tambah Nilai Farmasi</i> (Breaking COVID-19 chain: use the Pharmacy Value Added Services)	TV1 Interview	29 April 2020
Medicines by Post	Traxx FM Radio Interview	29 April 2020
Ramadan & MCO: an opportunity to quit smoking	BFM Radio Interview	29 April 2020
CMCO: Don't miss out in medicine	New Straits Times Article	11 May 2020
<i>COVID-19: Trend baharu dalam penjualan ubat-ubatan</i> <i>di internet</i> (COVID-19: New trends of medicines sales on the internet)	TV1 Interview	13 May 2020
<i>COVID-19: Pengambilan ubat dalam tempoh Perintah</i> <i>Kawalan Pergerakan</i> (COVID-19: Taking medicines during the Movement Control Order period)	Selangor FM Radio Interview	18 May 2020
<i>PKPB: Cukupkah bekalan ubat?</i> (CMCO: Is the medicines supply sufficient?)	TV1 Interview	19 May 2020
<i>PKPB: Patuh ambil ubat, elak komplikasi meningkat</i> (CMCO: Medication compliance prevents complications)	Nasional FM Radio Interview	2 June 2020
	IKIM FM Radio Interview	3 June 2020
	Asyik FM Radio Interview	8 June 2020
	Bernamea Radio Interview	19 June 2020
RMCO: Medication compliance	Traxx FM Radio Interview	15 June 2020
<i>PKPP: Kongsi ubat nak jimat, tak bahaya ke?</i> (CMCO: Sharing medicines, isn't it dangerous?)	Asyik FM Radio Interview	22 June 2020
	Bernamea Radio Interview	26 June 2020


Educational and promotional activities conducted by the PSP from March to June 2020

JANGAN RAWAT DIRI SENDIRI
UNTUK JANGKITAN COVID-19






ANTIBIOTIK
tidak digunakan untuk merawat Covid-19, tetapi untuk merawat **jangkitan sampingan** oleh bakteria (co-infection) yang berlaku pada pesakit Covid-19.




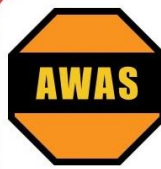
Sediaan antibiotik secara oral adalah dikategorikan sebagai Ubat Terkawal.
Pengambilan antibiotik tanpa pemantauan doktor boleh menyebabkan **kerintangan antibiotik**.

PPE/A&P/IF042020/03


 **DUTA KENALI UBAT ANDA**

JANGAN RAWAT DIRI SENDIRI
UNTUK JANGKITAN COVID-19






Tindakan menyembur ke badan atau meminum **CECAIR PELUNTUR** tidak dapat mencegah atau merawat Covid-19, sebaliknya **menyebabkan keracunan**.



Tindakan sebegini boleh menyebabkan kerengsaan pada tekak, pendarahan dalam perut atau kematian.
Cecair peluntur hanya boleh digunakan pada permukaan sahaja seperti meja atau lantai.

PPE/A&P/IF042020/04


 **DUTA KENALI UBAT ANDA**

JANGAN RAWAT DIRI SENDIRI
UNTUK JANGKITAN COVID-19





Penggunaan **CHLOROQUINE DAN HYDROXYCHLOROQUINE** perlu **pemantauan rapi** oleh **doktor** yang merawat.



Chloroquine dan hydroxychloroquine adalah Ubat Terkawal.
Pengambilan sendiri ubat-ubatan ini tanpa pemantauan doktor boleh **memudaratkan kesihatan**.

PPE/A&P/IF042020/01

 **DUTA KENALI UBAT ANDA**

JANGAN RAWAT DIRI SENDIRI
UNTUK JANGKITAN COVID-19





Pengambilan **VITAMIN C** dalam dos yang tinggi **TIDAK** mencegah atau merawat jangkitan Covid-19.



Vitamin C adalah suplemen kesihatan yang boleh diambil untuk tujuan penjagaan kesihatan secara umum.
Pengambilan dalam dos berlebihan mungkin boleh menyebabkan **kesan sampingan** kepada pengguna.

PPE/A&P/IF042020/02

 **DUTA KENALI UBAT ANDA**

One of the patient education infographic series produced by the PSP

Poster for a radio interview session about the treatment of COVID-19



Health promotional articles were published in the newspapers and magazines to educate the public about the importance of medication compliance



A Pharmacy Enforcement Officer from JKN Selangor at an interview session via video call, explaining the initiatives to ensure physical distancing during pharmacy enforcement activities

Pharmacists at the Hospital Kepala Batas, Penang were attending a demonstration session to practice the correct hand washing techniques



Demonstration of hand washing techniques by the pharmacists at Jalan Angsana Health Clinic, Penang



Demonstration of hand washing techniques by a pharmacist assistant at Lebuhan Muntri Health Clinic, Penang

HTF, Perlis pharmacy staff were briefed about Covid-19 and PPE by the HTF Covid-19 Education Team



COVID-19 CPE session at Hospital Tunku Azizah



Reflections

Lessons learnt



The close monitoring of medicines stock and supply status during the COVID-19 outbreak was proven to be effective in allowing immediate actions to prevent stock-out situations in MOH facilities. In view of this, a structured early drug shortage warning system to detect and identify issues related to drug management should be developed.

Various monitoring mechanisms had helped the CPC PSP to acquire first-hand information to make important decisions related to crisis preparedness strategies promptly. This showed that the access to real-time data is crucial to facilitate efficient decision making by the MOH.



During the COVID-19 pandemic, the availability of APIs in the country was affected when China and India tightened their control on API export. Therefore, the production of APIs in the country or region should be encouraged to reduce the dependency on other countries.

Healthcare personnel must be adequately trained and well equipped with ability, competency and strength to work under pressure and crisis at all time. Also, guidelines and SOPs are useful means of ensuring the standardisation of new practices or norms in service delivery.





Direct human contacts could be hampered during a disease outbreak. Latest technology should always be considered in delivering pharmaceutical care services to avoid the interruption of the service at all time.

The collaboration with POS Malaysia has increased the area of coverage for UMP service and working together with the local suppliers to increase the production of high demand items during the lockdown were good examples of public-private partnership. In the future, more innovative opportunity for public-private partnership should be explored.



Some hand sanitizers and PPE that were received through donations did not conform to the specifications. The Guidelines for Receiving Donations of Pharmaceutical Product in MOH (*Tatacara Penerimaan Sumbangan Produk Farmaseutikal di Kementerian Kesihatan Malaysia*) is now available in the official portal of PSP (www.pharmacy.gov.my). The guidelines could be used should there be donations from any individual, industry or society.

What's next



More IT-based pharmaceutical services, for example, counselling services using online platforms and social media, could be explored. E-education material and electronic applications to increase service coverage should be developed.

Pharmacy personnel should also receive broader types of trainings including disaster management and motivational seminar to ensure that every staff is mentally and physically prepared for potential public health emergencies.



Any monitoring plans developed should be practical and able to provide real-time situation if possible.

There is a need to build the capacity of local manufacturers to produce API and engage in regional collaborations in the production of API.



Pharmacists are encouraged to be innovative in finding new information-sharing methods and to explore e-learning tools to disseminate healthcare-related information.

Programmes involving many participants, such as public talks, workshops and exhibitions, shall be conducted according to the new norms and SOP to prevent the spread of infectious diseases.



Programmes involving house visits, such as home medication review and *Program Duta Prihatin Masyarakat* (PDPM*), will be conducted with strict adherence to physical distancing SOP.

Community programmes such as the Pharmacy Integrated Community Care (PICC**) will be resumed during the Recovery MCO phase. The SOP or new norms shall be adhered to ensure that these activities can be conducted safely.



** PDPM is a house visit programme involving the community representative or the Know Your Medicines Ambassador together with the pharmacist. The houses selected are usually patients with potential medication adherence problems or those with bedridden patients.*

*** PICC is a programme which uses a community approach, involving healthcare professionals from various disciplines such as pharmacists, doctors, medical assistants, nurses, physiotherapist, nutritionist, etc., to carry out health education for diabetic patients.*

Conclusion

Conclusion

The journey of handling COVID-19 pandemic crisis warrants great leadership, structured planning, excellent teamwork and undoubtedly, a lot of hard work. Despite all the challenges we faced, the crisis preparedness at the PSP level was successfully carried out and the emerging issues were well managed. Pharmacy personnel, from the top management at the headquarters and state health offices, to all pharmacy staffs at the front line and behind the scene, had shown great commitment and pride in carrying out our responsibility in handling the COVID-19 pandemic as part of the MOH family. With all the initiatives and strategies imposed, adequate access to medicines and pharmaceutical supplies needed for COVID-19 treatment and prevention was ensured. In addition, the implemented strategies had also ensured the continuity of treatment for all our patients during the pandemic. To the date of the publication of this report, the fight against COVID-19 is far from over. The PSP, together with all other members of the MOH, shall continue to work hard and be resilient to face the upcoming challenges.

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