

# Kluster baharu tibi di Kota Tinggi beri 'amaran serius'

Kes babit wanita warga emas sudah jangkiti 37 individu

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**Kuala Lumpur:** Kluster baharu kes tibi di Kota Tinggi memabatkan wanita warga emas yang membawa kepada jangkitan kepada 37 individu seharusnya menjadi amaran serius.

Menteri Kesihatan, Datuk Seri Dr Dzulkefly Ahmad, berkata kes itu boleh berlaku ke atas siapa dan di mana-mana tempat, termasuk luar bandar jika seseorang itu terdedah kepada bakteria *mycobacterium tuberculosis* yang merebak melalui udara.

"Ini satu kes yang jadi *wake up call* (tanda amaran serius) yang menyentap kita. Apa yang kita boleh katakan, kemunculan semula penyakit berjangkit ini. Apa yang berlaku 25 Januari lalu (kes di Kota Tinggi), kluster indeks kesnya ialah warga emas wanita 72 tahun menjadi guru al-Quran.

"Beliau berdepan anak-anak dalam kalangan pelajarinya daripada pelbagai kumpulan. Akhirnya sehingga 7 Februari, terdapat 37 kes memabatkan 29 kanak-kanak dan lapan dewasa.



"Daripada 37 kes, 36 dikesan secara aktif. Penguat kuasa kesihatan kita turun padang buat pengesanan kontak. (Hasil saringan), 903 kontak rapat dikenal pasti dan menjalani saringan tibi," katanya pada Waktu Pertanyaan Menteri di sini, semalam.

Beliau menjawab soalan tambahan Suhaizan Kaiat (PH-Pulau) yang meminta perincian mengenai kes kluster tibi di Kota Tinggi dan ingin tahu bagaimana kawasan luar bandar boleh menjadi kawasan penyebaran tibi.

Dr Dzulkefly berkata, orang ramai perlu tahu wabak tibi boleh menjangkiti sesiapa sahaja yang terdedah kepada bakteria *mycobacterium tuberculosis*.

"Mengapa di Kota Tinggi? Tempat yang tidak sibuk, di situlah kita perlu ambil perhatian. Apabila kes ini agak unik, kita kaji mengapa terdeteksi indeks kes dan sebagainya. Ia berkait dengan imuniti. Jadi, boleh berlaku di mana saja dan kepada sesiapa pun.

"Kita mungkin terdedah kepada mikro bakteria itu, tapi ia berlaku secara senyap. Namun, apabila berlaku sesuatu pada kita, iaitu imuniti badan turun



Dr Dzulkefly pada Waktu Pertanyaan Menteri di Dewan Rakyat, semalam. (Foto BERNAMA)

mendadak, mikro bakteria tersebut akan *flare up* (meletus), di sinilah berlaku kes," katanya.

Dr Dzulkefly turut menjawab soalan tambahan Datuk Dr Ahmad Yunus Hairi (PN-Kuala Langat) sama ada penyebaran tibi menunjukkan kegagalan dalam Program Imunisasi Kebangsaan dengan kerajaan mewajibkan suntikan vaksin Bacillus Calmette-Guerin (BCG) bagi kanak-kanak untuk perlindungan.

## Suntikan BCG diteruskan

Menjawab soalan itu, beliau berkata, rekod Kementerian Kesihatan menunjukkan liputan imunisasi bagi kanak-kanak mencapai 98 peratus dengan suntikan, termasuk BCG masih diteruskan meliputi sekitar 500,000 bayi bagi

kelahiran setiap tahun.

"Ada pun pendekatan lain, antaranya persoalan mengenai warga dan pekerja asing (juga perlu diberi perhatian). Sebab itu, saringan awal sangat penting, namun seperti kita maklum, *latent tibi* (wabak tibi senyap) sangat sukar dikenal pasti," katanya.

Beliau berkata, sebanyak 10 kluster baharu kes jangkitan tibi dilaporkan di negara ini sehingga 7 Februari lalu, dengan Selangor mendahului dengan merekodkan empat kes.

"Di Johor, satu kes baru-baru ini, (memabatkan) wanita warga emas, guru al-Quran berusia 72 tahun, yang berakhir dengan 903 kontak rapat dikenal pasti," katanya.

# Experts: Mask up when travelling

Malaysians are advised to stay vigilant during the coming festive season

By FAZLEENA AZIZ  
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**PETALING JAYA:** With 10 new tuberculosis (TB) clusters reported as of Feb 7, experts are advising those travelling during the festive rush to take safety meas-

ures. People should put on face masks while travelling and seek medical treatment early if they show symptoms, says Universiti Malaya Professor of Epidemiology and Public Health, Prof Dr Rafdzah Ahmad Zaki.

"If you are unwell, it is best not to travel but since it is the festive season, many would like to balik kampung and meet their families.

So if you suspect there are symptoms, it is advisable to get yourself checked.

"The other thing is to wear a mask to prevent bacteria or virus from spreading, especially in public transport. It is not just TB, there are also other kinds of infectious diseases," she said.

Dr Rafdzah also pointed out that good ventilation is needed when there is a gathering, so doors and windows should be kept open.

"Since TB is an infectious disease, once you have a case, it will spread if transmission isn't controlled. Remember, TB's incubation period is long from the time of exposure to symptoms.

"So when a case is detected, we do more active screening and thus find more cases. The cluster is a reminder that TB has been around us for a while," she said, adding that people needed to be more vigilant.

Federation of Private Medical Practitioners Associations Malaysia (FPMPAM) president Dr Shanmuganathan T.V. Ganeson said the Medical Examination Monitoring Agency (Fomema) has an important role in TB screening.

"This is an important public health layer that helps identify cases early and links individuals to care. TB control works best when everyone in the country -

citizens and non-citizens alike have access to screening and treatment.

"Any gaps in access, coverage, or willingness to seek care can create blind spots for infectious diseases.

"TB control is most effective when individuals diagnosed with TB can complete treatment without interruption. If treatment is disrupted, there is a risk of ongoing transmission and drug resistance," he said.

He also said not all tuberculosis was pulmonary (lung TB). Extra-pulmonary TB can affect lymph nodes, bones, joints, the spine and other organs.

These forms are generally not

infectious because they do not involve the airways, he said.

"Transmission concern mainly arises with active pulmonary TB, where bacteria can be released into the air. This distinction is important to reduce unnecessary fear or stigma, as a person with extra-pulmonary TB alone does not typically pose a transmission risk to others."

Last week, it was reported that 33 TB cases were detected in Kota Tinggi, Johor, with all patients currently under treatment.

Health Minister Datuk Seri Dr Dzulkefly Ahmad told the Dewan Rakyat that Selangor led with four clusters, while a significant cluster was identified in Johor.

## Dzulkefly: 10 new TB clusters in seven states

By RAHIMY RAHIM  
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**KUALA LUMPUR:** Ten new active tuberculosis (TB) clusters have been detected in seven states so far, with Selangor topping the list with four clusters involving 10 cases, says Health Minister Datuk Seri Dr Dzulkefly Ahmad (pic).

"Johor recorded one cluster with 37 cases, while Kedah and Kelantan each reported one cluster with two cases.

"This is followed by Pahang, recording one cluster involving four cases, Perlis reported one cluster with two cases, and Sabah reported one cluster with five cases," he told Datuk Dr Ahmad Yunus Hairi (PN-Kuala Langat) during the Minister's Question Time.

Dr Ahmad Yunus had asked the Health Ministry to state the latest status of TB clusters by state, including the number of active cases still under monitoring.

He also asked the ministry to explain the specific screening and control measures that have been implemented in high-risk premises, such as boarding schools, prisons and worker hostels to prevent further transmission.

In high-risk premises such as boarding schools, prisons and worker hostels, screening measures are conducted based on the Tuberculosis Information System Manual (TBIS 2018), which includes contact identification, contact evaluation, and contact screening, said Dzulkefly.

The screening process includes symptom screening, including

cases of persistent cough, fever, loss of appetite and weight loss, while clinical examination of the lungs was carried out.

Chest X-ray examination, as well as sputum examination, including microscopy and culture, are also done, he said.

The Health Minister added that control measures to prevent the spread of TB include ensuring that individuals diagnosed with TB receive early anti-TB treatment.

"Close contacts who do not have active TB are screened for TB infection or latent TB and are started on preventive treatment. Treatment is monitored daily through Directly Observed Therapy at the nearest health facility.

"In addition, symptomatic individuals are advised to practice proper cough etiquette, covering their mouth and nose when coughing or sneezing.

"The Health Ministry continuously monitors the situation of TB clusters and strives to improve the delivery of quality services through early detection and treatment," he said.

On the Kota Tinggi Johor cluster, Dzulkefly said that should serve as a wake up call for the whole country.

"The case in Johor is a recent one where the index case was a 72-year-old woman, a religious teacher, which resulted in 903 close contacts being identified," he said.

"As of Feb 7, it involves 37 cases involving 29 children and eight adults," he said, adding that all of them are currently being treated at nearby health facilities.



Important: A patient studying a poster of information on TB displayed at a clinic. — FAIHAN GHANI/The Star

## Clinics receiving more patients

By MOHD FARHAAN SHAH  
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**JOHOR BARU:** The recent rise in tuberculosis (TB) cases in Johor has coincided with the cough and flu season, with private clinics seeing an increase in patients with respiratory symptoms, says Johor Doctors Association president Dr Mohamed Amin Kader.

He said many private clinics across the state have recorded a higher number of walk-in patients complaining of fever, cough and flu in recent weeks.

Despite the increase, Dr Mohamed Amin assured the public there was adequate medication to treat patients with common respiratory illnesses.

He said private clinics in Johor adhere strictly to the Health Ministry's standard operating procedure, especially when hand-

ling patients who have been coughing for more than two weeks.

"Patients with prolonged cough, especially those coming from areas where TB cases have been reported, will be screened for tuberculosis," he said yesterday.

Dr Mohamed Amin said patients who test positive for TB would be referred to the nearest government health clinic for further examination and treatment.

He explained that TB patients are required to attend health clinics daily to consume their medication for a minimum of six months without fail.

"The first few weeks of treatment are critical. If there is improvement in the patient's phlegm, the intensity of medication may be reduced under medical supervision," he said.

However, he added that

patients whose condition does not improve or worsens would be referred to a respiratory specialist at Hospital Sultanah Aminah for further management.

Dr Mohamed Amin stressed that contact tracing carried out by the Health Ministry was crucial in curbing TB transmission, as it allowed authorities to identify and screen close contacts early.

Meanwhile, Malaysian Medical Association Johor Branch chairman Dr S. Prabha Shanthi said the sudden outbreak of TB in Kota Tinggi had raised alarm, particularly due to the rapid spread and lack of early warning signs.

She said the population structure in the district contributed to faster transmission, as Kota Tinggi is largely made up of elderly residents, children and foreign workers - groups more vulnerable due to weakened immune systems.

# Alliance a boost for health and tech

## M'sia-India partnership will further country's advancement in various sectors

BY RAGANANTHINI  
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**PETALING JAYA:** Indian Prime Minister Narendra Modi's visit has set the tone for the next phase of the Malaysia-India economic partnership with focus on technology and healthcare, say officials.

Association of Private Hospitals Malaysia president Datuk Dr Kuljit Singh expected collaboration between both governments, such as in the area of traditional medicine, to cascade to private hospitals.

He said this would pave the way for the introduction of a greater variety in healthcare offerings to the Malaysian market.

"We believe that will also

strengthen Malaysia's position as a leading destination for medical tourism," he said.

Asean-India Business Council alternate chairman and Federation of Malaysian Business Associations vice-chairman Nivas Ragavan said Modi's official visit to Malaysia over the weekend marked a significant step forward in elevating bilateral relations under the Comprehensive Strategic Partnership forged in 2024.

"The visit resulted in the signing of multiple cooperation agreements and renewed commitments to deepen collaboration across trade, semiconductors, defence, healthcare, tourism and digital innovation demonstrating a clear intent by both governments to translate diplomatic goodwill into tangible economic

outcomes," he said.

With bilateral trade between the two countries already hitting over RM70bil, he said the most recent engagement sent a strong signal of confidence with Malaysia maintaining robust export strength in palm oil and electrical/electronic products.

Nivas said existing trade will be further supported by initiatives such as local currency trade settlement and expanded technology cooperation that created meaningful opportunities for joint ventures, supply-chain integration and regional market expansion.

"Equally important is the forward-looking digital and innovation agenda. The planned introduction of India's Unified Payments Interface (UPI) in Malaysia, alongside expanding

collaboration in AI, digital technologies and presence of more than 100 Indian IT companies generating local employment, highlights the transition of Malaysia-India ties toward high-value, knowledge-driven sectors," he said.

Beyond economics, he said the visit also reinforced deep people-to-people and cultural bonds symbolised by high-level engagements.

Assoc Prof Dr Suseela Devi Chandran of the Faculty of Administrative Science & Policy Studies (FSPPP), UiTM Shah Alam, said the signing of the 11 MOUs during the Indian leader's visit was a sign of trust and cordiality between both sides.

"It's up to the policymakers from both countries to study the MOUs and work accordingly so

that the outcome can be mutually beneficial.

"We have always had the upper hand on the economic front as India imports more from Malaysia, with this being the case over the last 15 to 20 year. But we can work with India on people-to-people connectivity, tourism and security cooperation," she said, noting that the warm relationship between Modi and Prime Minister Datuk Seri Anwar Ibrahim has added a new dimension to bilateral relations.

Assoc Prof Suseela said aligning well with emerging powers and superpowers was a boost to Malaysia's status as a middle power.

It was Modi's second official visit to Malaysia since 2015 although he made a brief stopover here in 2018.

**PENULARAN KES TIBI DALAM NEGARA**

# KKM kesan 10 kluster baharu

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**Kuala Lumpur**

**K**ementerian Kesihatan (KKM) memaklumkan sebanyak 10 kluster baharu kes jangkitan tuberkulosis atau tibi dilaporkan setakat 7 Februari lalu.

**Menteri Kesihatan, Datuk Seri Dr Dzulkefly Ahmad** berkata daripada jumlah itu, Selangor mendahului dengan merekodkan empat kluster, iaitu tertinggi di negara ini.

"Bagi 2026, sehingga 7 Februari, 10 kluster baharu tibi dilaporkan dengan Selangor mendahului dengan

empat kluster.

"Di Johor, satu kes (direkodkan) baru-baru ini, (membabitkan) wanita warga emas, guru al-Quran berusia 72 tahun, yang berakhir dengan 903 kontak rapat dikenal pasti," katanya pada Waktu Pertanyaan-Pertanyaan Menteri di Dewan Rakyat, semalam.

Beliau menjawab soalan **Datuk Dr Ahmad Yunus Hairi (PN-Kuala Langat)** yang meminta penjelasan mengenai status terkini kluster tibi mengikut negeri serta jumlah kes aktif yang masih dipantau.

Memperincikan sejumlah 10 kluster baharu yang kesemuanya masih aktif, Dr Dzulkefly yang juga Ahli

Parlimen Kuala Selangor berkata, terdapat enam negeri lain yang turut merekodkan kes sama dan menyumbang masing-masing satu kluster penyakit berjangkit terbabit.

"Kluster tibi merujuk kepada kejadian kelompok jangkitan dua kes atau lebih yang mempunyai kaitan epidemiologi dari segi masa, tempat atau hubungan kontak yang menunjukkan kemungkinan wujudnya rantaian transmisi yang sama.

"Kes indeks yang dikenal pasti ketika permulaan kluster adalah

merujuk kepada kes tibi yang dikenal pasti terlebih dahulu dan menjadi rujukan utama dalam siasatan kontak serta kawalan wabak.

"Di Selangor, terdapat empat kluster, membabitkan 10 kes, Johor pula sebanyak 37 kes direkodkan, sementara masing-masing dua kes di Kedah dan Kelantan, di Pahang pula, empat kes, Perlis dengan dua kes dan Sabah, lima kes," katanya.

Mengulas langkah diambil bagi memerangi tibi membabitkan institusi berisiko

tinggi seperti sekolah berasrama, penjara, Dr Dzulkefly berkata, saringan dijalankan berdasarkan Manual Tuberculosis Information System, (TBIS 2018) iaitu mengenalpastian kontak, penilaian kontak dan pemeriksaan kontak.

Katanya, saringan yang dijalankan merangkumi penilaian simptom termasuk batuk berpanjangan, demam, hilang selera makan dan susut berat badan; pemeriksaan klinikal paru-paru; pemeriksaan x-ray paru-paru dan pemeriksaan kahak iaitu sputum mikroskopi dan kultur.

"Langkah kawalan bagi mengekang penyebaran penyakit tibi ini adalah de-

ngan memastikan mereka yang disahkan menghidap penyakit itu diberikan rawatan awal anti-tibi.

"Bagi kontak rapat yang tidak menghidap tibi akan disaring untuk mengesan jangkitan tibi latent tibi (jangkitan tibi) dan dimulakan rawatan pencegahan tibi.

"Pemantauan rawatan secara *Directly Observed Therapy* (DOT) secara harian dilaksanakan di fasiliti kesihatan terdekat," katanya.

Selain itu, katanya, individu bergejala dinasihatkan mengamalkan etika batuk iaitu dengan menutup mulut dan hidung ketika batuk atau bersin.

**Selangor mendahului dengan empat kluster**

## Wabak senyap, boleh berjangkit di mana-mana

**Kuala Lumpur:** Menteri Kesihatan, Datuk Seri Dr Dzulkefly Ahmad, memberi peringatan kes indeks tibi di Kota Tinggi, Johor membabitkan wanita warga emas yang membawa kepada jangkitan kepada 37 individu sepatutnya menjadi *wake up call* bahawa wabak itu boleh berlaku di mana-mana saja termasuk secara 'senyap'.

Menjelaskan kebimbangan itu, Dr Dzulkefly yang juga Ahli Parlimen Kuala Selangor, yang merujuk kes di Kota Tinggi, menjelaskan, kes terbabit menunjukkan penularan tibi masih boleh berlaku di kawasan luar bandar.

Sehubungan itu, beliau berkata, kes terbabit sepatutnya dijadikan rujukan bahawa penularan tibi boleh berlaku ke atas siapa dan di mana-mana lokasi, jika seseorang itu terdedah kepada bakteria *mycobacterium tuberculosis* yang merebak melalui udara.

"Ini satu kes yang jadi 'wake up call' yang menyentak kita. Apa yang kita boleh katakan kemunculan semula penyakit berjangkit ini.

"Apa yang berlaku 25 Januari lalu, kluster indeks kesnya adalah warga emas wanita 72 tahun menjadi guru al-Quran. Tambahan pula beliau berdepan

anak-anak dalam kalangan pelajarinya daripada pelbagai kumpulan.

"Akhirnya sehingga 7 Februari, terdapat 37 kes membabitkan 29 kanak-kanak dan lapan dewasa. Daripada 37 kes, 36 dikesan secara aktif, maknanya penguatkuasa kesihatan kita turun padang buat pengesanan kontak. (Hasil daripada saringan dijalankan), 903 kontak rapat dikenal pasti dan menjalani saringan tibi," katanya.

Beliau menjawab soalan tambahan **Suhaizan Kaiat (PH-Pulai)** yang meminta perincian mengenai kes kluster tibi di Kota Tinggi dan ingin tahu bagaimana sebuah lokasi di luar bandar boleh menjadi kawasan penyebaran tibi.

Mengulas lanjut, Dr Dzulkefly berkata, orang ramai perlu tahu bahawa wabak tibi boleh menjangkiti sesiapa saja yang terdedah kepada bakteria *mycobacterium tuberculosis*.

"Kenapa di Kota Tinggi? Tempat yang tidak sibuk, di situlah kita perlu ambil perhatian. Apabila kes ini agak unik, maka kita kaji mengapa tercetus indeks kes dan sebagainya. Ia (sebenarnya) terkait dengan imuniti, jadi boleh berlaku di mana sahaja dan kepada sesiapa pun," katanya.

# KKM kesan 10 kluster baharu jangkitan tibi

**Individu bergejala dinasihatkan mengamalkan etika menutup mulut, hidung ketika batuk atau bersin**

Oleh DIANA AZIS

**KUALA LUMPUR** - Sebanyak 10 kluster baharu kes jangkitan tuberkulosis atau tibi dikesan masih aktif di negara ini sehingga 7 Februari lalu.

Menteri Kesihatan, Datuk Seri Dr Dzulkefly Ahmad berkata, daripada jumlah itu, Selangor mendahului dengan merekodkan empat kluster melibatkan 10 kes.

"Satu kes menjadi *'wake-up call'* yang

menyentap atas kemunculan semula penyakit berjangkit berlaku pada 25 Januari lalu, dengan indeks melibatkan seorang wanita warga emas berusia 72 tahun, yang akhirnya pada 7 Februari terdapat 37 kes melibatkan 29 kanak-kanak dan lapan dewasa.

"Daripada 37 kes itu, 36 kes dikesan secara tindakan pengesanan kes (ACD), dengan pegawai kesihatan Kementerian Kesihatan Malaysia (KKM) turun padang untuk buat pengesanan kontak.

"Sejumlah 903 kontak rapat dikenal pasti, menjalani saringan tibi dan semua kes dimulakan rawatan serta dipantau secara harian di fasiliti kesihatan terdekat," katanya ketika sesi Pertanyaan Menteri di Dewan Rakyat pada Selasa.

## DEWAN RAKYAT

Beliau menjawab soalan **Datuk Dr Ahmad Yunus Hairi (PN-Kuala Langat)** yang meminta penjelasan mengenai status terkini kluster tibi mengikut negeri dan jumlah kes aktif masih dipantau.

Dalam pada itu, Dzulkefly menjelaskan langkah kawalan bagi mengekang penyebaran tibi adalah dengan memastikan mereka yang disahkan diberi rawatan awal anti-tibi.

"Bagi kontak rapat yang tidak menghidap tibi, mereka akan disaring untuk mengesan jangkitan tibi dan dimulakan rawatan pencegahan.

"Pemantauan rawatan secara terapi pemantauan langsung secara harian dilaksanakan di fasiliti kesihatan terdekat.

"Individu bergejala dinasihatkan me-



**DR DZULKEFLY**

ngamalkan etika batuk iaitu dengan menutup mulut dan hidung ketika batuk atau bersin," ujarnya.

# Health Ministry steps up monitoring after TB cluster detected

**A TUBERCULOSIS** (TB) cluster in Kota Tinggi that has infected dozens, including schoolchildren, has prompted intensified health surveillance, with the Health Ministry confirming it reflects a broader national pattern of TB cluster outbreaks.

Health Minister Dr Dzulkefly Ahmad said the cluster began on Jan 25 and expanded following extensive contact tracing.

"It started with a 72-year-old *Quran* teacher as the index case. As of Feb 7, there are 37 cases – 29 children and eight adults.

"A total of 903 close contacts have been identified and screened. Most cases were detected through active case detection."

Local reports earlier indicated the cluster involved communities around Felda Sungai Mas with schools sanitised after infections were detected among students while health teams screened hundreds of close contacts.

All identified cases are receiving treatment

and are being closely monitored, Dzulkefly said.

He later told Dewan Rakyat that the outbreak reflects wider TB transmission nationwide.

"In 2025, a total of 88 TB clusters were reported nationwide, involving 254 TB cases. Of these, 35 clusters are still active. As of Feb 7, 10 new clusters have been reported, with Selangor recording four."

He was responding to Datuk Dr Ahmad Yunus Hairi (Kuala Langat–PH) who sought the latest status by state, active monitored cases and control measures in high-risk institutions.

On control measures, Dzulkefly outlined screening and treatment protocols in settings such as boarding schools, prisons and worker dormitories.

"Screening in high-risk institutions such as boarding schools, prisons and worker dormitories includes symptom checks, chest X-rays, sputum tests and rapid molecular testing.

"Confirmed patients are given immediate

anti-TB treatment and monitored daily under directly observed therapy."

He also warned of the risks posed by latent infections.

"Latent TB is dangerous because the bacteria can remain in the body without symptoms and reactivate when a person's immunity drops."

Dzulkefly said vaccination coverage among newborns remains high.

"Bacille Calmette–guérin (BCG) vaccination coverage for newborns in Malaysia is around 99%. However, there is still no effective TB vaccine for adults."

He added that antimicrobial resistance is an emerging global threat.

"What we are facing today is antimicrobial resistance – resistance to antibiotics, including TB drugs. This is a major global challenge and a serious future threat when antibiotics can no longer effectively treat infections that were once easily cured."

## Healthcare must be centred on human oversight: Specialist

**PETALING JAYA:** Artificial intelligence (AI) has the potential to revolutionise medical diagnosis and healthcare delivery but it must never replace human clinical judgement, said Universiti Kebangsaan Malaysia public health specialist Prof Dr Sharifa Ezat Wan Puteh.

She said AI could serve as a tool to assist doctors in identifying potential diagnoses and narrowing down differential conditions, but stressed that final decisions must always be confirmed by medical professionals.

"AI may help suggest possible conditions and, in some cases, guide clinicians towards more accurate diagnoses. However, many diseases are complex and require a human touch. A final diagnosis must still be made by a medical professional."

She said AI systems could overdiagnose or underdiagnose conditions, leading to false positives or negatives.

She added that such errors could trigger unnecessary investigations or procedures, inflating healthcare costs and exposing patients to avoidable risks.

She also said AI is most

effective when used to assist and automate existing healthcare services, particularly in diagnostics and pharmaceutical processes.

Full reliance on AI for medical decision-making could be dangerous, said Sharifa.

"Using AI as a support tool is acceptable, but relying fully on AI to make medical diagnoses or management decisions could be hazardous," she said.

"The recommended investigations, treatments or procedures suggested by AI may be inaccurate, especially in complex, severe or uncommon cases."

She highlighted that AI systems often rely on clinical algorithms that may not account for individual patient differences.

Biases in training data could influence AI recommendations, potentially leading to uncertain or even harmful outcomes, she added.

Nonetheless, she said AI could play a constructive role in treatment and patient management.

"AI tools could flag medication changes, support personalised nutrition plans for patients with chronic diseases and assist with

screening decisions, but always under the supervision of healthcare professionals," she emphasised.

The Malaysian Medical Council (MMC) has issued ethical guidelines to govern AI in medical practice, emphasising safe, responsible and equitable application.

The guidelines stress bias-free systems, evidence-based practices, ethical safeguards as well as the importance of fairness, underscoring that AI must support, not replace, professional clinical judgement.

Aligned with international standards, including the World Health Organisation and Malaysia's National AI Governance and Ethics Guidelines, the MMC directives maintain that registered medical practitioners remain fully accountable for patient outcomes, even when AI tools are used in clinical decision-making.

Key principles include protecting patient autonomy, promoting wellbeing, ensuring transparency and explainability of AI systems, clarifying accountability, and safeguarding privacy and data protection.

The directives also outline that doctors must receive appropriate

training before using AI, secure informed consent by explaining the tool's use and limitations, maintain strict data confidentiality, and retain the ability to override AI suggestions whenever necessary.

In the United States, the Food and Drug Administration has endorsed several AI-driven radiological and diagnostic tools, reflecting the growing acceptance of AI in healthcare under strong regulatory oversight.

"These developments are timely and crucial, but they also highlight the need for strong governance frameworks. Without oversight, AI could unintentionally widen health inequalities or undermine patient trust."

Ultimately, Sharifa stressed that human oversight must remain at the centre of healthcare, even as AI transforms delivery.

"AI should enhance clinical practice, not replace it. Ethical use, proper regulation and continuous human involvement are essential to ensure patient safety and maintain trust in our healthcare system."

– BY KIRTINEE RAMESH

# Battling the superbug



**A**NTIMICROBIAL resistance has resulted in infections that are difficult and costly to treat, require lengthier hospital stays and spread more easily within communities and healthcare facilities.

The rapid global spread of these resistant organisms has further intensified the problem as it moves easily across borders through travel, trade and food systems, facilitating the rapid dissemination of antimicrobial resistance worldwide.

In fact, superbug or antimicrobial resistance (AMR) has emerged as one of the most pressing public health threats of our time.

It occurs when microorganisms such as bacteria, viruses and fungi develop the ability to survive exposure to drugs designed to kill them or curb their effect.

As a result, standard treatments become increasingly less effective or even futile, allowing infections, at times life-threatening, to persist and spread.

Over time, AMR develops mechanisms that prevent medicines from working as they usually do.

While this resistance can arise naturally, it is typically accelerated by the misuse and overuse of antimicrobials in humans, animals and agriculture, as well as poor infection prevention and control practices, says Associate Professor Dr Cindy Teh Shuan Ju from Universiti Malaya's Medical Microbiology Department, Faculty of Medicine.

The World Health Organisation (WHO) estimates that AMR contributed to 4.95 million deaths globally in 2019. Without effective interventions, this figure could rise to 10 million deaths annually by 2050, placing AMR infections on a par with other more common causes of death such as cancer, diabetes and car accidents.

Closer to home, in the Health Ministry's Key Health Indicators Report 2023, the mortality rate attributed to



*AMR is typically accelerated by the misuse and overuse of antimicrobials in humans, animals and agriculture, as well as poor infection prevention and control practices, says Associate Professor Dr Cindy Teh Shuan Ju from Universiti Malaya's Medical Microbiology Department, Faculty of Medicine. PICTURE CREDIT: BIORISM*

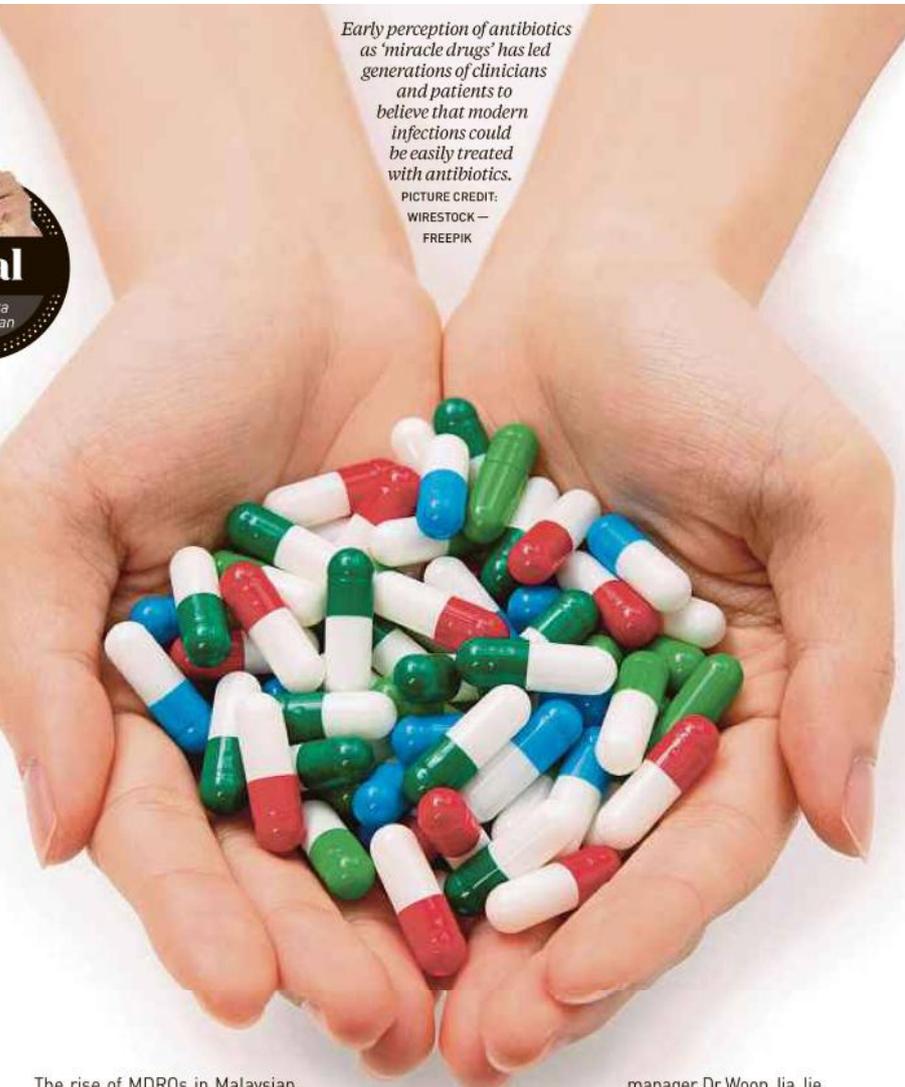


*Despite its severity, AMR remains widely underestimated and is often seen as a 'distant problem' rather than an immediate, visible threat, says Biorism Holdings Sdn Bhd research and development manager Dr Woon Jia Jie. PICTURE CREDIT: BIORISM*

antibiotic-resistant bacterial pathogens was 0.03 per 100,000 population.

Malaysia has recorded a significant upward trend in carbapenem-resistant organisms, which are classified as MDROs, says Dr Teh, citing the ministry's National Antibiotic Resistance Surveillance Report 2024.

MDROs are essentially bacteria and microorganisms resistant to three or more families of antibiotics.



*Early perception of antibiotics as 'miracle drugs' has led generations of clinicians and patients to believe that modern infections could be easily treated with antibiotics.*

PICTURE CREDIT: WIRESTOCK — FREEPIK

The rise of MDROs in Malaysian hospitals has become increasingly evident, signalling the urgent need for stronger and more effective infection prevention measures.

Dr Teh says this challenge, however, is not unique to Malaysia. Neighbouring countries in the region are seeing similar trends, giving rise to MDROs causing serious consequences to more vulnerable populations, particularly children and the elderly who have developing or weaker immune systems that are more susceptible to severe, prolonged and recurrent infections.

The rise of MDROs also puts tremendous pressure on the healthcare system, including infection prevention and control teams, as there is a need for stricter infection control measures, such as intensified surveillance, isolation protocols and environmental decontamination.

But despite its severity, AMR remains widely underestimated.

AMR is often seen as a "distant problem" rather than an immediate, visible threat, says Biorism Holdings Sdn Bhd research and development

manager Dr Woon Jia Jie.

"Because antibiotics have been effective, affordable and widely accessible for decades, many people assume they will always work," says Dr Woon.

Antibiotics' early reputation as "miracle drugs" led generations of clinicians and patients to believe that modern infections could be easily treated with antibiotics.

Over time, antibiotics became normalised as a routine solution rather than being treated as a finite medical resource, adds Dr Woon.

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