

Malaysian Society of Hypertension

21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026



CONFERENCE BOOKLET



Beyond Blood Pressure

Making Cardio-Renal-Metabolic
Health A Shared Responsibility

24 - 26 April 2026
Shangri-La Hotel, Kuala Lumpur

congress2026.msh.my

01

Malaysian Society of Hypertension

21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

WELCOMING NOTES



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

WELCOMING NOTES



MSH PRESIDENT AND ORGANIZING CHAIRPERSON'S *Message*

Dear Colleagues and Esteemed Guests,

Welcome to the Malaysian Society of Hypertension's 21st Annual Scientific Congress, taking place from April 24th to 26th, 2026. This year's topic, "Beyond Blood Pressure: Making Cardio-Renal-Metabolic Health a Shared Responsibility," emphasises our commitment to tackling the multidimensional nature of hypertension care and its influence on overall health.

As we commemorate our 21st congress, we reflect on the advancements made in hypertension therapy while anticipating the future of total organ protection and metabolic health management. This congress brings together professionals from a variety of fields to investigate novel techniques for improving hypertension outcomes and reducing organ damage.

The scientific program will feature renowned speakers who will discuss the most recent advances in hypertension research, clinical practice, and technology breakthroughs. I invite all attendees to participate actively in debates, workshops, and networking opportunities during the congress. I would like to express my heartfelt gratitude to the organising committee, presenters, sponsors, and all of you for your commitment to promoting cardiovascular health in Malaysia and beyond.

Lastly, I invite you to join the society as a member and become part of our growing family committed to combating cardiovascular disease.

Thank you for your participation, and I wish you a productive and enlightening congress.

A handwritten signature in black ink, appearing to be 'Azhari', written in a cursive style.

DATO' SRI DR. AZHARI BIN ROSMAN

Organizing Chairperson



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

WELCOMING NOTES



SCIENTIFIC'S CHAIRPERSON *Message*

It gives me great pleasure to welcome all participants, prominent presenters, and distinguished guests to the 2026 MSH Annual Scientific Meeting on behalf of the Malaysian Society of Hypertension (MSH).

We have the privilege of hosting a truly global event this year, with well-known foreign specialists joining us to discuss the most recent developments in the treatment of hypertension. From cutting-edge technologies to the most recent clinical guidelines, this meeting seems to be a fantastic chance for education, teamwork, and creativity.

To prevent and treat hypertension, which is a primary cause of morbidity and mortality globally, we must continue to improve our understanding and approaches. The next debates will undoubtedly motivate us to improve clinical practice and patient outcomes.

We promote active participation in sessions, exchange ideas, and form lasting connections. Together, we can shape the future of hypertension care for the benefit of both patients and communities.

Thank you for taking part in this important event. We look forward to a productive and memorable meeting.

Iskandar

DR. ISKANDAR MIRZA

Scientific Chairperson



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

WELCOMING NOTES



SCIENTIFIC'S CO-CHAIRPERSON *Message*

I am delighted to welcome you to the 21st Annual Scientific Congress hosted by the Malaysian Society of Hypertension. As Co-Scientific Chair, I am happy to be part of a devoted team that collaborated with the other organising committees to curate this scientific agenda.

We meticulously developed the curriculum through numerous rounds of discussions, reviews, and collaboration. Our sessions adhere to the most recent evidence-based updates, including those from the European Society of Cardiology (ESC), European Society of Hypertension (ESH), and Malaysian Clinical Practice Guidelines. I have a thorough understanding of our responsibility as frontline healthcare providers in identifying, diagnosing, and treating hypertension in our community as a family medicine and hypertension specialist. Since many of our patients have hypertension, it is critical that we maintain up-to-date information and clinical expertise.

We believe that everyone who attends this conference, including trainees, researchers, and doctors, will gain from the rich exchange of experiences and information. Let this serve as a platform for networking and cooperation in addition to education. By working together, we can advance our understanding and enhance patient outcomes.

Welcome to the Congress once more. We hope to have your support for many years to come. I hope everyone has a productive and enriching time at this congress.

DR. BEH HOOI CHIN

Co-Scientific Chairperson



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

02

Malaysian Society of Hypertension

21ST ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

ABOUT MALAYSIAN SOCIETY OF HYPERTENSION



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

ABOUT MSH



Malaysia Society of Hypertension (MSH) was officially registered in 1993 and serves as a professional organization dedicated to addressing the issue of hypertension in Malaysia.

Hypertension, commonly referred to as high blood pressure, is a widespread health concern with serious complications. The primary objective of MSH is to promote public education on hypertension, increase awareness and understanding among the general population, and enhance its management.

01

PROMOTE

Promote public education on hypertension, raising awareness and knowledge about the condition among the general population in Malaysia.

02

HELP

Help healthcare professionals and individuals in achieving optimal hypertension control through education, guidance, and promoting best practices.

03

ENCOURAGING

Encouraging research and publication towards better care in the management of hypertension.



OBJECTIVE OF SOCIETY



PROMOTE

Promote basic and clinical studies and educate doctors and para-medical staffs regarding hypertension and to propagate knowledge on hypertension.



EDUCATION

Educate the public and to be of service to all hypertensives and para-medical and others interested in hypertension and to advise hypertension patients to remain active and to lead a normal and useful life.



COST-EFFECTIVE

Promoting cost-effective management and control of hypertension involves implementing strategies that provide effective care while minimizing financial burden.



INTERNATIONAL LIAISE

Liaise with international bodies related to hypertension and to organise educational meetings or provide services at local and regional levels.



MULTIMEDIA PLATFORM

Compile, print, publish, and distribute brochures and/or journals by experts on hypertension.

MEMBERSHIP INFORMATION

THE BENEFITS



DISCOUNTED CME

Attendance at MSH's CME programs with discounted price



RESEARCH GRANT

Opportunities to apply for MSH Research Grant (subject to availability)



CONFERENCE SPONSORSHIP

Limited sponsorship to attend selected conferences (subject to availability)



CONTRIBUTING ARTICLES

Opportunities to submit articles to MSH website and newsletter



MEMBERS PORTAL

Free access to Society's members-only portal

REGISTER NOW

Visit our website to register and know more details and information

[MSH.MY/MEMBERSHIP/REGISTRATION](https://msh.my/membership/registration)



ABOUT MSH

COMMITTEE OF MSH

**DATO'
SRI DR. AZHARI
ROSMAN**

President of MSH



**DR.
ISKANDAR
MIRZA**

Vice President of MSH



**DR. BEH
HOOI
CHIN**

Hon General Secretary



**DR.
HANA
AZHARI**

Hon Treasurer



**PROF. DATIN
DR. CHIA
YOOK CHIN**

Council Member



**PROF. DR.
KHOO EE
MING**

Council Member



**PROF. DR.
NIK SHERINA
HANAFI**

Council Member



**DR.
NAVIN
KUMAR**

Council Member



**PROF. DR.
CHING SIEW
MOOI**

Council Member



**DR.
CHONG KUCK
MENG**

Council Member



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

03

Malaysian Society of Hypertension

21ST ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

ABOUT 21ST ANNUAL SCIENTIFIC CONGRESS



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

ABOUT 21ST MSH ASC

MSH CONGRESS 2026

BEYOND BLOOD PRESSURE:

MAKING CARDIO-RENAL-METABOLIC

The 21st MSH Annual Scientific Congress brings together healthcare **professionals, researchers, and experts** for three days of transformative learning.



Regional &
International
Experts



Interconnected
System Approach



Interactive
Learning



Innovation &
Technology



Evidence-Based
Updates



Vulnerable
Populations
Focus

24 - 26 April 2026

Shangri-La Hotel, Kuala Lumpur



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

04

Malaysian Society of Hypertension

21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

ORGANIZING COMMITTEE



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

ORGANIZING COMMITTEE

**DATO'
SRI DR. AZHARI
ROSMAN**

Organizing Chairperson



**DR.
ISKANDAR
MIRZA**
Scientific Chairperson



**DR. BEH
HOOI
CHIN**
Co-Scientific Chairperson



**DATO
WIRA DR. L.R.
CHANDRAN**
Secretary



**PROF. DR.
CHING SIEW
MOOI**
Treasurer



**PROF. DR.
KHOO EE
MING**
Abstract Coordinator



**PROF. DR.
NIK SHERINA
HANAFI**
Opening Ceremony and Contacts



**DR. NOOR
YUHYI BIN
SULAIMAN**
Committee Member



**DR.
SHARIMILA**
Committee Member



**DR.
NAVIN
KUMAR**
Multimedia Coordinator



**PROF. DATIN
DR. CHIA
YOOK CHIN**
Industry Liaison



**DR.
CHONG KUCK
MENG**
Industry Liaison



**DR.
THUM
CHAN HO**
Committee Member



**DR.
FA'IZ BIN
MASHOOD**
Committee Member



**DR.
GOAY SWEE
EN**
Committee Member



**DR. NOOR
MUHAMMAD
AZLAN SHAH**
Committee Member



**DR. ANEESA
ABDUL
RASHID**
Committee Member



**DR.
HANA
AZHARI**
Committee Member



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

Help people with obesity

LIVE LIGHTER™

with Wegovy®

Wegovy® offers:

≥20%
WEIGHT
LOSS¹⁻³

Wegovy® delivers
≥20% weight loss,
in ~1 in 3 PwO¹⁻³

84%
FAT MASS
LOSS^{*4}

Wegovy® delivers
weight loss
from the
right places
– 84% from
fat mass^{*4}

46%
REDUCED
CRAVINGS^{5,6}

Wegovy® enabled
46% decrease
in constant



SCAN HERE

for the Wegovy® Abbreviated
Prescribing Information (API) and
Full Prescribing Information (PI)

SCAN HERE

for future
expert sessions
and updates



PwO: People with Obesity

*Please note that Semaglutide 7.2 mg in STEP UP trial has not yet received approval from the FDA. This data is from a pooled population of Semaglutide 2.4mg and 7.2mg from STEP UP trial.

References: 1. Wilding et al. Once-Weekly Semaglutide in Adults with Overweight or Obesity. *N Engl J Med* 2021;384:989-1002. 2. Wadden et al. Effect of Subcutaneous Semaglutide vs Placebo as an Adjunct to Intensive Behavioral Therapy on Body Weight in Adults With Overweight or Obesity: The STEP 3 Randomized Clinical Trial. *JAMA* 2021;325:1403-13. 3. Rubino et al. Effect of Continued Weekly Subcutaneous Semaglutide vs Placebo on Weight Loss Maintenance in Adults With Overweight or Obesity: The STEP 4 Randomized Clinical Trial. *JAMA*. 2021;325:1414-25. 4. Hjelmæsæth J et al. Presented at EASD 2025, Vienna, Austria, 15–19 September 2025. 5. Wharton S et al. Two-year effect of semaglutide 2.4 mg on control of eating in adults with overweight/obesity: STEP 5. *Obesity (Silver Spring)* 2023;31:703–715. 6. Arnaut T et al. Oral presentation at EASD 2025, Vienna, Austria, 15–19 September 2025.

For Healthcare Professionals Only.
Please refer to full prescribing information before prescribing.

Novo Nordisk Pharma (Malaysia) Sdn. Bhd. (Reg. No. 199201009267 (240770-W))
Menara 1 Sentrum, Level 16, No. 201 Jalan Tun Sambanthan, 50470 Kuala Lumpur.
Tel: +603 2265 7300 Fax: +603 2276 5161 www.novonordisk.com
Date of material production: 13 JAN 2026 MY26SEM000012
2026 © Novo Nordisk Pharma (Malaysia) Sdn. Bhd.



ONCE-WEEKLY

wegovy®

semaglutide injection 2.4 mg

05

Malaysian Society of Hypertension

21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

SCIENTIFIC PROGRAMME



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my



EVENT SCHEDULE: DAY 1

08.30 Hypertension in the Cardiovascular-Renal-Metabolic Continuum: Moving from Silos to Systems

Speaker: **Prof. Markus Schlaich, Professor**, Dobney Chair in Clinical Research, Medicine, UWA Medical School, Australia

09.00 Welcome Address and Opening Ceremony

SYMPOSIUM 1

Insights on the Latest Hypertension Guideline:
HOPE-ASIA-MSH Symposiums

Chairperson: **Dr. Alan Fong**, Consultant Cardiologist, Sarawak Heart Centre Kota Samarahan;
Head of Clinical Research Centre, Sarawak General Hospital Kuching

09.30 Topic 1: An Update of the Malaysia Management of Hypertension CPG (6th Edition)

Speaker: **Prof. Dr. Abdul Rashid Abdul Rahman**, Internal Physician, An-Nur Specialist Hospital

09.50 Topic 2: Aligning Perspectives on Hypertension:
A Review of the HOPE ASIA Hypertension Guidelines

Speaker: **Prof. Dr. Kazuomi Kario**, Professor and Chairman of Cardiovascular Medicine, Jichi Medical University School of Medicine, Japan

10.10 Topic 3: From Guidelines to Practice: Ensuring High Quality of Blood Pressure Measurement

Speaker: **Prof. Dr. Jiguang Wang**, Professor of Cardiovascular Medicine, Shanghai Jiaotong University School of Medicine; Director, The Shanghai Institute of Hypertension



EVENT SCHEDULE: DAY 1

10.30

Q&A Session

10.40

Coffee Break

Poster Presentations

11.30

Navigating RAASi Therapy: Clinical Insights Across the Patient Journey by Servier

Speaker: **Dr. Azani Mohamed Daud**, Cardiologist, Gleneagles Hospital Kuala Lumpur

Chairperson: **Prof. Dr. Ching Siew Mooi**, Professor of Family Medicine Department, University Putra Malaysia

12.00

Beyond Beta-Blockade: The Rise of 3rd-Generation Vasodilatory Agents in Modern Hypertension Guidelines by A. Menarini

Speaker: **Dr. Effarezan Abdul Rahman**, Internal Medicine Specialist, Damansara Specialist Hospital

Chairperson: **Dr. Thum Chan Ho**, Cardiologist; Preventive Cardiology, National Heart Institute (IJN)

12.30

Lunch & Friday Prayers

SYMPOSIUM 2

Across Ages: Hypertension in Vulnerable Populations

Chairperson: **Emeritus Prof. Dr. Khoo Ee Ming**, Consultant Family Physician, Universiti Malaya Specialist Centre

14.30

Topic 1: Early Recognition of Hypertension in Children and Adolescents



EVENT SCHEDULE: DAY 1

14.50

Topic 2: After Pregnancy Ends, Risk Continues: Managing Long-Term Cardiovascular Risk After Gestational Hypertension

Speaker: **Prof. Dr. Amilia Afzan Mohd Jamil**, Associate Professor, Head of Department Faculty of Medicine and Health Sciences, UPM

15.10

Topic 3: Managing Hypertension in the Elderly: An Individualized Approach

Speaker: **Dato' Dr. Tunku Muzafar Shah Tunku Jaafar**, Consultant Geriatrician, Selayang Hospital; Deputy Head of Geriatrics Service, Ministry of Health Malaysia

15.30

Q&A Session

15.40

Navigating the Weight of Evidence of Semaglutide in Obesity Management by Novo Nordisk

Speaker: **Dr. Al Fazir bin Omar**, Senior Consultant Cardiologist, Pantai Hospital Kuala Lumpur

Chairperson: **Dr. David Quek Kwang Leng**, Consultant Interventional Cardiologist, Cardiac Vascular Sentral Kuala Lumpur

16.10

Coffee Break



EVENT SCHEDULE: DAY 1

16.40

From Control to Continuity: Building Sustainable Patient Care in Hypertension Management by DKSH

Speaker: **Dr. Iskandar Mirza**, Cardiologist, National Heart Institute (IJN)

Chairperson: **Dr. Thum Chan Ho**, Cardiologist; Preventive Cardiology, National Heart Institute (IJN)

17.10

Q&A Session

17.20

Topic: Nocturnal Hypertension: The Hidden Risk in Hypertension Management

Speaker: **Prof. Yan Li**, Professor of Cardiovascular Medicine, Shanghai Institute of Hypertension

Chairperson: **Prof. Ching Siew Mooi**, Professor of Family Medicine Department, University Putra Malaysia
& **Dr. Beh Hooi Chin**, Family Medicine Specialist, University Malaya

17.40

Lucky Draw



EVENT SCHEDULE: DAY 2

08.00

Spot Diagnosis Session in Hypertension

Speakers: **Dr. Yuhyi and Dr Goay Swee En**, Clinical Fellow Cardiology, National Heart Institute (IJN)
& **Dr. Goay Swee En**, Cardiologist, National Heart Institute (IJN)
Chairperson: **Dr. Azlan Shah**, Clinical Fellow Cardiology, National Heart Institute (IJN)

08.45

SYMPOSIUM 3

Protecting Guarding the Heart: New Frontiers in Cardiovascular Management

Chairperson: **Prof. Dr. Nik Sherina Haidi Hanafi**, Primary Care Physician, Chair of Universiti Malaya Medical Centre

Topic 1: Understanding Heart Failure with Preserved Ejection Fraction: What You Need to Know

Speaker: **Dato Sri Dr. Azmee Ghazi**, Head of Cardiology/Senior Consultant Cardiologist/ Clinical Director of Heart Failure and Heart Transplant/Head of Service, IJN Premier Healthcare Division / Director of Sports Cardiology, National Heart Institution (IJN)

09.05

Topic 2: Hypertension and Atrial Fibrillation: When Pressure Fuels the Flutter

Speaker: **Dr. Suraya Hani**, Consultant Cardiologist, National Heart Institution (IJN)

09.25

Q&A Session

09.35

Aldosterone: A New Frontier in Hypertension Management? By AstraZeneca

Speakers: **Prof. Markus Schlaich**, Professor, Dobney Chair in Clinical Research, Medicine, UWA Medical School, Australia

Chairperson: **Dato' Seri Dr. Azhari**, Senior Consultant Cardiologist, National Heart Institution IJN



EVENT SCHEDULE: DAY 2

10.05

Coffee Break

Poster Presentation

10.35

Advancing Hypertension care: The Role of Renal Denervation by Medtronic

Speakers: **Prof. Markus Schlaich**, Professor, Dobney Chair in Clinical Research, Medicine, UWA Medical School, Australia

11.05

PLENARY 2

Emerging Pharmacotherapies in The Management of Hypertension

Speaker: **Prof YuQing Zhang**, Associate Professor, Cardiology, Division of Hypertension, Fu Wai Hospital, Chinese Academy Medical Sciences and Peking Union Medical College, Beijing, China

Chairperson: **Emeritus Prof. Dr. Chia Yook Chin**, Family Physician, Sunway University

11.35

SYMPOSIUM 4

Strategic Approaches to Managing Complex Hypertension in Clinical Practice: Challenges and Solutions

Chairperson: **Assoc. Prof. Dr. Navin**, Faculty of Medicine & Health Science, University Putra Malaysia

& Prof. Markus Schlaich, Professor, Dobney Chair in Clinical Research, Medicine, UWA Medical School, Australia

11.55

Topic 1: Hypertension Beyond Renal Replacement Therapy: Achieving Control in End-Stage Renal Disease

Speaker: **Prof. Dr Lim Soo Kun**, Consultant Nephrologist, Universiti Malaya Specialist Centre

Topic 2: Resistance Hypertension Across the Cardio-Renal-Metabolic Spectrum

Speaker: **Emeritus Prof. Dr. Chan Siew Pheng**, Professor Emeritus, Consultant Endocrinologist, Sunway Jaya Medical Centre



EVENT SCHEDULE: DAY 2

12.15	<p>LUNCH SYMPOSIUM Keeping it Real: For Real Results in Obesity Management by Novo Nordisk</p> <p>Speaker: Dr. Hafidz bin Abdul Hadi, Consultant Cardiologist, Institut Jantung Negara, IJN Chairperson: Dato' Sri. Dr. Azhari bin Rosman, Senior Consultant Cardiologist, National Heart Institution (IJN)</p>
13.15	<p>Q&A Session</p>
13.20	<p>Lunch</p>
14.30	<p>Driving Better Outcomes with Combination Therapy: Applying Clinical Evidence to Transform Lipid Management by Organon</p> <p>Speaker: Dr. Hafidz Abd Hadi, Consultant Cardiologist, National Heart Institution (IJN) Chairperson: Dr. Azlan Shah, Cardiologist, National Heart Institution (IJN)</p>
15.00	<p>Variability: The Law of Life by Viatris</p> <p>Speaker: Dr. Vijaya B Ramasamy, MBChb (UK), MRCP (UK), SCE (Nephrology (UK), FRCP Lond), CCT (General Medicine & Nephrology) (UK), Consultant Nephrologist, Island Hospital, Penang Chairperson: Dr. Iskandar Mirza, Cardiologist, National Heart Institute (IJN)</p>



EVENT SCHEDULE: DAY 2

15.30

My Blood Pressure is Controlled, Is This Enough to Protect My Kidneys? by Abbot

Speaker: **Dato' Seri Dr. Azhari**, Senior Consultant Cardiologist, National Heart Institute (IJN)

Chairperson: **Dr. Thum Chan Ho**, Cardiologist; Preventive Cardiology, National Heart Institute (IJN)

16.00

Coffee Break & Booth Visit

16.20

Addressing Obesity In Patients With Dysregulated Appetite & Food Cravings by iNova

Speaker: **Dr. Iskandar Mirza Amran**, Clinical Fellow in Cardiology, National Heart Institute (IJN)

Chairperson: **Dr. Goay Swee En**, Cardiologist, National Heart Institute (IJN)

16.50

Informative Debate: Hypertension in Women vs. Men: Who Should be Prioritised?

Speaker: **Prof. Imelda Balchin**, Obstetrics and Gynaecology Maternal Fetal Medicine, KPJ Damansara Specialist Hospital 2 & **Dr. Azani Mohamed Daud**, Cardiology, Gleneagles Hospital Kuala Lumpur

Chairperson: **Dr. Chong Kuck Meng**, General Practitioner, Clinic Chong

17.30

Lucky Draw



EVENT SCHEDULE: DAY 3

09.00

Spot Diagnosis in ECG

Speakers: **Dr. Fa'iz Mashood**, Clinical Fellow Cardiology, National Heart Institute (IJN)
& **Dr. Azlan Shah**, Clinical Fellow Cardiology, National Heart Institute (IJN)
Chairperson: **Dr. Yuhyi**, Clinical Fellow Cardiology, National Heart Institute (IJN)

SYMPOSIUM 5

Across Ages: Evidence-Based Lifestyle Interventions for Blood Pressure Reduction: Practical Approach for Clinicians

Chairperson: **Prof. Dato' Wira Dr L.R. Chandran**, Professor at MAHSA University,
Dr. Yuhyi, Clinical Fellow Cardiology, National Heart Institute (IJN), & **Dr. Beh Hooi Chin**, Family Medicine Specialist, University Malaya

09.40

Topic 1: Changing Habits & Outcomes: A Lifestyle Medicine Approach to Hypertension

Speaker: **Assoc. Prof. Dr. Fadzilah Hanum**, Department of Primary Care Medicine, Faculty of Medicine, University Malaya

10.00

Topic 2: Shaking the Salt Habit: Lessons from Malaysian's Salt Reduction Strategies

Speaker: **Prof. Dr. Suzana Shahar**, Clinical and Health Sciences: Associate Health Science (Geriatric Nutrition and Epidemiology), Universiti Kebangsaan Malaysia



EVENT SCHEDULE: DAY 3

10.30

When Data Drives Care: Integrating RT-CGM with Oral Combination Therapy in T2D by Zuellig Pharma Therapeutics

Speakers: **Dr. David Yong, Consultant**, Cardiologist, Gleneagles Hospital Kuala Lumpur
Chairperson: **Dr. Chong Kuck Meng**, General Practitioner, Clinic Chong

11.00

Coffee Break

MSH Membership Enrolment

SYMPOSIUM 6

Cardiovascular Health in Focus: Innovations, Integrations and Impact

Chairpersons: **Dato' Seri Dr. Azhari**, Senior Consultant Cardiologist, National Heart Institution (IJN)
& **Dr. Hana Azhari**, Physician, Universiti Kebangsaan Malaysia

11.20

Topic 1: Beyond Heart Failure: Neprilysin Inhibition as a Dual Pathway for Cardiovascular Innovation and Blood Pressure Control by Novartis

Speaker: **Dr. Aslannif Roslan**, Consultant Cardiologist, Sunway Medical Centre

11.50

Topic 2: The Preemptive Strike on ASCVD: Preventive Cardiology in Focus

Speaker: **Dr. Thum Chan Ho**, Preventive Cardiologist, National Heart Institution (IJN)



EVENT SCHEDULE: DAY 3

12.10

Q&A Session

12.20

Oral Presentation

Chairperson: **Prof. Dr. Khoo Ee Ming**, Consultant Family Physician, Universiti Malaya Specialist Centre

13.20

LUNCH SYMPOSIUM

Importance of Screening for AFib in the management of hypertension by OMRON

Speaker: **Prof. Dr. Chia Yook Chin**, Family Physician, Sunway University

13.50

Prize-Giving Ceremony

14.00

Closing Keynote Address

Dato' Sri Dr. Azhari Rosman, Director, Malaysian Society of Hypertension; Senior Consultant Cardiologist, National Heart Institute (IJN)

14.10

Lunch

14.40

Posters Viewing

Your Complete Antihypertensive Solutions for Every Patient Journey



COVERAM[®]
perindopril | amlodipine



VIACORAM[®]
Perindopril Arginine / Amlodipine



COVERSYL[®]
perindopril



COVERSYL PLUS[®]
perindopril tert-butylamine | indapamide



TRIPLIXAM[®]
perindopril | indapamide | amlodipine



Access full prescribing information by scanning this QR code

06

Malaysian Society of Hypertension

21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

ORAL PRESENTATION



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

ORAL PRESENTATION

1 **Impact of Hypertension on Atrial Fibrillation Recurrence Following Pulsed Field Ablation: Real-World Data from a National Heart Center**

Noor Muhammad Azlan Shah, Suraya Hani Kamsani, Low Ming Yoong, Surinder Kaur Khelae Atma Singh, Azlan Hussin

2 **Missing the Window of Reversibility: An Echocardiographic Analysis of Incidental Hypertensive Target Organ Damage in an Island District Hospital**

Jagdeep Singh A/L Gurcharan Singh, Firas Bin Hashim

3 **Effectiveness of Digital Health Interventions for Care Integration in Cardiovascular Disease: A Systematic Review and Meta-Analysis**

Allegra Chan, Hooi Min Lim, Woei Xian Lim^{1,2}, Jia Ting Leong, Adina Abdullah, Adam G. Dunn



IMPACT OF HYPERTENSION ON ATRIAL FIBRILLATION RECURRENCE FOLLOWING PULSED FIELD ABLATION: REAL-WORLD DATA FROM A NATIONAL HEART CENTER

Noor Muhammad Azlan Shah, Suraya Hani Kamsani, Low Ming Yoong, Surinder Kaur Khelae Atma Singh, Azlan Hussin

¹ Electrophysiology Unit, Department of Cardiology, Institut Jantung Negara, Kuala Lumpur, Malaysia

Background:

Hypertension is a major contributor to atrial remodeling and has traditionally been associated with increased recurrence following atrial fibrillation (AF) ablation. Its prognostic relevance in the era of pulsed field ablation (PFA), a novel non-thermal myocardial-selective technology, remains uncertain.

Objectives:

To evaluate whether hypertension is a significant predictor of AF recurrence following PFA.

Methods:

Total of 1,098 paroxysmal AF ablations were performed between 2009-2024 including 122 radiofrequency ablations, 555 cryoballoon ablations, and 182 PFA procedures. After exclusions, 173 first-time PFA cases with follow-up were analyzed. AF recurrence was assessed using Kaplan-Meier analysis. Logistic and Cox proportional hazards regression were performed to determine the significant predictors.

Results:

Median age was 63 years and 63.6% were male. Hypertension was present in 71.1%, followed by dyslipidemia (49.1%), coronary artery disease (44.5%), and diabetes (34.7%). Acute procedural success was 97.7% with a 1.2% complication rate. During follow-up, 36 patients (20.8%) developed AF recurrence, with freedom from recurrence of 82.6% at 12 months and 77% at 24 months. Hypertension was not independently associated with recurrence (OR 1.28, $p=0.562$; HR 1.10, $p=0.801$). Similarly, coronary artery disease, diabetes, dyslipidemia, age, and procedural variables were not significant predictors.

Conclusions:

In this real-world PFA cohort, hypertension was not an independent predictor of AF recurrence. These findings suggest that hypertensive AF patients may achieve comparable outcomes following PFA and should not be excluded from ablation strategies based solely on comorbidity burden. Prospective comparative studies against medical therapy are warranted.

MISSING THE WINDOW OF REVERSIBILITY: AN ECHOCARDIOGRAPHIC ANALYSIS OF INCIDENTAL HYPERTENSIVE TARGET ORGAN DAMAGE IN AN ISLAND DISTRICT HOSPITAL

Jagdeep Singh A/L Gurcharan Singh, Firas Bin Hashim

¹ Department of Internal Medicine, Hospital Sultanah Maliha, Langkawi, Malaysia.

Background:

Hypertensive heart disease (HHD) is progressive but reversible. In district hospitals, echocardiography is typically driven by acute indications rather than proactive screening, masking community burden and delaying disease modifying therapies.

Objectives:

To evaluate structural HHD and elevated filling pressures across an annual echocardiography workload, highlighting the gap between targeted screening and incidental detection.

Methods:

A retrospective audit evaluated 1,249 echocardiograms (788 outpatient, 461 inpatient) performed in 2025 at Hospital Sultanah Maliha. Representative clinical data were analyzed for left ventricular hypertrophy (LVH), left atrial enlargement (LAE), and referral indications.

Results:

Of 1,249 cases, 93% had hypertension. However, only 2% of referrals explicitly targeted HHD or heart failure screening. Representative sampling showed 80% had established LVH and 16% had LAE. Furthermore, 43% demonstrated E/e' ratios > 14, indicating elevated filling pressures. Consequently, severe target organ damage was predominantly detected incidentally during scans for acute indications.

Conclusions:

Severe under-screening of HHD causes patients to miss the therapeutic window for LVH regression. Expanding proactive echocardiographic screening is vital to initiate remodeling reversal therapies early, preventing irreversible fibrosis and acute admissions in isolated populations.

EFFECTIVENESS OF DIGITAL HEALTH INTERVENTIONS FOR CARE INTEGRATION IN CARDIOVASCULAR DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

Allegra Chan, Hooi Min Lim, Woei Xian Lim^{1,2}, Jia Ting Leong, Adina Abdullah, Adam G. Dunn

¹ Department of Primary Care Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

² Wexham Park Hospital, Frimley Health NHS Foundation Trust, United Kingdom

³ Sydney School of Public Health, Faculty of Medicine and Health, University of Sydney, Sydney, Australia

Background:

Despite a growing interest, the use of digital health interventions (DHIs) incorporating care integration for CVD and their effectiveness remain unclear.

Objectives:

To assess the effectiveness of DHIs incorporating care integration for CVD in improving CVD-related outcomes.

Methods:

For this systematic review, we searched MEDLINE, CINAHL, EBSCO Psychology and Behavioural Sciences Collection, Scopus, and Web of Science from 1 January 1995 to 5 November 2025. We included studies reporting primary data on DHIs incorporating care integration for adult CVD patients. Primary endpoints were all-cause mortality and readmissions, and CVD events. Secondary endpoints were the control of cardiovascular risk factors. We conducted random-effects meta-analyses in RevMan.

Results:

We included 89 studies (28,804 participants), assessing 54 in the meta-analysis. Overall, usage of DHIs in care integration was largely limited to person-centred care and clinical domains. Compared to controls, DHI groups had significant reductions in the risk of CVD events (RR 0.72 [0.59, 0.88], $df=6$, $p=0.008$), but not in all-cause mortality or readmissions. Significant reductions in CVD events were associated with DHIs using text messaging interventions and mobile ± web-based systems, and DHIs supporting self-management. DHIs incorporating over two integration domains showed significantly greater improvements in systolic blood pressure.

Conclusions:

Although limited in usage, DHIs incorporating care integration are effective in improving CVD-related outcomes when compared with usual care, with effectiveness influenced by modality and function, and potentially by the extent of integration. Future studies could apply DHIs more broadly across the care integration spectrum and assess modifiers like adherence and engagement.



BP control is not just about lowering numbers.
Stability matters.



NORVASC®: Beyond BP control



Systolic BPV was a stronger determinant of CV outcomes than mean SBP¹



BPV is an independent risk factor and happens even in patients with well-controlled BP¹



Choose **NORVASC®** with a long 35- to 50-hour half-life for continuous BP control²



NORVASC® reduce systolic BPV more than other antihypertensive class³



NORVASC® significantly reduces the risk of strokes and CV events compared to other antihypertensives¹

Abbreviations: BP: Blood pressure; BPV: Blood pressure variability; CV: Cardiovascular; SBP: Systolic blood pressure.

References: 1. Gupta A, et al. *Eur Heart J.* 2024;45(13):1159-1169. 2. NORVASC® (amlodipine besilate). Malaysia Prescribing Information (Version: Jan 2024). 3. Webb AJ, et al. *Lancet.* 2010;375:906-915.

For Healthcare Professionals Only.



Viatrix Sdn. Bhd.
Reg. No: 201801018158 (1280174-H)
15-03 & 15-04, Level 15, Imazium,
No. 8, Jalan SS 21/37, Damansara Uptown,
47400 Petaling Jaya, Selangor, Malaysia.
Tel: 603-7733 8005
©2026 VIATRIS – All Rights Reserved
MY-NORV-2026-00005-10APR2026

Full prescribing information will be available upon request

NORVASC® Abbreviated Prescribing Information



07

Malaysian Society of Hypertension

21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026

POSTER PRESENTATION



Malaysian Society of Hypertension

21ST ANNUAL SCIENTIFIC CONGRESS 2026

congress2026.msh.my

POSTER PRESENTATION

1 **Exploring Barriers and Facilitators of Salt Meter Use Among Patients Attending a Health Screening Campaign: A Qualitative Study**

HC Beh, Jazlan Jamaluddin, Karleen Chong, Zi-Yi Yeoh, PrevenaSubramaniam, JI Choong, Siti Nurkamilla, SK Lim, SM Ching, YC Chia

2 **Prevalence of Resistant Hypertension and Its Associated Factors Among Patients with Hypertension in Primary Care Clinics in Kinta District, Perak**

Navin Kumar Devaraj, Norannisa Rohiman

3 **Hypertension and Risk of Pacing-Induced Cardiomyopathy: Insights from a 10- Year Real-World Malaysian Pacemaker Cohort**

Noor Muhammad Azlan Shah, Suraya Hani Kamsani, Low Ming Yoong, Surinder Kaur Khelae Atma Singh, Azlan Hussin

4 **The Oculomotor Enigma: Isolated Third Nerve Palsy as the Harbinger of Hypertensive Posterior Reversible Encephalopathy Syndrome (PRES)**

Nasehah Sakeenah Shamsul Bahrin

5 **Prevalence And Factors Associated with White Coat Effect Among Hypertensive Patients in Family Medicine Specialist Clinic, Hospital Sultan Abdul Aziz Shah: A Cross-Sectional Study in 2024**

Aneesa Abdul Rashid, Sazlina Shariff Ghazali, Lau Hung Chiun, Syafeeq Afsar Mohamed Faiz, Nur Syakirah Badrul Hisham, Harenee, Zulaikha Zakaria



POSTER PRESENTATION

- 6** **The Knowledge-Practice Gap in Hypertension Care: Physician Competency in Home Blood Pressure Monitoring**
Aneesa Abdul Rashid, Fadzilah Mohamad, Nasehah Sakeenah Shamsul Bahrin, Muhammad Amir Izzat Mohd Nor, Arvind Sreedharan, Nur Ain Syamimie Ahmad Yaakub, Muhammad Husni Abu Bakar
-
- 7** **Beat-to-Beat Cardiovascular Variability Reveals Distinct Autonomic Vascular Adaptation Patterns in Essential Hypertension**
Jia Hui Ooi, Choon-Hian Goh, Ahmadreza Argha, Maw Pin Tan, Hooi Chin Beh, Nor Ashikin Md Sari, Nigel H. Lovell, Einly Lim
-
- 8** **Association Between Number of Antihypertensive Agents and Blood Pressure (BP) Control in Primary Care Clinics in Kota Tinggi District**
Syafiqah Alyani Mustafa, Nik Siti Fatimah Mohamed, Norlizah Paidi



EXPLORING BARRIERS AND FACILITATORS OF SALT METER USE AMONG PATIENTS ATTENDING A HEALTH SCREENING CAMPAIGN: A QUALITATIVE STUDY

HC Beh, Jazlan Jamaluddin, Karleen Chong, Zi-Yi Yeoh, PrevenaSubramaniam, JI Choong, Siti Nurkamilla, SK Lim, SM Ching, YC Chia

¹ Department of Primary Care Medicine, Universiti Malaya, 50603 Kuala Lumpur, Malaysia

² Department of Primary Care Medicine, Universiti Malaya Medical Centre, 50603 Kuala Lumpur, Malaysia

³ Department of Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

⁴ Department of Family Medicine, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor Darul Ehsan, Malaysia

⁵ Department of Clinical Medicine and Surgery, Faculty of Medical and Life Sciences, Tan Sri Sir Jeffery Cheah Sunway School of Medicine, Sunway University, Bandar Sunway, Selangor, Malaysia

Background:

Hypertension is the leading cause for cardiovascular diseases. High salt intake causes hypertension. Despite well-established benefits of salt reduction, population sodium intake remains high. Innovative interventions have been developed to support in monitoring and reducing salt intake including salt meter.

Objectives:

To explore the acceptability, usability, or challenges with the use of salt meters.

Methods:

The study was carried out during a health campaign. In-depth interviews were conducted using a semi-structured interview guide informed by the Health Belief Model (HBM). All interviews were audio-recorded, transcribed verbatim, and analysed using NVivo software.

Results:

We included a total of 33 participants aged 21- 81 years. There were eight participants with hypertension. Only three participants were aware of what a salt meter was. A total of five themes and 19 subthemes were derived from the analyses. 1) Beliefs about personal risk and seriousness from high salt intake 2) Beliefs about advantages of using salt meter 3) Perceived barriers in using salt meter 4) Triggers that prompt interest or promote the use of salt meter 5) Confidence and motivation to use salt meter. Others were about user experience, emotions and suggestions for future improvement.

Conclusions:

Most participants perceived salt meter as a usable tool for monitoring salt intake, to improve BP control, enhance self-management, confidence, and facilitate positive behavioural changes in managing own health. Numerous suggestions were offered for future improvements to the use of salt meter, aimed at enhancing user experience, and further supporting salt reduction and BP control.

PREVALENCE OF RESISTANT HYPERTENSION AND ITS ASSOCIATED FACTORS AMONG PATIENTS WITH HYPERTENSION IN PRIMARY CARE CLINICS IN KINTA DISTRICT, PERAK

Navin Kumar Devaraj, Norannisa Rohiman

¹Department of Family Medicine, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

²Greentown Health Clinic, Ipoh, Perak, Malaysia

Background:

Resistant hypertension (RH) is defined as persistently elevated blood pressure (BP) despite optimal antihypertensive therapy. It's associated with an elevated risk of cardiovascular and renal complications. Prevalence data from Malaysia, particularly within the primary care setting, remains limited.

Objectives:

This study aimed to determine the prevalence and factors associated with the presence of resistant hypertension among patients with hypertension attending primary care clinics in Kinta District, Perak.

Methods:

A cross-sectional study was conducted in 2025 in four government primary care clinics in Kinta District, Perak. 402 eligible patients were recruited. Data was collected using a validated questionnaire. Resistant hypertension was defined as uncontrolled hypertension (>140/90 mmHg) with good medication adherence while on three or four antihypertensive agents (including a diuretic) in adequate doses. Data were analyzed using SPSS v30.0.

Results:

The prevalence of resistant hypertension was 16.9%(68/402). Multivariate analysis identified four independent determinants significantly associated with the presence of RH: longer duration of hypertension (aOR=1.05; 95%CI:1.01-1.09; p=0.006), diabetes mellitus (aOR = 2.96; 95%CI:1.34-6.54; p=0.007), chronic kidney disease (aOR =3.21; 95% CI:1.64-6.28; p<0.001), and probable risk of OSA (aOR =1.96; 95%CI:1.04-3.72; p=0.039).

Conclusions:

The prevalence of resistant hypertension was 16.9%. It was found that those with longer duration of hypertension, having diabetes mellitus, chronic kidney disease and a probable risk of OSA to be associated with the presence of RH. Integrating adherence assessment (MyMAAT-12) and OSA screening (STOP- BANG) into routine care, alongside optimizing treatment and early referral, may enhance RH management at the primary care level.



HYPERTENSION AND RISK OF PACING-INDUCED CARDIOMYOPATHY: INSIGHTS FROM A 10- YEAR REAL-WORLD MALAYSIAN PACEMAKER COHORT

Noor Muhammad Azlan Shah, Suraya Hani Kamsani, Low Ming Yoong, Surinder Kaur Khelae Atma Singh, Azlan Hussin

¹ Electrophysiology Unit, Department of Cardiology, Institut Jantung Negara, Kuala Lumpur, Malaysia

Background:

Hypertension (HTN) is highly prevalent in Malaysia and is associated with structural cardiac remodeling and heart failure. However, its role in the development of pacing-induced cardiomyopathy (PICM) remains uncertain.

Objectives:

To determine whether hypertension independently predicts the development of PICM in a large real-world Malaysian pacemaker cohort.

Methods:

We conducted a retrospective study of patients who underwent permanent pacemaker implantation between 2013 and 2023. Among 4,110 eligible patients, 1,286 had complete pre- and post-implant echocardiographic data. Of these, 1,080 patients with baseline LVEF $\geq 50\%$ were included. PICM was defined as a $\geq 10\%$ reduction in LVEF resulting in LVEF $< 50\%$ after implantation. Demographics, comorbidities, device type, pacing burden, and electrocardiographic parameters were analyzed. Logistic regression was performed to identify predictors of PICM.

Results:

Among 1,080 patients (median age 69 years; 48.3% male), 244 (22.6%) developed PICM. Hypertension was present in 70.9% and was similarly distributed between PICM and non-PICM groups (72.1% vs 70.6%, $p=0.637$). HTN was not associated with PICM on univariate analysis (OR 1.08, $p=0.638$) and remained non-significant after multivariable adjustment (adjusted OR 0.84, $p=0.787$). In contrast, diabetes, male sex, wider post-implant QRS duration, and higher RV pacing burden were associated with PICM on univariate analysis.

Conclusions:

Hypertension was not an independent predictor of PICM in this real-world cohort. Pacing-related electrical factors appear to be more important determinants. Risk stratification should prioritize optimization of pacing burden and electrical parameters, and prospective studies are needed to validate these findings.

THE OCULOMOTOR ENIGMA: ISOLATED THIRD NERVE PALSY AS THE HARBINGER OF HYPERTENSIVE POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES)

Nasehah Sakeenah Shamsul Bahrin

¹Klinik Kesihatan Buloh Kasap, Jalan Tasik Alai, 85010 Segamat, Johor, Malaysia

Background:

Posterior Reversible Encephalopathy Syndrome (PRES) is a clinico-radiological entity typically characterized by headache, seizures, altered mental status, and visual disturbances. While cortical blindness and seizures are well-recognized manifestations, isolated cranial nerve palsies, particularly of the oculomotor nerve, are rare presentations that can lead to diagnostic challenges.

Case Presentations:

A 46-year-old female with no significant medical history presented with a three-day history of diplopia, dizziness, and headache. She had two prior emergency department visits within the preceding 72 hours; initially, she was treated for hypertensive urgency and discharged. Upon representation, physical examination revealed a left-sided third nerve palsy characterized by mild ptosis and limited adduction, with preserved visual acuity (6/6 bilaterally (aided)). A computed tomography (CT) brain imaging showed multifocal chronic lacunar infarcts but no acute intracranial pathology. Her condition progressed to a hypertensive emergency (BP >200/100 mmHg) with worsening neurological symptoms. Following the diagnosis of PRES, she was managed with intravenous labetalol infusion. Notably, her diplopia and ptosis improved rapidly as her blood pressure was stabilized. She was discharged after two days of inpatient care, fully recovered.

Conclusions:

This case highlights an atypical presentation of PRES manifesting as an isolated third nerve palsy. It underscores the importance of recognizing focal neurological deficits in the context of severe hypertension as potential indicators of PRES. Early recognition and aggressive blood pressure management are crucial for the complete reversal of neurological symptoms and the prevention of permanent vascular injury.

Keywords:

Posterior Reversible Encephalopathy Syndrome, stroke, hypertension, hypertensive emergency, diplopia.



POSTER PRESENTATION

PREVALENCE AND FACTORS ASSOCIATED WITH WHITE COAT EFFECT AMONG HYPERTENSIVE PATIENTS IN FAMILY MEDICINE SPECIALIST CLINIC, HOSPITAL SULTAN ABDUL AZIZ SHAH: A CROSS-SECTIONAL STUDY IN 2024

Aneesa Abdul Rashid, Sazlina Shariff Ghazali, Lau Hung Chiun, Syafeeq Afsar Mohamed Faiz, Nur Syakirah Badrul Hisham, Harenee, Zulaikha Zakaria

¹ Department of Family Medicine, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

² Undergraduate Medical Student, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

Background:

White coat effect (WCE) refers to elevated office blood pressure (BP) readings in treated hypertensive patients but normal BP outside the clinical setting, often triggered by the presence of healthcare professionals. Identifying WCE is crucial to avoid misdiagnosis and overtreatment, and to improve patient outcomes.

Objectives:

This study aimed to determine the prevalence of WCE and identify factors associated with it among hypertensive patients at Family Medicine Specialist Clinic (FMC), Hospital Sultan Abdul Aziz Shah (HSAAS). The factors examined include socio-demographic characteristics (age, gender, and race), clinical profiles (body mass index, comorbidities, and antihypertensive treatment), lifestyle (smoking status and physical activity), and psychological (anxiety, stress, and sleep behaviour).

Methods:

This study used secondary data obtained from medical records of hypertensive patients attending the FMC, HSAAS. A structured proforma was developed using Google Forms for data entry. Statistical analysis was conducted using IBM SPSS Statistics version 30.0. Prevalence of WCE was reported as frequency, while age and BMI were expressed as median and interquartile range (IQR). Mann-Whitney U test, Pearson's chi-square test, and Fisher's exact test were used to determine associations between variables.

Results:

The prevalence of WCE was 22.3%. Sociodemographic, lifestyle, and psychological factors showed no significant association with WCE. However, dyslipidaemia ($p = 0.03$) and beta-blocker use ($p = 0.028$) were significantly associated. Other clinical variables and antihypertensive medications showed no significant associations.

Conclusions:

WCE prevalence was 22.3%. Dyslipidaemia and beta-blocker use were significantly associated. Recognizing these associations is important to guide accurate diagnosis and avoid overtreatment.



THE KNOWLEDGE-PRACTICE GAP IN HYPERTENSION CARE: PHYSICIAN COMPETENCY IN HOME BLOOD PRESSURE MONITORING

Aneesa Abdul Rashid, Fadzilah Mohamad, Nasehah Sakeenah Shamsul Bahrin, Muhammad Amir Izzat Mohd Nor, Arvind Sreedharan, Nur Ain Syamimie Ahmad Yaakub, Muhammad Husni Abu Bakar

¹ Department of Family Medicine, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

² Klinik Kesihatan Buloh Kasap, Jalan Tasik Alai, 85010 Segamat, Johor, Malaysia

³ Medical Student, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia

Background:

Proficient use and interpretation of home blood pressure monitoring (HBPM) by healthcare professionals are critical for optimal hypertension management. Adherence to clinical guidelines for HBPM is fundamental to improving patient outcomes.

Objectives:

This study aimed to assess physicians' knowledge of HBPM, their practice of recommending it, and their awareness of its normal threshold, while identifying factors associated with these competencies.

Methods:

A cross-sectional study was conducted among 101 doctors at a public university's medical faculty and hospital. A validated questionnaire collected data on socio-demographics, HBPM knowledge (20-point scale), recommendation practices, and awareness of normal HBPM levels.

Results:

The median knowledge score was 14 (IQR 5). Although 97.0% of doctors recommended HBPM, only 18.8% correctly identified its normal threshold. Participants from medical-based specialties demonstrated significantly higher knowledge scores (median (IQR) 17(5), $p < 0.001$) and greater awareness of normal levels. In contrast, fewer than 5% of non-medical based doctors correctly identified the HBPM threshold ($p < 0.001$).

Conclusions:

Despite adequate knowledge and high recommendation rates for HBPM, a critical gap exists in the awareness of its normal values. Medical specialty was a key determinant of both knowledge and awareness. These findings underscore the need for targeted educational interventions to standardize HBPM competencies across all disciplines and enhance hypertension care.

Keywords:

Knowledge, Practice, Awareness, Home Blood Pressure Monitoring, Hypertension

BEAT-TO-BEAT CARDIOVASCULAR VARIABILITY REVEALS DISTINCT AUTONOMIC-VASCULAR ADAPTATION PATTERNS IN ESSENTIAL HYPERTENSION

Jia Hui Ooi, Choon-Hian Goh, Ahmadreza Argha, Maw Pin Tan, Hooi Chin Beh, Nor Ashikin Md Sari, Nigel H. Lovell, Einly Lim

¹ Department of Biomedical Engineering, Faculty of Engineering, Universiti Malaya, 50603 Kuala Lumpur, Malaysia.

² Department of Mechatronics and BioMedical Engineering, Lee Kong Chian Faculty of Engineering and Science, Universiti Tunku Abdul Rahman, Bandar Sungai Long, 43200 Kajang, Selangor, Malaysia.

³ Graduate School of Biomedical Engineering, UNSW Sydney, NSW, Australia

⁴ Tyree Institute of Health Engineering (IHealthE), UNSW Sydney, NSW, Australia

⁵ Ageing and Age Associated Disorders Research Group, Department of Medicine, Faculty of Medicine, Universiti Malaya, 50603 Kuala Lumpur, Malaysia

⁶ Department of Primary Care Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

⁷ Division of Cardiology, Department of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

Background:

Conventional hypertension management focuses on static blood pressure (BP) thresholds, potentially overlooking dynamic autonomic and vascular mechanisms that contribute to cardiovascular risk. Beat-to-beat heart rate variability (HRV) and blood pressure variability (BPV) provide high-resolution insights into short-term cardiovascular regulation, yet their physiological interpretation in hypertension remains unclear.

Objectives:

To characterize autonomic and vascular adaptations to orthostatic stress in hypertensive individuals using beat-to-beat cardiovascular variability analysis and data-driven phenotyping.

Methods:

Normotensive (CON) and essential hypertensive (HTN) participants aged >45 years underwent a standardized 70° head-up tilt (HUT) test. Continuous ECG, blood pressure, and hemodynamic signals were recorded. Linear and non-linear HRV and BPV indices were computed using overlapping sliding windows. Arterial stiffness and echocardiographic parameters were incorporated. Unsupervised clustering was applied to identify distinct cardiovascular adaptation phenotypes.

Results:

Compared with CON, HTN participants exhibited delayed hemodynamic compensation, reduced HRV complexity, and altered BPV responses during postural transition ($p < 0.05$). Clustering analysis identified two distinct adaptation patterns independent of hypertension status: (1) sympathetic-mediated vasoconstrictive compensation and (2) enhanced chronotropic drive with impaired vasoconstriction. These phenotypes were associated with differing arterial stiffness and structural cardiac characteristics. Notably, similar phenotypes were observed among normotensive individuals, suggesting subclinical autonomic-vascular alterations preceding overt hypertension.

Conclusions:

Beat-to-beat cardiovascular variability during orthostatic stress reveals mechanistic heterogeneity beyond clinic BP measurements. Integrating autonomic and vascular metrics may improve phenotypic stratification and early detection of hypertensive cardiovascular dysfunction.



ASSOCIATION BETWEEN NUMBER OF ANTIHYPERTENSIVE AGENTS AND BLOOD PRESSURE (BP) CONTROL IN PRIMARY CARE CLINICS IN KOTA TINGGI DISTRICT

Syafiqah Alyani Mustafa, Nik Siti Fatimah Mohamed, Norlizah Paidi

¹ Air Tawar 2 Health Clinic, Kota Tinggi Johor

² Sungai Rengit Health Clinic, Kota Tinggi Johor

³ Bandar Mas Health Clinic, Kota Tinggi Johor

Background:

Hypertension is a major contributor to cardiovascular morbidity and mortality. Patients requiring multiple antihypertensive agents may represent a higher-risk group with possible resistant hypertension or suboptimal treatment adherence. Understanding the relationship between number of antihypertensive agents and BP control in primary care is essential to improve management strategies.

Objectives:

To determine the association between number of antihypertensive agents and blood pressure control among hypertensive patients in primary care clinics in Kota Tinggi District.

Methods:

A retrospective study was conducted using secondary data of hypertensive patients attending government primary care clinics. Latest BP readings and antihypertensive medications were extracted from medical records. Blood pressure control was defined as BP <140/90 mmHg. Patients were categorised according to number of antihypertensive agents (one, two, and three or more). Association between number of agents and BP control was analysed using chi-square test, with $p < 0.05$ considered statistically significant.

Results:

A total of 366 patients were included. Overall BP control rate was 83.3%. Blood pressure control was highest among patients on single-agent therapy (90.9%), compared to those on two agents (78.9%) and three or more agents (79.1%). There was a statistically significant association between number of antihypertensive agents and BP control ($p = 0.009$).

Conclusions:

Patients requiring multiple antihypertensive agents were more likely to have uncontrolled blood pressure, suggesting possible resistant hypertension or suboptimal adherence, and highlighting an opportunity for targeted interventions such as adherence assessment, lifestyle modification and treatment optimisation in primary care.

Keywords:

Hypertension; blood pressure control; antihypertensive agents; primary care; resistant hypertension

CONNECT. LEARN. TRANSFORM CARDIOVASCULAR CARE WITH THE IJN-CRRC+ COMMUNITY



The IJN-CRRC+ Community comprises IJN experts and healthcare professionals in primary care across Malaysia, who will be trained and upskilled through the IJN-CRRC+ Program to manage patients following treatment at tertiary care centres, ensuring continued and optimised patient care.

What we envision:



Creating a Healthcare Ecosystem for Continuous Learning



Upskilling Healthcare Professionals across Malaysia



Optimising Management in Primary Care for Improved Patient Outcomes



Providing Ongoing Guidance and Support from IJN Experts



SCAN TO DISCOVER THE IJN-CRRC+ PROGRAM PORTAL

Access the CRRC+ portal to explore educational modules and enhance your knowledge of cardiovascular care.

OUR VALUED PARTNERS

Thank you for powering MSH ASC 2026 and helping us go Beyond Blood Pressure

PREMIER PARTNERS



MAJOR PARTNERS



SUPPORTING PARTNERS





Malaysian Society of Hypertension

**21ST — ANNUAL
— SCIENTIFIC
CONGRESS —
— 2026**