

Malaysian Family Physician

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and Family Medicine Specialist Association of Malaysia

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CARING THROUGH CHANGE: THE EVOLVING ROLE OF PRIMARY CARE PROFESSIONALS

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About MFP

The *Malaysian Family Physician* (MFP) is the official journal of the Academy of Family Physicians of Malaysia (AFPM). It is jointly published by the Family Medicine Specialist Association (FMSA) of Malaysia. Up to December 2022, the MFP published three issues per year. It also started an Online First section in January 2021, where accepted articles are published online ahead of the issue. Starting from January 2023, the MFP is adopting continuous publication as soon as each article is ready for publication. This is to ensure knowledge is disseminated in a timely manner.

Goal: The MFP is an international journal that disseminates quality knowledge and clinical evidence relevant to primary care. The journal acts as the voice of family physicians, researchers and other members of the primary care team on clinical practice issues.

Scope: The MFP publishes:

- i. Research – Original Articles and Reviews
- ii. Education – Case Reports/Clinical Practice Guidelines/Test Your Knowledge. We only encourage case reports that have the following features:
 1. Novel aspects
 2. Important learning points
 3. Relevant to family practice
- iii. Invited debate, commentary, discussion, letters, online, comment, and editorial on topics relevant to primary care.
- iv. A Moment in the Life of a Family Physician – We encourage submission of a short narrative to share perspectives, voice, views and opinions about a family physician's experience that has affected their practice or life.
Read our Information for Authors section to learn more about these article types.

Strength: MFP is the only primary care research journal in Malaysia and one of very few in the region. It is open access and fully online. The journal is indexed in Scopus and has a strong editorial team and an established pool of readers with increasing recognition both locally and internationally.

Circulation: The journal is freely available online.

Indexing: All articles published in MFP are included in:

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Malaysian Family Physician

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Information for Authors

The Malaysian Family Physician welcomes articles on all aspects of family medicine in the form of original research papers, review articles, CPG review, case reports, test your knowledge and letters to the editor. The journal also publishes invited debate, commentary, discussion, letters, comment, A Moment in the Life of a Family Physician and editorials on topics relevant to primary care.

Articles are accepted for publication on condition that they are contributed solely to the Malaysian Family Physician. Neither the Editorial Board nor the Publisher accepts responsibility for the views and statements of authors expressed in their contributions. All papers will be subjected to peer review. The Editorial Board further reserves the right to edit and reject papers. Authors are advised to adhere closely to the instructions given below to avoid delays in publication.

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2. The **Main Manuscript** should be submitted in electronic form only and in **Microsoft Word**.
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 - Use left-aligned paragraph formatting rather than full justification.
 - Follow the instructions in Ensuring a Blind Review (refer below).
 - Follow the referencing style provided in the References section below.
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3. The **Title Page** must be uploaded separately from the main manuscript file in Microsoft Word. Please refer to the required sub-headings in the Title Page section below.
4. A **Cover Letter** must be signed by the corresponding author on behalf of all authors. This letter must include this statement “this manuscript is my (our) own work, it is not under consideration by another journal, and this material has not been previously published.”
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TITLE PAGE

For all types of manuscript, please include all the sub-headings below in the Title Page (you can use this template):

- **Article Type:** Original Research / Review / CPG Review / Case Report / Test Your Knowledge / Letter To Editor / A Moment in the Life of A Family Physician
- **Title:** Please state the title in detail to include the study design, particularly for original research.
- **Author(s):** The full names, highest academic qualification, ORCID (compulsory for corresponding author) and institutions of all authors.
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ORIGINAL RESEARCH (INCLUDING CLINICAL AUDIT ARTICLE)

The original research (including clinical audit) should be conducted in the primary care setting on a topic of relevance to family practice. Both qualitative and quantitative studies are welcome. The length **should not exceed 4500 words (Introduction, Methods, Results and Discussion) with a maximum of 5 tables or figures and 40 references**. Please include the following sub-headings in the manuscript:

1. **Title:** State the title based on PICO, including study design.
2. **Abstract:** Structured abstract (Introduction, Methods, Results and Conclusion) of no more than 250 words.
3. **Keywords:** 3-5 keywords, preferably MeSH terms.

4. **Introduction:** Clearly state the purpose of the article with strictly pertinent references. Do not review the subject extensively.
5. **Methods:** Describe the study in sufficient detail to allow others to replicate the results. Provide references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well known; describe new or substantially modified methods, give reasons for using them, and evaluate their limitations. If validated or copyrighted questionnaires are used, describe if permissions were obtained from the authors/owners to use the questionnaires. When mentioning drugs, generic names are preferred (proprietary names can be provided in brackets). Do not use patients' names or hospital numbers. Include numbers of observation and the statistical significance of the findings. When appropriate, state clearly that the research project has received the approval of the relevant ethical committee. For an RCT article, please include the trial registration number) and follow the CONSORT checklist. Other study designs must also follow a reporting checklist, which can be found at <https://www.equator-network.org/>.
6. **Results:** Present your results in logical sequence in the text, tables and figures. Tables and figures may be left at the respective location within the text. These should be numbered using Arabic numerals only. Table style should be "Simple" (as in Microsoft Word). Do not repeat table or figure data in the text.
7. **Discussion:** Emphasise the new and important aspects of the study and conclusions that follow from them. Do not repeat data given in the Results section. The discussion should state the implications of the findings and their limitations and relate the observations to the other relevant studies. Link the conclusions with the aims of the study but avoid unqualified statements and conclusions not completely supported by your data. Recommendations, when appropriate, may be included.
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10. **Ethical Approval:** Please state if the study was approved; if so, by which institution and the approval ID.
11. **Conflicts of interest:** All authors must declare any conflicts of interest.
12. **Funding:** Please state if the study was funded; if so, by which institution and the funding ID.
13. **Data sharing statement:** Please describe your data sharing plan. State if your raw data is uploaded in publicly available databases, shared via controlled access repositories or only available upon request.
14. **How does this paper make a difference in general practice?:** This section should be written in bullet points (up to five points) and must not exceed 100 words.
15. **References:** Refer to the References section below for more details.

REVIEW

All types of review articles, including narrative review, scoping reviews and systematic reviews are accepted for publication in MFP. A comprehensive review of the literature with a synthesis of practical information for practising doctors is expected. For a systematic review, the PRISMA checklist must be followed. For a scoping review, the PRISMA-ScR checklist

1. **Title:** Include the topic and type of review in the title.
2. **Abstract:** Structured abstract (Introduction, Methods, Results and Conclusion) of no more than 250 words.
3. **Keywords:** 3-5 keywords, preferably MeSH terms.
4. **Introduction:** Describe the topic and objective of the review.
5. **Methods:** All types of review articles (including narrative review) must report the search strategy, database and keywords used to obtain the literature. The PRISMA and PRISMA-ScR checklists should be followed for systematic and scoping reviews, respectively.
6. **Results (*for systematic and scoping reviews):** This section is required for systematic and scoping reviews. Please follow the guideline in the PRISMA and PRISMA-ScR checklists.
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10. **Acknowledgements:** Acknowledge the people who have contributed significantly to the study (but do not qualify for authorship). If an artificial intelligence (AI) tool was used in any way during the preparation of the manuscript, it must be disclosed in the Acknowledgments section of the manuscript. Authors should describe the use as detailed as possible for transparency purposes. Read [HERE](#) about our AI use policy.
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CASE REPORT

Case reports should preferably be less-commonly seen cases that have an educational value for practising doctors. Only case reports that are **novel, have important learning points and relevant to family practice** will be accepted for publication in this journal. The acceptance rate of submitted case report is about 30%. The case report must be written in a **patient-centred manner instead of a disease-centred focus**. The length should **not exceed 1500 words (Introduction, Case Presentation, Discussion and Conclusion) and cite no more than 20 references**. Before submitting the case report, the authors must ensure that the patient's identity is protected both in the text and pictures. This patient consent form must be signed and uploaded during submission. Please include the following sub-headings in the manuscript:

1. **Title:** Use an interesting title to show the new learning points and include the term "case report" in the title.
2. **Abstract:** Unstructured abstract between 100-250 words.
3. **Keywords:** 3-5 keywords, preferably MeSH terms.
4. **Introduction:** Describe the condition and aim of the case report.
5. **Case Presentation:** Describe the case in detail.
6. **Discussion:** Discuss the case with existing literature.
7. **Conclusion:** Provide the key learning point from the case report.
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9. **Conflicts of interest:** All authors must declare any conflicts of interest.
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11. **Patients' consent for the use of images and content for publication:** Was consent obtained from the patient(s)? Was the consent written or verbal? Has the patient consent form been signed?
12. **What is new in this case report compared to the previous literature?:** This section should be written in bullet points (up to five points) and must not exceed 100 words.
13. **What is the implication to patients?:** Describe any potential implication to patients based on the learning points from this case report.
14. **References:** Refer to the References section below for more details.

CPG REVIEW

The CPG should be relevant to primary care. Its length **should not exceed 4000 words (Introduction to Conclusion) and 40 references**. An abstract is required (no more than 300 words) together with the keywords. The CPG review should be written with case vignettes to illustrate its application in primary care practice.

1. **Title:** State the scope of the CPG, include the latest version or year for revised CPGs.
2. **Abstract:** Unstructured abstract between 100-250 words.
3. **Keywords:** 3-5 keywords, preferably MeSH terms.
4. **Introduction:** Describe the condition and aim of the CPG review.
5. **Development process of the CPG:** Describe the development process of the CPG, e.g.: who are the team members involved, what methodology was used, how was the evidence gathered, how was the decision made on the recommendations, was the outcomes validated, how was the CPG disseminate and implementation, etc. Follow the AGREE Reporting Checklist (<https://www.equator-network.org/wp-content/uploads/2016/03/AGREE-Reporting-Checklist.pdf>) wherever possible.
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8. **How to apply the CPG into practice in primary care?** Explain how the CPG can be in primary care practice.
9. **Case vignettes as examples of application:** Use case vignettes to illustrate the application of the CPG.
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15. **How does this paper make a difference in general practice?:** This section should be written in bullet points (up to five points) and must not exceed 100 words.
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TEST YOUR KNOWLEDGE

A Test Your Knowledge article should be relevant to primary care and preferably be about less-commonly seen cases that have an educational value for practising doctors. The length should **not exceed 1000 words (Case Summary to Answers with discussion) and no more than 20 references**. If the article involves a patient, the authors must ensure that the patient's identity is protected both in the texts and pictures; and this patient consent form must be signed and uploaded during submission. Please include the following sub-headings in the manuscript:

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3. **Keywords:** 3-5 keywords, preferably MeSH terms.
4. **Case Summary:** Describe the case.
5. **Questions:** State the questions.
6. **Answers with discussion:** Provide the answers and discuss them with support from the literature.
7. **Acknowledgements:** Acknowledge the people who have contributed significantly to the study (but do not qualify for authorship). If an artificial intelligence (AI) tool was used in any way during the preparation of the manuscript, it must be disclosed in the Acknowledgments section of the manuscript. Authors should describe the use as detailed as possible for transparency purposes. Read [HERE](#) about our AI use policy.
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5. **Author contributions:** Describe the contributions of every authors in the study. (Please put this in Title Page during submission to ensure blinded peer review)
6. **Conflicts of interest:** All authors must declare any conflicts of interest.
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8. **References:** Refer to the References section below for more details.

A MOMENT IN THE LIFE OF A FAMILY PHYSICIAN

We encourage submission of a short narrative to share perspectives, voice, views and opinions about a family physician's experience that has affected their practice or life. It could be about being a doctor, educator, administrator/management, researcher, student or even patient. This type of article should be a **reflective piece of about 500 words in length (Main text)**, and can be accompanied with photo(s). The journal also accepts articles which anchor on the photo(s) as the main content, this can be accompanied with captions (not more than 100 words) that describe the photo(s) with author's reflection on it.

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- **Website:** Rainie L. The rise of the e-patient. Pew Research Center Internet and the American Life Project. October 7, 2009. Accessed January 11, 2012. <https://www.pewresearch.org/internet/2009/10/07/the-rise-of-the-e-patient-2/>
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 2. Author, 2019
 3. Author, 2016
 4. Hashim S, Ayub ZN, Mohamed Z, et al. The prevalence and preventive measures of the respiratory illness among Malaysian pilgrims in 2013 Hajj season. J Travel Med. 2016;23(2):tav019. Published 2016 Feb 8. doi:10.1093/jtm/tav019
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CONTENTS

ORAL PRESENTATION

Systematic and Scoping Review	1	Fighting Fire with Fire? Digital Interventions for Youth Internet and Gaming Addiction: A Systematic Review and Meta-Analysis
Clinical Study / Trial	1	Depression, Anxiety, And Other Correlates Of Erectile Dysfunction Severity Among Male Adults Attending Government Primary Healthcare Clinics In The Kuala Langat District, Malaysia
	2	Real-world effectiveness of sofosbuvir plus ravdasvir for chronic hepatitis C: a national registry-based study
	3	Psychological Distress Among Individuals Undergoing Subfertility Treatment in LPPKN Outpatient Clinics in Malaysia: Implications for Primary care physicians
	4	Artificial Intelligence Assisted Fundus Interpretation for Diabetic Retinopathy Screening in Sabah: Comparison with Three Expert Ophthalmologists Under Real-World Field Conditions
	5	Feasibility, preliminary wound outcomes, and user experiences of a chronic wound decision support tool (CW-DST) in primary care clinics in Klang Malaysia: A Mixed-Methods study
	6	AI-Assisted Fundus Screening in Sabah Primary Care: Operator Perspectives on Implementation Challenges
	7	Identifying Non-Genetic Clinical Predictors of Allopurinol-Induced Severe Cutaneous Adverse Reactions Using Machine Learning Approaches
	8	Evaluating the use of Modified FRAX and FRAXplus® scoring in Estimating Osteoporosis Fracture Risk in Individuals with Type 2 Diabetes Mellitus
	9	A Prospective Observational Study on Self-Management Behaviour for Type 2 Diabetes Patients in Melaka Primary Care Clinics
	10	Diabetes Empowerment Among Young-Onset Type 2 Diabetes (YT2D) Adults in Selected Government Health Clinics in Johor, Malaysia: Does it Translate to Good Glycaemic Control?
	11	Beyond FIB-4 Score: Liver Stiffness Measurement as a Complement to Biochemical Fibrosis Screening in Primary Care
	12	Prevalence Of Lower Urinary Tract Symptoms(Luts) And Its Associated Factors Among Men Attending Government Health Clinics In Kuantan, Pahang
	13	Diabetes-related distress and its association with HbA1c among patients with T2DM in primary care

POSTER PRESENTATION

Quality Improvement Initiative Study	1	Comparing Family Medicine EHRs (Electronic Health Records): A Quality Improvement Initiative of Malaysia's CCMS (Primary Care) Versus South Korea's PHIS (Tertiary Care)
	2	Breaking Therapeutic Inertia: Impact of a Multidisciplinary Enhanced Diabetes Care Clinic on Poorly Controlled Diabetes
	3	Factors Associated with Refusal of Renal Replacement Therapy Among Advanced Chronic Kidney Disease Patients Attending a Pre-Dialysis Education Programme in Klinik Kesihatan Bandar Tumpat
	4	Beyond the Pill: Successful Risk Reduction and Low HIV Conversion at Seremban PrEP Clinic

- 5 **Clinical Audit On Obesity Screening And Management Among Type Ii Diabetic Mellitus Patients In Klinik Kesihatan Pandamaran**
- 6 **A Clinical Audit on Pre-Pregnancy Care (PPC) Service for Diabetic Patients Attending Health Clinics in PKD Petaling**
- 7 **Optimising Sputum Sample Quality in Primary Care to Strengthen Tuberculosis Diagnosis**
- 8 **Improving Cervical Cancer Screening Coverage Among Women Aged 30-65 Years In Kulai District, Johor: A Quality Improvement Initiative**
- 9 **Pain Management & Wound Care Centre (PWCC): Incorporating Best Practice Approach for Chronic Pain and Wound Management in Primary Care**
- 10 **From Drill to Skill: Evaluation of Obstetric Emergency Simulation Training in a Primary Care Setting**
- 11 **Creating Legacy In Klinik Kesihatan Batu 9: One-Year Outcomes Of A Dedicated FMS-Led Multidisciplinary Diabetes Legacy Clinic**
- 12 **Assessing Knowledge, Attitude and Practice In Geriatric Care Amongst Healthcare Providers In Primary Care Setting in Kulai, Johor**
- 13 **Improving Usage of Long Acting Reversible Contraception (LARC) Among Women in Reproductive Age With Poorly Controlled DM in Klinik Kesihatan Kampung Gial**
- 14 **Integration Of An Asthma Clinical Quality Registry Into Routine Workflows In Malaysian Primary Care: A Mixed-Methods Evaluation**
- 15 **Establishing Mental Health Centre of Excellence (MHCoE) KK Kajang: A Quality Improvement Initiative**
- 16 **A Clinical Audit : Enhancing Adherence to National Antibiotic Guidelines (NAG) 2024 for Management of Urinary Tract Infection in Pregnancy among Medical Officers Providing Antenatal Care in Klinik Kesihatan Bukit Naga (KKBN)**
- 17 **Evaluating a Multidisciplinary Pre-Diabetes Quality Improvement Programme Amongst Healthcare Staff in Klinik Kesihatan Senawang, Negeri Sembilan**
- 18 **Bringing Geriatric Care Closer to Home: A Collaborative Multidisciplinary Primary Care Initiative in Penang**
- 19 **From Profiling to Quality Assessment: A Structured Approach to Harmonising and Standardising Sociodemographic Data Across NHMS Cycles**
- 20 **Advancing Open Science in Mental Health: A Unified Framework for Harmonising National Adolescent Survey Data (2012–2022)**
- 21 **Overcoming Clinical Inertia in Primary Care Wound Management through a Customized Digital Clinical Decision Support System**
- 22 **Reducing Delayed Diagnosis of Sudden Sensorineural Hearing Loss in Primary Care: The SURE-HEAR Quality Improvement Initiative in PKD Kuala Langat**
- 23 **Exploring The Experience Of Breast Cancer Screening: A Qualitative Study Among Women In Kelantan, Peninsular Malaysia**
- 24 **Caring with Change: The Evolving Role of Paramedics as Case Manager in Malaysia**

CONTENTS

	25	A Clinical Audit on Intrauterine Contraceptive Device Procedure at Klinik Kesihatan Bandar Baru Bangi, PKD Hulu Langat, Selangor
	26	An Audit on Adherence of Medical Officers to the Mental Health Assessment Checklist in the Cloud-Based Clinical Management System (CCMS) in KK Kubur Panjang
Systematic and Scoping Review	1	The Landscape of Long-term Post-Stroke Assessment in Primary Care in Malaysia: A JBI Scoping Review
Translational Research	1	Survival Analysis of Chronic Kidney Disease Among Diabetic Patients With and Without Comorbid Hypertension in Temerloh Health Clinic
	2	Prevalence and Associated Factors of Erectile Dysfunction among Diabetic Patients With or Without Hypertension and Beta-Blocker Use in Temerloh Health Clinic
	3	Knowledge, Awareness and Perception of contraception and Its associated factors among women of reproductive age attending Klinik Kesihatan Ibu Anak Jalan Gambut Kuantan, Pahang Malaysia
	4	Reliability and Validity of the Insulin Treatment Appraisal Scale (ITAS-M) Malay Version among Type 2 Diabetes Mellitus in Kuantan, Pahang
	5	An Islamic Values-Based Cognitive Intervention for Older Adults with Mild-to-Moderate Dementia: A Culturally Adapted Module for Malaysian Primary Care
	6	FIND-DM Perlis: Closing the Family Screening Cascade for Early Detection of Type 2 Diabetes Mellitus in Primary Care — A Two-Year Statewide Retrospective Analysis
Clinical Case Report / Case Series	1	When the Pursuit of Athletic Fitness Becomes Harmful: Bulimia Nervosa in an adolescent
	2	A Wolf in Sheep's Clothing: Cerebellopontine Angle Tumour Masquerading as Bell's Palsy During Pregnancy
	3	Progressive Bilateral Proximal Muscle Weakness with a Large Mediastinal Mass: A Case Suggestive of Paraneoplastic Myasthenia Gravis
	4	A Quiet Decline: When Subtle Signs Cost a Mother's Life
	5	When Benign Mimics Malignancy: Spongiotic Dermatitis Presenting as Suspected Paget's Disease of the Breast in an Adolescent—A Primary Care Diagnostic Challenge
	6	Masquerading Leprosy: Post-Inflammatory Hypopigmentation in Multibacillary Leprosy - A Case Report
	7	When Acne Isn't Acne: A Case Report of Mpox in Primary Care
	8	Growing Fears: A Case of Primary Tokophobia in a Primigravida
	9	A Tale of Two Pathogens: Atypical Nasal Diphtheria and Histoplasmosis in a Newly Diagnosed HIV Patient
	10	Uncommon Presentation of Neisseria Meningitidis in Primary Care: A Clinical Case Series
	11	Acne That Wasn't: Unmasking Malassezia Folliculitis Behind Persistent Papules
	12	Expressive Aphasia as an Isolated Presentation in an Undiagnosed Primary Lung Adenocarcinoma with Brain Metastases
	13	Hidden Cause of Bruises: Acquired Platelet Dysfunction with Eosinophilia as a Diagnostic Challenge

- 14 Feasibility and Adherence of a Pediatric vDOTS Service During the Intensive Phase of Tuberculosis Treatment: A Case Series
- 15 A 12-Year Persistent Verrucous Elbow Lesion in a Young Adult: Diagnostic Challenges in Primary Care Practice
- 16 When Common Diagnoses Mislead: Cryptogenic Organizing Pneumonia in a Pregnant Woman with Asthma
- 17 Fournier's Gangrene Diagnosed in Primary Care
- 18 Battle of Mind over Motor
- 19 Fetal Congenital Heart Block: Is 37 Weeks Too Late for the “Stable” Fetus?
- 20 Managing Cold-Evoked Central Post-Stroke Pain After Basal Ganglia Stroke: A Primary Care–Led Multimodal Rehabilitation Approach
- 21 Mimicking Heart Failure: A Hidden Renal Cell Carcinoma with Inferior Vena Cava Thrombus Revealed by POCUS in Primary care- case report
- 22 The Great Mimicker Unmasked: A case of Paediatric Tuberculosis with Cardiac Sequelae Presenting as Severe Pneumonia
- 23 Point-of-Care Ultrasound (POCUS) for Post-Void Residual Assessment in Logistically Challenged Postpartum Patient: A Case Report
- 24 Missed Clues in Primary Care: Triple Positive Obstetric Antiphospholipid Syndrome Preceding Diagnosis of Systemic Lupus Erythematosus in a Pregnant Woman
- 25 When Rashes Deceive: Unveiling the Chameleon – HIV and Secondary Syphilis Hiding Behind Common Rashes
- 26 From Suspected Trichorionic Triamniotic Pregnancy to Confirmed Quadruplets: A Rare Diagnostic Challenge in Primary Care
- 27 Negative Tests, Positive Diagnosis: Discordant Serology in Secondary Syphilis in Primary Care
- 28 When Psychological Distress Reveals an Underlying Congenital Condition: A Case of Mayer–Rokitansky–Küster–Hauser Syndrome
- 29 Local Anaesthetic Systemic Toxicity Mimicking Panic Attack: A Diagnostic Challenge in Primary Care
- 30 Evaluating Wound-Healing Progress and Pain Relief Following High-Intensity Laser Therapy (HILT) in a Diabetic Foot Wound: Clinical Case Series Report
- 31 “Acute Scrotal Pain in Children: Prioritising Exclusion of Testicular Torsion”
- 32 Young Ischaemic Stroke Secondary to Cardiac Myxoma in a Patient with Substance Abuse: A Primary Care Perspective
- 33 Beyond Truancy: A Multisystemic Approach to Adolescent School Refusal in Primary Care
- 34 Conservative Management of Intradural Extramedullary Spinal Cord Tumour in Pregnancy: A Case Report
- 35 Early detection of cystic hygroma with hydrops fetalis in primary care: A case report experience from the heart of Malaysian Borneo

CONTENTS

- 36 **Double Trouble: A Rare Case of Peyronie's Disease on a Background of Rheumatoid Arthritis**
- 37 **Taenia taeniaeformis, A Rare Tapeworm Infection in a 10 Month Old Infant. A Case Report**
- 38 **A Pragmatic Offloading Innovation: Double-Layer Gamgee Technique for Accelerated Healing of a Chronic Plantar Diabetic Foot Ulcer**
- 39 **Losing More Than Hair: A Diagnostic Challenge of Secondary Syphilis**
- 40 **The Silent Danger: A Case of Unrecognized Intranasal Button Battery Impaction in a Child with Autism Spectrum Disorder(ASD)**
- 41 **GULLAIN -BARRE SYNDROME IN PREGNANCY**
- 42 **Acute Angle-Closure Glaucoma in a Young Patient with End-Stage Renal Failure and Multiple Systemic Comorbidities**
- 43 **When Stroke Is Not Stroke: Diabetic Striatopathy Presenting as Hemichorea in Primary Care**
- 44 **An Unexpected Leak: Dose-Dependent Urinary Incontinence Associated with Sertraline Use**
- 45 **From Arm Swelling to Breast Cancer Diagnosis: A Primary Care Challenge**
- 46 **POCUS in Practice: Diagnosing Life-Threatening Emergencies in Primary Care**
- 47 **Beyond Reassurance: Subtle Symptoms Revealing an Anterior Mediastinal Mass Suspicious for Cystic Teratoma**
- 48 **A Case Report of Atypical Ketosis-Prone Diabetes Complicated by Early Worsening of Diabetic Retinopathy and Rapid-Onset Nephropathy Detected in Primary Care**
- 49 **Beyond Visible Light: Practical Applications of Wood's Lamp in Primary Care Dermatology**
- 50 **More Than Just Cellulitis: A Five-Year Journey to a Filariasis Diagnosis in an Elderly Patient**
- 51 **An Unusual Chest Wall Swelling: Primary Care as a Gateway to Diagnosis — A Case Series of Chest Wall Tuberculosis**
- 52 **Paederus Dermatitis ("Charlie Ant" Dermatitis) in Putrajaya: A Case Series Highlighting the Role of Primary Care in Early Management and Prevention of Complications**
- 53 **The Silent Dip: Reactive Hypoglycemia in Adolescent Obesity**
- 54 **Not All Erectile Dysfunction Is Organic: Unmasking Vaginismus Through a Primary Care Lens**
- 55 **Supportive Psychotherapy in Perinatal Grief: A Case Report From Family Medicine**
- 56 **Fluvoxamine-Induced Nightmares in Major Depressive Disorder: A Rare but Disruptive Adverse Effect**
- 57 **Marked Transaminitis in a Young Adult with Newly Diagnosed HIV and Chronic Hepatitis B Co-infection: A Case Report**
- 58 **Beyond 'benign' cervical lymph nodes: Kikuchi disease**

59	Episcleritis Following Chickenpox in a Child: A Rare Ocular Manifestation of Varicella Zoster Virus
60	Chronic Pain in Primary Care: More Than Physical - A Total Pain Approach
61	A Preventable Fatal Outcome of Puerperal Sepsis in a Rural Postnatal Mother
62	Hidden in Plain Sight: The Crucial Role of Primary Care in the Early Identification of High-Risk Pregnancies Requiring Termination - A Case Series
63	A Silent Threat: Delayed Diagnosis in Advanced Abdominal Pregnancy
64	Detect Early, Protect Two: A Primary Care Approach to HIV Serodiscordance Discovered During Pregnancy
65	From “Lazy Hip” to Lacunar Infarct : A Curious Case of Missed Hypertension in Primary Care
66	The Great Imitator: A Rare Case of Disseminated TB Masquerading as Malignancy in an Immunocompetent Patient
67	A Double-Edged Sword: Anticoagulation and Intracranial Hemorrhage In The Postpartum Period
68	The Invisible Struggle: A Case Study of Post Pandemic School Refusal in an Undiagnosed Autistic Adolescent
69	Limitations in Management of Vasomotor Symptoms in a Transgender Woman at Health Clinic. - A Case Report
70	A Silent Threat: Tuberculosis in Pregnancy and Its Impact on Maternal and Foetal Health - Lessons from a Primary Care Case Report
71	Adolescent Striae Mimicking Non-Accidental Injury: A Case Report and Diagnostic Challenge
72	School Absenteeism and Depression in Adolescence: Uncovering Autism Spectrum Disorder Through Primary Care
73	From Exercise to Eruption: A Case of Exercise-Induced Vasculitis
74	When Smears are Negative and Tablets Don't Fit: Navigating Paediatric Tuberculosis in a District Clinic
75	Diagnostic Challenges of Per-Rectal Bleeding in a Virally Suppressed HIV Patient: A Primary Care Perspective
76	Beyond the Presenting Complaint: Life-Saving Recognition of Domestic Violence and Postpartum Psychiatric Crisis in Primary Care
77	When Illness Is Not Just Biological: Tuberculosis in a Family Broken by Substance Abuse
78	A Neoplasm Mimicker: Pulmonary Cryptococcal Nodule in a Ruxolitinib-Treated Myelofibrosis Patient
79	When Orthopnea Was Not Heart Failure: Unilateral Diaphragmatic Paralysis Secondary to Parsonage Turner Syndrome
80	Beyond Fluid Overload: Primary Care Challenges in Identifying HFrEF in an ESRF Patient on CAPD
81	Sweet But Severe: A Rare Case of Diabetic Embryopathy With Bilateral Proximal Femoral Focal Deficiency And Radio-humeral Synostosis

CONTENTS

82	The Unveiled Truth of Efavirenz Induced Gynaecomastia : A Case Report
83	“When Seizures Aren’t Seizures: Alternating Hemiplegia in Childhood as an Epilepsy Mimic in Primary Care”
84	A Mouthful of Mystery: An Invisible Presentation of Kaposi Sarcoma in Advanced HIV
85	From Vague Symptoms to Surgical Emergency: A Case Report on Obturator Hernia in Primary Care
86	From Poor Glycaemic Control to Severe Hypertriglyceridemia in Pregnancy: A Case Highlighting Primary Care Challenges
87	Missed Screening, Late Disclosure: Advanced HIV Infection Presenting with Respiratory Failure
88	Breaking the Admission Tradition: Safe Ambulatory Care for New-Onset Type 1 Diabetes
89	The Face of Hidden Leprosy: A face of hidden Leprosy: An Atypical Presentation Without Sensory Loss
90	Missed Opportunities: A Case Report on Syphilis in Teenage Pregnancy
91	When HIV Treatment Mimics Depression: A Case of Efavirenz Neuropsychiatric Toxicity
92	Beyond the Baby Bump: Diagnosing a Giant Cell Tumour During Pregnancy — A Case Report
93	Antenatal Diagnosis of Bronchopulmonary Sequestration in a Low-Risk Pregnancy: A case report of Primary Care Perspective
94	Integrating Family Therapy into Adolescent Depression Management: Learning Points from Primary Care
95	Beyond Physical Recovery: The Invisible Psychological Burden of Young Stroke and Missed Psychosocial Opportunities in Primary Care
96	Caught in the Web of Gaming: A Young Woman’s Battle with Addiction, Anxiety, and Depression: A Case Report
97	Beyond Hospital Walls: The Life-Changing Impact of Community Vision Screening in Pediatric Ocular Trauma
98	The Importance of Early Antenatal Booking in Advanced Maternal Age Pregnancy: Lessons from a Suspected Trisomy 18 Case
99	Asymptomatic Methyldopa-Induced Liver Injury in Pregnancy: A Primary Care Perspective
100	From recurrent UTI to Genitourinary Syndrome of Menopause: The Value of a Comprehensive Primary Care Approach
101	Severe Dementia and Caregiver Burden in Primary Care: A Case Report
102	Dapsone-Induced Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) In Leprosy: Two Cases Highlighting a Fatal Hepatic Failure and Relapsing Disease
103	Navigating Diagnostic Uncertainty in Primary Care: Pregnancy of Unknown Location with Intrauterine Contraceptive Device In Situ

104	Peach, Fire and Drool - Decoding the Danger of Early Exposure to Pornography via Social Media Emojis in a Boy with Attention Deficit Hyperactivity Disorder – A Case Report
105	Navigating Diagnostic Complexity in Adolescent Mental Health: The Role of Primary Care in a Case of Evolving Bipolar Disorder
106	FROM FETUS WITH SMALL BOWEL DILATATION TO CHILD WITH CONGENITAL CHLORIDE DIARRHOEA
107	Exogenous Cushing's Syndrome Masked as Refractory Type 2 Diabetes Mellitus: A Case from Primary Care
108	Applying the International Classification of Functioning, Disability and Health (ICF) Model in Geriatric Domiciliary Care: A Case-Based Approach to Frailty and Advanced Neurocognitive Disorder
109	Unmasking Dual Disability: Camouflaged ASD in a Teenage Girl with Co-occurring Mood Disorders- A Case Report
110	Mounjaro®: Not the Medical Miracle? A Case Report of Paradoxical Weight Gain after Initiation of Tirzapatide
111	"The Dose Looks Too High": A Primary Care Pitfall in Chronic Hypoparathyroidism Management
112	Challenges in Diagnosis of Exclusion: Intrahepatic Cholestasis in Pregnancy
113	Spongiform Drug Eruption Mimicking a Lichenoid Drug Eruption: A Case of Clinicopathological Discordance in a Drug Eruption
114	Beyond Tuberculosis Prevention: Isoniazid-Induced Unilateral Gynecomastia in a Patient Receiving IPT
115	From Womb to Birth: Antenatal Diagnosis and Management of Congenital Pulmonary Airway Malformation
116	"Not All Forgetfulness Is Dementia": Metastatic Lung Adenocarcinoma Presenting with Cognitive Decline
117	HIV Elite Controller in Primary Care: Challenges Beyond Viral Suppression
118	The Headache That Wouldn't Quit: A case of Spontaneous Subdural Haemorrhage Masquerading as Benign Antenatal Headache
119	More Than a Fungal Infection: Recognizing Extramammary Paget Disease in Primary Care
120	Interrupted Care: Unplanned Pregnancy During Active Management of Malignant Breast Phyllodes Tumour: A Case Report
121	Not All Folliculitis Needs Antibiotics: A Missed Case of Malassezia Folliculitis
122	Opioid Rotation in End-of-Life Care at Home: Practical Applications in Primary Care
123	Beyond the Pills: Challenges in Managing Perinatally Acquired HIV in a Primary Care Setting
124	When Syphilis Is Not Syphilis : Revisiting Childhood Yaws in an Elderly Woman with Positive Treponemal Serology
125	Malignant etiology of chest pain in adolescent - a case report

CONTENTS

126	PERSISTENT ANOSMIA IN AN ELDERLY PATIENT: POST VIRAL OR NEUROGENIC?
127	Neonatal Diabetes Mellitus Due to a CNOT1 Mutation with Combined Endocrine–Exocrine Pancreatic Dysfunction
128	The Copper IUD Nightmare- Anchored in False Security, Delayed Pregnancy Recognition and Severe Preeclampsia: A Primary Care Case Report
129	Beyond Referral: Integrating Patient Empowerment in Primary Care Management of Diabetic Foot Osteomyelitis — Experience from Klinik Kesihatan Batu 9
130	From Neurosurgery to Neighbourhood: Primary Care as the Pivot in Managing Non-Accidental Injury with Chronic Subdural Haemorrhage in a Biopsychosocial Vulnerable Infant
131	From Missed Red Flags to Life-Saving Interventions: Clinical Utility of the HEADDSS Framework in High-Volume Primary Care Settings
132	Multidisciplinary Antenatal Care for High-Risk Pregnancy Following Recent Dermatofibrosarcoma Protuberans Excision and Prophylactic Anticoagulation
133	A Hidden Trigger: Amphetamine Type Stimulant (ATS)-Induced Psychosis Misdiagnosed as Psychotic Depression in Primary Care
134	Behind the Spirit of Possession: Severe Hashimoto Hypothyroidism Presenting with Myxedema Oedema & Neuropsychiatric Manifestation
135	Case Report: Hepatocellular Carcinoma Presenting as Obstructive Jaundice Detected with the Aid of POCUS Hepatobiliary
136	Beyond the Milestones : Navigating the Rare Path of Trisomy 10p in Primary Care
137	Why my urine is purple? A rare case report
138	Small Child, Silent Thyroid: A Case of Failure to Thrive Secondary to Subclinical Hypothyroidism
139	Unilateral Nipple Discharge in Primary Care: Two Cases Highlighting Diagnostic Challenges and Red Flags
140	The Silent Burden of a Pump Twin : A Rare Case of Twin Reversed Arterial Perfusion Sequence
Community Project	1 Effectiveness of an Interactive School-Based Intervention on Knowledge and Attitudes Towards Smoking and Vaping Among Malaysian Adolescents in Negeri Sembilan: The H.E.B.A.T Program
	2 Evaluating The Effectiveness Of The Promosi Remaja Sejahtera Module On Adolescent Sexual Reproductive Health Literacy In The East Coast Of Malaysia: A Linear Mixed-Effects Analysis
	3 Development And Validation Of A Questionnaire Assessing Sexual And Reproductive Health Knowledge Among Adolescents Based On The Promosi Remaja Sejahtera Module
	4 Prevalence and Socioeconomic Determinants of First-Trimester Vitamin D Deficiency among Pregnant Women in Langkawi, Malaysia
	5 Bridging Hospital-to-Community Rehabilitation: A Reflective Comparative Analysis from an Observership at the Royal Melbourne Hospital with Contextual Adaptation for Malaysia

- 6 **Cegah Bantut Initiative: A Community-Driven Nutritional Intervention for Stunting Reduction in Changkat Lada**
- 7 **Exploring the Determinants of Bullying Behaviour Among Malaysian Secondary School Adolescents in Kuantan**
- 8 **From Clinics to Community: A Primary Care-Led Cognitive Stimulation Therapy Model Transforming Dementia Care**
- 9 **An Integrated Multi-Agency Home-Based Health Screenings: A Community Project in Kampung Santan Madani, Perlis**
- 10 **Preparing for an Ageing Nation: Outcomes of the "Old Is Gold - The Golden Era Begins at 40" Community Geriatric Care Initiative in Kulai, Malaysia**
- 11 **Beyond the Clinic Walls: Infaq Kasih Ramadhan - A Statewide Community Outreach by Family Medicine Specialists in Terengganu**
- 12 **Learning Disability Screening for Primary School Students in Kuantan, Pahang: A 2025 Report by IIUM Family Health Clinic (FHC)**
- 13 **THE SALTY SIDE OF BLOOD SUGAR: MODELING DIETARY SODIUM AND POTASSIUM IMPACTS ON GLYCAEMIC CONTROL**
- 14 **Health Beyond Walls: Activating Communities, Preventing Diabetes**
- 15 **PROJECT CEMPAKA: Bridging Breast Cancer Screening Gaps Through Digital Education**
- 16 **Bachok District Adolescent Sexual And Reproductive Health Program: "A Moment of Pleasure, A Lifetime of Regret".**
- 17 **Caring Beyond Clinic Walls: Advancing Early Breast Cancer Detection Through the Program Mobile Mammogram Cempaka-HoSZA**
- 18 **SHIFT-UP! : A mental health programme**
- 19 **Festival Penuaan Sihat Warga Emas @ Komuniti Tanjong Karang: Promoting Healthy Ageing and Frailty Awareness**
- 20 **Bridging the Gap: A Multidisciplinary Community Outreach Model to Improve Preventive Healthcare Access Among Orang Asli Communities in Sepang, Malaysia**
- 21 **KACUK '25: A Community-Based Basic Life Support Training and Public Health Screening Programme — Impact and Outcomes**
- 22 **Healthier Me (SIHAT KU): A 12-Week Multi-Component Lifestyle Intervention Improving Behavioural and Body Composition Outcomes Among Primary Care Healthcare Workers**
- 23 **Empowering Communities through Diabetes Education: A Structured Intervention for Improved Outcomes**
- 24 **Healthy Ageing, Better Quality of Life – A Community-Based Health Screening Initiative for Senior Citizens of Kelab Warga Emas Junjang**
- 25 **Screening for Cardiovascular Risk Factors in a Suburban Community: Findings from the SeHaTi MADANI Community Program in Nilai, Negeri Sembilan**
- 26 **Bulatan Mekar: A Collaborative Primary Care and NGO Initiative for Caregivers**
- 27 **WIRA KITA TUNJANG BANGSA: A Community-Based Psychosocial Empowerment Programme for Methadone Clients in Kuala Selangor District**

CONTENTS

	28	REACH (Recovery, Empowerment and Community Healing): Promoting Psychosocial Recovery Among OSCA and MENTARI Clients in Segamat
	29	Program Warga Berilmu dan Sihat di Usia Emas (WISE) Kuala Selangor
Clinical Study / Trial	1	The Effectiveness Of Using Digital Technology To Reduce Excessive Screen Time And Screen Dependency Scores Among Pre-School Children In Kuantan
	2	Prevalence of Limited Health Literacy and Its Associated Factors Among Patients with Type 2 Diabetes Mellitus Attending Government Health Clinics in Kuantan
	3	Barriers and facilitators encountered by carers when providing care for patients with Type 2 diabetes mellitus on insulin: A qualitative study
	4	SGLT-2i Use and Regular SMBG: Key Predictors for Successful Insulin De-intensification in T2DM
	5	Prevalence of Asymptomatic Bacteriuria Among Pregnant Patients with Gestational Diabetes Mellitus in Klinik Kesihatan Kuala Lumpur and Its Associated Factors
	6	Knowledge, Awareness and Practice of Cardiopulmonary Resuscitation (CPR) Among Household Members of Patients With Heart Disease
	7	Views And Experiences Of Metabolic Dysfunction-Associated Fatty Liver Disease (Mafld) Diagnosis And Management Among Primary Care Doctors In Klang Valley
	8	Thalassemia Knowledge And Its Associated Factors Among Individuals Attending Pre-Marital Course In Kuantan, Pahang
	9	Short Interpregnancy Interval and Its Associated Factors Among Multigravida Women Attending Government Health Clinics in Kuantan, Pahang
	10	Knowledge, Attitude, and Practice of Pre-Pregnancy Care (PPC) To Women of Childbearing Age and Factors Associated with its Delivery among Primary Care Physicians (PCPs) in Klang Valley, Malaysia
	11	Prevalence of Allergic Rhinitis among Adult Patients Attending an Academic Primary Care Centre in Selangor, Malaysia
	12	Heart and Lifestyle (HEAL) Initiative in Klinik Kesihatan Penampang, Sabah
	13	Behind the Recovery Curve: Assessing Prevalence and Associated Factors of Poor CD4 Reconstitution Among Late-Presenting HIV Patients in Bintulu
	14	Awareness and Attitudes Towards Advance Care Planning Among Primary Care Patients in Sarawak
	15	Prevalence Of Loneliness And Its Associated Factors Among Elderly In Felda Community In Kuantan, Pahang
	16	Adherence To Clinical Practice Guidelines In Managing Hypertensive Patients With Cardiovascular Diseases In Gombak, Selangor: Prevalence And Associated Factors
	17	Prevalence of Primary Sarcopenia among community-dwelling older adults in Seberang Perai Utara district, Penang and its associating factors
	18	Prevalence of Prediabetes and Its Associated Factors Among Adult Attending Outpatient Primary Health Clinic in Kuantan Pahang
	19	Knowledge, Attitude, And Practice Of Exclusive Breastfeeding Among Mothers In Kerian District
	20	Exploring the Unmet Needs of Women with End Stage Renal Failure on Haemodialysis in Primary Care settings: A Qualitative Study

- 21 Factors Associated with Knowledge, Attitudes, Practices, and Awareness (KAPA) Towards Sexual and Reproductive Health (SRH) Among Secondary School Students in Segamat, Malaysia
- 22 Beyond Blood Pressure: High Burden of Metabolic Syndrome and Its Modifiable Determinants Among Hypertensive Patients in Primary Care
- 23 Urinary Incontinence in Older Adults with Diabetes: Prevalence and Factors Influencing Symptom Burden
- 24 Breastfeeding Self-Efficacy And Its Associated Factors In Primiparous Working Women In Kuantan
- 25 Bridging Access and Continuity: Adherence, Persistence and Retention of Pre-exposure Prophylaxis in Sabah Primary Care
- 26 Prevalence of Erectile Dysfunction and Its Associated Factors Among Non-Communicable Disease Patients in Johor Government Primary Health Care Clinics
- 27 Prevalence Of Postpartum Depression And The Associated Risk Factors In Primary Health Care Clinic Bandar Baru Bangi, Seksyen 7 Shah Alam And Beranang, Selangor Malaysia
- 28 Association of Depression, Anxiety, and Stress with Help-seeking Intention Among Late Adolescents in Government Secondary Schools in Kuantan
- 29 Identifying Responsibilities, Challenges and Solutions of Healthcare Providers for Teleconsultation with Older Patients in Primary Care: A Qualitative Study
- 30 Effectiveness of Fixed-Dose Intramuscular Low Molecular Weight Iron Dextran in Treating Iron Deficiency Anemia in Pregnancy: A Clinical Audit at Klinik Kesihatan Simpang Kuala, Alor Setar
- 31 Body Composition Profiles and Sarcopenic Obesity Risk among Employees at a Public University in Selangor
- 32 Views And Experiences On Hiv Pre-Exposure Prophylaxis (Prep) Among Family Medicine Specialists In Klang Valley
- 33 Outcome of Routine Fundus Screening in Diabetic Patients in Primary Care Setting: A Retrospective Study in Klinik Kesihatan Nilai
- 34 The prevalence of catch-up pneumococcal vaccine refusal towards under-5 children and the factors that influence this practice among parents attending primary care clinics in Rompin, Pahang
- 35 Prevalence Of Substantial Postpartum Weight Retention And It's Associated Factors Among Kuantan Mothers
- 36 Psychological, Clinical, and Sociodemographic Predictors of Erectile Dysfunction among Young Men Attending Primary Care Clinics in Sabah
- 37 Medication Adherence And Its Associated Factors Among Heart Failure Patients In Hospital Pakar Universiti Sains Malaysia
- 38 Knowledge and Attitude Towards Gestational Diabetes Mellitus Among Women with GDM in Kelantan
- 39 A Retrospective Cohort Study on the Efficacy and Medication Adherence of Pre-Exposure Prophylaxis (PrEP) for Human Immunodeficiency Virus (HIV) Prevention Among Clients at Klinik Kesihatan Jalan Masjid (KKJM), Kuching

CONTENTS

- 40 **Met and Unmet Needs of Older Adults in Self - Funded Care Centres in Hulu Langat, Selangor**
- 41 **Cardiovascular Disease Knowledge and Risk Perception Among Patients with Dyslipidemia in a Malaysian Primary Care Clinic**
- 42 **Frailty and Quality of Life among older patients with non-communicable diseases attending outpatient clinics in Universiti Sains Malaysia Specialist Hospital**
- 43 **Mental Health Status and Workplace Stress Among All Healthcare Staff in Hulu Langat District, Selangor: A Universal Study**
- 44 **High-Intensity Focused Electromagnetic Therapy on Patients with Erectile Dysfunction in Hospital Universiti Sains Malaysia: A Pre- and Post-Study**
- 45 **Light at the End of the Tunnel: Opportunities for Primary Care Engagement in Vaccine-Hesitant Mothers in Pasir Puteh, Kelantan**
- 46 **Knowledge Of Obesity-Related Pregnancy Risks And Its Associated Factors Among Reproductive-Age Women In Kota Bharu, Kelantan**
- 47 **Nonadherence To Inhaler Use And Its Associated Factors Among Elderly With Asthma And Chronic Obstructive Pulmonary Disease In Hospital Universiti Sains Malaysia**
- 48 **Prevalence Of Sarcopenia And Its Associated Factors Among Older Person With Diabetes Type 2 In Primary Health Clinic In Kubang Pasu, Kedah**
- 49 **Unravelling Association of Increased Body Mass Index with Sarcopenia and Related Outcomes Among Older Population in Perlis**
- 50 **Efficacy of a 12 Week Oral FixedDose Combination of AlphaLipoic Acid and B Vitamins in the Management of Symptomatic Diabetic Peripheral Neuropathy: A Randomized Controlled Trial**
- 51 **Bridging the Gap in Pre-Pregnancy Care: Knowledge and Associated Factors Among Healthcare Providers in a Primary Care Setting - A Single-Centre Study**
- 52 **Awareness, Knowledge and Attitude Towards Human Milk Sharing and Human Milk Bank Among Primary Care Doctors in Malaysia**

ORAL PRESENTATION

Systematic and Scoping Review_01

Fighting Fire with Fire? Digital Interventions for Youth Internet and Gaming Addiction: A Systematic Review and Meta-Analysis

#FMSC2026-042

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Introduction: Early and prolonged internet exposure among children and adolescents, alongside the increasing prevalence of digital addictions, has become a significant public health concern. While digital interventions offer accessible, scalable solutions that can be integrated into primary care settings, inconsistent evidence and the “digital paradox” necessitate careful evaluation of effectiveness. This review aimed to describe digital interventions targeting internet and gaming addiction among youth and assess their effectiveness.

Methods: A systematic search was conducted across Scopus, Web of Science, PsycINFO and PubMed using predefined terms. Interventional studies published in English from 2015 onwards involving children, adolescents, and young people were included. Study selection, data extraction, and quality assessment were performed independently by two reviewers. Eligible studies were included in a meta-analysis conducted using R software.

Results: Of 2,110 records identified, 12 studies were included, predominantly from high- and middle-income countries. Interventions included mobile applications, online cognitive behavioural therapy (CBT), and gamified platforms. Those incorporating theoretical frameworks, personalisation, and interactive elements appeared more effective. Meta-analysis of seven studies ($n = 4,396$) showed a moderate overall effect ($SMD = -0.89$) with substantial heterogeneity ($I^2 = 92.2\%$). Subgroup analysis found that both online CBT ($SMD = -1.89$) and mobile app interventions ($SMD = -0.30$) had consistent positive effects and suggest online CBT may have larger effects than mobile apps.

Conclusion: Digital interventions show positive effects towards digital addiction among youth. Future research should focus on improving methodological quality and expanding implementation across diverse socioeconomic settings to enhance generalisability and address the global burden of digital addiction.

Keywords: Digital addiction; youth; mhealth

Clinical Study / Trial_01

Depression, Anxiety and Other Correlates of Erectile Dysfunction Severity Among Male Adults Attending Government Primary Healthcare Clinics in the Kuala Langat District, Malaysia

#FMSC2026-010

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Introduction: Erectile dysfunction (ED) is common but under-recognized, and data on its psychological correlates in Malaysian primary care are limited; this study examines the prevalence, risk factors, and association of psychological profiles with ED severity.

Methods: A cross-sectional study was conducted from April to July 2025 among men aged ≥ 18 years attending government primary care clinics in Kuala Langat district, Malaysia. Validated tools were used for ED (IIEF-5), depression, and anxiety assessment, with associations examined via chi-square tests, bivariate and multivariate logistic regression analyses.

Results: The response rate was 96.4% (405/420), and 73.1% reported ED, with a preponderance of moderate ED (33.1%). Depression and anxiety were strongly associated with ED severity ($\chi^2 = 96.69$ and 49.81 , both $p < 0.001$). Depression and anxiety increased with ED severity, affecting 46.5% and 27.9% of men with severe ED, compared with much lower rates in other severity groups, demonstrating a clear gradient of psychological distress. Depression and anxiety were strong independent predictors of ED (OR = 6.16, 95% CI: 1.77–26.91, $p = 0.02$) and (OR = 6.91, 95% CI: 2.99–27.85, $p = 0.01$), respectively. Other significant ED predictors include older age, older partner age, longer marriage duration, lower sexual frequency, three or more comorbidities, prior urogenital surgery, and spousal sexual dysfunction.

Conclusion: ED is highly prevalent and associated with psychological distress, emphasizing the need for early detection, routine mental health screening, couple-centered care, and supportive public health and policy initiatives to enable holistic sexual health management.

Keywords: erectile dysfunction, depression, anxiety

Clinical Study / Trial_02

Real-world Effectiveness of Sofosbuvir Plus Ravidasvir for Chronic Hepatitis C: A National Registry-based Study

#FMSC2026-022

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Introduction: Hepatitis C virus (HCV) infection remains a major global public health challenge. About 50 million people live with chronic infection worldwide and approximately 242,000 deaths

occur annually from cirrhosis and hepatocellular carcinoma. Direct-acting antivirals (DAAs) have transformed treatment outcomes; however, large-scale real-world evidence for sofosbuvir plus ravidasvir (SOF/RDV) delivered through decentralised healthcare systems remains limited. This study evaluated the real-world effectiveness of SOF/RDV in patients with chronic hepatitis C treated within a national treatment programme in Malaysia.

Methods: This registry-based observational cohort study analysed data from the My HIV Care Cascade (MyHCC) national registry. Adult patients (≥ 18 years) with confirmed HCV infection who received SOF/RDV between 2018 and 2024 were included. Patients without cirrhosis received 12 weeks of therapy, while those with compensated cirrhosis received 24 weeks according to national treatment guidelines. Sustained Virologic Response (SVR) was assessed using HCV RNA or HCV core antigen testing where molecular testing was unavailable.

Results: A total of 1,143 patients were included (median age 48 years, 92.4% male). People who inject drugs (PWID) accounted for 71.3% of the cohort, and HIV co-infection was present in 4.3% of patients. Among 504 patients with available SVR testing, 469 achieved SVR, corresponding to an SVR rate of 93.1%.

Conclusion: SOF/RDV demonstrated high real-world effectiveness across hospital and primary care settings, including key populations such as PWID. These findings support decentralised hepatitis C treatment programmes and provide programmatic evidence relevant to hepatitis C elimination strategies in low- and middle-income countries.

Keywords: Hepatitis C, Direct-acting antivirals, Ravidasvir

Clinical Study / Trial_03

Psychological Distress Among Individuals Undergoing Subfertility Treatment in LPPKN Outpatient Clinics in Malaysia: Implications for Primary Care Physicians

#FMSC2026-023

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Introduction: Subfertility can negatively affect psychological well-being, leading to significant emotional distress. Primary care physicians play an important role in providing continuous and holistic support for couples with infertility issues. Local evidence on depression, anxiety, and stress among individuals attending public fertility services in Malaysia remains limited. This study aimed to determine the prevalence and identify factors associated with psychological distress among individuals receiving subfertility care at LPPKN outpatient clinics in Malaysia.

Methods: A multicentre cross-sectional study was conducted among 222 individuals attending four LPPKN outpatient subfertility clinics in Malaysia. Data were collected using structured questionnaires on sociodemographic and clinical characteristics, along with the validated Bahasa Malaysia version of the Depression, Anxiety and Stress Scale (DASS-21). Bivariate analyses and multiple linear regression were performed to identify factors associated with depression, anxiety, and stress.

Results: The prevalence of depressive, anxiety, and stress symptoms (mild to extremely severe) was 34.7%, 13.5%, and 19.4%, respectively. Female participants reported significantly higher scores across all domains ($p < 0.05$). Multivariable analysis demonstrated that female gender was independently associated with higher levels of depression ($\beta = 0.230$, $p = 0.002$), anxiety ($\beta = 0.163$, $p = 0.016$), and stress ($\beta = 0.242$, $p < 0.001$). Higher educational attainment was associated with increased anxiety and stress, while race and treatment phase were associated with stress levels.

Conclusion: Psychological distress is prevalent among individuals undergoing subfertility treatment in Malaysia, particularly among women. These findings highlight the important role of primary care physicians in early identification and ongoing support of psychological distress.

Keywords: Subfertility; Psychological distress; Primary care physician.

Clinical Study / Trial_04

Artificial Intelligence Assisted Fundus Interpretation for Diabetic Retinopathy Screening in Sabah: Comparison with Three Expert Ophthalmologists Under Real-World Field Conditions

#FMSC2026-137

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Introduction: Diabetic retinopathy (DR) remains a leading cause of preventable blindness worldwide, with a disproportionate burden in resource-limited settings where access to ophthalmology services is limited. Artificial intelligence (AI)-assisted fundus interpretation has emerged as a scalable solution for DR screening, demonstrating high sensitivity and specificity in controlled environments. However, its performance in real-world conditions, particularly in field-based settings, may be affected by variability in image acquisition and quality. This study aimed to evaluate the agreement between AI-assisted classification of referable diabetic

retinopathy and expert ophthalmologist assessment under real-world field conditions in Sabah, Malaysia.

Methods: A cross-sectional comparative study was conducted using 800 fundus images from patients with diabetes screened in primary care settings across Sabah. All images were analysed using an AI-based system and independently graded by three expert ophthalmologists, with majority consensus serving as the reference standard.

Results: Of the 800 fundus images analysed, 580 (72.5%) were classified as gradable and 220 (27.5%) as ungradable. Among the gradable images, 518 were classified as non-referable diabetic retinopathy by the AI system, all of which were confirmed by expert consensus. A further 62 images were classified as referable diabetic retinopathy by the AI system, of which 57 (91.9%) were confirmed by expert assessment. Using expert consensus as the reference standard, the AI system achieved a sensitivity of 100.0%, specificity of 99.0%, positive predictive value of 91.9%, negative predictive value of 100.0%, and overall accuracy of 99.1% for the detection of referable diabetic retinopathy.

Conclusion: AI-assisted classification of referable diabetic retinopathy demonstrated excellent agreement with expert ophthalmologist assessment and showed potential utility as a screening and triage tool in resource-limited settings. However, image quality remains an important determinant of performance and should be considered when implementing AI-assisted screening programmes in real-world practice.

Keywords: Diabetic Retinopathy; Artificial Intelligence; Fundus Photography; Screening; Primary Care.

Clinical Study / Trial_05

Feasibility, Preliminary Wound Outcomes, and User Experiences of a Chronic Wound Decision Support Tool (CW-DST) in Primary Care Clinics in Klang, Malaysia: A Mixed-methods Study

#FMSC2026-143

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Introduction: Chronic wounds are a significant burden in primary care, where variability in assessment and management delays healing. Clinical decision support tools can standardise care and improve outcomes. This study evaluated the feasibility, preliminary wound outcomes, and user experiences of the Chronic Wound Decision Support Tool (CW-DST) in Malaysian primary care.

Methods: A convergent mixed-methods feasibility study was conducted in three public primary care clinics in Klang from December 2025 to March 2026. Patients with chronic wounds of at least 6 weeks duration were recruited using convenience sampling. Wound assessment and management were guided by the CW-DST based on the T.I.M.E. framework. Wound outcomes (width, length, depth, wound type, and number of wounds) were

measured at baseline, week 4, week 8, and week 12. Quantitative data were analysed using repeated measures ANOVA with Bonferroni post hoc comparisons. Qualitative data from healthcare providers were analysed thematically.

Results: 53 patients were included (mean age 57.5 years; 56.6% female), with diabetic foot ulcers being the most common wound type (47.2%). Significant reductions in wound width, length, and depth were observed over 12 weeks ($p < 0.001$). Improvements in wound type became significant from week 8 ($p = 0.001$), while a reduction in wound number was significant by week 12 ($p = 0.010$). Qualitative findings from 22 healthcare providers indicated improved decision-making, workflow efficiency, and confidence in wound management.

Conclusion: The CW-DST is a feasible and acceptable tool in primary care, with the potential to improve wound outcomes and streamline clinical workflow.

Keywords: Chronic wound management, Decision support tool, T.I.M.E. framework

Clinical Study / Trial_06

AI-Assisted Fundus Screening in Sabah Primary Care: Operator Perspectives on Implementation Challenges

#FMSC2026-147

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Introduction: Diabetic retinopathy (DR) screening remains limited in Sabah due to geographic dispersion and restricted access to ophthalmology services. AI-assisted fundus screening enables non-specialist primary care staff to acquire retinal images with automated interpretation, potentially improving access. This study evaluated operator perspectives on usability, workflow integration, and implementation challenges.

Methods: A cross-sectional mixed-methods study was conducted among 20 primary care operators without formal training in fundus image interpretation. Operators used a non-mydriatic fundus camera integrated with autonomous AI during routine screening, completing approximately 800 encounters. A structured questionnaire assessed usability, perceived safety, efficiency, and trust using Likert scales, alongside open-ended questions. Quantitative data were analysed descriptively, while qualitative responses underwent thematic analysis.

Results: Operators reported high usability, ease of operation, and increased confidence in referral decisions supported by AI outputs. Perceived efficiency gains included reduced dependence on specialist graders and faster clinical decision-making. Facilitators included a user-friendly interface and workflow compatibility. Key challenges included image gradability issues (e.g., cataracts, small pupils), workflow constraints, and the need for structured training. Concerns regarding governance, including clear referral pathways and escalation protocols, were also identified.

Conclusion: AI-assisted fundus screening is feasible and acceptable in Sabah primary care. Successful implementation requires

optimisation of workflow integration, operator training, and governance frameworks to support safe and sustainable scale-up.

Keywords: diabetic retinopathy, artificial intelligence, primary health care

Clinical Study / Trial_07

Identifying Non-Genetic Clinical Predictors of Allopurinol-Induced Severe Cutaneous Adverse Reactions Using Machine Learning Approaches

#FMSC2026-165

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Introduction: Allopurinol is a recognised cause of severe cutaneous adverse reactions (SCAR), which are uncommon but potentially life-threatening. Although HLA-B*58:01 is a well-established genetic risk factor, it is inadequate on its own to predict risk. Non-genetic clinical factors may also contribute. This study aimed to identify non-genetic factors predictive of allopurinol-induced SCAR using machine learning approaches.

Methods: We conducted retrospective prediction model development using harmonised datasets comprising adverse drug reaction reports from the National Pharmaceutical Regulatory Agency and clinical data from Universiti Malaya Medical Centre. Data cleaning included variable harmonisation and exclusion of variables with high missingness. Five machine learning algorithms were evaluated, and model performance was assessed using receiver operating characteristic area under the curve (ROC AUC), precision-recall area under the curve (PR AUC), precision, recall, and F1 score. SHapley Additive exPlanations (SHAP) were used to identify influential variables contributing to model predictions.

Results: From a dataset of 4,123 records, 3,411 were included after data cleaning. Seven variables were retained. The final CatBoost model showed moderate discrimination (ROC AUC 0.7085; PR AUC 0.4652; F1 score 0.509; precision 0.443; recall 0.599). SHAP analysis identified higher allopurinol dose (mean absolute SHAP: 0.080) as the most influential predictor, followed by Chinese ethnicity (0.044), female sex (0.033), and renal comorbidity (0.019).

Conclusion: Higher allopurinol dose, Chinese ethnicity, female sex and renal comorbidity were influential non-genetic predictors of allopurinol-induced SCAR. While requiring further validation before clinical application, the findings support a multifactorial approach to SCAR risk stratification.

Keywords: allopurinol, drug eruptions, machine learning

Clinical Study / Trial_08

Evaluating the Use of Modified FRAX and FRAXplus® Scoring in Estimating Osteoporosis Fracture Risk in Individuals with Type 2 Diabetes Mellitus

#FMSC2026-177

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Introduction: Type 2 diabetes mellitus (T2DM) and osteoporosis are increasingly prevalent conditions, with evidence suggesting T2DM patients face a higher risk of fractures not fully captured by conventional risk tools. This study evaluated the performance of conventional FRAX, RA-adjusted FRAX (using rheumatoid arthritis as a surrogate for T2DM), and FRAXplus® in estimating fracture risk in a diabetic population.

Methods: We conducted a cross-sectional study involving T2DM patients who underwent DXA scan at Sarawak General Hospital. Fracture risk was assessed using all three FRAX methods. Sensitivity, specificity, positive predictive value (PPV) negative predictive value (NPV) and agreement using Cohen's Kappa were compared.

Results: Conventional FRAX and FRAXplus® both showed moderate sensitivity (0.706) and specificity (0.628), with PPV and NPV of 0.682 and 0.643 respectively. RA-adjusted FRAX demonstrated higher sensitivity (0.902) but much lower specificity (0.302), and PPV of 0.605 and NPV of 0.722. Agreement was moderate between RA-adjusted FRAX and both conventional FRAX and FRAXplus® ($\kappa = 0.453$, $p < 0.001$), but perfect agreement was observed between conventional FRAX and FRAXplus® ($\kappa = 1.000$, $p < 0.001$).

Conclusion: Clinically, while RA-adjusted FRAX enhances fracture risk detection in diabetes patients, its reduced specificity may lead to overtreatment — which may be acceptable in settings without access to DXA. FRAXplus®, despite incorporating diabetes duration, does not outperform conventional FRAX and may be used interchangeably. These two models — FRAXplus® and conventional FRAX — may be more suitable in settings with DXA access, given their more balanced performance, thereby preventing excessive and unnecessary DXA referrals.

Keywords: Osteoporosis; Type 2 Diabetes Mellitus; modified FRAX

Clinical Study / Trial_09

A Prospective Observational Study on Self-Management Behaviour for Type 2 Diabetes Patients in Melaka Primary Care Clinics

#FMSC2026-195

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Introduction: This study evaluated self-management and adherence behaviours among adults with Type 2 Diabetes Mellitus (T2DM) and examined their associations with clinical outcomes.

Methods: A cross-sectional study was conducted from July to December 2025 across 26 primary care clinics in Melaka. 586 adults with T2DM were recruited using systematic sampling. Participants completed the Summary of Diabetes Self-Care Activities (SDSCA) and interviewer-assisted Assessment to Self-Management Questionnaire for Diabetes Mellitus (ASQ-DM). Both tools demonstrated acceptable internal consistency (Cronbach's $\alpha=0.77$). Clinical data were extracted from medical records and analysed using SPSS version 29 ($p<0.05$).

Results: Participants had a mean age of 56.7 years (SD 11.8), with 57.8% female. Suboptimal glycaemic control (HbA1c $\geq 7\%$) was observed in 66.4%. Mean SDSCA and ASQ-DM scores were 3.82 (SD 1.22) and 5.98 (SD 0.96), respectively. ASQ-DM correlated with SDSCA ($r=0.19$, $p=0.03$). HbA1c has positive association with LDL ($r=0.23$, $p<0.001$), diabetes duration ($r=0.15$, $p<0.001$), and glucose monitoring ($r=0.11$, $p=0.007$). Negative correlation with HbA1c was found in dietary practices ($r=-0.13$, $p<0.001$), medication adherence ($r=-0.09$, $p=0.027$), general intention ($r=-0.12$, $p=0.005$), and age ($r=-0.10$, $p=0.014$).

Conclusion: Poor glycaemic control was associated with increased monitoring but weaker adherence-related behaviours, suggesting reactive rather than sustained self-management. Strengthening long-term behaviour change may be more important than monitoring alone in improving diabetes outcomes.

Keywords: Type 2 diabetes, self-management, Glycated hemoglobin

Clinical Study / Trial_10

Diabetes Empowerment Among Young-Onset Type 2 Diabetes (YT2D) Adults in Selected Government Health Clinics in Johor, Malaysia: Does it Translate to Good Glycaemic Control?
#FMSC2026-263

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Introduction: Previous studies have shown that higher diabetes empowerment is associated with better glycaemic control. However, evidence among Young-Onset Type 2 Diabetes (YT2D) adults remains limited despite increasing prevalence worldwide. This study aims to determine diabetes empowerment levels among YT2D adults and their association with glycaemic control (HbA1c).

Methods: This cross-sectional study was conducted among YT2D adults attending six public primary healthcare clinics in Johor, Malaysia. Universal sampling method was used. A validated bilingual (Malay and English) Diabetes Empowerment Scale (DES) questionnaire was used, with scores categorized into low (28–65), moderate (66–103), and high (104–140). Data were analysed using SPSS version 25.0 and Spearman correlation test was used to assess the relationship between DES and HbA1c.

Results: 372 participants were recruited. Majority were Malay (72.6%), female (64.5%), and married (76.9%). The median age was 37 years (IQR=5), median diabetes duration was 3 years, and median HbA1c was 8.3% (IQR=3.4). The median total DES score was 109 (IQR=12). The highest median domain score was for “Setting and Achieving Diabetes Goals” at 40 (IQR=5), followed by “Managing Psychosocial Aspects of Diabetes” at 36 (IQR=4), and “Assessing Dissatisfaction and Readiness to Change” at 34 (IQR=5). No statistically significant correlation was found between total DES scores and HbA1c.

Conclusion: This study demonstrated high diabetes empowerment among YT2D adults. However, glycaemic control remained suboptimal, suggesting that empowerment alone is insufficient to achieve optimal outcomes and highlighting the need for more comprehensive diabetes management strategies.

Keywords: Diabetes Mellitus Type 2, Empowerment, Glycated Hemoglobin

Clinical Study / Trial_11

Beyond FIB-4 Score: Liver Stiffness Measurement as a Complement to Biochemical Fibrosis Screening in Primary Care

#FMSC2026-274

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Introduction: Metabolic-associated steatotic liver disease (MASLD) is increasingly encountered in primary care, particularly among patients with diabetes, obesity and metabolic syndrome.

Risk stratification using FIB-4 score may not accurately reflect fibrosis burden, leading to delayed treatment or unnecessary referral. This retrospective pilot study evaluated liver stiffness measurement (LSM) using FibroScan as a complement to biochemical screening.

Methods: A retrospective cross-sectional secondary analysis was conducted at Klinik Kesihatan Bandar Botanik using records of 45 patients with metabolic risk factors who underwent FibroScan. Of these, 27 patients with complete clinical and biochemical data were analysed. Two groups were assessed: patients with intermediate or high FIB-4 scores, and clinically selected at-risk patients in whom FIB-4 score and FibroScan were performed concurrently. FibroScan measured liver stiffness and steatosis using controlled attenuation parameter (CAP). Exploratory analyses examined associations with clinical or biochemical parameters.

Results: Among 27 patients analysed, advanced fibrosis ($\geq F3$) was identified in 33% ($n=9$), while 63% ($n=17$) had moderate-to-severe steatosis. Among patients with elevated FIB-4 scores, 56% had liver stiffness below 10 kPa. Among at-risk patients with low or intermediate FIB-4 scores, 45% had clinically significant fibrosis ($\geq F2$), including one 26-year-old with F4-range liver stiffness despite FIB-4 score of 0.35. AST showed the strongest correlation with liver stiffness ($\rho=0.660$, $p=0.0002$); CAP correlated with BMI ($\rho=0.409$, $p=0.034$).

Conclusion: FibroScan identified liver stiffness abnormalities in selected primary care patients, including those not flagged by FIB-4 score. LSM may complement biochemical screening to refine fibrosis risk and guide management.

Keywords: Fatty Liver; Liver Stiffness Measurement; Primary Health Care

Clinical Study / Trial_12

Prevalence of Lower Urinary Tract Symptoms (LUTS) and Its Associated Factors among Men attending Government Health Clinics in Kuantan, Pahang

#FMSC2026-314

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Introduction: Lower urinary tract symptoms (LUTS) are a common men's health problem that is often underdiagnosed and undertreated in primary care. This study aimed to determine the prevalence of LUTS and its associated factors among men attending government health clinics in Kuantan, Pahang.

Methods: A cross-sectional study was conducted among 274 men aged 40 years and above attending all 12 government health clinics in Kuantan. Sociodemographic, medical, and lifestyle data were collected using a self-administered questionnaire. LUTS was assessed using the validated Malay Version of the International Prostate Symptom Score (IPSS). Multiple logistic regression was performed to identify factors associated with significant LUTS.

Results: The prevalence of LUTS was 88.3%. Based on IPSS

severity classification, 67.9% had mild symptoms, 16.8% had moderate symptoms, and 3.6% had severe symptoms. The prevalence of clinically significant LUTS (moderate-to-severe symptoms) was 20.4%. Multiple logistic regression analysis showed that age was independently associated with significant LUTS. Respondents aged 60–69 years (AOR=3.45, $p=0.031$) and ≥ 70 years (AOR=4.08, $p=0.018$) were more likely to have significant LUTS compared to those aged 40–49 years. No significant association was found between LUTS and BMI, smoking status, alcohol consumption, physical activity level, household income, diabetes mellitus, hypertension, or cardiovascular disease.

Conclusion: LUTS is highly prevalent among men attending government health clinics in Kuantan. Increasing age was the only factor independently associated with significant LUTS, highlighting the importance of early screening and assessment among older men in primary care settings.

Keywords: International prostate symptom score (IPSS), lower urinary tract symptoms (LUTS), men's health

Clinical Study / Trial_13

Diabetes-related Distress and Its Association with HbA1c among Patients with T2DM in Primary Care

#FMSC2026-326

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Introduction: Suboptimal glycaemic control is common in primary care among patients with type 2 diabetes (T2DM). While clinical and metabolic factors are well recognised, emotional challenges such as diabetes-related distress (DRD) are increasingly recognised as affecting treatment outcomes. Limited data exist on DRD prevalence and its relationship with HbA1c levels in local settings. This study aimed to assess DRD prevalence and its relationship with HbA1c levels in patients with T2DM.

Methods: A cross-sectional study among adult T2DM patients at a public clinic in UiTM Sungai Buloh measured diabetes distress with DDS-17. HbA1c and clinical data were from records. Multivariable regression identified factors linked to HbA1c

Results: A total of 218 participants were recruited. The average HbA1c was 7.6% (SD=1.96). DRD was mild in 62.8% of participants, while 29.8% and 7.3% had moderate and severe distress. Longer duration of diabetes, ($b=0.04$, $p=0.009$, 95% CI: 0.01-0.07); use of both oral glucose-lowering medications and insulin, ($b=1.74$, $p<0.001$, 95% CI: 0.72-2.75); dietitian counseling ($b=0.70$, $p=0.002$, 95% CI: 0.26-1.15); and severe diabetes-related distress ($b=1.36$, $p=0.002$, 95% CI: 0.49-2.22) were independently associated with higher HbA1c.

Conclusion: Glycaemic control among T2DM patients in this primary care setting is suboptimal. Diabetes-related distress emerged as one of the important predictors of HbA1c, highlighting the need to incorporate distress screening and psychosocial support into routine diabetes care.

Keywords: T2DM, diabetes distress, HbA1c

POSTER PRESENTATION

Quality Improvement Initiative Study_01

Comparing Family Medicine EHRs (Electronic Health Records): A Quality Improvement Initiative of Malaysia's CCMS (Primary Care) Versus South Korea's PHIS (Tertiary Care)

#FMSC2026-092

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Introduction: This quality improvement initiative compares two Electronic Health Record (EHR) paradigms: Clinic Care Management System (CCMS) utilized in high-volume Malaysian public primary care clinics (Klinik Kesihatan), and Precision Health Information System (PHIS) deployed for precision-driven tertiary care (Family Medicine Department) at Korea University Anam Hospital, reflecting their diverging clinical priorities.

Methods: Guided by the HL7 EHR-System Functional Model (EHR-S FM) and socio-technical evaluation principles, a comparative workflow and heuristic interface assessment was conducted. Data entry protocols, user cognitive load under real-world constraints, and architectural interoperability were benchmarked against ISO 13940 (Continuity of Care), HL7 FHIR structures, and HIMSS Digital Health Indicator (DHI) standards.

Results: CCMS employs a Tabbed Journal interface optimized for longitudinal primary care. While equipped with structured audit templates, severe high-patient-volume constraints frequently force clinicians to default to free-text narrative entry. This preserves crucial socio-clinical context but creates uncomputable data silos. Conversely, PHIS—validated by an elite HIMSS DHI score of 308/400—functions as a high-density tertiary ecosystem. It enforces discrete data capture, visualizing quantitative physiological trends via time-series dashboards seamlessly integrated with PACS/LIS diagnostics. Furthermore, a visual nodal timeline and indexed external health records grant PHIS superior longitudinal depth and FHIR-ready computability, actively driving automated clinical decision support.

Conclusion: This comparison exposes a critical socio-technical trade-off. CCMS captures context-rich narratives but sacrifices structured data due to workflow pressures, whereas PHIS enforces computability for advanced tertiary integration at the cost of higher interface cognitive load. Optimizing future EHRs requires balancing required data granularity with practical clinical time constraints.

Keywords: Electronic Health Records, Family Medicine, Quality Improvement

Quality Improvement Initiative Study_02

Breaking Therapeutic Inertia: Impact of a Multidisciplinary Enhanced Diabetes Care Clinic on Poorly Controlled Diabetes

#FMSC2026-178

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Introduction: Poor glycaemic control in Type 2 Diabetes Mellitus (T2DM) remains a major challenge in primary care, often due to therapeutic inertia, poor adherence, and fragmented care. This project aims to evaluate the effectiveness of an Enhanced Diabetes Care (EDC) clinic in improving glycaemic control among high-risk T2DM patients.

Methods: This project was conducted in KK Dato Keramat involving T2DM patients with HbA1c >10%. Patients were enrolled into the EDC clinic, which utilised a structured multidisciplinary approach involving Family Medicine Specialist (FMS), DMTAC pharmacist, and diabetic educator. Interventions included short-interval follow-up, treatment intensification, and structured education. The model was guided by a PDSA-based framework. Pre- and 6-month post-intervention HbA1c levels were analysed.

Results: A total of 26 patients with complete pre- and post-intervention data were analysed. Mean HbA1c significantly improved from 11.33% ± 1.84 to 9.21% ± 2.83, demonstrating a mean reduction of 2.11% (p=0.0019). Overall, 74.1% of patients achieved HbA1c reduction. The greatest HbA1c reduction observed was 6.5%. Significant improvements were also observed in LDL-C [3.20 ± 1.43 vs 2.65 ± 1.17 mmol/L, p=0.0121] and body weight [69.68 ± 15.11 vs 68.14 ± 14.76 kg, p=0.0473]. Changes in blood pressure were not statistically significant. Challenges identified included patient default and incomplete follow-up.

Conclusion: A structured multidisciplinary approach with frequent follow-up is feasible and effective in primary care. Strengthening patient retention and follow-up systems is essential to optimise outcomes.

Keywords: Type 2 Diabetes Mellitus, Primary Health Care, Disease Management

Quality Improvement Initiative Study_03

Factors Associated with Refusal of Renal Replacement Therapy among Advanced Chronic Kidney Disease Patients Attending a Pre-Dialysis Education Programme in Klinik Kesihatan Bandar Tumpat

#FMSC2026-306

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Introduction: Timely renal replacement therapy (RRT) preparation is crucial among patients with advanced chronic kidney disease (CKD). The Pre-Dialysis Education Programme (PDEP) facilitates shared decision-making, yet some patients still refuse RRT despite structured counseling. This study aimed to determine factors associated with RRT refusal among advanced CKD patients attending PDEP in a primary care setting.

Methods: A retrospective cross-sectional study was conducted among 71 advanced CKD patients enrolled in PDEP at Klinik Kesihatan Bandar Tumpat between November 2023 and December 2025. Sociodemographic characteristics, CKD severity, comorbidity burden and PDEP completion status were reviewed. The primary outcome was refusal of RRT after attending PDEP. Factors associated with RRT refusal were analysed using multiple logistic regression and reported as adjusted odds ratios (AOR) with 95% confidence intervals (CI).

Results: The mean age of participants was 66.1 ± 9.9 years, with 60.6% aged ≥ 65 years. Most patients were referred at CKD stage 4 (81.7%), and 62.0% completed PDEP modules. Overall, 45 patients (63.4%) refused renal replacement therapy (RRT). Multivariable analysis showed that age ≥ 65 years was independently associated with RRT refusal (AOR 3.83, 95% CI 1.25–11.71, $p=0.018$). Gender, CKD stage, comorbidity burden, and PDEP completion were not significant predictors. Financial constraints and transportation difficulties were the most frequently reported barriers among patients who refused RRT.

Conclusion: Older age (≥ 65 years) was independently associated with RRT refusal among advanced CKD patients attending PDEP. Tailored counselling, early family involvement, and interventions addressing financial and transportation barriers may reduce RRT refusal.

Keywords: pre-dialysis education programme, refused RRT, Kelantan

Quality Improvement Initiative Study_04

Beyond the Pill: Successful Risk Reduction and Low HIV Conversion at Seremban PrEP Clinic

#FMSC2026-018

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Introduction: Klinik Kesihatan Seremban launched Pre-Exposure Prophylaxis (PrEP) services in January 2023. To address social stigma among high-risk key populations, a PrEP Navigator service utilizing peer navigators and a local NGO (MyKekasih) was introduced in March 2023.

Methods: We evaluated clinic data from January 2023 to December 2025 to assess patient demographics, regimen preferences, and clinical outcomes among the 382 enrolled PrEP clients.

Results: Community outreach drove an exponential 607% increase in client enrollment. Among the 382 total clients, the demographic was predominantly male (89.8%), Malay, and tertiary educated. Men who have sex with men (MSM) constituted the largest key population at 85.6%. On-demand PrEP (166 clients) was slightly preferred over daily regimens (135 clients). Of the 82 clients who discontinued treatment, 31 (39.2%) dropped out voluntarily because they were no longer at high risk for HIV, demonstrating successful risk reduction. HIV conversion was remarkably low, with only 3 clients (3.8%) testing positive.

Conclusion: Despite challenges such as clinical manpower constraints and religious controversies in a Muslim-majority country, the community-integrated PrEP program is highly

successful. With high voluntary discontinuation due to reduced risk and low HIV conversion, PrEP serves as a successful, evidence-based harm reduction strategy aligned with Maqasid Syariah (harm prevention) and acts as a promising adjunctive treatment to abstinence.

Keywords: Pre-Exposure Prophylaxis, HIV Infections, Community Health Workers.

Quality Improvement Initiative Study_05

Clinical Audit on Obesity Screening and Management Among Type 2 Diabetic Mellitus Patients In Klinik Kesihatan Pandamaran

#FMSC2026-047

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Introduction: Type 2 Diabetes Mellitus (T2DM) and obesity are major global public health concerns associated with poor glycaemic control. Weight reduction in overweight or obese patients with T2DM improves glycaemic outcomes and reduces the need for glucose-lowering medications. This study aimed to conduct a clinical audit on obesity screening and management among T2DM patients in Klinik Kesihatan Pandamaran and to implement corrective measures for quality improvement.

Methods: Seven audit criteria were adapted from the Malaysian Clinical Practice Guidelines on Obesity Management and T2DM, with target standards of 100% for the first criterion and $>80\%$ for the remaining criteria. Retrospective data were collected from TPC-OHCIS and analysed using an audit chart. The pre-intervention population included all adult T2DM patients attending the Outpatient Department during the second week of December 2023, while post-intervention data were collected during the first week of April 2024. Interventions included continuing medical education (CME), post-CME assessments, and provision of reference materials for medical officers, staff, and patients.

Results: Pre-intervention findings indicated that although anthropometric measurements were taken, BMI documentation, obesity diagnosis, and classification were often neglected. There was variability in implementing comprehensive obesity management plans, with many patients not receiving structured interventions such as dietary counselling, physical activity recommendations, or pharmacotherapy. Interventions primarily focused on training healthcare providers. Post-intervention, there was a notable improvement in the diagnosis of obesity and enhanced patient management.

Conclusion: This audit highlights the need for standardised obesity screening and management in T2DM patients. Strengthening training and adopting structured, multidisciplinary approaches can improve adherence to guidelines and patient outcomes.

Keywords: Obesity; Type 2 Diabetes Mellitus; Clinical audit

Quality Improvement Initiative Study_06

A Clinical Audit on Pre-Pregnancy Care (PPC) Service for Diabetic Patients Attending Health Clinics in PKD Petaling

#FMSC2026-051

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Introduction: Pre-pregnancy care (PPC) is essential for optimising maternal health and reducing adverse obstetric complications associated with diabetes mellitus. This audit evaluates compliance with Ministry of Health (MOH) Malaysia PPC guidelines for diabetic women and assesses practice changes following targeted interventions.

Methods: A cross-sectional audit was conducted at seven health clinics in Petaling district. The study included Malaysian women aged 15–49 attending diabetes follow-ups, excluding those with permanent infertility or menopause. Data were collected over three phases: pre-intervention (August 2023), Cycle 1 (October 2024), and Cycle 2 (May 2025). Interventions comprised Continuing Medical Education (CME), integration of a simplified PPC clerking format, and clinical system alert notifications with regular provider reminders.

Results: Initial audits revealed low guideline compliance. Following interventions, registration of eligible diabetic women in PPC increased from 23.8% to 61.8%. Standardized clerking format utilization rose from 21.3% to 56.4%. Significant improvements were noted in PPC counseling (30.4% to 63.6%) and pregnancy suitability assessments (30.4% to 58.2%). Non-pharmacological management reached 90.9% by the final cycle.

Conclusion: The audit demonstrates that combined educational and system-based strategies effectively enhance adherence to PPC guidelines at the primary care level, fostering structured and comprehensive management for high-risk patients.

Keywords: Pre-pregnancy care, Diabetes, Clinical Audit

Quality Improvement Initiative Study_07

Optimising Sputum Sample Quality in Primary Care to Strengthen Tuberculosis Diagnosis

#FMSC2026-053

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Introduction: Sputum smear microscopy remains an important method for diagnosing pulmonary tuberculosis (TB). However, poor-quality sputum reduces diagnostic accuracy and may delay treatment. Optimal sputum should be produced through deep coughing, be thick and mucopurulent, and have an adequate volume (3–5 mL). In addition, early morning samples provide higher bacterial yield. In primary care, poor-quality samples are common due to inadequate patient instruction, lack of supervision, and difficulty producing sputum. Without proper guidance, patients tend to spit instead of coughing out samples, resulting in the producing saliva instead of sputum.

Methods: This Quality Improvement Initiative study was performed from 2021 to 2025 at the TB Unit, Klinik Kesihatan Cheras. In 2021, sputum samples were analysed and found to be lacking in quality. As a result, targeted interventions, including QR code-based educational videos, were created and introduced in October 2021.

Results: Satisfactory sputum samples improved from 48.83% (2021) to 79.71% (2025), while unsatisfactory samples decreased from 51.17% to 20.29%. In addition, satisfactory samples with AFB positivity increased from 81% to more than 90%.

Conclusion: Interventions created for sputum production significantly improved the quality of sputum samples.

Keywords: Pulmonary Tuberculosis, Sputum, Quality Improvement

Quality Improvement Initiative Study_08

Improving Cervical Cancer Screening Coverage among Women Aged 30-65 Years in Kulai District, Johor: A Quality Improvement Initiative

#FMSC2026-065

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Introduction: Malaysia aims to eliminate cervical cancer by 2030, with a target incidence of fewer than 4 cases per 100,000 women. As cervical cancer is preventable through early detection and treatment of precancerous lesions, improving screening uptake is essential. In Kulai district, screening coverage among women aged 30–65 years was 5.49%, which was well below the 20% target set by the Ministry of Health Malaysia.

Methods: A quality improvement study was conducted from September 2024 to December 2025. Pre-intervention assessment included retrospective analysis of screening data, supervisory reports, and a Knowledge, Attitude and Practice (KAP) survey involving 68 healthcare personnel and 48 clients. The main outcome measure was the percentage of eligible women who underwent cervical cancer screening.

Results: Baseline findings showed low screening uptake,

particularly in the outpatient department and community settings, with embarrassment identified as the main barrier among clients. Interventions included monthly target setting with continuous monitoring, daily screening schedules in outpatient and maternal and child health clinics, implementation of the Credentialing and Privileging programme, development of the CerviCare health education portal, establishment of a local women's database, expansion of HPV testing, use of mobile screening equipment in community settings, and strengthened health promotion activities. Screening coverage increased from 5.49% in 2024 to 13.73% in 2025, while Achievable Benefit Not Achieved decreased from 14.51% to 6.21%. KAP scores improved among both healthcare personnel and clients.

Conclusion: The initiative improved screening coverage and service delivery, with further gains expected through integration with a call-and-recall system.

Keywords: Uterine, Cervical Neoplasms, Mass Screening, Health Knowledge, Attitudes, Practice

Quality Improvement Initiative Study_9

Pain Management & Wound Care Centre (PWCC): Incorporating Best Practice Approach for Chronic Pain and Wound Management in Primary Care

#FMSC2026-104

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Introduction: The National Wound Care Programme in Malaysia was introduced in 2008 to standardize practices and enhance quality of care. This service was expanded to Primary Health Clinics in 2017. Pain clinics have evolved significantly from anaesthesia-led services to multidisciplinary centers managing pain conditions. These clinics are in tertiary hospitals. The establishment of the Pain Management & Wound Care Centre (PWCC) represents an innovative approach to delivering comprehensive care at the primary healthcare level.

Methods: PWCC was launched in January 2025 at Klinik Kesihatan Peringgit, Melaka. It is the first centre in Malaysia that integrates modern wound care and chronic pain services under one roof. The centre operates 6 days a week at a designated facility. Services are delivered by multidisciplinary team members led by a Family Medicine Specialist and supported by Medical Officers, Paramedics, Allied Health Professionals, Diabetic Educator and Clinical Psychologist, with a collaboration from hospital-based specialty, namely Pain Specialist, Orthopaedic Surgeon and Plastic & Reconstructive Surgeon. Care delivery follows the latest version of Ministry of Health guidelines.

Results: A total of 100 patients were managed under the wound care service, with 50% showing clinical improvement since their initial visit. In the chronic pain service, 20 patients were enrolled, of whom 10 achieved significant pain reduction, reporting pain scores below 3 following interventions.

Conclusion: PWCC demonstrates that a multidisciplinary, integrated approach at the primary care level is feasible and effective. It serves as a one-stop centre for holistic wound care and pain management and had improves patient clinical outcomes and satisfaction.

Keywords: chronic pain, wound care

Quality Improvement Initiative Study_10

From Drill to Skill: Evaluation of Obstetric Emergency Simulation Training in a Primary Care Setting

#FMSC2026-114

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Introduction: Simulation training promotes active learning and enhances healthcare providers' confidence and teamwork in managing obstetric emergencies. Timely management is crucial to prevent maternal morbidity and mortality. This project aimed to evaluate participants' confidence, protocol familiarity, and satisfaction following obstetric emergency simulation training in a primary care setting.

Methods: An obstetric simulation drill was conducted over four weekly sessions involving multidisciplinary healthcare providers at Klinik Kesihatan UTC Keramat Mall. Scenarios included eclampsia, postpartum haemorrhage (PPH), maternal collapse, and abruptio placenta. Participants managed scenarios in teams, followed by structured debriefing sessions. A post-simulation questionnaire, adapted from the validated Satisfaction with Simulation Experience Scale (SSES), was administered to assess participant satisfaction, with additional items assessing retrospective pre- and post-drill confidence and protocol familiarity. Data was analysed using descriptive statistics.

Results: All 27 participants completed the questionnaire. The proportion of participants reporting confidence in managing obstetric emergencies increased from 66.7% pre-drill to 100% post-drill. Confidence in role performance improved from 70.4% to 100%, team communication from 66.7% to 100%, and protocol familiarity from 66.7% to 100%. All SSES domains scored above 4.0, with an overall mean satisfaction score of 4.59/5. Participants highlighted practical learning, teamwork, and role clarification as key strengths, while suggesting more frequent drills for improvement.

Conclusion: Obstetric simulation training improved participants' confidence, protocol familiarity, and satisfaction in managing maternal emergencies within a primary care setting. Regular simulation drills may strengthen team preparedness and should be incorporated into ongoing staff training programmes.

Keywords: Simulation Training, Primary Health Care, Maternal Health Services

Quality Improvement Initiative Study_11

Creating Legacy in Klinik Kesihatan Batu 9: One-Year Outcomes of a Dedicated FMS-Led Multidisciplinary Diabetes Legacy Clinic

#FMSC2026-122

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Introduction: The “legacy effect” describes how early intensive glycaemic control in type 2 diabetes (T2DM) provides sustained protection against complications, with benefits persisting for decades. Evidence shows that any period of HbA1c $\geq 7.0\%$ during the first year after diagnosis significantly increases long-term mortality. Despite molecular evidence for this “metabolic memory”, structured primary care models to operationalise immediate intensive management remain limited. We describe the one-year experience of a Family Medicine Specialist (FMS)-led “Legacy Clinic” utilising a multidisciplinary team (MDT) with support from a pharmacist, dietitian, physiotherapist, and diabetes educator.

Methods: A retrospective study of 52 patients with newly diagnosed type 2 diabetes mellitus (DM) with HbA1c $\geq 6.3\%$ was conducted in a Legacy Clinic. Patients were recruited from September 2024 to April 2025 and were followed up for at least one year. Outcomes included mean HbA1c change and the proportion achieving legacy targets ($<6.5\%$ and $\leq 7.0\%$).

Results: The cohort (N=52) presented with high baseline HbA1c levels (6.3%–15.3%). Following one year of multidisciplinary team (MDT) intervention, mean HbA1c improved from 9.1% to 7.6%, representing a reduction of 1.5%.

Specifically, 23% (n=12) achieved HbA1c $<6.5\%$, and 40% (n=21) reached $<7.0\%$. The majority achieved a reduction of $>1.0\%$. Patients with higher baseline HbA1c demonstrated substantial clinical improvement, with reductions ranging from 2.0% to 6.0%.

Conclusion: An FMS-led Legacy Clinic model is effective in sustaining early glycaemic outcomes over one year. Prioritising treatment intensification during the “golden year” of diagnosis enables primary care specialists to establish a favourable long-term health trajectory.

Keywords: Type 2 Diabetes Mellitus, DM Legacy Clinic, Multidisciplinary team

Quality Improvement Initiative Study 12

Assessing Knowledge, Attitude and Practice in Geriatric Care Amongst Healthcare Providers in Primary Care Setting in Kulai, Johor

#FMSC2026-127

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Introduction: By 2030, 15% of Malaysians will be aged over 60. While primary care could facilitate graceful ageing through patient-centred management, current delivery remains sub-optimal and under-utilised in meeting this demographic's specific needs.

Methods: A cross-sectional study was conducted among healthcare

workers in four primary care clinics under Kulai District Health Office. Respondents were selected using stratified random sampling to ensure representation across professional categories, including family medicine specialists (FMS), medical officers (MO), pharmacists, nurses and medical assistants. Data was collected using a structured questionnaire adapted from previously validated instruments to assess levels of knowledge, attitude, and practice of healthcare providers towards geriatric care. Descriptive statistics and binary logistic regression were used for data analysis.

Results: There were 160 respondents of which 82% were females and 36% were doctors. 58% had high knowledge. Logistic regression identified single marital status (adjusted OR=2.93, $p=0.038$), doctors (adj. OR=3.52, $p=0.024$), primary care working experience ≤ 3 years (adj. OR=3.74, $p=0.02$), non-degree holders (adj. OR=3.22, $p=0.039$) and working experience ≤ 5 years as significantly associated with high knowledge. 52% of participants had a positive attitude. The proportion of participants with good practice across 7 domains ranged between 40% (hearing assessment) to 84% (vision assessment).

Conclusion: Despite good knowledge and favorable attitudes among healthcare providers, suboptimal performance in selected practice domains indicates the need for structured geriatric training and integration of geriatric care protocols within primary care services

Keywords: Primary care, knowledge, geriatric care

Quality Improvement Initiative Study 13

Improving Usage of Long Acting Reversible Contraception (LARC) Among Women of Reproductive Age with Poorly Controlled DM in Klinik Kesihatan Kampung Gial

#FMSC2026-133

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Introduction: According to the Perlis State Performance Report 2023, data from Klinik Kesihatan Kampung Gial (KKKG) showed that 83.7% of women of reproductive age with diabetes mellitus had suboptimal glycaemic control (HbA1c $>6.5\%$). Among them, only 16.4% were using long-acting reversible contraceptives (LARC). This quality improvement project aimed to increase LARC uptake among these women as part of preconception care to optimise maternal and fetal outcomes in future pregnancies.

Methods: Pre-intervention data for January–December 2024 was collected using the Pre-Pregnancy Care (PPC) Registration Linelisting. Patient files were audited during the verification phase, with findings recorded in an audit form. Both staff and patients were interviewed using survey forms to identify contributing factors. Interventions included continuous medical education on counselling techniques, development of a Contraception Flip Chart, implementation of state-level LARC insertion training, use of standardised clerking sheet, and workflow optimisation in PPC clinics.

Results: Verification data revealed 22% of eligible patients used LARC. Model of Good Care (MOGC) compliance ranged from 13–50%. Barriers included ineffective contraception counselling

by healthcare providers (84.5%), poor patient knowledge of pregnancy risks in diabetes (82.6%), limited trained medical officers for LARC insertion (77.8%), and patient refusal (70%). After intervention, LARC initiation increased from 22% to 25% while ABNA improved from 57.5% to 54.3%. The proportion of trained medical officers rose from 25% to 50%, and MOGC compliance improved.

Conclusion: Despite improved provider training and compliance, LARC uptake remains low. Further training and system strengthening are needed to achieve the target.

Keywords: LARC, PPC, DM

Quality Improvement Initiative Study_14

Integration of an Asthma Clinical Quality Registry into Routine Workflows in Malaysian Primary Care: A Mixed-Methods Evaluation

#FMSC2026-182

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Introduction: The absence of an asthma registry hinders quality monitoring, and maintaining one is challenging in high-demand primary care settings. We developed the Klang Asthma Cohort (KAC) registry, integrating structured quality indicators into routine reviews, and evaluated its usability, acceptability, and feasibility for sustaining asthma care quality monitoring.

Methods: Using a mixed-methods approach, this study evaluated the implementation of the registry over one year at two primary care clinics with an EMR system. Primary care doctors were recruited through purposive sampling. Quantitative data included registry use tracked via system logs and usability assessed using the System Usability Scale (SUS) at one and six months. Qualitative data were collected through interviews at one month and one year and analysed thematically.

Results: Ten doctors completed the SUS, and eighteen were interviewed. The registry was accepted because asthma was highlighted as under-prioritised and it helped with assessments, documentation, and data for planning. SUS scores were above average and increased over six months of implementation. The registry checklist style, technical issues, and repetitive variables in the Excel structure highlighted areas for improvement. The registry was used in 550 consultations, mainly in asthma

clinics, with low uptake in outpatient services. Barriers included workload, workforce constraints, disease complexity, and limited EMR integration. There was a need for a more integrated system, modern digital solutions, and targeted use for poorly controlled patients.

Conclusion: The KAC registry has the potential to support sustainable asthma quality monitoring in resource-limited primary care, but broader use needs refinement and addressing system barriers for better integration.

Keywords: Asthma, Primary Care, Asthma Registry, Clinical Quality Registry, Electronic Medical Record, Workflow integration, Usability, Feasibility

Quality Improvement Initiative Study_15

Establishing Mental Health Centre of Excellence (MHCoE) KK Kajang: A Quality Improvement Initiative

#FMSC2026-225

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Introduction: Primary care mental health services historically lacked dedicated spaces, privacy, and holistic pathways. To bridge this gap, Klinik Kesihatan (KK) Kajang established Selangor's first Mental Health Centre of Excellence (MHCoE) in July 2025, utilizing a community-based, multidisciplinary model.

Methods: Services transitioned from general OPD to a repurposed, homey bungalow within the clinic compound. A multidisciplinary team (FMS, MOs, Case Manager, Counsellor, OT, Pharmacist, MSW) was formed. To drive collaborative care, MHCoE established dual referral and advocacy networks involving government agencies (Hospital Kajang Psychiatry, NCEMH, HEAL Line, MOE, MOHE, JKM, IPD), NGOs (Me Care), and community sectors (Advisory Panel, houses of worship). Rehabilitation was sustained via structured quarterly programmes incorporating batik painting, pet therapies, green therapies, mindful walking, air-dry clay, sand therapies, and group psychoeducation.

Results: Service capacity expanded from half-day morning sessions (1 MO) to full-day sessions over two days (3 MOs). Consequently, registered cases rose from 45 (2023) and 32 (2024) under OPD care to 102 in 2025 (a 219% increase). By the first quarter of 2026, MHCoE recorded approximately 90 new cases and 200 follow-ups, surpassing the entire 2024 workload within a single quarter. Patient feedback indicated improved emotional stabilisation, enhanced privacy, and greater engagement, though human resource constraints and societal stigma remain key challenges.

Conclusion: Systematically transitioning from fragmented OPD management to a dedicated MHCoE improved accessibility, privacy, and holistic care quality. MHCoE KK Kajang offers a replicable model for primary care facilities seeking to bridge community-level treatment gaps.

Keywords: Mental health Services, Primary Health Care, Community Mental Health Services

Quality Improvement Initiative Study_16

A Clinical Audit: Enhancing Adherence to National Antibiotic Guidelines (NAG) 2024 for Management of Urinary Tract Infection in Pregnancy among Medical Officers Providing Antenatal Care in Klinik Kesihatan Bukit Naga (KKBN)

#FMSC2026-235

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Introduction: Urinary tract infection (UTI) is among the most common infections in pregnancy, carrying risks of foeto-maternal complications. Adherence to clinical guidelines in its management is imperative. However, in practice, this remains suboptimal. This audit aimed to evaluate and improve adherence to the National Antimicrobial Guideline (NAG) 2024 in managing UTI in pregnancy among medical officers in Klinik Kesihatan Bukit Naga (KKBN).

Methods: A two-cycle retrospective clinical audit was conducted. Pre-intervention audit included 37 antenatal records of pregnant women suspected or confirmed UTI from August 2024 till June 2025. Adherence to the NAG2024 was assessed across three domains: (1) Diagnosis - encompassing clinical assessment, urine full examination and microscopy (UFEME) and urine culture and sensitivity test, (2) Treatment and (3) Post-treatment care. Subsequently, interventions comprising case-based simulations, structured UTI care checklist and periodic reminders to medical officers were implemented. Post-intervention audit reviewed thirty cases from August 2025 till December 2025.

Results: Pre-intervention audit revealed 74% overall adherence to the NAG in managing UTI in pregnancy, with lower scores in domains of diagnosis (71%) and post treatment care (52%). Analysis of post-intervention audit showed an improvement of overall adherence to 95% with the treatment and post-treatment care components achieving 100%. However, incorrect interpretations of UFEME affected subsequent process care in diagnosis domain, which achieved only 90%.

Conclusion: This audit demonstrates the interventions resulted in improvement of adherence to the NAG in management of UTI in pregnancy. It is recommended to emphasise continuous education on UFEME interpretation in UTI management pathways in future audit-intervention cycles.

Keywords: urinary tract infections, pregnancy, clinical audit

Quality Improvement Initiative Study_17

Evaluating a Multidisciplinary Pre-Diabetes Quality Improvement Programme Amongst Healthcare Staff in Klinik Kesihatan Senawang, Negeri Sembilan

#FMSC2026-237

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Introduction: Pre-diabetes indicates a high risk of developing Type 2 Diabetes Mellitus. Without timely lifestyle and clinical interventions, individuals face disease progression alongside severe metabolic and cardiovascular complications. To address this urgency, Klinik Kesihatan Senawang initiated a targeted, multidisciplinary quality improvement programme. This clinical audit initiative was uniquely designed to improve the metabolic health of the clinic's own healthcare personnel who have been identified with pre-diabetes.

Methods: A six-month clinical initiative was structured using a multidisciplinary framework engaging doctors, diabetic educators, dietitians, physiotherapists, and psychologists. The intervention comprised pre- and post-screening, repeat blood testing, regular individual follow-ups, and group counselling sessions. Baseline and post-intervention clinical markers, specifically HbA1c, LDL cholesterol, weight, and urine protein were audited and analysed for seven participants aged 35 to 55.

Results: Post-intervention analysis demonstrated promising clinical improvements. Following the programme, 71.4% of participants successfully reduced their HbA1c levels, whilst 57.1% lowered their LDL cholesterol. Furthermore, all five participants with complete post-intervention weight data successfully achieved weight loss, with the most significant reduction being 8.3 kg. Renal indicators also improved, amongst the three participants presenting with trace proteinuria at baseline, all successfully reverted to a negative status.

Conclusion: This structured, multidisciplinary quality improvement initiative effectively enhanced glycaemic control, lipid profiles, proteinuria status and weight management in pre-diabetic individuals. The implementation of such comprehensive clinical audit programmes provides a highly effective framework to systematically improve patient care outcomes and prevent disease progression.

Quality Improvement Initiative Study_18

Bringing Geriatric Care Closer to Home: A Collaborative Multidisciplinary Primary Care Initiative in Penang

#FMSC2026-253

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Introduction: In Malaysia, 4.1 million individuals were aged ≥60 years in 2025, with Penang recording the fourth highest proportion of older adults (13.2%), including 12.2% in Seberang Perai Utara (SPU). In the absence of geriatric specialist services in SPU, older adults were referred to hospitals in neighbouring districts, contributing to high default rates and increased caregiver burden.

Methods: The Seamless Geriatric Care (SGC) Clinic was established in May 2025 through collaboration between geriatricians from Hospital Seberang Jaya and Family Medicine Specialists at Klinik Kesihatan Kepala Batas. Monthly multidisciplinary clinics provide comprehensive geriatric assessments for older adults in SPU, supported by allied healthcare professionals (AHP), pharmacists

and dentists. Initially, services were fragmented with healthcare providers stationed in separate clinic units. Beginning April 2026, services were streamlined by co-locating multidisciplinary team members within a shared consultation space.

Results: By May 2026, 47 older adults were managed jointly, with an average new-to-follow-up case ratio of 40:60 per clinic session. Cognitive impairment was the commonest referral reason (78.7%), followed by Parkinson's disease (12.8%). Prior to co-location, 41% of patients were not reviewed by any AHP. Following reorganisation, all patients were reviewed by at least one AHP, achieving 100% same-visit multidisciplinary coverage, including pharmacist and dental assessments.

Conclusion: The SGC model demonstrates the value of integrating primary and tertiary care services to deliver coordinated, community-based geriatric care closer to patients' homes. However, referral rates for new cases remain suboptimal, suggesting that SGC services could be further utilised and expanded in future.

Keywords: Geriatrics; Delivery of Health Care, Integrated; Health Services for the Aged.

Quality Improvement Initiative Study_19

From Profiling to Quality Assessment: A Structured Approach to Harmonising and Standardising Sociodemographic Data Across NHMS Cycles

#FMSC2026-271

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Introduction: Longitudinal analysis using repeated national health surveys requires consistent and reliable sociodemographic data across survey cycles. However, differences in variable structures, naming conventions, coding systems, and response classifications may affect comparability and data usability. This study aimed to implement and evaluate a structured process for harmonising and standardising sociodemographic data across multiple National Health and Morbidity Survey (NHMS) cycles to enable comparable longitudinal analyses.

Methods: Sociodemographic datasets from the NHMS 2011, 2015, 2019, and 2023 were assessed through four stages: (1) data profiling, (2) harmonisation through variable mapping and response alignment, (3) standardisation of variable naming conventions and coding structures using SPSS, and (4) data quality assessment on the final harmonised datasets. Data quality dimensions assessed included completeness, validity, plausibility, and uniqueness. Quality assessment was performed using automated scripts in Google Colab.

Results: The harmonisation and standardisation processes reduced inconsistencies across survey cycles and produced comparable sociodemographic variables for longitudinal analysis. Validity and uniqueness scores achieved 100% across all datasets. Completeness scores ranged from 92.8% to 94.5%, while plausibility scores ranged from 97.3% to 98.3%. Overall data quality scores

consistently exceeded 97%, indicating high-quality harmonised datasets. Common issues identified included missing values in employment and marital-related variables, particularly occupation, working status, and working_last_1month variables.

Conclusion: The structured harmonisation and standardisation process improved the consistency, comparability, and quality of sociodemographic data across NHMS cycles. The resulting harmonised datasets facilitate more reliable longitudinal analyses and support stronger evidence generation for public health research and policy decision-making.

Keywords: Data Profiling, Harmonisation, Standardisation, Data Quality, NHMS

Quality Improvement Initiative Study_20

Advancing Open Science in Mental Health: A Unified Framework for Harmonising National Adolescent Survey Data (2012–2022)

#FMSC2026-289

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Introduction: Adolescent mental health is a fundamental component of public health in Malaysia, requiring consistent longitudinal monitoring. However, direct comparisons between survey years are often hindered by variations in data structures and module designs. This study aimed to develop a unified framework to harmonize mental health-related data across the 2012, 2017, and 2022 National Health and Morbidity Survey (NHMS) cycles. Central to this initiative was the promotion of open science principles and data reusability, ensuring that multi-year national datasets are interoperable for long-term psychological trend analysis.

Methods: A systematic data integration process was performed using raw datasets from three national survey cycles: GSHS 2012, AHS 2017, and AHS 2022. The methodology involved aligning comparable constructs through a unified renaming convention and synchronizing value labels. To ensure data integrity and transparency, validation was conducted through rigorous profiling and internal consistency checks across all cycles.

Results: The harmonised dataset aggregated 86,430 adolescent records. Six core indicators were successfully synchronized for longitudinal comparison, including loneliness, sleep disturbance, and suicidal behaviours. Beyond cross-cycle harmonisation, the 2022 survey introduced nine standardized depressive symptom indicators, establishing a new baseline for future mental health surveillance. This expansion facilitates a more granular approach to monitoring adolescent well-being in the post-pandemic era.

Conclusion: Systematic NHMS module harmonisation improves data utility by adhering to open science standards. By establishing cohesive, reusable structures, this framework provides an essential foundation for evidence-based policy formulation and enhanced mental health interventions tailored to Malaysian adolescents.

Keywords: Adolescent Mental Health, Data Harmonization, Open Science

Quality Improvement Initiative Study_21

Overcoming Clinical Inertia in Primary Care Wound Management through a Customized Digital Clinical Decision Support System (CDSS)

#FMSC2026-290

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Introduction: Translating national holistic wound care policies into daily practice is frequently impeded by clinical inertia. Clinicians often manage chronic wounds as isolated local lesions while overlooking systemic comorbidities. This quality improvement initiative evaluated how an in-house digital Clinical Decision Support System (CDSS) alters primary care workflows and medical orchestration.

Methods: A clinical audit framework evaluated a random sample of 30 pre-intervention (January–April 2025) and 30 post-intervention (January–April 2026) complex chronic wound records for detailed workflow compliance, while facility-wide census data tracked overall clinical key performance indicators (KPIs). Baseline audits revealed poor comorbidity optimization (41.38%) and substandard wound treatment mapping (35.00%) due to default, reactive practices. To target 100% policy alignment, a digital CDSS framework was developed: point-of-care visual matrix algorithms, real-time multidisciplinary digital consultation hubs, and a customized web application (Wound Care 360). The CDSS actively prompted systemic non-communicable disease (NCD) reviews, pain assessments, and structured escalation pathways to family medicine specialists.

Results: Transitioning to CDSS-guided reasoning substantially enhanced workflow compliance from 49.86% to 60.83%. Triggered comorbidity optimization increased to 80.00%, and structured pain score tracking reached 96.67%. Concurrently across the facility census, physician-led early intervention successfully captured 231 high-risk cases within the safe seven-day window. The monthly wound resolution rate improved from 2.84% to 9.62%, with 97.7% of healed cases resolving within the three-month target. Administrative census automation reclaimed 6.7 staff labor hours per patient monthly.

Conclusion: Implementing an active digital CDSS effectively mitigates primary care clinical inertia, bridges the policy-to-practice gap, and transforms chronic wound management into a safe, coordinated, and highly efficient service

Keywords: Clinical Decision Support Systems, Primary Health Care, Quality Improvement

Quality Improvement Initiative Study_22

Reducing Delayed Diagnosis of Sudden Sensorineural Hearing Loss in Primary Care: The SURE-HEAR Quality Improvement Initiative in PKD Kuala Langat

#FMSC2026-294

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Introduction: Sudden Sensorineural Hearing Loss (SSNHL) is an otological emergency requiring prompt otolaryngology (ORL) referral to prevent permanent severe hearing loss. In primary care, it is frequently misidentified as a benign conductive condition. A formal grievance investigation of a case of delayed diagnosis of SSNHL case in PKD Kuala Langat revealed no standardised primary care pathway. This initiative conducted a rapid Plan-Do-Study-Act (PDSA) cycle to increase clinician knowledge and confidence through a structured, one-page decision aid.

Methods: A pilot study at Klinik Kesihatan Telok Datok introduced the Structured Urgent Recognition and Evaluation of Acute Hearing Loss (SURE-HEAR) flowchart, covering bedside tuning fork assessment, immediate oral prednisolone initiation, and a parallel KKM otorhinolaryngologist/voluntary private-audiologist referral pathway. Medical Officers (MOs) completed paired pre- and post-surveys after an individual focused 5-minute brief. Surveys assessed knowledge (8-item MCQ), confidence (8-item Likert), and open feedback on barriers.

Results: Ten MOs participated (100% response). Mean knowledge rose from 5.30 to 7.30/8 ($p = 0.002$). Mean confidence rose from 24.60 to 35.60/40 ($p = 0.004$). Recognition of the 24–48-hour urgent ORL referral window improved from 40% to 100% ($p = 0.031$). All intended to adopt the algorithm (mean 4.80/5); qualitative feedback identified workload as the primary barrier.

Conclusion: A PDSA cycle using the SURE-HEAR flowchart yielded short-term gains in clinician knowledge and confidence. Despite limitations (single-site, $n=10$, immediate post-test), these findings support a planned district-wide scale-up across PKD Kuala Langat via a 60-minute CME framework and 6-month sustainability audit toward standardised clinical governance.

Keywords: Hearing Loss, Sudden; Primary Health Care; Quality Improvement

Quality Improvement Initiative Study_23

Exploring the Experience of Breast Cancer Screening: A Qualitative Study Among Women in Kelantan, Peninsular Malaysia

#FMSC2026-303

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Introduction: Breast cancer remains the most common cancer among women, and early detection through screening is essential to improve outcomes. Despite available screening services in Malaysia, participation remains suboptimal, particularly in

Kelantan, where delayed presentation remains a concern. This study explored women's experiences of breast cancer screening in Kelantan, guided by the Theory of Planned Behaviour and Health Belief Model.

Methods: This qualitative study involved women aged 35 years and above with experience of breast cancer screening in Kelantan. Twenty-five participants from urban and rural settings were recruited using purposive sampling between December 2023 and June 2024. Data were collected through semi-structured, face-to-face interviews conducted in Malay, audio-recorded, transcribed verbatim and translated into English. Data was analysed using NVivo 15 software.

Results: The study identified themes corresponding to attitudes, subjective norms and perceived behavioural control within the TPB, and aligned with HBM constructs. Attitudinal factors included beliefs in early detection, perceived risk among women with family history, increasing age or breast symptoms, and stigma-related fears of body exposure, pain and radiation. Subjective norms highlighted the role of healthcare providers, family members, workplaces and community stakeholders in facilitating screening. Factors related to perceived behavioural control included limited awareness, financial and time constraints, long waiting periods, unsuitable venues, inadequate privacy, limited parking and infrequent campaigns.

Conclusion: Breast cancer screening among women in Kelantan is shaped by personal beliefs, social influences, practical barriers and stigma. Culturally sensitive interventions, stronger community engagement and improved service accessibility are needed to enhance screening uptake.

Keywords: Breast Neoplasms; Mammography; Qualitative Research.

Quality Improvement Initiative Study_24

Caring with Change: The Evolving Role of Paramedics as Case Manager in Malaysia.

#FMSC2026-231

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Introduction: The growing elderly population has led to an increasing demand for healthcare that is more comprehensive, structured, and patient-centred. In primary care settings, older adults commonly present with complex health issues. The GeCARES service was introduced as an integrated geriatric care approach to reduce service fragmentation and improve continuity of care. Within this model, paramedics have evolved beyond traditional clinical responsibilities to function as case managers who coordinate multidisciplinary care for older patient.

Methods: To explain the evolving role of paramedics as Case Manager in GeCARES Clinic and how it affects the health system.

Results: A total of 39 older patients were assessed in year 2026. Frailty was the most common diagnosis, identified in 32 cases, followed by sarcopenia falls and instability, polypharmacy, and

cognitive impairment. Other conditions included osteoporosis, mental illness, incontinence and malnutrition. This shows that seniors at GeCARES Clinic have complex care needs. In the GeCARES initiative, the role of the paramedics has evolved from an acute care provider to a strategic care coordinator. Key responsibilities include registering and scheduling GECARES referrals, coordinating referrals to relevant multidisciplinary services, ensuring patients attend follow-up care when required. Case manager ensures continuity of care between health clinics and hospitals, strengthens collaboration among patients, caregivers, NGOs, and healthcare personnel, and coordinates cases for discussion and presentation during multidisciplinary team meetings.

Conclusion: Paramedics play an important role as case managers by facilitating and coordinating continuity of care. This expanding responsibility enhances integrated geriatric care services at the primary care level.

Keywords: The Integrated GERiatric services in primary CARE centres (GeCARES), paramedic, case manager

Quality Improvement Initiative Study_25

A Clinical Audit on Intrauterine Contraceptive Device Procedure at Klinik Kesihatan Bandar Baru Bangi, PKD Hulu Langat, Selangor

#FMSC2026-234

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Introduction: The intrauterine contraceptive device (IUCD) is a long-term reversible and effective method of contraception widely used in primary care. Ensuring procedural quality and adherence to clinical standards is essential to optimize patient safety. This audit evaluated compliance with the Buku Panduan Latihan Prosedur Pemasangan Dan Pengeluaran Alat Dalam Rahim (ADR) Untuk Pegawai Perubatan Di Fasiliti Kesihatan Primer (2019).

Methods: A retrospective clinical audit was conducted involving 73 clients who underwent IUCD insertion between January and December 2024 at KK Bandar Baru Bangi. Demographics, documentation, assessments, and outcomes were retrieved via Electronic Medical Records (EMR) and Family Planning Record books and analysed descriptively using Microsoft Excel.

Results: Most clients were Malay (98.6%) with a mean age of 34 years; 78.1% were overweight or obese. Significant gaps were identified in Medical Eligibility Criteria (MEC) screening (0%), bimanual pelvic examination (0%), and sound length documentation (36.9%). Informed consent was documented in 92.3% of cases, but post-procedure safety netting reached only 44.6%. The baseline complication rate was 6.8% (including expulsion, malposition, and perforation), associated with higher BMI, inadequate anatomical assessment, and poor documentation. Following interventions, a 2025 re-audit of 111 clients demonstrated a reduction in the complication rate to 1.8%.

Conclusion: Gaps exist between the current primary care practice and standard guidelines, particularly in pre-insertion assessments and clinical documentation. Implementing structured retraining, standardized insertion checklists, and enhanced patient counselling are essential steps to reduce preventable complications and strengthen the overall quality of care.

Keywords: Intrauterine Contraceptive Devices, Clinical Audit, Family Planning

Quality Improvement Initiative Study_26

An Audit on Adherence of Medical Officers to the Mental Health Assessment Checklist in the Cloud-Based Clinical Management System (CCMS) in KK Kubur Panjang

#FMSC2026-305

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Introduction: This audit evaluated Medical Officers' adherence to Mental Health Assessment Checklists in the Cloud-Based Clinical Management System (CCMS) at KK Kubur Panjang. Objectives included measuring screening rates using standardised mental health and medication side-effect checklists during follow-ups before and after a Continuing Medical Education (CME) intervention, while highlighting side-effect detection.

Methods: A two-cycle audit of mental health patients was conducted in accordance with the 2009 Malaysian Mental Health Clinic Guidelines. Data were extracted from the CCMS. Cycle 1 occurred in 2024, prior to a CME session focused on checklist adherence and documentation. Cycle 2 assessed post-CME adherence in 2025.

Results: Pre-CME surveys revealed that 50% (4/8) of medical officers were unaware of the CCMS mental health checklists. Following the CME, the overall average checklist adherence score increased significantly from 21.9% in 2024 to 63.4% in 2025. Compliance increased across symptom assessment, medication adherence, side-effect screening, physical examinations, and mental state examinations (MSE).

Conclusion: While the CME successfully improved adherence to the assessment protocol, better detection of medication side effects remains necessary. To sustain compliance, we recommend CCMS system upgrades—such as automated pop-ups, "all/none" checkboxes, and standardised MSE drop-downs—alongside ongoing case-based discussions to reinforce checklist utilisation and holistic care.

Keywords: mental health, audit

Systematic and Scoping Review_01

The Landscape of Long-term Post-Stroke Assessment in Primary Care in Malaysia: A JBI Scoping Review

#FMSC2026-163

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Introduction: Stroke remains a leading cause of long-term disability in Malaysia, necessitating a seamless transition from acute hospital phases to community-based care. While national guidelines exist, a significant "service gap" often emerges post-discharge. This study explored how survivors are systematically assessed in the community to identify the specific barriers preventing optimal functional recovery and reintegration within the Malaysian primary care landscape.

Methods: Following the JBI methodology for scoping reviews, a three-step search strategy was executed across six electronic databases, including PubMed, Scopus, MyCite and MyJurnal. Inclusion criteria were strictly limited to studies of adult stroke survivors (aged 18+) at least six months post-stroke who had transitioned to Malaysian primary care settings, such as government health clinics (Klinik Kesihatan). From an initial pool of 1,689 records published between 2000 and April 2026, 134 full-text articles were rigorously assessed for eligibility. Two independent reviewers extracted data regarding tool utilization and reported clinical gaps.

Results: The analysis revealed a predominant focus on cardiovascular risk factor monitoring, whereas assessments for functional, cognitive and psychosocial complications were largely inconsistent. Standardized instruments, such as the Post-Stroke Checklist (PSC), are not universally implemented in local clinics. Key findings highlighted substantial unmet needs regarding post-stroke fatigue, emotional distress and community reintegration, with over 80% of survivors relying exclusively on informal domestic support.

Conclusion: A significant disparity exists between ideal care protocols and actual service delivery in Malaysia. These findings emphasize the urgent need for structured assessment frameworks to align local primary care services with the World Stroke Organization (WSO) Roadmap.

Keywords: Stroke Survivors, Primary Care, Long-term Assessment

Translational Research_01

Survival Analysis of Chronic Kidney Disease Among Diabetic Patients With and Without Comorbid Hypertension in Temerloh Health Clinic

#FMSC2026-098

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Introduction: Diabetes mellitus is a leading cause of chronic kidney disease (CKD) worldwide. The coexistence of hypertension among diabetic patients further accelerates renal damage and increases the risk of CKD. Understanding the effect of comorbid hypertension on the time to development of CKD is essential for improving preventive and management strategies. The objective is to compare the time to development of CKD among diabetic patients with and without comorbid hypertension using survival analysis techniques.

Methods: A retrospective cohort study was conducted among 401 diabetic patients who were followed from the time of diabetes diagnosis until the development of CKD or censoring due to loss to follow-up, death, or the end of the study period. Kaplan–Meier survival curves estimated CKD-free survival probabilities, and the log-rank test compared survival distributions between patients with and without hypertension. A Cox proportional hazards regression revealed the association between hypertension and the risk of developing CKD.

Results: Kaplan–Meier analysis demonstrated that diabetic patients with hypertension had significantly lower CKD-free survival compared to those without hypertension. The log-rank test confirmed this difference was statistically significant ($\chi^2=29.254$, $df=1$, $p<0.001$). In the Cox proportional hazards model, hypertension was independently associated with a significantly increased risk of developing CKD (hazard ratio [HR]=4.52, 95% confidence interval [CI]:1.84–11.07, $p=0.001$).

Conclusion: Diabetic patients with comorbid hypertension experience earlier onset and more than a fourfold increased risk of CKD. Early detection and effective management of hypertension are crucial to delaying or preventing CKD progression in diabetic patients.

Keywords: Diabetes mellitus, Chronic kidney disease, Hypertension, Survival analysis

Translational Research_02

Prevalence and Associated Factors of Erectile Dysfunction among Diabetic Patients With or Without Hypertension and Beta-Blocker Use in Temerloh Health Clinic

#FMSC2026-093

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Introduction: Erectile dysfunction (ED) is a common complication among patients with diabetes mellitus and is frequently associated with hypertension. However, evidence regarding the effect of beta-blocker use on ED remains inconsistent. This study aimed to determine the prevalence of ED and its association with hypertension and beta-blocker use among diabetic patients attending Temerloh Health Clinic.

Methods: A cross-sectional study was conducted among 401 male patients with diabetes mellitus. ED was assessed using the International Index of Erectile Function-5 (IIEF-5) questionnaire. Data on hypertension and beta-blocker use were obtained from medical records. Associations were analysed using chi-square tests, and odds ratios (OR) with 95% confidence intervals (CI) were calculated.

Results: The prevalence of ED among diabetic patients was 89.5%. A higher prevalence of ED was observed among patients with hypertension compared to those without hypertension (91.5% vs 82.1%). Hypertension was significantly associated with ED ($\chi^2 = 6.178$, $p = 0.013$), with hypertensive patients having

more than twice the odds of ED (OR 2.33; 95% CI: 1.17–4.63). Although the prevalence of ED was higher among beta-blocker users compared to non-users (93.8% vs 88.2%), this association was not statistically significant ($\chi^2 = 2.401$, $p = 0.121$; OR 2.01; 95% CI: 0.82–4.93).

Conclusion: Erectile dysfunction is highly prevalent among diabetic patients attending Temerloh Health Clinic. Hypertension is significantly associated with erectile dysfunction, whereas beta-blocker use is not independently associated. These findings highlight the importance of routine screening for erectile dysfunction, particularly among diabetic patients with hypertension.

Keywords: Erectile dysfunction, diabetes, hypertension

Translational Research_03

Knowledge, Awareness and Perception of Contraception and Its associated Factors among Women of reproductive age attending Klinik Kesihatan Ibu dan Anak Jalan Gambut, Kuantan, Pahang Malaysia

#FMSC2026-108

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Introduction: Contraception is essential for reproductive health by preventing unintended pregnancies, reducing maternal mortality, and improving family well-being. However, contraceptive prevalence in Malaysia remains lower than in many developed countries. This study aimed to assess women's knowledge, awareness, and perception (KAP) toward contraception and associated factors.

Methods: A cross-sectional study was conducted from November 2023 to November 2024 among 430 women aged 18–49 years attending Klinik Kesihatan Ibu dan Anak Jalan Gambut, Kuantan, Pahang. Respondents were selected using simple random sampling and completed a validated questionnaire on sociodemographic characteristics, knowledge, awareness, and perception. Data were analyzed using descriptive statistics and logistic regression.

Results: Most respondents were aged 25–35 years (58.8%), Malay (77.4%), married (97.4%), and from the B40 income group (73.7%). Good knowledge was found in 31.6% of respondents, good awareness in 55.8%, and good perception in 6.3%. Higher income (T20) was negatively associated with good knowledge (AOR 0.11, 95% CI: 0.01–0.76, $p=0.03$), while absence of health problems (AOR 2.65, 95% CI: 1.12–5.97, $p=0.02$) was positively associated. Good perception was significantly associated with non-Malay ethnicity (AOR 2.64, 95% CI: 1.11–6.28, $p=0.03$).

Conclusion: Women of reproductive age in Kuantan demonstrated low knowledge and perception toward contraception despite moderate awareness. Tailored health education and counseling are needed to improve contraceptive literacy, address misconceptions, and enhance reproductive health outcomes in Malaysia.

Keywords: Contraception, Women of reproductive age, associated factors

Translational Research_04

Reliability and Validity of the Insulin Treatment Appraisal Scale (ITAS-M) Malay Version among Patients with Type 2 Diabetes Mellitus in Kuantan, Pahang

#FMSC2026-293

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Introduction: Effective management of diabetes mellitus often requires insulin therapy, yet psychological barriers toward insulin initiation are common among individuals with type 2 diabetes mellitus (T2DM), contributing to clinical inertia and suboptimal glycaemic control. The Insulin Treatment Appraisal Scale (ITAS), originally developed and validated by Snoek et al. in 2007, is a widely used instrument to assess patients' attitudes toward insulin therapy. However, a validated Malay version is lacking.

Methods: A cross-sectional validation study was conducted among 250 adults with T2DM attending a primary care clinic in Pahang. The ITAS was translated using forward-backward translation and expert review. Psychometric testing included internal consistency (Cronbach's α and MIIC) and construct validity, assessed via exploratory factor analysis (EFA).

Results: The ITAS-M demonstrated good internal consistency ($\alpha = 0.82$). Sampling adequacy was acceptable (KMO = 0.83; Bartlett's test $p < 0.001$). EFA identified a five-factor structure explaining 56.36% of total variance: challenges, social stigma, self-failure, burden, and positive benefits.

Conclusion: The ITAS-M is a valid and reliable instrument to assess attitudes toward insulin therapy among Malay-speaking adults with T2DM in the Malaysian primary care setting. Its use may facilitate early identification of psychological barriers to insulin initiation in clinical and research settings.

Keywords: reliability, validity, insulin

Translational Research_05

An Islamic Values-Based Cognitive Intervention for Older Adults with Mild-to-Moderate Dementia: A Culturally Adapted Module for Malaysian Primary Care

#FMSC2026-317

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Introduction: Dementia is an increasing public health challenge in Malaysia. While Cognitive Stimulation Therapy (CST) improved cognition and quality of life, it lacks cultural and spiritual alignment. This study aimed to develop, validate and assess the feasibility of an Islamic Values-Based Cognitive Stimulation Intervention (IRK-I) Module for older adults with mild and moderate dementia for future implementation in primary care and community settings.

Methods: A Design and Development Research (DDR) integrated with ADDIE model was employed. Module development was informed by a scoping review and focus group discussions involving healthcare professionals, caregivers, Islamic scholars and older adults. Content validity was established using the Fuzzy Delphi Method and Content Validity Index (CVI). Feasibility was assessed through a Nominal Group Technique (NGT) involving multidisciplinary experts, while implementation readiness was evaluated by occupational therapists using the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM) and Feasibility of Intervention Measure (FIM).

Results: The final IRK-I module comprises 20 structured group sessions delivered over 10 weeks, integrating cognitive stimulation activities with Islamic elements such as Qur'an recitation, zikr, doa, nasyid and Islamic reminiscence. Expert consensus ranged from 86% to 100%, with excellent content validity (I-CVI=1.00; S-CVI/Ave=0.98). NGT findings demonstrated good feasibility (76–80%), while occupational therapists reported high ratings for acceptability, appropriateness, and feasibility (all mean scores $>4.0/5.0$).

Conclusion: IRK-I represents a culturally adapted and validated non-pharmacological intervention with potential to support dementia care in Malaysian primary care, community, and residential care settings.

Keywords: Dementia; Cognitive Stimulation; Primary Health Care

Translational Research_06

FIND-DM Perlis: Closing the Family Screening Cascade for Early Detection of Type 2 Diabetes Mellitus in Primary Care — A Two-Year Statewide Retrospective Analysis

#FMSC2026-327

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Introduction: Perlis faces a heavy burden of type 2 diabetes mellitus (T2DM). The NHMS 2023 reports a 20.6% prevalence, with 7.0% undiagnosed. Family history is a well-established risk marker, and regional data from multiple countries confirm that screening first-degree relatives enables much earlier diagnosis and prompts targeted clinical intervention. This study evaluates the two-year outcomes of screening first-degree relatives of newly diagnosed T2DM patients in Perlis. We aimed to identify cascade drop-offs to develop a highly scalable, improved framework for primary healthcare.

Methods: We conducted a statewide retrospective descriptive analysis using data collected from primary care clinics across Perlis between January 2024 and December 2025. We tracked the screening cascade, covering initial T2DM index cases, identified relatives, attendance records, and final clinical outcomes.

Results: Over two years, clinics recorded 2,000 new T2DM index cases. From these, 542 first-degree relatives were identified for

screening, yielding an identification rate of 27.1%. However, only 153 relatives presented for testing, reflecting a 28.2% attendance rate, while 389 individuals (71.8%) failed to attend. Among the 153 screened, 135 had normal blood glucose, 10 had pre-diabetes, and 8 were newly diagnosed with T2DM. This represents a diagnostic yield of 5.2% for T2DM, 6.5% for pre-diabetes, and an overall 11.8% yield for any abnormal glycaemia.

Conclusion: FIND-DM Perlis achieved a clinically valuable diagnostic yield but revealed severe drop-offs between patient identification and actual screening. Implementing a formalized, family-centric clinical pathway can reduce this leakage, boosting both early detection and proactive diabetes prevention.

Keywords: Diabetes Mellitus, Type 2; Targeted Screening; Primary Health Care

Clinical Case Report / Case Series_01

When the Pursuit of Athletic Fitness Becomes Harmful: Bulimia Nervosa in an Adolescent

#FMSC2026-012

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Introduction: Bulimia nervosa is an eating disorder characterized by repetitive self-induced vomiting to prevent weight gain, and it mostly affects females.

Case Presentation: Mr I, a 13-year-old boy brought by his mother due to a 10 kg weight loss over three months. He was rejected by a soccer team because he was overweight, which led him to become determined to lose weight. Despite daily vigorous exercise, his weight remained unchanged. He also consumed only eggs as his meals. His mother noticed that he frequently vomited after meals, which he attributed to epigastric pain. This behaviour persisted and he managed to lose weight rapidly. Due to worsening epigastric pain, he was admitted to hospital. Blood investigations (full blood count, renal profile, liver function test, thyroid function test, and blood glucose) were normal. OGDS showed gastritis changes. He was subsequently referred to psychiatry and diagnosed with bulimia nervosa.

Discussion: Bulimia nervosa has been diagnosed more frequently in female than male. Eating disorder in females were related to society pressure to achieve slim figure while in contrast males were influenced by desire to attain athletic figure. In this case, rejection from the soccer team and overweight issue likely triggered body dissatisfaction and extreme weight loss behaviours. Nevertheless, both sexes may experience similar medical complications such as electrolyte imbalance, dental erosion and malnutrition.

Conclusion: This case highlights the importance of recognizing eating disorders such as bulimia nervosa in male and should receive the same level of clinical attention as in female patient. Early recognition in primary care with timely management can prevent further complication.

Keywords: bulimia nervosa, eating disorder, body dissatisfaction

Clinical Case Report / Case Series_02

A Wolf in Sheep's Clothing: Cerebellopontine Angle Tumour Masquerading as Bell's Palsy during Pregnancy

#FMSC2026-016

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Introduction: Facial nerve palsy in pregnancy is commonly attributed to Bell's palsy and is often managed in primary care. Rarely, cerebellopontine angle (CPA) tumours can present with isolated facial nerve symptoms that mimic Bell's palsy. CPA tumours first diagnosed during pregnancy are extremely uncommon, with very few cases reported in the literature. Early recognition is critical to prevent delays in diagnosis and optimize maternal and fetal outcomes.

Case Presentation: A 32-year-old gravida 4, para 3 woman presented to primary care at 16 weeks' gestation with right-sided facial numbness and difficulty with mastication. Examination suggested Bell's palsy, and she was managed conservatively. Although partial improvement occurred, mild facial numbness persisted. At 25 weeks' gestation, she developed acute right-sided hemiparesis, gait imbalance, and multiple cranial nerve deficits. Neuroimaging revealed an enhancing mass at the right cerebellopontine angle with mass effect on the brainstem and fourth ventricle, consistent with a CPA tumour complicated by early obstructive hydrocephalus. Following initial refusal, she underwent ventriculoperitoneal shunt insertion at 29 weeks' gestation and remains under neurological consultation for ongoing conservative management.

Discussion: This case highlights the exceptionally rare presentation of a CPA tumour as Bell's palsy in pregnancy and underscores the scarcity of reported cases first diagnosed during gestation. Persistent or atypical facial palsy, particularly with progressive neurological signs, should prompt early neuroimaging and specialist referral.

Conclusion: Primary care clinicians should maintain a high index of suspicion for atypical facial palsy in pregnancy to enable timely recognition of rare but serious intracranial pathology.

Keywords: Cerebellopontine Angle Neoplasms, Pregnancy, Primary Health Care

Clinical Case Report / Case Series_03

Progressive Bilateral Proximal Muscle Weakness with a Large Mediastinal Mass: A Case Suggestive of Paraneoplastic Myasthenia Gravis

#FMSC2026-024

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Introduction: Myasthenia gravis (MG) is an autoimmune disorder of the neuromuscular junction characterized by fluctuating muscle weakness and fatigability. Paraneoplastic MG is frequently associated with thymic or other mediastinal neoplasms. Early recognition in primary care is essential, as prompt diagnosis and treatment of the underlying pathology can improve clinical outcomes.

Case Presentation: A 40-year-old man presented with a five-month history of progressive generalized weakness, predominantly

affecting proximal muscles of the upper and lower limbs. He experienced difficulty rising from a seated position, climbing stairs, lifting objects, and combing his hair, accompanied by fatigability and recurrent falls. There was no ocular, bulbar, respiratory, or constitutional symptoms. On examination, he was hemodynamically stable with intact cranial nerves. Neurological assessment revealed symmetrical proximal muscle weakness (Medical Research Council grade 4/5) with preserved distal strength, normal tone, reflexes, and sensation. Laboratory investigations were unremarkable. Chest radiography demonstrated a large left mediastinal mass. A neuromuscular junction disorder was suspected. In the context of a mediastinal mass, paraneoplastic MG was considered. The patient was referred to neurology, initiated on pyridostigmine, and planned for contrast-enhanced CT thorax. He showed marked clinical improvement following treatment.

Discussion: This case highlights the importance of recognizing fatigable proximal muscle weakness in primary care. Absence of classical ocular or bulbar symptoms may delay diagnosis. Identification of a mediastinal mass should prompt consideration of paraneoplastic MG.

Conclusion: A high index of suspicion is required for early diagnosis of MG. Timely referral and identification of underlying mediastinal pathology are crucial in optimizing patient outcomes.

Keywords: Myasthenia Gravis; Paraneoplastic Syndromes; Primary Health Care

Clinical Case Report / Case Series_04

A Quiet Decline: When Subtle Signs Cost a Mother's Life

#FMSC2026-036

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Introduction: Disseminated tuberculosis is a rare form of tuberculosis (1–2% of cases) with often non-specific presentation, leading to delayed or missed diagnosis. If untreated, it carries high mortality, particularly in pregnancy and the postpartum period.

Case Presentation: A 38-year-old Indonesian grand multipara with antenatal risk factors, including anemia, gestational diabetes, obesity, and suboptimal controlled hypothyroidism, was regularly followed up during pregnancy. Despite good compliance, she demonstrated poor gestational weight gain followed by progressive weight loss. Following delivery, she attended early postpartum review but missed subsequent follow-up. Two weeks postpartum, she developed confusion and altered behaviour, initially treated as postpartum blues at a general practitioner clinic. Her condition deteriorated progressively, resulting in dependency for daily activities. No further medical attention was sought until she was found unresponsive on day 45 postpartum and pronounced dead. The cause of death was disseminated tuberculosis. This case illustrates a missed opportunity for earlier tuberculosis screening in the presence of significant unexplained weight loss during pregnancy.

Discussion: This case highlights the diagnostic challenge of disseminated tuberculosis with minimal or absent classical

symptoms, particularly in pregnancy. Subtle signs such as inadequate weight gain or weight loss should prompt further evaluation. Equally, the case highlights the critical vulnerability of the postpartum period. Misattribution of loss of weight and neurological symptoms further contributed to delayed diagnosis.

Conclusion: Maternal tuberculosis may present silently yet progress rapidly with fatal outcomes. Increased clinical suspicion, attention to red flags such as unexplained weight loss, and ensuring continuity of postpartum care are essential to prevent avoidable maternal deaths.

Keywords: Disseminated Tuberculosis, Miliary Tuberculosis, Pregnancy

Clinical Case Report / Case Series_05

When Benign Mimics Malignancy: Spongiform Dermatitis Presenting as Suspected Paget's Disease of the Breast in an Adolescent—A Primary Care Diagnostic Challenge

#FMSC2026-064

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Introduction: Mammary Paget's disease is a rare breast malignancy presenting with persistent eczematous changes of the nipple-areolar complex. However, benign dermatoses such as spongiform dermatitis may closely mimic this, creating diagnostic challenges, particularly in young patients where malignancy is unexpected.

Case Presentation: 18-year-old nulliparous lady presented with a 6-month history of persistent right breast skin lesion with intermittent periareolar haemoserous discharge and associated with pain, unresponsive to multiple courses of topical steroid therapy and antibiotics. Family history was notable for breast cancer, in her maternal grandmother. Examination revealed a unilateral dry, scaly and erythematous patch around the periareolar region without palpable mass. Ultrasound demonstrated superficial periareolar skin thickening (0.6 cm) with minimal vascularity (BIRADS 4). Given the clinical suspicion of Paget's disease, a biopsy was performed. Histopathological examination revealed spongiform dermatitis. The patient was treated with topical corticosteroids and emollients, with subsequent supervision under the dermatology and surgical department.

Discussion: This case highlights the overlap between benign dermatoses and Paget's disease. Red flags such as chronicity, unilateral involvement, discharge, nipple-areolar complex destruction and treatment resistance warrant further evaluation. While malignancy is rare in adolescents, anchoring bias toward benign diagnoses may delay definitive investigation, imaging may be indeterminate, thus histopathology remains the diagnostic gold standard.

Conclusion: Persistent nipple-areolar dermatitis requires careful evaluation regardless of age. Early biopsy is essential in atypical or refractory cases to exclude malignancy and prevent diagnostic delays.

Keywords: Paget Disease, Mammary Dermatitis, Spongiform Dermatitis, Differential

Clinical Case Report / Case Series_06

Masquerading Leprosy: Post-Inflammatory Hypopigmentation in Multibacillary Leprosy - A Case Report

#FMSC2026-066

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Introduction: Leprosy remains a public health concern in endemic regions, with rising global cases. Its variable and atypical presentations can mimic other dermatoses, leading to delayed diagnosis and treatment.

Case Presentation: A 57-year-old man presented with a six-month history of generalized, asymptomatic hypopigmented macules, on the upper back and involving the trunk, face, and limbs. He was treated for presumed fungal infection without improvement. Examination showed hypopigmented macules with preserved sensation and no nerve thickening. Initial slit-skin smear was negative. Histopathology showing melanopenic hypomelanosis suggested post-inflammatory hypopigmentation. Repeated evaluation smear detected acid-fast bacilli (BI 0.8+), confirming multibacillary leprosy. The patient was treated with WHO multidrug therapy, resulting in improvement after 12 months.

Discussion: Leprosy exhibits a wide clinical spectrum determined by host immune response, often leading to diagnostic uncertainty. Atypical presentations lacking classical features such as sensory loss or nerve thickening may mimic other dermatoses, contributing to misdiagnosis and delayed treatment. In this case, hypopigmented lesions resembled post-inflammatory hypopigmentation, with non-specific histopathology further obscuring the diagnosis. Initial slit-skin smear was negative, but repeat evaluation revealed acid-fast bacilli, confirming multibacillary leprosy. This highlights the limitations of smear sensitivity, particularly in low bacillary load cases, and the role of observer variability. Early recognition in endemic areas requires high clinical suspicion, repeat testing, and strict quality assurance to prevent diagnostic delays.

Conclusion: This case highlights the diagnostic challenges of atypical leprosy presentations and the limited sensitivity of slit-skin smears. Maintaining a high index of suspicion, particularly in endemic areas, is key to successful diagnosis.

Keywords: Post Inflammatory Hypopigmentation, Multibacillary leprosy, Endemicity

Clinical Case Report / Case Series_07

When Acne Isn't Acne: A Case Report of Mpox in Primary Care

#FMSC2026-081

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Introduction: Mpox is an emerging zoonotic infection with increasing atypical clinical presentations, posing diagnostic challenges in primary care. Unfamiliarity with its evolving manifestations may lead to misdiagnosis and delayed identification

among frontliners, particularly in low-incidence countries such as Malaysia.

Case Presentation: A 30-year-old man with stable HIV infection on treatment presented with a 4-day history of fever. He subsequently developed a single acneiform lesion over the abdomen, followed by multiple painful lesions in the perianal region. He denied other systemic symptoms. He reported recent sexual contact with a regular, healthy male partner who is on Pre-exposure Prophylaxis. There was no history of recent travel. On examination, he was febrile with otherwise stable vital signs. Dermatological findings revealed a solitary abdominal pustule (non-umbilicated) with surrounding erythema, multiple similar perianal lesions, and inguinal lymphadenopathy. Differential diagnoses included bacterial folliculitis, Herpes Simplex & Herpes Zoster infections. Given the patient's risk profile, Mpox was also considered. PCR test from the lesion and nasopharyngeal swabs subsequently confirmed Mpox. He was managed conservatively with home isolation and recovered fully without complications.

Discussion: This case highlights an atypical, localized presentation of Mpox that mimics other common conditions seen in primary care, increasing the risk of misdiagnosis. The presence of fever and lymphadenopathy were the key clinical clues. Emerging evidence suggests that Mpox may present with limited lesions and predominant anogenital involvement.

Conclusion: Maintaining a high index of suspicion, especially among at-risk populations, is essential in primary care to facilitate early testing, appropriate treatment, isolation, and timely public health intervention.

Keywords: Mpox, Primary Care

Clinical Case Report / Case Series_08

Growing Fears: A Case of Primary Tokophobia in a Primigravida

#FMSC2026-085

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Introduction: Tokophobia, a pathological fear of childbirth, can lead to significant psychological distress and requests for pregnancy termination. This case explores the intersection of primary tokophobia, Major Depressive Disorder (MDD), and Adverse Childhood Experiences (ACE).

Case Presentation: A 26-year-old primigravida at 10 weeks gestation presented with low mood, social withdrawal, and intense anxiety regarding her growing abdomen, fetal delivery, and medical procedures. She expressed a strong desire to terminate the pregnancy. Her history revealed chronic physical abuse by her father throughout her youth. Initially diagnosed with adjustment disorder, her diagnosis was later revised to Severe Social Anxiety and MDD with ACE. Management included Fluvoxamine (titrated to 150mg OD) and a multidisciplinary birth plan involving Psychiatry, O&G, and Primary Care. She successfully delivered via spontaneous vaginal delivery at 40 weeks in an isolated room with proactive pain management.

Discussion: This case highlights how childhood trauma can

manifest as severe tokophobia during pregnancy. The patient's fear was not merely about labor but extended to body changes and clinical environments. A multidisciplinary approach and pharmacological stabilization were essential in moving the patient from a request for termination to a successful full-term delivery.

Conclusion: Early screening for ACE and tokophobia is critical. Integrated psychiatric and obstetric care can significantly improve maternal outcomes and facilitate a safe birthing experience for high-risk patients.

Keywords: Pregnancy, Adverse Childhood Experiences, Major Depressive Disorder

Clinical Case Report / Case Series_09

A Tale of Two Pathogens: Atypical Nasal Diphtheria and Histoplasmosis in a Newly Diagnosed HIV Patient

#FMSC2026-087

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Introduction: Patients with newly diagnosed Human Immunodeficiency Virus (HIV) often present with complex, multisystemic opportunistic infections. While histoplasmosis is a recognised infection, adult toxigenic diphtheria is rare and frequently presents with atypical symptoms, posing a significant diagnostic challenge for clinicians in primary care settings.

Case Presentation: A 37-year-old Malay man presented with a two-weeks history of dry cough and fever. Following initial treatment for pneumonia, he developed umbilicated facial papules and oral leukoplakia. HIV screening was reactive, and a skin biopsy revealed intracellular fungal bodies. Tissue culture later confirmed disseminated histoplasmosis (*Histoplasma capsulatum*). Concurrently, the patient reported hoarseness and epistaxis; ENT examination identified a fungating nasal mass. PCR and Elek's testing confirmed the presence of toxigenic *Corynebacterium diphtheriae* carrying Toxin Genes A and B.

Discussion: This rare co-infection highlights the diagnostic difficulty of atypical diphtheria, which presented as a bleeding nasal mass rather than the classic pseudomembrane. Other than that, in HIV patients, umbilicated skin lesions require a high index of suspicion to differentiate histoplasmosis from molluscum contagiosum or talaromycosis. A thorough history regarding high-risk behaviors was essential for the diagnostic workup.

Conclusion: Clinical vigilance and detailed history-taking are vital for family physicians. Early identification of atypical presentations is essential for initiating prompt, life-saving treatment and implementing critical public health measures, such as contact tracing and post-exposure prophylaxis.

Keywords: HIV, Histoplasmosis, Nasal Diphtheria, Atypical Presentation, Family Medicine.

Clinical Case Report / Case Series_10

Uncommon Presentation of Neisseria Meningitidis in Primary Care: A Clinical Case Series

#FMSC2026-101

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Introduction: *Neisseria meningitidis* is a Gram-negative diplococcus classically associated with invasive diseases such as meningitis (50% of patients), meningococcaemia (5-20%) and pneumonia (5-15%). However, it can rarely cause urogenital infections such as urethritis. Meningococcal urethritis is uncommon and often mimics gonococcal urethritis, posing diagnostic challenges in primary care.

Case Presentation: Two male patients (aged 38 and 23) presented with minimal, painless urethral discharge following recent unprotected sexual activity with male partners. Neither had systemic symptoms. Clinical findings were unremarkable apart from urethral discharge. Both cases were initially treated empirically as gonococcal urethritis. However, culture and sensitivity testing later confirmed *N. meningitidis* (serotype Y in one case, non-typeable in the other) as the causative organism. Both patients received intramuscular ceftriaxone and oral doxycycline according to standard guidelines for urethral discharge syndrome. Additional investigations, including screening for HIV, syphilis, and hepatitis, were negative. Throat swabs showed no carriage of *N. meningitidis*. Patients were counselled on safe sexual practices, partner notification, and meningococcal vaccination.

Discussion: Meningococcal urethritis is rare and underreported, with no prior documented cases in Malaysia. Its clinical presentation closely resembles gonococcal urethritis, making laboratory confirmation essential. Sexual transmission, particularly via oral-genital contact, is a likely route. Current guidelines recommend management similar to uncomplicated gonococcal infections.

Conclusion: Meningococcal urethritis is an emerging and clinically significant condition in primary care. Awareness, accurate diagnosis, and prompt treatment are crucial to prevent misdiagnosis and reduce potential community transmission.

Keywords: Meningococcal Urethritis

Clinical Case Report / Case Series_11

Acne That Wasn't: Unmasking Malassezia Folliculitis Behind Persistent Papules

#FMSC2026-134

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Introduction: Acne vulgaris is a common condition encountered in primary care, affecting up to 85% of adolescents and young adults. Due to its high prevalence, acneiform eruptions are often presumed to be acne. However, not all papules and pustules share the same cause. *Malassezia* folliculitis, a fungal infection of hair follicles, can closely resemble inflammatory acne in distribution and appearance.

Case Presentation: A 21-year-old man presented with a 3-week history of itchy “pimples” over his back and forehead, beginning as small red bumps and increasing in number. He had no prior acne, family history, or recent skincare changes. Previous treatment with topical and oral antibiotics was ineffective. Examination revealed monomorphic follicular papules and pustules without comedones, nodules, or cysts, consistent with diagnosis of *Malassezia* folliculitis. He was treated with itraconazole 200 mg daily, ketoconazole 2% shampoo, and miconazole 2% cream, with improvement after 2 weeks.

Discussion: *Malassezia* folliculitis mimics acne but differs in key aspects. It presents on the trunk as monomorphic, pruritic lesions without comedones and is often unresponsive to antibiotics. Misdiagnosis leads to unnecessary antibiotic use, worsening fungal overgrowth and contributing to antimicrobial resistance. In primary care, where acne is often managed empirically, this overlap can delay treatment and increase patient dissatisfaction. Early recognition and antifungal therapy can reduce repeated visits, healthcare costs, and inappropriate treatment.

Conclusion: *Malassezia* folliculitis is often mistaken for acne. This case highlights the importance of diagnostic vigilance in primary care. Recognizing key features and reassessing poor response can improve outcomes, reduce unnecessary antibiotic use, and enhance care efficiency.

Keywords: *Malassezia*, Folliculitis, Acne Vulgaris

Clinical Case Report / Case Series_12

Expressive Aphasia as an Isolated Presentation in an Undiagnosed Primary Lung Adenocarcinoma with Brain Metastases

#FMSC2026-140

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Introduction: Lung adenocarcinoma accounts for about 40% of lung cancers and is the most common subtype in non-smokers. Brain metastases occur in 16–20% of cases and may present as the initial manifestation.

Case Presentation: A 64-year-old female lecturer, a non-smoker with hypertension and dyslipidemia, presented to primary care with a 1 to 2-month history of word-finding difficulty (dysphasia). She had no limb weakness, facial asymmetry, or other neurological symptoms. Neurological examination and Mini-

Mental State Examination were normal. The initial chest X-ray was unremarkable. However, the non-contrast CT brain revealed multiple rounded lesions suggestive of metastases. Further imaging with contrast-enhanced CT and MRI of the brain demonstrated multiple enhancing lesions with surrounding edema. CT of the thorax, abdomen, and pelvis identified a left lower lobe lung mass (2.4 × 3.5 × 3.6 cm), along with multiple pulmonary nodules, mediastinal lymphadenopathy, and metastases to the spleen and bones. CT-guided biopsy confirmed lung adenocarcinoma.

Discussion: Lung adenocarcinoma typically presents with respiratory symptoms, but some patients remain asymptomatic until metastasis occurs. The brain is a common site of spread, and neurological symptoms may be the first indication. In primary care, subtle symptoms like isolated aphasia are often attributed to stroke or transient ischemic attack, especially in patients with cardiovascular risk factors, potentially delaying diagnosis.

Conclusion: Brain metastases may be the first manifestation of malignancy. This case highlights the importance of considering serious underlying causes in patients with isolated neurological symptoms and the need for timely neuroimaging and referral.

Keywords: Metastasis, Dysphasia, Lung carcinoma

Clinical Case Report / Case Series_13

Hidden Cause of Bruises: Acquired Platelet Dysfunction with Eosinophilia as a Diagnostic Challenge

#FMSC2026-146

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Introduction: Acquired Platelet Dysfunction with Eosinophilia (APDE) is a rare, under-recognised bleeding disorder mainly affecting children in Southeast Asia. It involves transient platelet dysfunction with eosinophilia despite normal platelet counts.

Case Presentation: An 11-year-old boy presented with recurrent spontaneous bruising since age 9, worsening over one month, and triggered by minor trauma. He had no significant medical history but a family history of allergic rhinitis. Examination showed multiple ecchymoses (2–5 cm). Investigations revealed a normal platelet count (284 × 10⁹/L) and coagulation profile, with marked eosinophilia (5.68 × 10⁹/L, 29.4%). Peripheral blood smear confirmed the presence of eosinophilia, with no blasts or abnormal cells identified. Stool tests were negative for parasites. Platelet aggregation studies supported APDE. Family screening was inconclusive. The patient was treated empirically with albendazole, leading to normalization of eosinophil counts and improvement in bruising.

Discussion: APDE is diagnostically challenging due to its rarity and overlap with other bleeding disorders. Spontaneous bruising with a normal platelet count should raise suspicion. The absence

of parasitic infection does not exclude APDE, suggesting a possible immune-mediated mechanism. Early recognition helps avoid misdiagnosis, including non-accidental injury, and prevents unnecessary interventions such as corticosteroids or invasive tests. Management is mainly supportive, though empirical antihelminthic therapy is often used in endemic areas.

Conclusion: APDE should be considered in patients with unexplained bruising, eosinophilia, and normal platelet counts. Early recognition ensures appropriate management, avoids overtreatment, and reassures patients about its benign course.

Keywords: Acquired Platelet Dysfunction, Eosinophilia, Primary Care

Clinical Case Report / Case Series_14

Feasibility and Adherence of a Pediatric vDOTS Service During the Intensive Phase of Tuberculosis Treatment: A Case Series

#FMSC2026-264

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Introduction: This study is an observational case series evaluating the feasibility, adherence, and early clinical outcomes of an asynchronous video Directly Observed Therapy (vDOTS) service for pediatric tuberculosis (TB) patients. The study focuses specifically on the intensive phase of TB treatment. The intervention was implemented at public health clinics in Kota Tinggi, Johor

Case Presentation: The case series includes all pediatric patients diagnosed with active TB in 2026. Patients were selected for the vDOTS program based on criteria set by the KK TB team led by Family Medicine Specialist. To maximize accessibility and minimize cost, the vDOTS service utilised a generic, secure cloud-based upload link via MOH google site. Caregivers were provided with a newly developed standardized, step-by-step instructional flowchart in the local language (Malay) detailing how to record and submit the daily medication administration.

Discussion: Total of 36 TB cases among paediatrics population included in this study. 22 were male and 14 were female patients. 52.7% were smear positive PTB. Majority (26, 72.22%) had a mixed adherence vDOTS uploaded video and others were incomplete (10, 27.78%). Most patients (28, 77.7%) had an improvement in their weight at 2-month completion of intensive phase of TB treatment with average of 0.66kg increment.

Conclusion: The vDOTS PTB treatment among children is a feasible service to be implemented in health clinics. Appropriate monitoring workflow by health care personnel is needed to ensure complete adherence to vDOTS treatment for TB.

Keywords: vDOTS TB Among Children Population

Clinical Case Report / Case Series_15

A 12-Year Persistent Verrucous Elbow Lesion in a Young Adult: Diagnostic Challenges in Primary Care Practice

#FMSC2026-007

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Introduction: Verrucous skin lesions are frequently encountered in primary care and are commonly presumed to be benign viral warts. However, atypical features such as long duration, progressive enlargement, or recurrent bleeding warrant evaluation to exclude chronic infection and malignancy.

Case Presentation: A 20-year-old immunocompetent male presented with a >12-year history of a persistent verrucous plaque over his right elbow. The lesion began as multiple nodules in childhood, most of which resolved spontaneously except for one that gradually enlarged and developed recurrent bleeding. Examination revealed a 4x5 cm exophytic verrucous plaque, consistent with giant verruca vulgaris. Initial biopsy suggested reactive pseudoepitheliomatous hyperplasia, raising concern for chronic infective dermatoses. However, complete excision demonstrated classic viral wart histopathological features. The patient had an uneventful postoperative recovery with no recurrence.

Discussion: Longstanding verrucous lesions with atypical features such as progressive growth or bleeding pose a diagnostic challenge in primary care. While viral wart is usually benign, giant verruca vulgaris is an uncommon variant, and similar presentations include verrucous carcinoma, cutaneous tuberculosis, deep fungal infection, and non-tuberculous mycobacterial infection. Clinical and histopathological overlap, particularly pseudoepitheliomatous hyperplasia, may lead to misdiagnosis with superficial biopsies. In this case, diagnosis was confirmed only after excision, highlighting the limitations of partial biopsy and importance of adequate tissue sampling.

Conclusion: Atypical verrucous lesions are challenging as they can mimic both benign and malignant conditions. Considering a broad differential diagnosis and early specialist referral when atypical features are present are essential for accurate diagnosis and appropriate management in primary care.

Keywords: Chronic Wart, Differential Diagnosis, Giant Verruca Vulgaris

Clinical Case Report / Case Series_16

When Common Diagnoses Mislead: Cryptogenic Organizing Pneumonia in a Pregnant Woman with Asthma

#FMSC2026-009

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Introduction: Respiratory symptoms during pregnancy are often attributed to asthma exacerbations or respiratory infections. However, less common pulmonary conditions may present with similar clinical features, increasing the risk of misdiagnosis in primary care. Cryptogenic organising pneumonia (COP) is a rare inflammatory lung disease characterised by subacute respiratory symptoms and distinctive radiological findings, and it is rarely reported during pregnancy.

Case Presentation: We report the case of a 41-year-old pregnant woman (G3P1+1) with underlying bronchial asthma who presented for antenatal booking at 19 weeks' gestation. One week prior, she had been hospitalised for an acute asthma

exacerbation following an upper respiratory tract infection and was discharged with inhaled budesonide and salbutamol. During antenatal follow-up, she experienced episodic breathlessness and wheezing that partially responded to bronchodilator therapy. At 25 weeks' gestation, she re-presented with similar symptoms and was treated for recurrent asthma exacerbation. She also reported occasional abdominal discomfort and vomiting, initially attributed to pregnancy. At 32 weeks' gestation, she developed worsening breathlessness accompanied by persistent vomiting, acute kidney injury, and hepatobiliary dysfunction. Her condition deteriorated despite treatment, necessitating an emergency caesarean section at 33 weeks. Subsequent imaging suggested COP. Despite intensive care and corticosteroid therapy, she succumbed to progressive respiratory failure with multiorgan involvement.

Discussion: COP may mimic asthma exacerbations, particularly in patients with pre-existing asthma. In pregnancy, diagnostic evaluation may be further complicated by concerns regarding imaging and treatment safety.

Conclusion: Persistent respiratory symptoms that respond poorly to standard asthma therapy should prompt consideration of alternative diagnoses to facilitate earlier recognition and management.

Keywords: Cryptogenic Organizing Pneumonia, Pregnancy, Asthma

Clinical Case Report / Case Series_17

Fournier's Gangrene Diagnosed in Primary Care

#FMSC2026-015

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Introduction: Fournier's gangrene is a rare but aggressive necrotizing fasciitis of the genital and perineal regions, characterized by rapid tissue destruction, systemic toxicity, and often, a distinctive foul odour due to bacterial gas production. Early diagnosis and surgical management are vital to reduce the high mortality rate.

Case Presentation: A 62-year-old man with poorly controlled type 2 diabetes presented at primary care with a three-day history of worsening scrotal pain, swelling, and redness, accompanied by fever and fatigue. On examination, he was febrile (38.7°C), and the scrotum appeared erythematous, swollen, and tender with palpable crepitus. A strong, unbearable foul smell was noted, raising immediate concern for necrotizing infection. Suspecting Fournier's gangrene, he was referred to the urologist. CT imaging revealed gas in the scrotal soft tissues, confirming the diagnosis. Emergency surgical debridement was performed, and broad-spectrum intravenous antibiotics were started. The patient required further debridement, intensive care, and skin grafting.

Discussion: Fournier's gangrene typically affects patients with diabetes or immunosuppression. It frequently starts in the scrotum due to its several fascial layers, rich vascularity, and exposure to minor trauma or infection, presenting with sudden onset pain, swelling, crepitus, and an extremely foul odour from necrotic tissue. Rapid progression is common despite the early subtle symptoms.

Conclusion: Fournier's gangrene, a medical emergency demands immediate recognition and referral. This case underlines the

importance of timely recognition of warning signs in primary care, especially in high-risk individuals with swift referral for further management. Rapid diagnosis and early treatment are crucial to saving tissue and lives.

Keywords: Fournier's Gangrene, Necrotizing Fasciitis, Diabetes

Clinical Case Report / Case Series_18

Battle of Mind over Motor

#FMSC2026-020

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Introduction: Parkinson's disease (PD) is traditionally recognized for its motor symptoms. However, a significant proportion of patients report non-motor complications, including psychosis. This case study involves a PD patient who began exhibiting visual hallucinations and paranoid delusions after antiparkinsonian agents were commenced. In approaching this case, the possibility of underlying comorbidities such as dementia, depression, and medication-induced side effects is explored.

Case Presentation: Mr. MM is a 69-year-old Malaysian male diagnosed with Parkinson's disease (PD) in 2017, who experienced a significant transition from motor symptoms to severe neuropsychiatric complications. Since 2019, he developed complex visual and tactile hallucinations, paranoid delusions, and a decline in executive function. Initially diagnosed with Parkinson's disease psychosis (PDP), differential diagnoses included drug-induced psychosis and dementia with Lewy bodies (DLB). Management involved tapering benzhexol and adjusting Madopar HBS dosages, yet behavioural issues persisted alongside a reluctance to seek tertiary care. A strategic home visit was conducted to address nocturnal wandering, fall risks, and caregiver burden for his wife. He showed some improvement after surgical correction of bilateral cataracts and pterygium, which improved visual acuity and reduced hallucinations. With consistent counselling and occupational therapy, he eventually agreed for a specialist referral. He subsequently initiated antipsychotic therapy, and a neurologist confirmed a diagnosis of DLB.

Discussion: History taking is vital in differentiating between PDP and DLB, whereby both have symptoms that overlap one another. Co-management with tertiary teams is critical for addressing escalating clinical needs.

Conclusion: Management involves a multidisciplinary approach and non-pharmacological interventions, which can be provided in primary care clinics.

Keywords: Parkinson's Disease, Non-motor Symptoms, Psychosis

Clinical Case Report / Case Series_19

Fetal Congenital Heart Block: Is 37 Weeks Too Late for the "Stable" Foetus?

#FMSC2026-021

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Introduction: Congenital heart block (CHB) is a rare fetal arrhythmia (1 in 15,000–22,000 live births), primarily associated with maternal anti-Ro/SSA and anti-La/SSB antibodies. Despite antenatal surveillance, mortality remains 15–30%, with poor prognosis linked to fetal hydrops, myocardial dysfunction, or severe bradycardia (≤ 50 bpm).

Case Presentation: A 38-year-old woman detected with an irregular fetal heart rate at 31+3 weeks during a routine ultrasonography. Fetal echocardiography confirmed third-degree atrioventricular block with preserved cardiac anatomy (ventricular rates predominantly at 50–60 bpm). Mother was tested positive for anti-Ro and anti-La antibodies though asymptomatic. Management included multidisciplinary surveillance and delivery plan at 37 weeks. Despite stable growth and absence of hydrops, sudden intrauterine fetal demise occurred at 34+5 weeks, notably within one hour of a recordable fetal heart rate during inpatient monitoring.

Discussion: This case highlights the pivotal role of primary care in opportunistic detection of fetal arrhythmias. Furthermore, it invites the clinicians to ponder the optimal timing of delivery and the complex risk-benefit ratio of prematurity. While some case series advocate for delivery at 35 weeks for fetuses exhibiting high-risk features, the decision to wait until 37 weeks in this “stable” case resulted in a sudden demise. This unpredictable nature suggests that current prognostic markers are insufficient to guarantee safety in the late third trimester.

Conclusion: Autoimmune CHB follows an unpredictable course. Primary care providers remain essential for early recognition and long-term maternal counseling, including preconception planning with hydroxychloroquine for subsequent pregnancies to improve future perinatal outcomes.

Keywords: Congenital Heart Block, Foetal Bradycardia, Foetal Arrhythmia

Clinical Case Report / Case Series_20

Managing Cold-Evoked Central Post-Stroke Pain After Basal Ganglia Stroke: A Primary Care-Led Multimodal Rehabilitation Approach

#FMSC2026-029

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Introduction: Central post-stroke pain (CPSP) is an under-recognised neuropathic complication that may significantly impair function despite good motor recovery. Cold-evoked allodynia is a disabling but often overlooked presentation in primary care.

Case Presentation: 50-year-old man developed severe right upper limb neuropathic pain triggered by cold exposure following a left basal ganglia infarct. Despite excellent motor recovery with independent ambulation and return to work, he reported burning, electric shock-like pain with intensity of 9/10. Symptoms were stimulus-specific, occurring with air-conditioning exposure. Differential diagnoses including cervical radiculopathy and peripheral neuropathy were excluded clinically. He underwent

a multimodal rehabilitation approach including physiotherapy strengthening, occupational therapy for limb desensitisation, and pharmacological management. Gabapentin was poorly tolerated due to sedation, and switching to pregabalin resulted in significant symptom improvement.

Discussion: Although CPSP is classically associated with thalamic lesions, basal ganglia involvement may disrupt thalamocortical sensory processing, leading to maladaptive neuroplasticity and stimulus-specific allodynia. Beyond pharmacological and physical rehabilitation strategies, cognitive brain-based approaches such as pain neuroscience education and graded exposure to sensory triggers may help modulate central pain perception and improve coping. These strategies aim to reduce fear-avoidance behaviours and recalibrate central processing of sensory input, particularly in chronic pain states. This case highlights the importance of integrating multimodal strategies addressing both peripheral and central mechanisms of pain.

Conclusion: Cold-evoked CPSP should be considered in stroke survivors presenting with stimulus-specific neuropathic pain. Individualised pharmacological management combined with rehabilitation and cognitive-based strategies is essential. Primary care-led rehabilitation plays a key role in addressing complex post-stroke complications within the community.

Keywords: Stroke pain; Rehabilitation; Primary Care

Clinical Case Report / Case Series_21

Mimicking Heart Failure: A Hidden Renal Cell Carcinoma with Inferior Vena Cava Thrombus Revealed by POCUS in Primary care- A Case Report

#FMSC2026-039

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Introduction: Point-of-care ultrasound (POCUS) is increasingly utilised in primary care to enhance bedside diagnostic capability. While commonly used for cardiovascular and haemodynamic assessment, POCUS also has a significant role in detecting non-cardiac pathology.

Case Presentation: An 82-year-old male with no known medical illness presented with a 2-week history of bilateral lower limb swelling and reduced effort tolerance. Initial clinical assessment raised suspicion of cardiac failure. Bedside echocardiography using POCUS was performed and it was found to be normal. Unexpectedly, a left renal mass with extension into the inferior vena cava (IVC) suggestive of tumour thrombus was identified. Subsequent imaging confirmed the diagnosis of renal cell carcinoma (RCC) with IVC involvement.

Discussion: RCC is known for silent progression and may present with non-specific symptoms. Tumour thrombus extending into the IVC occurs in approximately 4–10% of RCC cases and is associated with poorer prognosis. This case highlights the expanded diagnostic value of POCUS beyond cardiac assessment, enabling early identification of life-threatening pathology in a primary care setting.

Conclusion: POCUS is a valuable adjunct in primary care, capable of detecting significant incidental findings. Its integration into routine clinical assessment may expedite diagnosis and referral, improving patient outcomes.

Keywords: Renal Cell Carcinoma, IVC Thrombus, POCUS, Primary Care.

Clinical Case Report / Case Series_22

The Great Mimicker Unmasked: A case of Paediatric Tuberculosis with Cardiac Sequelae Presenting as Severe Pneumonia

#FMSC2026-043

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Introduction: Paediatric tuberculosis (TB) remains a diagnostic challenge due to its non-specific presentation and its ability to mimic common respiratory infections, often resulting in delayed recognition and increased morbidity. This case highlights the critical role of primary care in early detection.

Case Presentation: A 12-year-old previously well girl presented with a two-week history of fever, cough, rhinorrhoea, lethargy, and reduced appetite. On examination, she was tachycardic and mildly tachypnoeic with oxygen saturation of 95% on room air and appeared mildly pale. Initial investigations revealed anaemia (Hb 9 g/dL) and thrombocytosis. Chest radiograph demonstrated right lung opacities with left-sided haziness, raising initial concern for severe pneumonia, prompting urgent referral to a tertiary centre. Further evaluation confirmed smear-positive pulmonary TB complicated by TB pericarditis. Computed tomography demonstrated extensive left lung collapse consolidation with cavitary lesions, bronchiectasis and global pericardial effusion. She required paediatric intensive care support with non-invasive ventilation. Management included anti-tuberculous therapy, corticosteroids, and treatment for concurrent vitamin D deficiency. She improved clinically and was discharged well with ongoing follow-up.

Discussion: Paediatric TB can closely mimic pneumonia, leading to diagnostic delay and severe complications such as pericarditis. Persistent or atypical symptoms should prompt consideration of TB, particularly in endemic settings. Early escalation from primary care is essential.

Conclusion: A high index of suspicion and timely referral are crucial to reduce morbidity and prevent life-threatening extrapulmonary complications in paediatric TB.

Keywords: Pulmonary Tuberculosis, Pericarditis Child

Clinical Case Report / Case Series_23

Point-of-Care Ultrasound (POCUS) for Post-Void Residual Assessment in Logistically Challenged Postpartum Patient: A Case Report

#FMSC2026-060

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Introduction: Postpartum urinary retention (PUR) is a complication of spontaneous vaginal delivery (SVD), associated with bladder dysfunction, urinary tract infections, and hydronephrosis. In primary care, assessing post-void residual (PVR) urine volume is valuable for patients with limited access to tertiary-level follow-up.

Case Presentation: A 25-year-old primigravida developed PUR 24 hours following a SVD. The delivery occurred after 12 hours of labour and complicated by a vaginal tear. Initial catheterisation drained 2 L of urine. However, voiding difficulty persisted and she had been discharged with catheter in situ; unfortunately, follow-up at a tertiary centre was unfeasible for her. On postpartum day 8, point-of-care ultrasound (POCUS) was performed using a curvilinear probe. The assessment demonstrated: Pre-void bladder volume: 304 mL [width (w) 8.31 cm x depth (d) 5.94 cm x height (h) 8.56 cm x correction coefficient (c) 0.72] • PVR: 107 mL (w 4.79 cm x d 4.08 cm x h 7.63 cm x c 0.72) POCUS guided clinical management and removal of the catheter. Repeat assessment on day 11 confirmed resolution, with a PVR of 8 mL (w 2.13 cm x d 1.51 cm x h 3.63 cm x c 0.72).

Discussion: The findings are consistent with the known mechanisms of PUR, including perineal trauma and secondary detrusor atony resulting from bladder overdistension. POCUS helps in monitoring PVR and catheter removal.

Conclusion: POCUS is a practical tool for managing PUR in primary care, particularly in resource-limited settings and reduces the need for unnecessary referrals.

Keywords: Postpartum, Urinary Retention, Point-of-Care Ultrasound

Clinical Case Report / Case Series_24

Missed Clues in Primary Care: Triple Positive Obstetric Antiphospholipid Syndrome Preceding Diagnosis of Systemic Lupus Erythematosus in a Pregnant Woman

#FMSC2026-061

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Introduction: Systemic Lupus Erythematosus (SLE) in pregnancy carries significant maternal and fetal risks, particularly when associated with antiphospholipid syndrome (APLS). Early recognition may be challenging when clinical manifestations are subtle, especially in patients with darker skin pigmentation, potentially leading to delayed diagnosis and recurrent pregnancy morbidity.

Case Presentation: A 32-year-old G6P3+2 woman presented with a history of recurrent pregnancy morbidity, including multiple

miscarriages, preterm deliveries and intrauterine death at 28 weeks secondary to severe preeclampsia with retroplacental haematoma. She was previously diagnosed with cervical incompetence requiring cerclage and subsequently found to have triple positive obstetric APLS. Since booking, she was noted to have persistent pancytopenia and proteinuria. On examination, features including malar rash, discoid lesions, oral ulcers, and alopecia were noted, raising suspicion of an underlying autoimmune condition. Further evaluation confirmed the diagnosis of SLE. She was managed under multidisciplinary care and commenced on enoxaparin, low dose aspirin, hydroxychloroquine, prednisolone and azathioprine with close maternal and fetal surveillance. Despite close multidisciplinary management and surveillance, the pregnancy was complicated by preterm delivery at 25 weeks, with subsequent neonatal demise.

Discussion: This case highlights a diagnostic gap where APLS was identified earlier, while underlying SLE was only recognised later. Early consideration of autoimmune overlap in patients with adverse obstetric outcomes may allow timely management. Primary care clinicians play an important role in recognising clinical features and patterns, and initiating appropriate investigations.

Conclusion: Early recognition of clinical features in patients with APLS is crucial for timely detection of underlying SLE and improved pregnancy outcomes.

Keywords: Systemic Lupus Erythematosus; Antiphospholipid Syndrome; Pregnancy Complications

Clinical Case Report / Case Series 25

When Rashes Deceive: Unveiling the Chameleon – HIV and Secondary Syphilis Hiding Behind Common Rashes

#FMSC2026-067

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Introduction: Rashes are a common presentation in primary care and are frequently attributed to benign allergic, inflammatory, or viral causes. However, diagnostic anchoring and incomplete history-taking may delay recognition of serious underlying diseases. Human immunodeficiency virus (HIV) and syphilis are well-known “great mimickers,” often presenting with dermatological features that resemble common conditions, leading to missed or delayed diagnoses.

Case Presentation: We present two cases highlighting this challenge. A 36-year-old man presented with a diffuse pruritic vesicular rash, initially treated as varicella-zoster infection. Despite antiviral therapy, his condition worsened over two weeks. Further investigations revealed negative varicella testing but confirmed HIV infection with a CD4 count.

Discussion: Both cases illustrate the pitfalls of diagnostic anchoring and omission of comprehensive sexual history in primary care. Persistent or atypical rashes, particularly those unresponsive to standard treatment, should prompt consideration of sexually transmitted infections. Early screening, thorough history-taking, and maintaining a high index of suspicion are essential to improve diagnostic accuracy, enable timely treatment, and prevent complications.

Conclusion: Atypical or persistent rashes demand a high index of suspicion. By prioritizing thorough sexual histories and avoiding diagnostic anchoring, clinicians can unmask “mimickers” like HIV and syphilis, ensuring timely treatment and preventing further transmission.

Keywords: HIV Infections Syphilis, Cutaneous Diagnostic Errors

Clinical Case Report / Case Series 26

From Suspected Trichorionic Triamniotic Pregnancy to Confirmed Quadruplets: A Rare Diagnostic Challenge in Primary Care

#FMSC2026-077

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Introduction: High-order multiple pregnancies are rare and associated with significant maternal and neonatal risks. Early diagnosis in the first trimester can be challenging due to limitations in ultrasonography. Recognition of separating membranes between gestational sacs membranes may provide important clues to fetal number.

Case Presentation: A 25-year-old primigravida presented for antenatal booking at 11 weeks’ gestation in a primary care clinic. Initial ultrasonography demonstrated three placentas with three fetuses but there were three distinct separating membranes seen, raising suspicion of a high-order multiple pregnancy beyond triplets. Recognising this membrane–fetus discrepancy, the patient was counselled and referred within one week to the Scan Clinic at Hospital Tengku Ampuan Afzan. Subsequent imaging with MFM Specialist confirmed a quadruplet pregnancy with a trichorionic quadriamniotic (TCQA) configuration. The pregnancy was a spontaneous conception, complicated by iron deficiency anaemia, gestational diabetes mellitus, preterm labour and subclinical chorioamnionitis. She underwent emergency LSCS at 28 weeks and 1 day gestation and all four neonates survived following neonatal intensive care support.

Discussion: In early gestation, fetal number may be underestimated due to overlapping sacs, technical limitations and operator dependency. The presence of additional interfoetal membranes can serve as an important clue to higher fetal number. This case highlights the importance of correlating membrane count with fetal visualisation and maintaining clinical suspicion when discrepancies arise.

Conclusion: Primary care plays a pivotal role in recognising early sonographic inconsistencies, initiating appropriate counselling and ensuring timely referral. Awareness of membrane–fetus mismatch may facilitate earlier suspicion of high-order multiple pregnancy and optimise maternal and neonatal outcomes.

Keywords: Multiple Pregnancy; Ultrasonography, Prenatal; Fetal Membranes.

Clinical Case Report / Case Series_27

Negative Tests, Positive Diagnosis: Discordant Serology in Secondary Syphilis in Primary Care

#FMSC2026-082

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Introduction: Syphilis, caused by *Treponema pallidum*, remains a diagnostic challenge due to its diverse clinical manifestations and ability to mimic other conditions. Interpretation of serological tests can be complex, particularly when discordant results occur between treponemal and non-treponemal assays. In primary care, reliance on point-of-care testing may lead to false-negative results and delayed diagnosis.

Case Presentation: A 24-year-old woman presented with a one-week history of a non-pruritic maculopapular rash involving the palms and soles, with mild upper respiratory symptoms and a history of unprotected sexual exposure three months prior. Examination findings were consistent with secondary syphilis. Initial point-of-care tests, including syphilis rapid test and rapid plasma reagin (RPR) with serial dilution, were non-reactive. However, repeat testing at a tertiary laboratory revealed positive *Treponema pallidum* particle agglutination assay (TPPA) and a reactive RPR (titre 1:16), confirming the diagnosis. The patient was treated with intramuscular benzathine penicillin G and scheduled for follow-up serological monitoring.

Discussion: Despite classical features, both point-of-care and initial RPR tests were non-reactive, reflecting limitations. Point-of-care tests may have reduced sensitivity and are affected by operator and kit variability, leading to false negatives. RPR is also limited by stage-dependent sensitivity, prozone effect, and inter-laboratory variability. Confirmatory treponemal testing is essential. This case underscores the importance of clinical judgment, combined testing, and consistent follow-up, particularly in women of reproductive age to reduce risk of vertical transmission.

Conclusion: Negative point-of-care and non-treponemal tests do not exclude active syphilis, highlighting importance of clinical suspicion and the need for confirmatory testing in discordant cases within primary care.

Keywords: Syphilis, Point of Care Testing, Discordant Serology

Clinical Case Report / Case Series_28

When Psychological Distress Reveals an Underlying Congenital Condition: A Case of Mayer–Rokitansky–Küster–Hauser Syndrome

#FMSC2026-089

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Introduction: Primary care plays a pivotal role in the holistic assessment of patients, particularly young individuals presenting with non-specific psychological or social concerns. A comprehensive biopsychosocial approach is essential to identify underlying organic conditions that may otherwise be overlooked.

Case Presentation: We report a case of a 20-year-old woman who presented to a primary care clinic with social isolation and depressive symptoms, brought in by her parents. Initial assessment revealed poor eye contact and limited verbal engagement. Screening for psychological distress using the Whooley questions and Patient Health Questionnaire-9 (PHQ-9) indicated moderate depression.

Discussion: Adopting a holistic assessment approach, further history revealed primary amenorrhoea which prompted further evaluation. Bedside pelvic ultrasound was unable to visualise the uterus, leading to outpatient magnetic resonance imaging (MRI), which confirmed absence of the uterus, cervix, and upper vaginal segment, consistent with Mayer–Rokitansky–Küster–Hauser (MRKH) syndrome. MRKH syndrome is a rare congenital condition, occurring in approximately 1 in 4,500 female births, and is a recognised cause of primary amenorrhoea. It has significant psychosocial and mental health consequences, particularly as diagnosis often occurs during adolescence or early adulthood. Management was initiated in primary care with counselling and emotional support, followed by referral to a multidisciplinary team including family medicine specialists, obstetrics and gynaecology, psychiatry, counselling services and occupational therapy.

Conclusion: This case highlights the importance of holistic assessment in primary care. A whole-person approach enables early identification of underlying conditions, facilitates timely diagnosis and referral, and ensures coordinated multidisciplinary care, thereby improving patient outcomes.

Keywords: MRKH Syndrome, Primary Amenorrhoea, Holistic approach

Clinical Case Report / Case Series_29

Local Anaesthetic Systemic Toxicity Mimicking Panic Attack: A Diagnostic Challenge in Primary Care

#FMSC2026-094

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Introduction: Local Anaesthetic Systemic Toxicity (LAST) is a rare but potentially life-threatening complication of local anaesthetic use. It often presents with early neurological and cardiovascular features that may resemble a panic attack, making prompt recognition essential to improve outcomes.

Case Presentation: A 34-year-old woman with a history of panic disorder, on sertraline 50 mg nightly, developed sudden shortness of breath, chest discomfort, shivering, metallic taste, and perioral numbness approximately 10 minutes after dental extraction under local anaesthesia (mepivacaine 2%, 6.6 mL). On arrival, she was alert but anxious, with tachycardia (120 bpm) and elevated blood pressure (154/96 mmHg). Examinations showed generalised shivering and muscle rigidity without focal neurological deficits, while oxygen saturation remained stable on room air. She was managed as suspected LAST with supportive care, including intravenous fluids and oxygen. Her condition remained stable, with no progression to seizures or cardiovascular compromise, and she was discharged the following day after medical and psychiatric review.

Discussion: This case highlights the diagnostic challenge between LAST and panic attack. While both may present with respiratory and autonomic symptoms, neurological features such as metallic taste and perioral numbness are more suggestive of LAST. The temporal association with local anaesthetic exposure further supported the diagnosis

Conclusion: Accurate differentiation between LAST and panic attack requires careful attention to timing and neurological features to ensure safe and timely management. Early recognition in primary care is crucial to avoid misdiagnosis and unnecessary escalation of anxiety-related treatment, ensuring appropriate monitoring and supportive management are promptly instituted for patient safety

Keywords: Local Anaesthetic Toxis Syndrome(LAST), Panic Disorder, Primary Care

Clinical Case Report / Case Series_30

Evaluating Wound-Healing Progress and Pain Relief Following High-Intensity Laser Therapy (HILT) in a Diabetic Foot Wound: Clinical Case Series Report

#FMSC2026-102

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Introduction: Diabetes mellitus is a chronic metabolic disorder that often leads to non-healing diabetic foot ulcers (DFUs), driven by neuropathy and impaired microcirculation. Conventional management, including debridement, infection control, and glycemic optimization, may be insufficient in chronic cases. High-Intensity Laser Therapy (HILT) has emerged as a promising adjunctive modality due to its ability to stimulate cellular activity, enhance collagen synthesis, and reduce inflammation and pain. However, evidence from real-world primary care settings remains limited. This abstract evaluates the effectiveness of HILT in accelerating wound healing and improving outcomes in patients with chronic DFUs.

Case Presentation: Two diabetic patients with chronic neuropathic foot ulcers unresponsive to prolonged standard care were treated with adjunctive HILT. In Case 1, a 55-year-old patient with a persistent ulcer achieved complete epithelialization within 4 weeks, with pain reduction from 4/10 to 0/10. In Case 2, a 48-year-old patient with a year-long non-healing ulcer achieved full closure after 8 weeks of HILT, also with complete pain resolution. Treatment involved twice-weekly application of dual-wavelength laser therapy alongside standard wound care.

Discussion: This case series demonstrates that HILT can significantly accelerate wound closure and relieve pain in chronic DFUs. The therapy enhances tissue regeneration and supports wound contraction when combined with standard care. Objective monitoring using wound measurements and pain scores confirmed consistent improvement.

Conclusion: HILT is an effective adjunctive therapy for chronic DFUs, reducing healing time and improving patient outcomes. Its integration into primary care may lower complications, including amputation risk, while enhancing quality of life.

Keywords: Diabetic Foot Laser therapy

Clinical Case Report / Case Series_31

“Acute Scrotal Pain in Children: Prioritising Exclusion of Testicular Torsion”

#FMSC2026-105

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Introduction: Acute scrotal pain in children presents a diagnostic challenge in primary care, where distinguishing testicular torsion from benign conditions such as orchitis is critical yet often challenging.

Case Presentation: We report a case of an 11-year-old boy who presented with a sudden onset of severe left-sided scrotal pain of a few hours' duration. The pain was exacerbated by touch and occurred without associated trauma, fever, urinary, or gastrointestinal symptoms. On examination, the patient appeared distressed but was afebrile and not septic. Local findings revealed a swollen and markedly tender left hemiscrotum without signs of infection. There was no high-riding testis, and the cremasteric reflex was not assessed due to severe pain. The contralateral testis was normal. Given the acute onset, testicular torsion was strongly suspected, and the patient was urgently referred for surgical evaluation. He subsequently underwent scrotal exploration and orchidopexy, with intraoperative findings however consistent with orchitis.

Discussion: Testicular torsion and orchitis are two primary causes of acute scrotal pain that, despite having different causes and treatment approaches, often have significant overlapping symptoms, making differentiation difficult in up to 50% of cases. As testicular torsion may lead to irreversible ischemic injury within hours, timely recognition and urgent referral remain essential. The decision to refer this patient urgently reflects appropriate and safe primary care practice although the end diagnosis is orchitis.

Conclusion: In children with acute scrotal pain, it is crucial to maintain a high index of suspicion and prioritise exclusion of torsion, as delayed diagnosis may lead to significant and irreversible complications.

Keywords: Scrotal Pain, Testicular Torsion, Orchitis

Clinical Case Report / Case Series_32

Young Ischaemic Stroke Secondary to Cardiac Myxoma in a Patient with Substance Abuse: A Primary Care Perspective

#FMSC2026-109

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Introduction: Stroke is the third leading cause of mortality in Malaysia, with ischaemic stroke being the predominant subtype. Although it mainly affects older adults, incidence among younger populations is rising, where non-traditional aetiologies such as cardioembolism and substance abuse must be considered.

Case Presentation: A 33-year-old male with a history of methamphetamine use and smoking presented with a two-week history of left-sided weakness following release from prison. Examination revealed left hemiparesis with upper motor neuron signs. Neuroimaging confirmed the right middle cerebral artery infarct. Echocardiography demonstrated a large left atrial myxoma (~9 cm²) prolapsing into the left ventricle, consistent with a cardioembolic source. Laboratory findings showed microcytic hypochromic anaemia and elevated inflammatory markers. The patient was treated with antiplatelet therapy, statin, and rehabilitation, followed by surgical excision of the tumour.

Discussion: Cardiac myxoma is a rare but important cause of young stroke, with up to 30–50% presenting with embolic events. This case highlights diagnostic challenges when conventional risk factors are absent. Although substance abuse contributes to stroke risk, the temporal profile suggests myxoma as the primary cause. From a primary care perspective, missed opportunities include lack of early risk screening, substance use assessment, and continuity of care during incarceration. Comprehensive management should integrate secondary prevention, relapse monitoring, smoking cessation, and psychosocial support.

Conclusion: Young stroke warrants evaluation for uncommon causes. Strengthening primary care screening and continuity, particularly in high-risk populations, is crucial to prevent delayed diagnosis and adverse outcomes.

Keywords: Young Stroke, Cardiac Myxoma, Substance Abuse

Clinical Case Report / Case Series_33

Beyond Truancy: A Multisystemic Approach to Adolescent School Refusal in Primary Care

#FMSC2026-117

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Introduction: School absenteeism is rising in recent years, with 25.6% of Malaysian adolescents reported to display truancy behaviour. Truancy has often been perceived as “being rebellious” but there is a growing shift toward recognising that school refusal is often rooted in deeper psychological issues requiring timely, non-punitive intervention.

Case Presentation: A 15-year-old girl was brought to Luyang health clinic due to chronic school absenteeism. She was suffering from major depressive disorder which was triggered by peer bullying, academic pressure and the systemic lack of support within school. Additionally, she came from a single-parent, low-income household. A comprehensive management plan that included pharmacological treatment with SSRI, psychoeducation, referrals to counsellor and occupational therapist, engagement with her family, best friend and school were carried out to aid in her transition back to school. She finally returned to school after five months and has been attending school daily ever since.

Discussion: This case represents a shift from simple truancy to “clinical” school refusal. Given the intersection between depression, bullying and socioeconomic disadvantage, a multisystemic

approach was undertaken to address these problems. Besides clinical intervention, family therapy, school engagement and enlistment of other relational resources were conducted to provide a supportive reintegration to school

Conclusion: School refusal is a complex condition related to underlying psychological distress with many interlinked factors. Family medicine specialists are increasingly evolving from traditional clinical providers into central coordinators of care, integrating interventions across the patient's ecosystems- family, school, peers and community- to address the complex biopsychosocial roots of school refusal.

Keywords: Adolescent, School Refusal, Mental Health

Clinical Case Report / Case Series_34

Conservative Management of Intradural Extramedullary Spinal Cord Tumour in Pregnancy: A Case Report

#FMSC2026-121

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Introduction: Intradural extramedullary (IDEM) tumours are rare in pregnancy and are typically benign, with spinal meningiomas accounting for up to 45% of adult intradural tumours. Hormonal influences during pregnancy may accelerate tumour growth, carrying risks to both mother and fetus. Clinical presentation is often nonspecific, frequently mimicking benign musculoskeletal conditions, which can delay diagnosis.

Case Presentation: A 31-year-old primigravida at 13 weeks' gestation presented to a primary care clinic with bilateral lower limb weakness that had worsened over three weeks. She subsequently developed difficulty with ambulation and sustained a fall at 14 weeks of gestation. The straight leg raise test was positive bilaterally and was referred for further evaluation. MRI demonstrated an intradural extramedullary lesion at T7/T8 (0.7 × 1.0 × 1.5 cm), suggestive of meningioma (differential: nerve sheath tumour), with spinal cord compression, cord oedema, and right T8 nerve root involvement. Although surgical intervention was advised, the patient declined due to concerns regarding fetal safety and opted for conservative management. She subsequently showed mild improvement with oral dexamethasone.

Discussion: This case illustrates the diagnostic challenge of IDEM tumours in pregnancy due to overlapping benign symptoms. Early identification of neurological red flags in primary care is crucial to prevent delayed intervention. Management remains complex, requiring a balance between maternal neurological preservation and fetal safety. Conservative management may be considered in selected cases, although it carries the risk of neurological deterioration.

Conclusion: Timely recognition, multidisciplinary care, and shared decision-making are essential in optimising maternal and fetal outcomes in such rare presentations.

Keywords: Spinal Meningioma, Pregnancy, Conservative

Clinical Case Report / Case Series_35

Early Detection of Cystic Hygroma with Hydrops Foetalis in Primary Care: A Case Report Experience From the Heart of Malaysian Borneo

#FMSC2026-130

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Introduction: Cystic hygroma, when associated by hydrops fetalis, carry a dismal prognosis. This necessitates early detection for timely intervention. In remote, resource-restricted setting, identifying rare congenital anomalies is often hindered by significant geographical and infrastructure barriers.

Case Presentation: We report the case of a 40-year-old multiparity, at 17 weeks gestation who presented to a remote rural clinic for routine follow-up. Despite physical hardship and extreme distance from specialist care, the primary care provider uses point of care ultrasound to identify a prominent posterior cervical cystic mass and generalized foetal skin oedema. The diagnosis of cystic hygroma with hydrops fetalis was subsequently confirmed at a tertiary maternal-foetal medicine unit, leading to a planned medical termination of pregnancy. Following the loss, the patient received comprehensive primary care follow-up, including bereavement support, contraception, and pre-pregnancy optimization.

Discussion: This case highlights point-of-care ultrasound's critical role in primary care for detecting fetal anomalies like concurrent cystic hygroma and hydrops fetalis. Despite severe regional limitations in Malaysian Borneo, a vigilant provider ensures early diagnosis and seamless tertiary referral. Furthermore, family physicians uphold comprehensive continuity of care by providing essential postpartum bereavement support, tailored contraception, and routine non-communicable disease screening locally.

Conclusion: This case underscores the vital role of clinical vigilance and the application of primary care principles including first contact, continuity, coordination, and comprehensive care even in the most underserved localities. It highlights how strengthening rural primary care infrastructure and diagnostic training can ensure that geographical extremity is not a barrier to high-standard obstetric and holistic patient care.

Keywords: Hydrops Foetalis, Rural Health, Point-of-Care Ultrasound

Clinical Case Report / Case Series_36

Double Trouble: A Rare Case of Peyronie's Disease on a Background of Rheumatoid Arthritis

#FMSC2026-135

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Introduction: Peyronie's disease (PD) is a localized fibrotic disorder of the tunica albuginea characterized by plaque formation, penile curvature, and sexual dysfunction. Rheumatoid arthritis (RA) is a chronic systemic autoimmune disease associated with inflammation-driven fibrosis. The coexistence of PD and RA is uncommon, and the effect of disease-modifying therapy such as Methotrexate (MTX) on this association remains unclear.

Case Presentation: A 39-year-old man with a 5-year history of seropositive RA on MTX 20 mg weekly and prednisolone 7.5 mg daily presented with 1 year of progressive penile curvature, painful erections, and mild erectile dysfunction. He denied trauma or infection. Examination revealed a palpable right penile plaque with approximately 30° right lateral curvature. Laboratory tests showed well-controlled inflammatory markers and low RA disease activity. He was managed conservatively with counselling, analgesia, and Vitamin E 400iu daily, as he declined invasive treatment.

Discussion: This case highlights a possible shared fibrotic pathway between RA and PD. Chronic systemic inflammation may promote aberrant connective tissue remodeling beyond joints. Although MTX has antifibrotic properties in other conditions, its role in PD remains uncertain, with no evidence of causation or protection. Management depends on disease severity and phase. Intralesional collagenase Clostridium histolyticum is the gold standard non-surgical therapy, while tunical plication or plaque incision with grafting remains the surgical standard for stable or severe cases.

Conclusion: The coexistence of PD and RA is rare but clinically relevant. Awareness of extra-articular fibrotic manifestations in RA is important to minimize excessive curvature that may affect penile function, mental health and sexual relationships.

Keywords: Peyronie's Disease, Rheumatoid Arthritis, Methotrexate

Clinical Case Report / Case Series_37

Taenia Taeniaeformis, A Rare Tapeworm Infection in a 10-Month-Old Infant. A Case Report

#FMSC2026-144

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Introduction: Tapeworm infection is rare in Malaysia due to improved sanitation and food safety practices. This case reports a rare tapeworm infection in an infant.

Case Presentation: A 10-month-old boy was brought in by his mother complaining that the child had passed out five worms in his stool. The worms were short, flat and white in colour. There was no blood and mucus in the stool. The child had no vomiting nor abdominal distention but was feeding well. He was not pale and active on examination. The mother and child stay in a suburban terraced house together with 10 family members. They have six pet cats and a few wild cats freely roaming around the house. The child was often noticed playing with the cats. The other family members did not have similar symptoms. Stool for ova and cyst reported as Taenia taeniaeformis with its proglottid seen. The child was treated with a dose of albendazole 200mg and two repeated stool tests confirmed full recovery.

Discussion: Taenia taeniaeformis is a tapeworm primarily infecting

cats and rodents whereas humans are accidental hosts. Infection occurs through fecal-oral route and it is often asymptomatic. Diagnosis is made through identification of proglottids in feces. Treatment is antihelmintic medication.

Conclusion: This case demonstrates humans as an accidental host for taenia commonly infecting cats. Personal and environmental hygiene including pets should be emphasised as a preventive step from taenia infection.

Keywords: Tapeworm, Infant, Taenia Taeniaeformis

Clinical Case Report / Case Series_38

A Pragmatic Offloading Innovation: Double-Layer Gamgee Technique for Accelerated Healing of a Chronic Plantar Diabetic Foot Ulcer

#FMSC2026-152

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Introduction: Diabetic foot ulcers (DFUs) remain a significant cause of morbidity and healthcare burden, particularly in resource-limited settings. Plantar DFUs are challenging due to persistent mechanical loading, which impairs tissue perfusion and delays wound healing. Although offloading is the cornerstone of DFU management, its implementation in primary care is often limited by cost and lack of access to specialised devices. This report describes a pragmatic modification of a double layer gamgee offloading technique for plantar pressure redistribution in chronic DFU management.

Case Presentation: A 46-year-old woman with diabetes mellitus presented with an 18-month history of a chronic plantar DFU at the hindfoot. Clinical assessment revealed wound pocketing, heavy exudate, macerated peri-wound skin, and non-progressive wound edges, suggestive of chronic infection. Standard wound care included sharp, mechanical, and autolytic debridement, antimicrobial dressings, exudate control, and peri-wound skin protection. Offloading was achieved using a double layer gamgee padding technique applied to the surrounding non-ulcerated plantar areas, creating a suspension effect that redistributed plantar pressure away from the ulcer site.

Discussion: Following implementation of the offloading intervention, progressive wound improvement was observed. Wound surface area was reduced by 76% at week 7 and 95% at week 11, with complete epithelialisation achieved by week 12.

Conclusion: A chronic plantar DFU of 18 months' duration achieved complete healing within 12 weeks following effective mechanical offloading. This case reinforces the critical role of pressure redistribution in wound healing and highlights a simple, low-cost, pragmatic strategy that may improve DFU outcomes in primary care settings.

Keywords: Diabetic Foot Ulcer, Offloading, Pressure Redistribution

Clinical Case Report / Case Series_39

Losing More Than Hair: A Diagnostic Challenge of Secondary Syphilis

#FMSC2026-155

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Introduction: Syphilitic alopecia (SA) is an uncommon cutaneous manifestation of secondary syphilis. Its resemblance to other forms of hair loss can lead to diagnostic challenges and delays in appropriate management.

Case Presentation: A 22-year-old male college student presented with a 2-month history of progressive patchy hair loss over the scalp. He denied any associated pruritus, pain, or prior history of autoimmune disease. His sexual history was significant for sex with men. Examination of the scalp revealed multiple small, irregular, non-scarring patches of alopecia over the parieto-occipital regions. No rash was observed on the palms or soles, and there was no lymphadenopathy. Serological investigations showed a reactive Rapid Plasma Reagin (RPR) test with a titer of 1:16. The Treponema pallidum Particle Agglutination (TPPA) test was also reactive. HIV screening was non-reactive. A diagnosis of secondary syphilis presenting as moth-eaten syphilitic alopecia was made. The patient was treated with a single intramuscular dose of benzathine penicillin G. At the 3-month follow-up, the patient demonstrated significant regrowth of terminal hair in affected areas. Repeat RPR testing was non-reactive, indicating a successful response to treatment.

Discussion: Syphilitic alopecia is frequently misdiagnosed as alopecia areata or tinea capitis due to its overlapping clinical features. In patients presenting with sudden-onset, patchy, "moth-eaten" hair loss, clinicians should maintain a high index of suspicion for syphilis, particularly in those with high-risk sexual behavior.

Conclusion: Syphilitic alopecia is a reversible condition. Early recognition, appropriate serological screening and treatment are essential to prevent progression to tertiary syphilis and to interrupt disease transmission.

Keywords: Syphilis, Alopecia, High Risk Sexual Behaviour

Clinical Case Report / Case Series_40

The Silent Danger: A Case of Unrecognized Intranasal Button Battery Impaction in a Child with Autism Spectrum Disorder (ASD).

#FMSC2026-160

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Introduction: Intranasal foreign bodies (IFBs) are common in children, and button battery impactions represent a surgical emergency due to the risk of rapid tissue destruction via electrochemical burns and liquefactive necrosis. Diagnosis is challenging in children with neurodevelopmental disorders, where unreliable clinical histories and difficult physical examination are common.

Case Presentation: A 9-year-old Malay boy with ASD and slow

learner presented with a two-month history of alternating, foul-smelling, greenish nasal discharge. The symptoms developed after an episode of being punched by a classmate, leading to epistaxis. There was no reported foreign body insertion. Initial assessments at the health clinic and the emergency department attributed the rhinosinusitis and the epistaxis to unknown causes, respectively. Subsequent ENT assessment was initially limited by the patient's uncooperative behaviour, showing only inferior turbinate hypertrophy and old blood clots. Persistent symptoms prompted a nasal endoscopy during a subsequent visit, which identified bilateral purulent discharge and a suspicious foreign body, and an X-ray confirmed the presence of a button battery. The diagnosis was revised to intranasal button battery impaction with suspected septal perforation. The patient was scheduled for urgent foreign body removal under general anaesthesia.

Discussion: This case highlights the importance of maintaining a high index of clinical suspicion for IFBs in children presenting with chronic foul-smelling nasal discharge in the absence of witnessed or reported foreign body insertion.

Conclusion: In patients with ASD, where communication barriers may mask clinical presentation, clinicians should prioritize definitive imaging or bedside endoscopy to ensure early recognition and prevent complications such as septal perforation.

Keywords: Nasal Septal Perforation, Autism Spectrum Disorder, Chemical

Clinical Case Report / Case Series_41

Gullain-Barré Syndrome in Pregnancy

#FMSC2026-174

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Introduction: Acute inflammatory demyelinating polyneuropathy (AIDP), the commonest variant of Guillain-Barré syndrome, is rare during pregnancy and may mimic metabolic or electrolyte-related neuromuscular disorders. Delayed diagnosis can result in significant maternal and fetal morbidity, making early recognition and multidisciplinary management essential.

Case Presentation: A 25-year-old primigravida at 21 weeks and 4 days of gestation with maternal obesity (booking BMI 30.49) and risk factors for gestational diabetes mellitus presented with a one-week history of progressive bilateral upper and lower limb numbness, worsening over four days with difficulty ambulating. She had a history of prolonged fasting and poor oral intake. Examination revealed dry mucous membranes, bilateral lower limb weakness (power 4/5), upgoing plantar reflexes, and preserved tone and reflexes. Initial investigations, including fbc, electrolytes, were unremarkable, and she was initially treated for suspected electrolyte imbalance secondary to improper fasting. During admission, she developed ascending weakness involving the upper limbs and right facial weakness. Further investigations, including thyroid function, autoimmune screening, vitamin B12, cortisol, infective workup, and anti-ganglioside antibodies, were unremarkable. Nerve conduction studies suggested AIDP, with acute motor axonal neuropathy as a differential diagnosis. Intravenous immunoglobulin therapy was initiated for five days, resulting in marked clinical improvement.

Discussion: AIDP in pregnancy may present atypically and resemble metabolic or nutritional disorders, contributing to diagnostic delay. Progressive ascending weakness with cranial nerve involvement should raise suspicion for Guillain-Barré syndrome despite initially normal investigations.

Conclusion: Early neurological assessment and timely initiation of IVIG are crucial to achieve favorable maternal and fetal outcomes in pregnancy-associated AIDP.

Keywords: Gullain-Barré Syndrome

Clinical Case Report / Case Series_42

Acute Angle-Closure Glaucoma in a Young Patient with End-Stage Renal Failure and Multiple Systemic Comorbidities

#FMSC2026-184

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Introduction: Acute Angle Closure Glaucoma (AACG) is an ophthalmic emergency requiring rapid diagnosis to prevent irreversible visual loss. Secondary causes of angle closure must be considered in younger patients and those with diabetic eye disease. Management becomes more complex in individuals with End Stage Renal Failure (ESRF), where osmotic agents are contraindicated.

Case Presentation: A 33 year old Malay woman with Diabetes Mellitus, Hypertension, Asthma, and ESRF on hemodialysis presented with four days of worsening left eye pain and redness, followed by sudden vision loss associated with headache, nausea, and vomiting. Examination revealed blood pressure of 153/86 mmHg, a mid dilated pupil, positive Relative Afferent Pupillary Defect, conjunctival injection, and absent red reflex. ECG showed normal sinus rhythm. The clinical impression was AACG. She received analgesia and antiemetic therapy, and urgent ophthalmology referral was initiated. Her ESRF status limited the use of osmotic agents, while her defaulted Non Proliferative Diabetic Retinopathy (NPDR) follow up raised suspicion for secondary angle closure due to neovascularization. Systemic symptoms were stabilized while awaiting definitive ophthalmologic intervention. Coordination between emergency and ophthalmology teams was essential.

Discussion: This case highlights the importance of maintaining high suspicion for secondary AACG in young patients with diabetic eye disease. ESRF complicates standard intraocular pressure-lowering strategies, underscoring the need for early recognition and multidisciplinary management.

Conclusion: AACG should remain a differential diagnosis in young patients with acute visual loss, especially those with diabetes and ESRF. Prompt ophthalmologic referral is crucial to prevent permanent vision impairment.

Keywords: Acute Angle-Closure Glaucoma, End-Stage Renal Failure, Non-Proliferative Diabetic Retinopathy

Clinical Case Report / Case Series 43

When Stroke Is Not Stroke: Diabetic Striatopathy Presenting as Hemichorea in Primary Care

#FMSC2026-196

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Introduction: Diabetic striatopathy is a rare but reversible neurological manifestation of poorly controlled diabetes mellitus characterized by hemichorea and basal ganglia abnormalities on neuroimaging. Due to its stroke-like presentation, delayed recognition may result in diagnostic uncertainty and prolonged morbidity.

Case Presentation: We report a 61-year-old Malay woman with longstanding uncontrolled Type 2 Diabetes Mellitus, hypertension, hypertensive cardiomyopathy, and hyperlipidaemia who had defaulted follow-up for two years. She presented with progressively worsening involuntary dance-like movements involving the left upper and lower limbs associated with facial twitching for two weeks. The abnormal movements were non-suppressible, improved during sleep, and significantly impaired daily functioning. Initial neurological assessment raised suspicion of acute stroke; however, computed tomography of the brain was unremarkable. Laboratory investigations revealed severe hyperglycaemia with HbA1c of 17.4%, random blood glucose of 13.1 mmol/L, and negative ketonuria.

Discussion: She was diagnosed with left hemichorea secondary to metabolic causes and initially treated with clonazepam with no response despite improving glycaemic control. In view of persistent symptoms, early magnetic resonance imaging was arranged, demonstrating T1-weighted hyperintensity in the right basal ganglia, consistent with non-ketotic hyperglycemic hemichorea syndrome, also known as diabetic striatopathy. Risperidone was initiated, followed by adjunctive topiramate in collaboration with the neuromedical team, resulting in marked clinical improvement within one month alongside intensive diabetic optimisation.

Conclusion: This case highlights the importance of recognising diabetic striatopathy as a reversible stroke mimic in primary care. Early recognition, timely neuroimaging, multidisciplinary management, and aggressive glycaemic optimisation are essential to prevent prolonged disability and achieve favourable functional recovery.

Keywords: Hemichorea, Hyperglycemia, Diabetes Mellitus Type II

Clinical Case Report / Case Series 44

An Unexpected Leak: Dose-Dependent Urinary Incontinence Associated with Sertraline Use

#FMSC2026-199

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Introduction: Urinary incontinence is a rare but underrecognised adverse effect of selective serotonin reuptake inhibitors (SSRIs). Sertraline has been implicated in several case reports, yet clinician awareness remains limited.

Case Presentation: A man in his 20s with stable retroviral disease on HAART and persistent depressive disorder on sertraline presented with a one-year history of almost daily involuntary urinary leakage. Episodes occurred during sleep and daytime sitting, without dysuria, haematuria, frequency, neurological symptoms, or constitutional features. Symptoms emerged following dose escalation to 175 mg and persisted despite reduction to 100 mg and later 75 mg. Examination, urinalysis, and blood glucose testing were unremarkable. The patient self-discontinued sertraline, after which incontinence resolved completely. Mood remained stable, supported by psychosocial improvements.

Discussion: A clear temporal association between dose escalation and symptom onset, persistence despite dose reduction, and complete resolution upon cessation supports a probable adverse drug reaction per the Naranjo Adverse Drug Reaction Probability Scale. No alternative urological, neurological, or metabolic cause was identified, with antiretroviral and HIV-related causes excluded. Sertraline likely contributes to detrusor overactivity through serotonergic modulation of M3 muscarinic and 5-HT₄ receptor pathways, disrupting the normal storage-voiding balance.

Conclusion: Sertraline should be considered a potential reversible cause of new-onset urinary incontinence in young adults, particularly following dose escalation. Although uncommon, this adverse effect may significantly impair quality of life and contribute to considerable patient distress. Clinicians should therefore maintain a high index of suspicion, perform a thorough medication review, and recognise the condition early to facilitate timely intervention and prevent unnecessary investigations and prolonged morbidity.

Keywords: Sertraline, Urinary Incontinence; Adverse Drug Reaction

Clinical Case Report / Case Series 45

From Arm Swelling to Breast Cancer Diagnosis: A Primary Care Challenge

#FMSC2026-221

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Introduction: Breast cancer remains the commonest cancer among Malaysian women with almost half of the cases detected at advanced stages. Factors such as poor health literacy, lack of awareness and inadequate screening contribute to delayed presentation. Breast cancer may present atypically to outpatient clinics, especially in areas with low educational background.

Case Presentation: We reported a case of a 48-year-old lady with no comorbidity, working as restaurant waiter complaining solely of right upper limb swelling and facial puffiness over the past three weeks. Initial differential diagnosis includes occupational-related shoulder ligamentous injury, nephrotic syndrome and primary lymphedema. Patient was given appointment for baseline

blood and urine investigation with reassessment in a week due to absence of breast-related symptoms. During the subsequent follow up, investigations were unremarkable. However, ongoing symptoms prompted a more thorough examination which incidentally revealed a firm right breast lump with axillary lymphadenopathy. The patient has no prior awareness to her breast mass or experienced any constitutional symptoms. Urgent breast clinic referral was done. Biopsy confirmed the diagnosis of ductal carcinoma in situ (DCIS).

Discussion: This case highlights the importance of in the absence of breast-related symptoms, persistent unilateral arm swelling should prompt suspicion of occult malignancy, including breast cancer. It also emphasises the need for effective safety-netting, follow-up, and reassessment in unresolved cases with inconclusive initial investigations to avoid delays in diagnosis.

Conclusion: Healthcare providers in primary care should strive to close the gap in breast-health awareness through promoting self-breast examination, scheduled mammogram screening and early breast cancer detection through holistic clinical assessment.

Keywords: Breast Cancer, Arm Swelling, Primary Care

Clinical Case Report / Case Series_46

POCUS in Practice: Diagnosing Life-Threatening Emergencies in Primary Care

#FMSC2026-245

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Introduction: Point-of-care ultrasound (POCUS) is emerging as a fast, portable, and affordable method for diagnosing cardiopulmonary issues at the bedside. Yet, despite its global rise, its potential to enhance standard diagnostic pathways remains largely untapped in Malaysian primary care.

Case Presentation: Case 1: A 29-year-old Myanmar woman with language barrier presented with chronic cough, fever, and weight loss. Physical examination revealed hyperpigmentation on bilateral cheeks, scattered mouth ulcers with chapped lips, muffled heart sounds with displaced apex beat, and bilateral pedal oedema. ECG revealed poor R wave progression. Bedside POCUS revealed global hypokinesia and pericardial effusion and facilitated an immediate emergency referral for a life-threatening newly diagnosed Systemic Lupus Erythematosus (SLE) flare with pericardial effusion. Case 2: A 50-year-old medical staff with multiple comorbidities presenting with mild exertional dyspnoea. He was hemodynamically stable with normal physical findings and nonspecific ECG changes (Right Bundle Branch Block). POCUS unexpectedly revealed a left ventricular thrombus. This incidental discovery drastically altered patient management from a routine outpatient workup to a medical emergency, averting potentially fatal embolic complications such as stroke.

Discussion: These two presentations underscore the transformative diagnostic power of POCUS in the primary care setting. By empowering providers to look beyond stable clinical exteriors and overcome severe communication limitations, bedside ultrasound effectively prevents catastrophic patient outcomes. Although

widespread adoption in Malaysia faces hurdles—primarily the need for standardized, goal-directed training programs—the clinical benefits are undeniable

Conclusion: Ultimately, POCUS represents a critical paradigm shift in patient safety, optimizing resource allocation and expediting urgent referrals across all clinical diagnostic pathways.

Keywords: POCUS, Primary Care

Clinical Case Report / Case Series_47

Beyond Reassurance: Subtle Symptoms Revealing Anterior Mediastinal Mass Suspicious for Cystic Teratoma

#FMSC2026-248

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Introduction: Mediastinal cystic teratomas are rare, slow-growing tumours that may remain clinically silent or present with non-specific symptoms, contributing to delayed recognition. In primary care, this challenge is amplified when adolescents present during stressful periods, where musculoskeletal or psychosocial explanations may appear plausible.

Case Presentation: A 17-year-old girl presented after SPM with three-month intermittent upper back pain, shortness of breath, and episodic bilateral upper limb coldness and numbness. Symptoms began during SPM preparation and had been treated as presumed costochondritis, but persisted beyond the examination period. Although asymptomatic and clinically well during consultation, cardiothoracic and upper limb symptoms with an unexplained systolic murmur were not fully explained by stress or costochondritis. Chest radiograph showed mediastinal widening. Contrast-enhanced CT revealed a 6.9 × 9.0 × 8.5 cm anterior mediastinal mass with cystic and fat components, radiologically suspicious for mediastinal cystic teratoma.

Discussion: This case illustrates the diagnostic trap of a reassuring clinical appearance. Mediastinal cystic teratomas are rare and indolent, remaining clinically silent despite considerable size. The striking feature was the mismatch between a completely well adolescent at consultation and a large anterior mediastinal mass with radiological mass effect. The symptoms were not dramatic, yet retrospectively represented subtle compressive clues. Previous attribution to stress and costochondritis was plausible, but persistence, episodic upper limb symptoms and an unexplained murmur prevented premature closure.

Conclusion: A reassuring clinical appearance does not exclude significant disease. Persistent or unexplained symptoms, particularly when an initial benign explanation does not fully fit, warrant reassessment and thorough physical examination in primary care.

Keywords: Mediastinal Teratoma; Mediastinal Mass; Physical Examination

Clinical Case Report / Case Series_48

A Case Report of Atypical Ketosis-Prone Diabetes Complicated by Early Worsening of Diabetic Retinopathy and Rapid-Onset Nephropathy Detected in Primary Care

#FMSC2026-251

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Introduction: Ketosis-prone diabetes (KPD), particularly the A-β+ subtype, presents with severe hyperglycemia, absent autoantibodies, and reversible beta-cell dysfunction. Rapid glycemic correction in such patients can paradoxically trigger catastrophic microvascular complications, known as early worsening of diabetic retinopathy (EWDR).

Case Presentation: A 35-year-old lean Malay man with untreated diabetes presented with severe hyperglycemia (HbA1c 11.6–12.7%), low C-peptide (220 pmol/L), and negative islet autoantibodies. Aggressive basal-bolus insulin rapidly reduced his HbA1c to 6.1% over six months. As glucotoxicity resolved, his endogenous beta-cell function recovered (C-peptide 349 pmol/L), causing recurrent hypoglycemia that necessitated drastic insulin reduction. Concurrently, this rapid glycemic correction precipitated EWDR, resulting in severe bilateral non-proliferative diabetic retinopathy (NPDR) requiring urgent laser photocoagulation. He also developed macroalbuminuria (uPCR 93 mg/mmol) with renal hyperfiltration. He is currently managed with low-dose insulin, an ACE inhibitor, and statins, with plans for SGLT2 inhibitor and fenofibrate therapy.

Discussion: This case highlights the "stunned pancreas" phenomenon of A-β+ KPD in primary care. Family Medicine Specialists must maintain high vigilance with atypical diabetes presentations. It is crucial to anticipate beta-cell recovery to prevent iatrogenic hypoglycemia, while remaining acutely aware that rapidly tightening chronic severe hyperglycemia risks devastating microvascular complications like EWDR. A multidisciplinary approach is vital for balanced, target-organ-protective management.

Conclusion: Atypical diabetes presentations require high clinical vigilance. Primary care physicians must recognize the signs of beta-cell recovery to prevent iatrogenic hypoglycemia, while remaining acutely aware that rapid correction of profound hyperglycemia can trigger devastating microvascular complications like EWDR.

Keywords: Ketosis-prone Diabetes • Early Worsening of Diabetic Retinopathy • Diabetic Kidney Disease

Clinical Case Report / Case Series 49

Beyond Visible Light: Practical Applications of Wood's Lamp in Primary Care Dermatology

#FMSC2026-252

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Introduction: Wood's lamp examination is a simple, non-invasive bedside tool using ultraviolet light to assist diagnosis of dermatological conditions. Despite its feasibility, it remains underutilised in primary care. This case series highlights its practical application and diagnostic value in a primary care clinic.

Case Presentation: We present five patients in primary care

with diverse dermatological conditions assessed using Wood's lamp: tinea capitis, erythrasma, vitiligo, pityriasis versicolor, and melasma. Characteristic fluorescence patterns included blue-green in tinea capitis, coral-red in erythrasma, accentuation of depigmented patches in vitiligo, yellowish fluorescence in pityriasis versicolor, and enhanced epidermal pigmentation in melasma. These findings supported clinical diagnosis and guided management.

Discussion: Wood's lamp provides immediate diagnostic support without invasive tests or costly equipment. It is useful in differentiating pigmentary disorders and superficial infections commonly seen in primary care. Early recognition may improve treatment accuracy, reduce unnecessary referrals, and strengthen diagnostic confidence. It may also reduce repeat visits, minimise empirical use of topical steroids or antifungals, and support targeted therapy. Its portability, low cost, and ease of use make it suitable for busy primary care settings, particularly in diagnostically challenging or recurrent cases.

Conclusion: As a bedside diagnostic aid, Wood's lamp can strengthen primary care dermatology by improving diagnostic confidence, guiding appropriate investigation or referral, and enhancing patient trust through visible findings. Wider use in primary care may support earlier diagnosis, targeted treatment, and improved patient outcomes.

Keywords: Wood's Lamp; Dermatology; Primary Health Care

Clinical Case Report / Case Series 50

More Than Just Cellulitis: A Five-Year Journey to a Filariasis Diagnosis in an Elderly Patient

#FMSC2026-278

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Introduction: Recurrent lower limb swelling is a common primary care challenge, frequently misdiagnosed as recurrent cellulitis due to cognitive anchoring. In non-endemic areas, lymphatic filariasis is rarely suspected, causing prolonged diagnostic delays. This case illustrates a family physician's critical role in re-evaluating chronic cases and breaking diagnostic bias.

Case Presentation: An 80-year-old man with hypertension and benign prostatic hyperplasia presented with a 5-year history of recurrent lower limb swelling and he repeatedly received oral antibiotics for cellulitis, calf abscesses, and lymphadenitis. In March 2025, deep vein thrombosis was ruled out via ultrasound. Physical examination revealed asymmetrical, non-pitting edema (left calf: 39 cm, right: 34 cm) with thickened, dry skin below the knee, without erythema or ulcer. Normal echocardiograms and ultrasounds ruled out systemic organ failure. Persistent symptoms prompted a Filariasis Rapid Test Kit (RTK), which returned positive, despite a negative night blood film. This case was coordinated with public health officials for epidemiological investigation alongside targeted antifilarial therapy and specialized lymphedema physiotherapy.

Discussion: This case demonstrates the pitfall of premature clinical closure. Repeated treatment failures should prompt re-

evaluation of chronic lymphatic pathology rather than repeated antibiotic courses. In chronic elephantiasis, adult worms calcify and microfilariae disappear, explaining the positive RTK despite negative night blood film.

Conclusion: This case highlights that lymphatic filariasis must be considered in chronic, recurrent cellulitis even in non-endemic regions. It underscores the value of the family physician's holistic re-evaluation and the utility of rapid diagnostic toolkits in primary care to prevent chronic morbidity and improve quality of life in elderly patient.

Keywords: Filariasis, Primary Care, Cellulitis.

Clinical Case Report / Case Series 51

An Unusual Chest Wall Swelling: Primary Care as a Gateway to Diagnosis — A Case Series of Chest Wall Tuberculosis

#FMSC2026-291

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Introduction: Chest wall tuberculosis (TB) is a rare form of extrapulmonary tuberculosis, accounting for less than 2% of all TB cases. Diagnosis is often challenging because presentations are clinically nonspecific and may mimic benign inflammatory conditions or malignancy. Early recognition is particularly important in vulnerable populations such as pregnant women and infants to prevent disease progression and deep-seated complications. We report two cases of chest wall tuberculosis initially presenting in primary care settings.

Case Presentation: The first case involved a 32-year-old primigravida at 13 weeks' gestation who presented with a painful left lower rib swelling. Clinical examination revealed an ill-defined, hard mass despite an unremarkable chest radiograph. Due to persistent clinical suspicion, the patient was referred early to the surgical team for further evaluation. Subsequent ultrasound-guided biopsy demonstrated epithelioid granuloma with necrosis, confirming bone tuberculosis. She responded well to anti-tuberculosis therapy despite developing drug-induced liver injury requiring treatment modification. The second case involved a 4-month-old infant presenting with a small sternal swelling. Despite initial referral to the paediatric team, the lesion progressively enlarged and was treated as sternal osteomyelitis with empirical antibiotics before definitive evaluation was pursued. Bone biopsy later confirmed tuberculosis. The infant showed complete clinical recovery following anti-tuberculosis treatment.

Discussion: These cases highlight that benign-appearing chest wall swellings can be highly deceptive in tuberculosis-endemic regions.

Conclusion: Vigilant clinical assessment and a high index of suspicion are essential in avoiding premature reassurance, facilitating appropriate early referral, and ensuring timely diagnosis and optimal management of atypical chest wall lesions.

Keywords: Chest Wall Tuberculosis, Extra Pulmonary Tuberculosis, Sternal Tuberculosis

Clinical Case Report / Case Series 52

Paederus Dermatitis ("Charlie Ant" Dermatitis) in Putrajaya: A Case Series Highlighting the Role of Primary Care in Early Management and Prevention of Complications

#FMSC2026-017

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Introduction: Paederus dermatitis is an acute irritant contact dermatitis caused by exposure to Paederus beetles, commonly known as "Charlie ants" in Malaysia.¹ It is frequently encountered in primary care but often under-recognised, leading to delayed treatment and preventable complications.²

Case Presentation: Several patients presented to primary care clinics in Putrajaya with acute onset skin lesions following suspected exposure to Paederus beetles, often occurring overnight. Patients typically developed linear erythematous plaques in a characteristic "whiplash" pattern, with vesicles or pustules and a burning sensation more prominent than pruritus.³ Symptoms appeared after a delay of 12–48 hours.³ Lesions were mainly found on exposed areas such as the face, neck, and upper limbs, with some cases showing "kissing lesions" due to toxin transfer.⁴ Management in primary care was conservative, including topical corticosteroids, cool compresses, and oral antihistamines or analgesics.³ Early treatment led to rapid improvement, whereas delayed presentation or mismanagement resulted in complications such as secondary bacterial infection and post-inflammatory hyperpigmentation.²

Discussion: Paederus dermatitis occurs when pederin is released after crushing the beetle on the skin, causing inflammation and epidermal damage.¹ The condition is often misdiagnosed as herpes simplex, herpes zoster, or impetigo, resulting in unnecessary treatment and delayed care.² Early recognition of the characteristic linear lesions and delayed onset is essential. Immediate washing with soap and water is a key preventive measure to reduce toxin exposure.³

Conclusion: In conclusion, Paederus dermatitis is a preventable condition where early recognition, prompt decontamination, and appropriate primary care management can significantly reduce morbidity and prevent complications.

Keywords: "Charlie Ant" "Pederin" "Tropical Dermatology"

Clinical Case Report / Case Series 53

The Silent Dip: Reactive Hypoglycemia in Adolescent Obesity

#FMSC2026-019

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Introduction: Adolescent obesity is a growing global concern, particularly in Malaysia, where it affects 13.6% of adolescents.

Case Presentation: This report describes a 15-year-old male who was under primary care follow-up for obesity. He had a strong

family history of cardiovascular disease. Clinical examination revealed he had acanthosis nigricans stage III. Oral glucose tolerance tests (OGTT) were taken and repeated twice, both of which showed persistent reactive hypoglycemia where blood glucose drops 2 hours postprandially. He remained asymptomatic of hypoglycemia symptoms. Random capillary dextrose tests were taken during clinic visits and showed normal readings. Over the course of follow-up in 2 years, he developed hypertension, illustrating the progressive cardiovascular disease with adolescent obesity.

Discussion: Reactive hypoglycemia marks underlying insulin resistance state in obese individual. Presence of asymptomatic hypoglycemia poses a significant clinical challenge which would remained undetectable without targeted screening in population at risk.

Conclusion: This case highlights the importance of early screening of diabetes in the management of pediatric obesity in a primary care setting.

Keywords: Obesity, Adolescent, Insulin Resistance

Clinical Case Report / Case Series 54

Not All Erectile Dysfunction Is Organic: Unmasking Vaginismus Through a Primary Care Lens

#FMSC2026-034

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Introduction: Sexual dysfunction is frequently encountered in primary care and often attributed to organic causes or medication side effects. However, premature attribution may lead to inappropriate treatment changes and missed underlying causes.

Case Presentation: A 30-year-old male with bipolar disorder on benzhexol, sodium valproate, and haloperidol, with hypertension and hyperlipidaemia, presented in September 2023 with erectile dysfunction (ED). He attributed symptoms to his medications, leading to prior discontinuation of antihypertensive and lipid-lowering therapy without improvement. This raised concern, as unnecessary alteration of essential medications posed potential risk to control of his chronic conditions. He was referred for psychiatric evaluation for suspected medication-related ED. Further history revealed only superficial penetration due to pain experienced by his 25-year-old wife. The couple also reported subfertility concerns; however, the wife had regular menses with no indication for gynaecological pathology. Couple assessment identified anxiety and avoidance behaviour, consistent with psychological vaginismus, and gynaecology referral was deferred.

Discussion: This case highlights the importance of a biopsychosocial approach. Misattribution of ED to medications may result in inappropriate discontinuation and potential harm. Learning points: (1) Assess both partners in sexual dysfunction. (2) Avoid premature medication changes without thorough evaluation.

Conclusion: Holistic evaluation enables accurate diagnosis and safe management. Addressing psychological factors led to successful penetration after six months of therapy.

Keywords: Erectile Dysfunction, Vaginismus, Primary Health Care

Clinical Case Report / Case Series 55

Supportive Psychotherapy in Perinatal Grief: A Case Report from Family Medicine

#FMSC2026-037

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Introduction: Perinatal grief is a significant and often underrecognized challenge in primary care. This grief may result from miscarriage, stillbirth, neonatal death, or complex psychosocial difficulties during early parenthood. Family physicians are uniquely positioned to provide ongoing support, validation, and continuity throughout the grieving process.

Case Presentation: This case report describes a mother whose pregnancy was complicated by fetal hypoplastic left heart syndrome (HLHS) and early-onset growth restriction. Despite a poor prognosis, the infant survived for 49 days. The mother's grief process, supported by primary care-based psychotherapy, illustrates how empathy, clinical presence, and structured screening can facilitate adaptive coping.

Discussion: Primary care physicians are well positioned to detect and intervene early, as demonstrated in this case. 1. Supportive psychotherapy as an approach 2. Integration of structured tools. Screening instruments enhance clinical judgment by enabling early detection, ongoing monitoring, and timely referral. 3. The physician as companion In this context, supportive psychotherapy functioned both as a therapeutic intervention and as an expression of the core values of family medicine, including presence, empathy, and solidarity during periods of profound loss. What is new in this case report 1. Illustrates the role of supportive psychotherapy in primary care for perinatal grief. 2. Highlights integration of structured screening tools with narrative care. 3. Demonstrates continuity of care as a therapeutic intervention in its own right. 4. Underscores the physician's role as a companion in grief, not just a clinician.

Conclusion: This case highlights the essential role of family physicians in bereavement care and the importance of integrating psychotherapy into standard clinical practice.

Keywords: Grief, Perinatal Loss, Psychotherapy, Primary Health Care, Family Practice

Clinical Case Report / Case Series 56

Fluvoxamine-Induced Nightmares in Major Depressive Disorder: A Rare but Disruptive Adverse Effect

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Introduction: Fluvoxamine, a selective serotonin reuptake inhibitor (SSRI), is widely used for the treatment of Major

Depressive Disorder (MDD). While generally well tolerated, it can cause uncommon adverse effects, including sleep disturbances such as nightmares, which may disrupt treatment adherence.

Case Presentation: A 29-year-old, presented with a two-month history of low mood, anhedonia, fatigue, feelings of worthlessness, and insomnia. She was diagnosed with MDD and initiated on fluvoxamine, with a planned two-week follow-up. One week after starting treatment, she developed distressing nightmares, leading her to discontinue the medication without medical advice. At review, her depressive symptoms persisted, and she reported the adverse effects as the reason for stopping the medication. Her antidepressant was switched to Sertraline, and Clonazepam was prescribed to address her depressive symptoms and insomnia. She was advised on medication adherence, education about possible side effects, and was scheduled for close follow-up to monitor her response and tolerability.

Discussion: Fluvoxamine, through serotonergic modulation, may influence REM sleep, potentially intensifying dreams. Although the nightmare is a rare side effect, it can significantly affect the quality of life and treatment adherence. Early follow-up within one to two weeks of SSRI initiation is critical to assess side effects and provide timely interventions.

Conclusion: This case highlights nightmares as a rare but disruptive adverse effect of fluvoxamine that can lead to premature discontinuation of the anti-depression medication. Early follow-up, patient education, and prompt management of side effects are essential to ensure adherence and optimization of the treatment outcomes in MDD.

Keywords: Fluvoxamine, Nightmares, Adverse Effect

Clinical Case Report / Case Series 57

Marked Transaminitis in a Young Adult with Newly Diagnosed HIV and Chronic Hepatitis B Co-infection: A Case Report

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Introduction: Human immunodeficiency virus (HIV) and Hepatitis B virus (HBV) co-infection accelerates liver disease progression and increases the risk of cirrhosis and hepatocellular carcinoma. Young adults may remain clinically asymptomatic despite significant biochemical abnormalities, leading to delayed recognition and management.

Case Presentation: A 19-year-old male was diagnosed with HIV and chronic hepatitis B (HBV) following a five-day history of fever and shortness of breath. Despite being clinically stable with unremarkable physical findings, he exhibited a markedly elevated HBV DNA level (297,000,000 IU/mL) and alanine aminotransferase (ALT) of 109 U/L. After one week of antiretroviral therapy (ART), his ALT rose to 247 U/L, although he remained asymptomatic. One month after diagnosis, the patient experienced dizziness following ART, leading to self-discontinuation of therapy and poor follow-up adherence.

Investigations demonstrated a declining CD4 count with low-level detectable HIV viraemia, while ALT remained elevated, highlighting the risks of treatment interruption.

Discussion: This case highlights the discordance between clinical presentation and disease severity in HIV-HBV co-infection. Significant hepatic inflammation may occur despite minimal symptoms, emphasizing the importance of biochemical and virological monitoring. Transient transaminitis following ART initiation may reflect immune reconstitution rather than drug toxicity, requiring careful interpretation. Additionally, early treatment-related adverse effects, particularly neuropsychiatric symptoms from efavirenz, may impair adherence. Young adults are particularly vulnerable to disengagement from care, contributing to suboptimal outcomes.

Conclusion: Effective management of HIV-HBV Co-infection requires early diagnosis, close laboratory monitoring, and proactive strategies to support adherence and continuity of care. Addressing treatment side effects and psychosocial factors is essential, particularly in young patients, to improve long-term clinical outcomes.

Keywords: HIV Infections, Hepatitis B, Alanine Transaminase

Clinical Case Report / Case Series 58

Beyond 'Benign' Cervical Lymph Nodes: Kikuchi Disease

#FMSC2026-055

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Introduction: Kikuchi disease is a rare, benign necrotising lymphadenitis that typically affects young women and may first present in primary care with fever and cervical lymphadenopathy.

Case Presentation: Case 1: A 22-year-old woman with no significant past medical history presented to a primary care clinic with a one-week history of intermittent low-grade fever and a painless cervical lymph node swelling. There were no upper respiratory symptoms, weight loss, night sweats, or tuberculosis contact. Examination revealed a solitary 2cmX1cm, firm, non-tender, immobile lymph node without overlying warmth. Full blood count showed leukopenia with mild anaemia. However, the lymph node persisted after two weeks, prompting otorhinolaryngology referral. Excisional biopsy revealed necrotizing lymphadenitis consistent with Kikuchi disease. Investigations for tuberculosis, lymphoma, and autoimmune disease were negative. She was treated with ibuprofen with gradual resolution. Case 2: A 24-year-old woman presents with intermittent low grade fever and a painless cervical lymph node for one week. Examination showed a firm, non-tender, non-fluctuant cervical lymph node measuring 1X1cm. Full blood count showed leukopenia with mild anaemia. Persistent lymphadenopathy led to otorhinolaryngology referral and biopsy, confirming Kikuchi disease. Tuberculosis, lymphoma, and autoimmune screens were negative, and similarly improved with non-steroidal anti-inflammatory medication.

Discussion: Kikuchi disease is a rare but important cause of persistent cervical lymphadenopathy in young women and might closely resemble more serious conditions, such as tuberculosis or lymphoma.

Conclusion: Systematic assessment, safety-netted follow-up, and timely biopsy referral for persistent lymphadenopathy in young adults are essential in primary care.

Keywords: Lymphadenopathy, Kikuchi Disease, Necrotising Lymphadenitis

Clinical Case Report / Case Series 59

Episcleritis Following Chickenpox in a Child: A Rare Ocular Manifestation of Varicella Zoster Virus

#FMSC2026-058

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Introduction: Varicella Zoster Virus (VZV) is a common viral infection in children, however ocular complications are uncommon. This case report describes a rare presentation of episcleritis secondary to VZV infection in a pediatric patient.

Case Presentation: A 7-year-old boy presented with a complaint of right-sided eye redness. The patient had been diagnosed with chickenpox based on classic vesicular skin rashes. Seven days after the onset of skin lesions, he developed redness in the left eye associated with mild pain and irritation. There was no eye discharge, blurring of vision, or other ocular symptoms. This was the first occurrence of such symptoms. No significant past medical and ocular history. Visual acuity is normal. Anterior segment examination of right eye showed sectoral injection over inferotemporal conjunctiva with prominent vessels. Patient was referred to ophthalmology and diagnosis of right-sided episcleritis, presumably due to VZV was made. He was treated with oral ibuprofen 200 mg once daily for one week. Significant clinical and symptomatic improvement was observed within this period with no sequelae or recurrence noted thereafter.

Discussion: Episcleritis is a self-limiting inflammation of the episcleral tissue, commonly idiopathic but sometimes associated with systemic or infectious causes. VZV, though primarily affecting skin and mucous membranes, can cause ocular inflammation. In this case, the delayed onset of episcleritis following chickenpox suggests a post-viral inflammatory response.

Conclusion: This case illustrates that early recognition of episcleritis with simple anti-inflammatory treatment can lead to rapid, complete recovery without complications.

Keywords: Episcleritis, Varicella Zoster Virus

Clinical Case Report / Case Series 60

Chronic Pain in Primary Care: More Than Physical - A Total Pain Approach

#FMSC2026-069

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Introduction: Chronic pain is commonly seen in primary care, yet many patients continue to have symptoms despite adequate pharmacological treatment. Pain is not purely physical, it is often shaped by psychological stress, social circumstances, and personal

beliefs. Family medicine is well placed to address these factors through continuity of care and a holistic approach.

Case Presentation: A 58-year-old Malay lady with type 2 diabetes with neuropathy, hypertension, and asthma presented with chronic joint pain. Despite multiple analgesics, her pain remained severe (7–8/10), affecting sleep and daily activities. Clinical assessment and investigations did not suggest inflammatory or autoimmune causes. Further history revealed significant caregiver burden, ongoing family conflict, and social isolation. She also expressed guilt and perceived inadequacy in her caregiving role, with frequent crying episodes and worsening asthma symptoms.

Discussion: This case highlights how patients' beliefs and emotional distress can influence pain perception and engagement with treatment. These factors contributed to persistent symptoms and reluctance towards medications. Management required a broader approach, including counselling to address emotional and spiritual distress, alongside occupational therapy and activity modification. With this, the patient reported improved coping, better function, and reduced pain severity.

Conclusion: Chronic pain should not be managed using a purely biomedical approach. Understanding patients' beliefs and context allows more meaningful care while reducing unnecessary escalation of medications. In primary care, this reflects a return to holistic, person-centred practice.

Keywords: Chronic Pain, Total Pain, Primary Care

Clinical Case Report / Case Series 61

A Preventable Fatal Outcome of Puerperal Sepsis in a Rural Postnatal Mother

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Introduction: Maternal mortality in remote areas remains a significant public health challenge due to intersecting geographical and systemic barriers. This case illustrates a preventable maternal death in a 26-year-old Orang Asli mother caused by puerperal sepsis.

Case Presentation: A G2P1 mother underwent elective induction of labor at 39 weeks, delivering a 2.87 kg baby girl via spontaneous vaginal delivery with an episiotomy. On postnatal day six, she presented to the emergency department with severe abdominal pain. Examination revealed an infected, foul-smelling episiotomy wound with breakdown. Investigations confirmed profound metabolic acidosis (lactate 6.4 mmol/L) and renal impairment. Despite fluid resuscitation and broad-spectrum antibiotics, she succumbed to septic shock within 24 hours.

Discussion: The death was classified as preventable, involving remediable factors: failure to provide adequate episiotomy care advice, failure to appreciate the severity of symptoms, inadequate fluid resuscitation, and delayed presentation due to geographical inaccessibility.

Conclusion: Preventive Initiatives: To achieve "Zero Puerperal Sepsis," primary care must transition to proactive surveillance using the Pahang Perineal Wound Care Bundle 2025. This framework emphasizes early detection via the "TIRED" symptoms (Temperature, Increased pain, Redness, Exudate, Deterioration) and REEDA scoring, alongside standardized patient education through the "HIPPS" (Hygiene, Ice, Pelvic floor exercises, Pain relief, Support) framework. Implementing structured care bundles and maintaining high suspicion for high-risk mothers—especially those in non-obstetric wards—is the primary defense against maternal mortality.

Keywords: Puerperal, Sepsis, Mortality

Clinical Case Report / Case Series_62

Hidden in Plain Sight: The Crucial Role of Primary Care in the Early Identification of High-Risk Pregnancies Requiring Termination - A Case Series

#FMSC2026-088

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Introduction: In Malaysia, primary care forms the cornerstone of antenatal care services. It plays a pivotal role in facilitating early antenatal booking, risk identification and stratification, coordination of care, and timely referral to secondary and tertiary services, all of which are essential to optimise maternal and fetal outcomes.

Case Presentation: We report three cases managed in Klinik Kesihatan Kuala Besut that reinforce this role. The first case involved a woman with underlying structural heart disease who had defaulted from specialist follow-up and presented for antenatal booking at 9 weeks' gestation. Baseline echocardiography arranged at the primary care level revealed a markedly dilated atrium with significant anatomical distortion. Despite being asymptomatic, she was urgently referred for specialist evaluation. The second and third cases highlight the capability of primary care to detect fetal abnormalities through routine antenatal ultrasonography. One fetus was diagnosed with anencephaly, a lethal neural tube defect characterised by absence of major portions of the brain and skull. The other involved bilateral polycystic kidney disease, also incompatible with survival.

Discussion: Timely referral from primary care facilitated specialist decision-making regarding termination of pregnancy. In the first case, multidisciplinary assessment determined that continuation of pregnancy posed a significant maternal risk. Similarly, termination was performed in the other two cases due to non-viable fetal conditions.

Conclusion: In conclusion, the contributions of primary care are often under-recognised, yet it plays a pivotal role in early antenatal booking, enabling prompt risk identification and early confirmation of maternal and/or fetal abnormalities, thereby reducing overall maternal morbidity and mortality.

Keywords: Termination of Pregnancy, Primary Care, Early Booking

Clinical Case Report / Case Series_63

A Silent Threat: Delayed Diagnosis in Advanced Abdominal Pregnancy

#FMSC2026-095

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Introduction: Abdominal pregnancy is a rare and potentially catastrophic form of ectopic pregnancy, occurring in approximately 1 in 10,000–30,000 pregnancies. Despite early antenatal booking and access to ultrasonography, diagnosis may be difficult due to its rarity and often silent presentation, creating a "ticking time bomb" scenario in which the condition remains unrecognised until severe complications develop.

Case Presentation: We report a 44-year-old gravida 5 para 4 woman who booked early at 6 weeks' gestation. Initial antenatal assessments and ultrasonography suggested an intrauterine pregnancy. She remained asymptomatic until 21 weeks' gestation, when a marked decline in haemoglobin was noted. Repeat imaging raised suspicion of an extrauterine pregnancy, and a diagnosis of advanced abdominal pregnancy with intrauterine fetal demise was confirmed. The patient subsequently underwent laparotomy with surgical dissection of the abdominal pregnancy and bilateral salpingectomy.

Discussion: This case highlights the inherent diagnostic challenges of abdominal pregnancy. As gestation advances, abdominal pregnancy may mimic a normal intrauterine pregnancy, making recognition increasingly difficult. Patients may remain asymptomatic, further lowering clinical suspicion. Notably, abdominal pregnancy can progress to advanced gestation and, in rare cases, reach term. Its rarity and variability in operator experience and ultrasound interpretation may also influence diagnostic accuracy. Importantly, a significant drop in haemoglobin should prompt evaluation for underlying causes, including occult bleeding.

Conclusion: In conclusion, early ultrasonography is vital to confirm a true intrauterine pregnancy. Continuous clinical vigilance, readiness to reassess when findings are inconsistent, and ongoing ultrasonography training are essential to minimise diagnostic delay.

Keywords: Abdominal Pregnancy, Ectopic Pregnancy, Ultrasonography

Clinical Case Report / Case Series_64

Detect Early, Protect Two: A Primary Care Approach to HIV Serodiscordance Discovered During Pregnancy

#FMSC2026-099

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Introduction: Vertical transmission of human immunodeficiency virus (HIV) has been significantly reduced in Malaysia following the implementation of universal antenatal HIV screening. However, partner testing remains voluntary and not mandatory. HIV serodiscordant couples—where one partner is HIV-positive and the other is uninfected—pose unique challenges in preventing both horizontal and vertical transmission, particularly when the diagnosis is made during pregnancy.

Case Presentation: We report a case of a pregnant woman with initial negative HIV screening at antenatal booking, whose husband was newly diagnosed with HIV during her second trimester through partner screening. Her husband was immediately initiated on antiretroviral therapy (ART). Pre-exposure prophylaxis (PrEP) was initiated after risk assessment and counselling given. She was closely monitored with serial HIV testing throughout pregnancy and remained seronegative. A healthy infant was delivered without complications.

Discussion: Early partner detection, prompt initiation of ART, and consideration of PrEP are important in reducing HIV transmission risk in serodiscordant couples. Effective viral suppression reduces the risk of sexual transmission and vertical transmission in this case. PrEP is safe for pregnant mothers and provided an extra layer of protection. Serial testing throughout pregnancy ensured early detection would have been possible in the event of seroconversion, thereby allowing timely intervention to prevent vertical transmission.

Conclusion: This case highlights that strengthening partner screening and integrating preventive strategies in primary care are key to closing the remaining gaps in eliminating HIV transmission.

Keywords: HIV Serodiscordance, Pre-Exposure Prophylaxis, Vertical transmission

Clinical Case Report / Case Series 65

From “Lazy Hip” to Lacunar Infarct: A Curious Case of Missed Hypertension in Primary Care

#FMSC2026-107

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Introduction: Lacunar strokes account for about 25% of all ischemic strokes. By definition, these strokes are small and located in noncortical areas. Isolated monoparesis is a rare symptom in stroke patients and is often caused by small artery disease or a small haemorrhage. Pure motor monoparesis (PMM) is a rare condition characterized by weakness limited to one limb without sensory disturbance.

Case Presentation: A 51-year-old woman, with no known comorbidities, presented with a sudden onset of pain and weakness of her left lower limb for two weeks with no prior trauma or fall. She visited several general practitioners in two weeks, but no diagnosis was confirmed. On her first visit at primary care, neurological examination showed mild weakness of the extensor and flexor muscles of the hips, tibialis anterior muscle and gastrocnemius muscle on the left side. The knee and ankle jerks were normal on the left side. The sensation were normal on the left side. There was no Babinski's sign bilaterally. Other significant findings were

occasional giddiness on prolonged standing. Blood pressure recorded was 153/89 mmHg with a pain score of 1/10. Other examination signs were unremarkable. A non-contrast CT scan of head showed a right-sided lacunar infarct.

Discussion: The presence of a lacunar infarct, in a patient without a known history of hypertension, usually signifies long-standing undiagnosed high blood pressure which has caused structural changes over years.

Conclusion: Lacunar infarction is a potentially reversible condition and can be managed well with adequate treatment.

Keywords: Lacunar Infarct, Hypertension, Isolated Monoparesis

Clinical Case Report / Case Series 66

The Great Imitator: A Rare Case of Disseminated TB Masquerading as Malignancy in an Immunocompetent Patient

#FMSC2026-110

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Introduction: Tuberculosis (TB) remains a major global health burden, often involving multiple organ systems via hematogenous spread.

Case Presentation: While disseminated TB typically manifests in immunocompromised hosts—such as those with HIV, diabetes, or on immunosuppressive therapy—we report a rare occurrence in a previously healthy, immunocompetent 41-year-old Malay male. The patient presented with a one-month history of intermittent pain and a progressively enlarging swelling in the left lower back, associated with a significant 15 kg weight loss. Despite productive cough, he remained afebrile and denied experiencing night sweats or haemoptysis. Initial investigations, including a chest radiograph and triple sputum AFB smears, were negative. Furthermore, HIV and diabetes screenings were also negative, confirming his status as an immunocompetent adult. These unremarkable results, combined with the atypical presentation, led to a high suspicion of malignancy, such as liposarcoma or renal cell carcinoma, prompting a tertiary referral. Advanced imaging (CECT and MRI) subsequently uncovered extensive intramuscular collections in the bilateral psoas muscles measuring 7.4 × 12.8 × 10 cm with T12–L4 tuberculous spondylitis. The diagnosis was confirmed when incision and drainage yielded pus positive for *Mycobacterium tuberculosis* via AFB stain and sputum GeneXpert.

Discussion: Following multidisciplinary antituberculosis therapy, the patient showed significant clinical improvement. This case highlights the necessity of excluding disseminated TB even in healthy, immunocompetent adults with negative initial screenings.

Conclusion: In summary, TB is a “great imitator” that frequently mimics malignancy, maintaining a high index of suspicion is essential to avoid diagnostic delays and ensure timely, life-saving intervention.

Keywords: Disseminated Tuberculosis

Clinical Case Report / Case Series_67

A Double-Edged Sword: Anticoagulation and Intracranial Hemorrhage in the Postpartum Period

#FMSC2026-111

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Introduction: The postpartum period is associated with an increased risk of venous thromboembolism, anticoagulation such as Enoxaparin is commonly initiated especially for patients at risk. However, bleeding complications attributed to enoxaparin use postpartum is rarely reported.

Case Presentation: A woman in her first week of postpartum period, presented to klinik kesihatan with complaints of worsening severe headache aggravated by posture and neck movement. Further assessments were done to rule out other possible causes of her headache. Recognizing the red flag presentation, she was urgently referred to hospital for further evaluation. Imaging confirmed intracranial hemorrhage; likely secondary to enoxaparin. Anticoagulation was immediately withheld, which leads to the resolution of bleeding and symptoms.

Discussion: This case highlights the important role of primary care in early detection of serious complications in postpartum patients. Symptoms such as severe headache, vomiting, neurological deficit should not be attributed to benign causes, especially in patients receiving anticoagulants. Prompt recognition and referral can significantly improve outcomes. Differential diagnoses such as cerebral venous sinus thrombosis should also be considered.

Conclusion: Primary care providers play a crucial role in identifying red flag symptoms in postpartum patients on anticoagulation. Early suspicion, timely referral, and clear communication with higher centers are essential to reduce morbidity and mortality

Keywords: Intracranial Hemorrhage, Enoxaparin

Clinical Case Report / Case Series_68

The Invisible Struggle: A Case Study of Post Pandemic School Refusal in an Undiagnosed Autistic Adolescent

#FMSC2026-118

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Introduction: In Malaysia, school absenteeism has seen a notable increase post Covid-19 pandemic. The pandemic disrupted traditional educational structure, created a “sanctuary effect” and caused difficulties among students to readapt to normal school routines. For some, the transition triggered severe school refusal and social withdrawal, unmasking underlying neurodevelopmental disorders.

Case Presentation: A 14-year-old boy presented with chronic school refusal lasting two years following the lifting of pandemic lockdowns. The patient exhibited extreme social isolation, confinement within his bedroom and refusal to leave home.

Clinical evaluation revealed a pattern of social-communication deficits, sensory hypersensitivity, and a rigid insistence on sameness that existed pre-pandemic, but was exacerbated by the return to physical school. Comprehensive assessment led to a diagnosis of autism spectrum disorder. The two-year long school refusal was attributed to maladaptive coping strategies and profound difficulty in navigating the post-pandemic environment which ultimately led to severe anxiety.

Discussion: The case illustrates the diagnostic challenges of identifying ASD in adolescents who have masked their symptoms well until a major life stressor, such as a global pandemic, exceeds their internal capacity. It highlights the importance of viewing school absenteeism through a different lens beyond the mere “rebellion” of adolescents but rather toward a medical framework that screens for neurodivergence in cases of chronic school refusal.

Conclusion: School refusal cases necessitate prompt clinical evaluation, as they often serve as indicators for deep-seated issues such as emotional distress, psychological instability and underlying neurodivergence. Early intervention and support are vital in preventing long term psychiatric morbidity.

Keywords: Adolescent Mental Health School Refusal Neurodivergence

Clinical Case Report / Case Series_69

Limitations in the Management of Vasomotor Symptoms in a Transgender Woman at a Health Clinic. - A Case Report

#FMSC2026-132

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Introduction: Healthcare for transgender population in Klinik Kesihatan remains limited, thus causing suboptimal treatment and diagnostic delays.

Case Presentation: A 37-year-old Malay transgender woman who underwent gender-affirming surgery in 2024, presented with a 3-year history of intermittent hot flushes, night sweats, insomnia, and mood changes. Despite being treated with antidepressant for over one year, her symptoms persisted, prompting self-treatment with various medications from the pharmacy. She came to us requesting transdermal estrogen cream as she claimed only this medication improves her symptoms. Our diagnosis is vasomotor symptoms secondary to hypoestrogenism after orchiectomy/vaginoplasty. The suggested treatment is lifelong estrogen replacement therapy. Unfortunately, we faced challenges during the investigation to confirm diagnosis and to provide medical treatment.

Discussion: Management of transgender patients is limited due to restricted policies and guidelines for transgender. Besides, healthcare workers are not trained for transgender medical needs. These constraints greatly increase their risk of poor overall health.

Conclusion: This case highlights systemic limitations in managing transgender health within Malaysian primary care. Training healthcare workers, prioritising transgender health needs, implementing health policy reforms are essential to ensure safe and effective care among transgenders.

Keywords: Vasomotor Symptoms, Transgender Woman

Clinical Case Report / Case Series 70

A Silent Threat: Tuberculosis in Pregnancy and Its Impact on Maternal and Foetal Health - Lessons from a Primary Care Case Report

#FMSC2026-142

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Introduction: Accurate diagnosis of Pulmonary tuberculosis in pregnancy is essential prior to initiating treatment. However, atypical clinical presentation, inadequate sputum sampling, and reluctance to perform chest radiography due to concerns about foetus radiation exposure may delay diagnosis. Such delays can result in postponed or missed treatment, leading to adverse outcomes for the mother, foetus, and the community.

Case Presentation: This is a case of a 26-year-old G2P1 at 27 weeks' gestation (second visit) who presented with a 2-week history of prolonged cough and post-tussive vomiting. She denied other symptoms or contact with pulmonary tuberculosis. Vital signs were stable, weight unchanged, and she appeared non-toxic. Auscultation revealed left bronchial breathing. Chest X-ray showed left upper lobe consolidation. Sputum acid-fast bacilli (AFB) returned 2+ after proper re-education given. Anti-tuberculosis treatment was promptly initiated with Akurit-4 (three tablets daily) and pyridoxine 20 mg once daily, with directly observed therapy (DOT). The case was reported and contact tracing was conducted.

Discussion: This case highlights the need for a high index of suspicion, proper sputum collection, and appropriate use of chest X-ray to enable early diagnosis and treatment while preventing disease transmission.

Conclusion: Early diagnosis, proper sputum collection, and prompt treatment is crucial to improve maternal and foetal outcomes. A multidisciplinary approach, along with directly observed therapy and contact tracing, is essential for effective management and disease control.

Keywords: Tuberculosis in Pregnancy

Clinical Case Report / Case Series 71

Adolescent Striae Mimicking Non-Accidental Injury: A Case Report and Diagnostic Challenge

#FMSC2026-145

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Introduction: Adolescent striae are more common in girls. Striae in boys can be misinterpreted as a result of non-accidental injuries such as physical abuse and caning.

Case Presentation: We reported a case of a 17-year-old boy who presented with a right axillary skin lesion, subsequently diagnosed as folliculitis. Incidental examination revealed multiple linear striae across the back, bearing a close resemblance to caning injuries, initially raising concern for non-accidental injury. Both

the patient and his father denied any history of physical abuse or trauma. Notably, the patient reported that his brother had similar markings, suggesting a familial predisposition. Further history established that the striae had been present for over one year, with onset at approximately 16 years of age, corresponding with a period of rapid pubertal growth. The diagnosis of physiological pubertal striae was made following a team discussion after excluding possible endocrine disorders and other related conditions. No safeguarding concerns were escalated.

Discussion: This case illustrates that unfamiliarity with this skin condition can lead to misinterpretation and unnecessary distress to both the patient and family. However, a high index of suspicion for non-accidental injury remains crucial, particularly among adolescents.

Conclusion: A thorough history including family history, social history, timeline of lesion onset, characteristics of the lesions, and a holistic approach are essential in differentiating benign physiological striae from inflicted injury.

Keywords: Striae distensae, Puberty, Non-accidental injury

Clinical Case Report / Case Series 72

School Absenteeism and Depression in Adolescence: Uncovering Autism Spectrum Disorder Through Primary Care

#FMSC2026-156

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Introduction: School absenteeism in adolescents is often a manifestation of underlying mental health conditions. While depression is commonly identified, co-existing autism spectrum disorder (ASD) may remain undiagnosed, particularly in individuals with subtle presentations.

Case Presentation: A 12-year-old girl presented with an 11-month history of recurrent somatic symptoms, school absenteeism, and persistent low mood. She fulfilled criteria for Major Depressive Disorder, with sleep disturbance, fatigue, poor concentration, guilt, and intermittent suicidal ideation. Significant anxiety related to school and social interaction was also evident. Despite an unremarkable early developmental history, further assessment revealed longstanding social communication difficulties, sensory sensitivities, and challenges in peer interaction. She met diagnostic criteria for ASD (Social Communication Level 1; Restricted/Repetitive Behaviour Level 2). ADHD screening was negative. Intervention and Outcome: Management included psychoeducation, brief counselling, initiation of fluoxetine, and referral for cognitive behavioural therapy and social skills training. Marked improvement was observed within 4 weeks, with PHQ-9 scores reducing from 17 to 10 and GAD-7 from 12 to 1, alongside significant subjective recovery.

Discussion: This case illustrates the diagnostic complexity of overlapping depressive and ASD symptoms, particularly in females who may mask core features. School absenteeism may be a critical early signal of unmet neurodevelopmental needs. Failure to respond to standard depression treatment should prompt reassessment for underlying conditions.

Conclusion: Primary care is uniquely positioned to detect hidden neurodevelopmental disorders. Early recognition of ASD alongside depression not only reframes the diagnosis but also transforms management, enabling targeted interventions that improve long-term emotional, social, and educational trajectories.

Keywords: Autism spectrum disorder, Depression, School Absenteeism

Clinical Case Report / Case Series 73

From Exercise to Eruption: A Case of Exercise-Induced Vasculitis #FMSC2026-157

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Introduction: Exercise-induced vasculitis is a benign, self-limiting small-vessel vasculitis triggered by prolonged physical activity, particularly during warm and humid weather. Diagnosis is based predominantly on clinical features. It is often under-recognized in primary care and may be mistaken for a more serious vascular or dermatological condition, leading to unnecessary treatment.

Case Presentation: A 33-year-old female with no significant medical history presented with a non-pruritic rash over both lower limbs and upper limbs a few days after completing a marathon activity. There were no associated systemic symptoms such as fever, arthralgia, or malaise. Cutaneous examination revealed a bilateral petechial rash involving the lower limbs and proximal upper limbs, with involvement of the hands and sparing of the palms and soles. Peripheral pulses were normal, and there were no clinical signs of infection. Laboratory investigations, including full blood count, inflammatory markers, and autoimmune screening, revealed no abnormalities.

Discussion: A clinical diagnosis of exercise-induced vasculitis was made based on the characteristic clinical features and its temporal association with physical activity. The patient was reassured and managed conservatively with leg elevation, avoidance of prolonged exercise in hot weather, and the use of compression stockings. A complete and spontaneous resolution was observed within five days.

Conclusion: This case highlights the importance of recognizing exercise-induced vasculitis in primary care. Awareness of its distinctive features enables accurate diagnosis, reduces unnecessary investigations and antibiotic exposure, and promotes effective patient reassurance.

Keywords: Exercise; Purpura; Vasculitis

Clinical Case Report / Case Series 74

When Smears are Negative and Tablets Don't Fit: Navigating Paediatric Tuberculosis in a District Clinic #FMSC2026-159

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Introduction: Diagnosing paediatric tuberculosis is notoriously challenging due to strictly paucibacillary presentations. This diagnostic complexity demands seamless coordination, rapid specialized testing, and timely intervention across multiple departments to secure a diagnosis and prevent disease progression. Obtaining microbiological proof often fails, necessitating reliance on contact tracing, molecular tools, and clinical judgment. Managing infections presents equal challenges, complicated by a lack of friendly paediatric drug formulations and paradoxical reactions

Case Presentation: We present two cases from Tanah Merah, Malaysia: a young female adolescent with isolated TB lymphadenitis and a toddler with smear-negative pulmonary and extrapulmonary TB. Both highlight profound diagnostic and management complexities. In case two, an initial hospital prescription of adult tablets required urgent primary care intervention to convert medications into appropriate liquid syrups, crucially ensuring DOTS compliance. Despite safely completing a nine-month regimen, the toddler required an excision biopsy for persistent lymphadenopathy, revealing necrotizing granulomatous inflammation.

Discussion: These cases deeply illustrate that pediatric TB management requires navigating complex logistical and physiological variables. The vital conversion to paediatric syrups underscores the indispensable role of primary care in adapting treatments. Furthermore, persistent granulomatous inflammation post-treatment often represents a sterile immunological response rather than true treatment failure, necessitating careful multidisciplinary evaluation to definitively rule out multidrug resistance.

Conclusion: Effective paediatric TB care extends far beyond overcoming initial diagnostic hurdles. It explicitly requires adaptable pharmacological strategies, vigilant longitudinal monitoring, and a completely integrated multidisciplinary approach to successfully address post-treatment complications, ultimately ensuring complete recovery for affected vulnerable children residing in Kelantan, Malaysia.

Keywords: Paediatric Tuberculosis; Lymphadenopathy; Primary Care

Clinical Case Report / Case Series 75

Diagnostic Challenges of Per-Rectal Bleeding in a Virologically Suppressed HIV Patient: A Primary Care Perspective #FMSC2026-164

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Introduction: Anorectal malignancies remain an uncommon but important differential diagnosis in people living with HIV, particularly in those presenting with per-rectal bleeding. We report a case of a 42-year-old male with well-controlled retroviral disease (RVD) who presented with per-rectal bleeding and was subsequently diagnosed with anorectal lymphoma.

Case Presentation: The patient, a freelance oil and gas engineer,

had a history of advanced HIV infection diagnosed in 2017, complicated by *Pneumocystis pneumonia*. He demonstrated excellent adherence to antiretroviral therapy (Tenvir-EM/Efavirenz) since 2018, with marked immunological recovery (CD4 count improved from 33 to 678 cells/mm³) and sustained virological suppression. His background was notable for multiple episodes of recurrent syphilis, reflecting ongoing high-risk exposure despite current reported stable partnership. He initially presented with per rectal bleeding for one month and significant weight loss for three months, without constitutional symptoms or signs of opportunistic infection. Physical examination was unremarkable. Given his risk profile, further evaluation with colonoscopy revealed an anorectal mass.

Discussion: Histopathological examination confirmed the diagnosis of anorectal high-grade lymphoma. This case highlights the diagnostic challenge of anorectal symptoms in HIV-positive individuals, even in the context of good immune reconstitution. While opportunistic infections and common anorectal conditions are frequently considered, malignancies such as lymphoma must not be overlooked.

Conclusion: Early recognition and prompt investigation of atypical anorectal symptoms are essential to avoid delayed diagnosis. This case underscores the importance of maintaining a broad differential diagnosis in HIV patients presenting with per rectal bleeding, regardless of apparent disease stability.

Keywords: HIV Infection, Anorectal Lymphoma, Rectal Bleeding

Clinical Case Report / Case Series 76

Beyond the Presenting Complaint: Life-Saving Recognition of Domestic Violence and Postpartum Psychiatric Crisis in Primary Care

#FMSC2026-173

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Introduction: Primary care visits may miss psychosocial crises when focused only on physical symptoms. Domestic violence and postpartum psychiatric illness are often overlooked due to vague complaints. Family physicians are key in uncovering hidden danger through holistic assessment and safeguarding. This series shows how lower abdominal pain and insomnia revealed emergencies involving abuse and suicidality.

Case Presentation: Case 1: A 42-year-old woman presented with lower abdominal pain. Minimal findings prompted further assessment, which revealed longstanding spousal abuse. Her daughter confirmed ongoing domestic violence. Support and referrals were provided. Case 2: A 33-year-old, three months postpartum, presented with insomnia. Assessment found severe depression, zolpidem misuse, hallucinations, and thoughts of harming her infant. Her husband described functional decline. She was referred for emergency psychiatric care.

Discussion: Lower abdominal pain masked domestic violence; insomnia concealed a postpartum psychiatric crisis. Symptom-focused care could have missed these emergencies. Holistic assessment and safeguarding vigilance turned routine consultations into life-saving interventions, highlighting the vital role of family physicians in detecting hidden risk.

Conclusion: Domestic violence and postpartum psychiatric crises often present vaguely. Missing these puts lives at risk. Family physicians must use holistic assessment and safeguarding vigilance to prevent harm.

Keywords: Domestic Violence; Postpartum Depression; Primary Care; Family Violence; Suicidality; Bio psychosocial Assessment

Clinical Case Report / Case Series 77

When Illness Is Not Just Biological: Tuberculosis in a Family Broken by Substance Abuse

#FMSC2026-180

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Introduction: Tuberculosis (TB) remains a significant public health concern, particularly in vulnerable populations where social determinants of health play a critical role. We report a family-based TB outbreak that illustrates how substance abuse can destabilise family structure, perpetuate poverty, and increase disease transmission risk.

Case Presentation: This case involves a multigenerational family with a longstanding history of substance misuse among male members, associated psychiatric illness, unemployment, and financial dependency on a single caregiver. Several family members had previous TB infections. The index case, a 44-year-old man with substance-induced psychosis, was diagnosed with smear-positive pulmonary TB. Subsequent contact tracing identified his 81-year-old father, who was asymptomatic but later tested positive via molecular testing. The family lived in overcrowded conditions with frequent movement between two households, facilitating ongoing exposure. Substance abuse contributed to poor health-seeking behaviour, missed contact screening, and delayed diagnosis. Additionally, immunocompromised states, advanced age, and repeated exposure within a high-risk social network further increased susceptibility. A major challenge in management was adherence to directly observed therapy (DOT), hindered by lack of transport, financial constraints, and weak family support. This highlights the limitations of standard TB control strategies when social instability is not addressed.

Discussion: Social instability and family dysfunction may impair tuberculosis control and treatment adherence. Family-based surveillance, community health worker involvement, and integrated addiction and mental health services may improve continuity of care for high-risk households.

Conclusion: A holistic primary care approach addressing both medical and social factors is essential to reduce ongoing tuberculosis transmission in vulnerable communities.

Keywords: Tuberculosis; Substance-Related Disorders; Vulnerable Populations

Clinical Case Report / Case Series 78

A Neoplasm Mimicker: Pulmonary Cryptococcal Nodule in a Ruxolitinib-Treated Myelofibrosis Patient

#FMSC2026-185

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Introduction: Orthopnea is commonly associated with cardiac failure and chronic respiratory disease; however, rarer neuromuscular causes may result in delayed diagnosis. Parsonage Turner Syndrome is a rare brachial plexopathy that may occasionally involve the phrenic nerve, causing diaphragmatic paralysis.

Case Presentation: A 56-year-old woman with chronic obstructive pulmonary disease presented with progressive dyspnea and orthopnea. She was initially treated for worsening COPD and later referred to cardiology, where investigations were unremarkable. Repeat chest radiography demonstrated elevation of the right hemidiaphragm, prompting respiratory referral. Further assessment revealed symptom onset following a flu-like illness associated with severe right arm and lower chest pain. She also reported reduced grip strength. Examination demonstrated weakness of thumb abduction and adduction. Ultrasound confirmed complete paralysis of the right hemidiaphragm, while CT imaging and MRI excluded alternative causes. Spirometry demonstrated a greater than 20% reduction in lung volumes when supine, supporting diaphragmatic dysfunction. Management focused on diaphragmatic physiotherapy and optimisation of COPD treatment, resulting in symptomatic improvement.

Discussion: Unilateral diaphragmatic paralysis secondary to Parsonage Turner Syndrome is uncommon and may mimic more common cardiopulmonary conditions, resulting in diagnostic delay. Careful history-taking and multidisciplinary respiratory assessment were essential in establishing the diagnosis.

Conclusion: Parsonage Turner Syndrome should be considered in patients presenting with unexplained orthopnea, particularly when associated with preceding viral symptoms and neurological deficits.

Keywords: Orthopnea Diaphragmatic Paralysis Parsonage-Turner Syndrome

Clinical Case Report / Case Series_79

When Orthopnea Was Not Heart Failure: Unilateral Diaphragmatic Paralysis Secondary to Parsonage Turner Syndrome

#FMSC2026-186

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Keywords: Orthopnea Diaphragmatic Paralysis Parsonage-Turner Syndrome

Clinical Case Report / Case Series_80

Beyond Fluid Overload: Primary Care Challenges in Identifying HFrEF in an ESRF Patient on CAPD

#FMSC2026-190

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Introduction: Cardiorenal Syndrome Type 4 often leads to "diagnostic overshadowing" in End-Stage Renal Failure (ESRF) patients, where primary cardiac failure is misidentified as simple fluid overload or poor dialysis clearance.

Case Presentation: A 35-year-old female with underlying ESRF on Continuous Ambulatory Peritoneal Dialysis (CAPD) came to Klinik Kesihatan Penampang complaining of worsening orthopnea and paroxysmal nocturnal dyspnea despite adherence to dialysis and fluid restriction for 1 month. She has bilateral lower limb swelling and SOB on exertion. Examination revealed a displaced apex beat and a holosystolic murmur. Investigations showed moderate anemia (Hb 8.3 g/dL) and "bat-wing" pulmonary congestion on CXR. Bedside Echocardiography revealed Heart Failure with Reduced Ejection Fraction (HFrEF) with an LVEF of 26-28% and severe functional mitral regurgitation.

Discussion: This case highlights the necessity of moving beyond the physical exam by integrating Point-of-Care Ultrasound (POCUS) in primary care clinics. By utilizing bedside POCUS, confirming a low-cardiac-output state and reduced LV contractility, the primary care provider can bypass diagnostic delays, facilitating swift referral to tertiary centres and immediate optimization of guideline-directed medical therapy.

Conclusion: Primary care providers must maintain a high

clinical suspicion for Heart Failure in ESRF patients. Increasing POCUS awareness and application is vital to bypass diagnostic overshadowing as early identification enables prompt referral and notification to both nephrologists and cardiologists. This proactive multidisciplinary coordination is essential to optimize the balance between ultrafiltration and afterload reduction, ultimately preventing recurrent hospitalizations and improving the clinical outcome of patients with Type 4 Cardiorenal Syndrome.

Keywords: ESRF; CAPD; HFrEF

Clinical Case Report / Case Series_81

Sweet but Severe: A Rare Case of Diabetic Embryopathy with Bilateral Proximal Femoral Focal Deficiency and Radio-humeral Synostosis

#FMSC2026-192

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Introduction: Maternal diabetes is a well-recognised teratogenic condition associated with a higher incidence of congenital malformations.

Case Presentation: A 33-year-old obese Malay woman was diagnosed with overt diabetes at seven weeks of her second pregnancy. Initial OGTT was 10.2/15.5 mmol/L, with a first-trimester HbA1c of 9.3%, improving to 5.8% by 22 weeks. She required escalating insulin therapy of up to 94 units/day alongside metformin. Antenatal scan at 23 weeks was unremarkable, though limited by obesity and foetal position. Shortened long bones were detected at 28 weeks, raising suspicion of skeletal dysplasia and possible sacral agenesis. A male infant weighing 3,120 grams was delivered by elective caesarean section at 37 weeks for breech presentation, one previous caesarean scar, and suspected foetal abnormality. The baby was born with poor respiratory effort, necessitating intubation and NICU admission. Examination revealed bilateral femoral and humeral shortening. Echocardiography demonstrated severe hypertrophic biventricular cardiomyopathy with mild aortic coarctation. Skeletal survey confirmed bilateral proximal femoral focal deficiency and bilateral radio-humeral synostosis. Unfortunately, the baby died at 97 hours of life due to severe cardiac complications.

Discussion: Maternal hyperglycaemia during early pregnancy, particularly during blastogenesis, is a major contributory factor in diabetic embryopathy. High glucose levels drive excessive free radical production, leading to oxidative stress, hypoxia, apoptosis, and epigenetic changes that contribute to foetal malformations.

Conclusion: This case highlights the teratogenic effects of hyperglycaemia during embryogenesis and emphasizes the importance of preconception care, early diabetes detection, and strict glycaemic control in early pregnancy to prevent diabetic embryopathy.

Keywords: Diabetic embryopathy, Proximal Femur Focal Deficiency, Radio-humeral synostosis

Clinical Case Report / Case Series_82

The Unveiled Truth of Efavirenz-Induced Gynaecomastia: A Case Report

#FMSC2026-194

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Introduction: Human immunodeficiency virus-related morbidity and mortality have been greatly improved following the introduction of highly active antiretroviral therapy. The initiation of antiretroviral therapy for the treatment of naïve adults should consist of a triple drug regimen: two drugs of nucleoside reverse transcriptase inhibitors (NRTIs) and one non-nucleoside reverse transcriptase inhibitor.

Case Presentation: A 26-year-old Malay man diagnosed with HIV on HAART treatment since May 2023. He was started on Tenofovir/Emtricitabine 1 tab OD and Efavirenz 600 mg OD. At 11 months of treatment, he presented with bilateral breast swelling associated with pain. Clinically, the lump measured 1.6 cm x 1.1 cm x 3.1 cm on the right breast and 1.7 cm x 3.3 cm x 3.5 cm on the left side, confirmed on ultrasound scan. Detailed history was taken. Baseline serum blood and endocrinologic evaluation were all within normal limits. Diagnosis of efavirenz-induced gynaecomastia was made and further options were discussed

Discussion: Efavirenz-induced gynaecomastia is not commonly encountered and is underreported. Multiple international reports showed a prevalence of 1.8-8.4% of males on efavirenz developing gynaecomastia. Studies reported that patients with efavirenz-induced gynaecomastia benefited from a change of medications or drug withdrawal within 6-12 weeks. Subsequently, some reported complete resolution within a period of 2 months without any specific intervention.

Conclusion: The incidence of efavirenz-induced gynaecomastia is increasing in men on HAART treatment. Proper identification and awareness for patients and health practitioners will promote better management of drug adverse effects.

Keywords: HAART, Efavirenz, Gynaecomastia

Clinical Case Report / Case Series_83

When Seizures Aren't Seizures: Alternating Hemiplegia in Childhood as an Epilepsy Mimic in Primary Care

#FMSC2026-197

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Introduction: Alternating Hemiplegia in Childhood (AHC) is a rare neurodevelopmental disorder often misdiagnosed as epilepsy due to recurrent paroxysmal neurological episodes. Characteristic features include alternating hemiplegia, symptom resolution during sleep, and poor response to anti-epileptic treatment. Early recognition in primary care is crucial to avoid diagnostic delay and improve management outcomes.

Case Presentation: A 1-year-3-month-old girl presented with

recurrent episodes of suspected seizures since the age of 1 month. She was initially treated as epilepsy and commenced on multiple anti-epileptic medications; however, she showed poor clinical response. She was also treated for Sandifer Syndrome and was given proton pump inhibitor therapy. The episodes were unusual, characterized by alternating right- and left-sided weakness, often triggered by recent illness or fatigue, with resolution during sleep. Due to persistent symptoms despite treatment, a high index of suspicion prompted further genetic evaluation. Genetic study subsequently confirmed the diagnosis of Alternating Hemiplegia in Childhood (mutations in the ATP1A3 gene).

Discussion: The rarity of the condition and overlapping clinical features contribute to significant diagnostic delay. Several clinical clues eventually raised suspicion for AHC, particularly the alternating laterality of weakness which is a characteristic feature of the disorder. Recognition of these red flags is important for primary care physicians and frontline healthcare providers, as early referral and genetic evaluation may prevent unnecessary investigations and prolonged inappropriate treatment.

Conclusion: In rare neurological disorders such as AHC, the family physician serves as the bridge between early recognition, coordinated multidisciplinary care, and long-term family support.

Keywords: Alternating Hemiplegia of Childhood, Epilepsy, Genetic Testing

Clinical Case Report / Case Series 84

A Mouthful of Mystery: An Invisible Presentation of Kaposi Sarcoma in Advanced HIV

#FMSC2026-203

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Introduction: Kaposi Sarcoma (KS) is a common malignancy among people living with HIV (PLHIV). In advanced stages, it often presents with visceral organ involvement rather than classical cutaneous or mucosal manifestations, signalling a poor prognosis.

Case Presentation: A 29-year-old man with a 10-year history of HIV, who had defaulted on his antiretroviral therapy (ART) for two years, presented with worsening epigastric pain for one week and a cough for three days. He had multiple previous admissions for chest infections, and ART had been restarted one month prior. Clinically, he was not tachypneic, not jaundiced and there were purplish nodules on his right upper and lower gums. The epigastric region was tender, without hepatosplenomegaly. A bedside ultrasound showed multiple hyperechoic liver lesions with smooth margins, while a chest X-ray revealed bilateral lung reticulonodular opacities, predominantly in the middle and lower zones. He was admitted for pneumonia and was scheduled for a CT scan of the thorax and abdomen, but unfortunately succumbed in the ward. A biopsy of the intraoral lesions, traced posthumously, was suggestive of Kaposi Sarcoma.

Discussion: HIV-related KS can manifest in cutaneous, mucocutaneous, and visceral organs. Among PLHIV, visceral

involvement is more prevalent in patients with low CD4 counts and high viral loads. Given the history, clinical findings, and imaging, visceral KS can easily mimic other AIDS-related co-infections.

Conclusion: A high index of clinical suspicion for KS is crucial when managing advanced HIV with multi-organ involvement, even in the absence of typical skin lesions. A suppressed viral load is pivotal in preventing KS.

Keywords: Sarcoma, Kaposi, HIV infection, Acquired immunodeficiency syndrome

Clinical Case Report / Case Series 85

From Vague Symptoms to Surgical Emergency: A Case Report on Obturator Hernia in Primary Care

#FMSC2026-204

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Introduction: Obturator hernia (OH) is a rare but clinically significant cause of small bowel obstruction (SBO), typically occurring in elderly and underweight females. Due to its deep pelvic location and non-specific presentation, it remains a diagnostic challenge especially in primary care settings.

Case Presentation: A 71-year-old female with scoliosis and osteoporosis presented with a two-month history of recurrent abdominal pain and weight loss, initially misattributed to dyspepsia. She later developed severe abdominal pain that radiated to the left hip, emesis, and inability to ambulate. Examination revealed hyperactive bowel sounds and a non-tender abdomen. Labs showed multiple electrolyte imbalances and mild anemia. An abdominal X-ray demonstrated prominent small bowel haustration, prompting emergent referral. CT confirmed small bowel obstruction secondary to a left obturator hernia. Following a successful transabdominal preperitoneal mesh repair, she recovered uneventfully and was discharged.

Discussion: This case highlights the "herald" signs of intermittent bowel obstruction that are frequently overlooked in primary care. The radiated hip pain likely represented a Howship-Romberg sign, caused by compression of the obturator nerve. While CT is the gold standard, initial plain radiography with high clinical suspicion supported by relevant labs prompts a vital referral in limited primary care settings that facilitate timely decision-making for therapeutic planning.

Conclusion: Clinicians must maintain a high index of suspicion for mechanical causes of SBO in elderly patients presenting with atypical, recurrent pain. As a primary care doctor, recognizing the "red flag" symptoms is crucial and ensuring prompt surgical referral is critical to prevent bowel strangulation and improve patient outcomes.

Keywords: acute abdomen, intestinal obstruction, primary health care

Clinical Case Report / Case Series_86

From Poor Glycaemic Control to Severe Hypertriglyceridemia in Pregnancy: A Case Highlighting Primary Care Challenges

#FMSC2026-209

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Introduction: Severe hypertriglyceridemia during pregnancy is an uncommon but potentially life-threatening condition, particularly when associated with uncontrolled diabetes mellitus. Physiological changes in pregnancy increase insulin resistance and hepatic lipid production, which may be markedly exacerbated in the presence of poor glycaemic control.

Case Presentation: We report the case of a 35-year-old pregnant woman with pre-existing poorly controlled type 2 diabetes mellitus (HbA1c 10.5%) and diabetic kidney disease. She conceived following unsuccessful pre-pregnancy counselling. Repeated blood samples were markedly lipaemic, precluding laboratory analysis on several occasions, before initiation of high-dose antidiabetic therapy. Subsequent investigations revealed severe hypertriglyceridemia with serum triglyceride levels of 26.1 mmol/L and persistent poor glycaemic control (HbA1c 10.5%). She was managed with intensive insulin therapy, a strict low-fat diet, and omega-3 fatty acid supplementation. Despite treatment, glycaemic and lipid control remained challenging. She subsequently delivered a large-for-gestational-age infant weighing 5.3 kg. Bilateral tubal ligation was performed due to two previous caesarean scars.

Discussion: Managing type 2 diabetes with severe hypertriglyceridemia in pregnancy requires meticulous maternal-fetal risk management. Effective preconception care is vital to prevent complications from uncontrolled disease, as illustrated by this patient's HbA1c and serum triglyceride level. Multiple insulin injections caused painful lipodystrophy until site-rotation education improved administration. Individualized glycemic targets, CGM discrepancies, and concerns regarding late-pregnancy statin teratogenicity created therapeutic challenges, highlighting the importance of multidisciplinary pregnancy optimization.

Conclusion: Uncontrolled diabetes mellitus can precipitate severe hypertriglyceridemia during pregnancy. Early recognition, aggressive metabolic control, and a multidisciplinary management approach are essential to reduce maternal and fetal morbidity.

Keywords: Uncontrolled Type 2 Diabetes Mellitus, Pregnancy, Hypertriglyceridemia

Clinical Case Report / Case Series_87

Missed Screening, Late Disclosure: Advanced HIV Infection Presenting with Respiratory Failure

#FMSC2026-212

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Introduction: Late presentation of human immunodeficiency virus (HIV) infection remains a major clinical challenge due to stigma, cultural beliefs and delayed disclosure of risk behaviour.

Case Presentation: A 34-year-old single Malay secondary school teacher presented with progressive weight loss, dry cough, exertional dyspnea, lethargy, and poor oral intake for 3 months. He initially believed his illness was due to supernatural causes, contributing to delayed medical attention. On examination, he was cachexic, tachypneic (RR 35 breath/min), hypotensive (90/60 mmHg) & hypoxemic requiring oxygen supplementation. Investigations demonstrated positive HIV-1 & HIV-2 enzyme-linked immunosorbent assay (ELISA), thrombocytopenia, elevated ESR & mild transaminitis, while chest radiography was unremarkable. Following clinical deterioration, detailed epidemiological history revealed prior men who have sex with men (MSM) exposure more than five years earlier without previous HIV screening. He was diagnosed with advanced HIV infection complicated by suspected *Pneumocystis jirovecii* pneumonia (PCP), requiring urgent tertiary referral.

Discussion: This case highlights how stigma, cultural beliefs and delayed disclosure of sexual history may contribute to late HIV diagnosis and severe opportunistic infections. PCP should be suspected in HIV positive patients with unexplained hypoxemia despite normal radiological findings.

Conclusion: Early HIV screening and culturally sensitive history taking are essential to reduce delayed diagnosis and improve outcomes in high-risk individuals.

Keywords: HIV infections, *Pneumocystis Pneumonia*, Men who have Sex with Men

Clinical Case Report / Case Series_88

Breaking the Admission Tradition: Safe Ambulatory Care for New-Onset Type 1 Diabetes

#FMSC2026-213

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Introduction: New-onset Type 1 Diabetes Mellitus (T1DM) in adolescents often presents with hyperglycemia and ketonuria, frequently triggering unnecessary admissions to internal medicine wards due to suspected Diabetic Ketoacidosis (DKA). However, differentiating isolated ketonuria from true biochemical DKA allows for safe ambulatory management, optimising scarce district hospital resources.

Case Presentation: A 13-year-old girl presented to a Klinik Kesihatan (KK) with classic hyperglycemic symptoms and significant ketonuria. She was urgently referred to the Emergency Department (ED) to rule out DKA. Upon ED arrival, she was alert, hemodynamically stable, and clinically well-hydrated. Laboratory investigations confirmed marked hyperglycemia, but her venous blood gas revealed a normal pH of 7.40 and a bicarbonate level of 22.0 mmol/L, successfully ruling out DKA. The Internal Medicine team was consulted, who concurred that the patient was stable for outpatient management and that her T1DM diagnostic workup could be safely executed in primary

care. Bypassing a ward admission, the patient was down-referred on the same day back to the Family Medicine Specialist (FMS) and Diabetes Educator at the KK, where insulin therapy was initiated.

Discussion: This case highlights that ketonuria alone does not equate to DKA, and stable new-onset T1DM does not warrant hospital admission. Crucially, it challenges the traditional hospital-centric norm by demonstrating that the diagnostic workup for T1DM—including specialized autoantibody and C-peptide assays—can be entirely coordinated within the primary care setting.

Conclusion: Prompt, triadic communication between the ED, Internal Medicine, and the FMS empowers the Klinik Kesihatan to safely execute comprehensive ambulatory management, avoiding unnecessary adolescent hospitalisations.

Keywords: Type 1 Diabetes Mellitus, Ketonuria, Primary Care, Emergency Medicine Collaboration

Clinical Case Report / Case Series 89

The Face of Hidden Leprosy: An Atypical Presentation without Sensory Loss

#FMSC2026-214

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Introduction: Leprosy or Hansen disease, is a chronic infectious disease caused by *Mycobacterium Leprae*. It typically affects the skin and peripheral nerves. Severe nerve damage, deformities, and long-term impairments may result if left untreated. As a result, patients may suffer from discrimination and exclusion from society.

Case Presentation: A 30-year-old man presented to our primary care clinic with upper respiratory tract infection symptoms. Upon examination, diffuse symmetrical facial infiltration with coarse thickened skin, prominent pores, deep ridging, multiple ill-defined papules and nodules over the forehead, cheeks, and nose, producing early leonine facies. No hypopigmented lesion with sensory loss or limb deformity was seen. No family history of leprosy, but mother and uncle had similar facial features. Skin Slit Smear revealed positive 3+ *Mycobacterium Leprae*. He was administered a multidrug therapy (MDT) regimen for anti-leprosy treatment.

Discussion: Leprosy remains a diagnostic dilemma in primary care due to its diverse clinical manifestations. This case presented with leonine facies without other classical features, which may mimic other dermatological disorders, leading to delayed diagnosis and treatment. Early identification in primary care is crucial because delayed treatment may result in irreversible nerve damage, disability, and psychosocial stigma.

Conclusion: Atypical leprosy can manifest with leonine facies, without sensory impairment or deformities. Primary care clinicians should consider leprosy in patients with unexplained infiltrative facial changes to make an early diagnosis and treatment, therefore preventing complications, transmission, and social stigma.

Keywords: Leprosy

Clinical Case Report / Case Series 90

Missed Opportunities: A Case Report on Syphilis in Teenage Pregnancy

#FMSC2026-216

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Introduction: Teenage pregnancies in vulnerable socioeconomic environments frequently expose systemic healthcare gaps. This case illustrates how fragmented acute care and low health literacy led to missed management, resulting in maternal and child morbidity.

Case Presentation: A 16-year-old, out-of-school Malay girl from a single-parent home presented to the Emergency Department (ED) in January 2025 with vaginal discharge, constipation and delayed menses. Despite a positive pregnancy test, she was discharged with a prescription for candidiasis, urinary tract infection and constipation colic. No pelvic ultrasound, senior consultation, obstetric referral, police reporting or referral to the nearest health clinic was done. In July 2025, she re-presented following an unassisted home delivery of a premature infant. Maternal screening revealed syphilis infection and postpartum anemia, requiring treatment and blood transfusion. The infant was intubated and diagnosed with probable congenital syphilis. Following social welfare intervention, the infant was placed for adoption. Postpartum, the patient developed major depressive disorder (MDD), requiring psychiatric intervention. Long-acting reversible contraception was inserted with parental consent. Primary care follow-up currently focuses on biopsychosocial aspects: supervision of contraception compliance, coordinating shared care for MDD, and collaborating with welfare agencies in encouraging her to continue study to break the cycle of vulnerability.

Discussion: This case underscores a catastrophic missed opportunity for early prenatal care and child protection. In primary care and emergency settings, a positive pregnancy test in an underage must trigger comprehensive abuse screening, specialist referrals, and infectious disease workups.

Conclusion: Mandatory algorithmic checklists in acute settings for adolescents must be advocated to bridge health literacy gaps and prevent maternal and child morbidity.

Keywords: syphilis, teenage, pregnancy

Clinical Case Report / Case Series 91

When HIV Treatment Mimics Depression: A Case of Efavirenz Neuropsychiatric Toxicity

#FMSC2026-222

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Introduction: Efavirenz, a non-nucleoside reverse transcriptase inhibitor, is associated with neuropsychiatric adverse effects including sleep disturbances, abnormal dreams, dizziness, and mood symptoms. Distinguishing medication-induced symptoms from adjustment reactions or primary psychiatric disorders can be challenging in newly diagnosed individuals living with HIV.

Case Presentation: We report a 22-year-old Malay gentleman with newly diagnosed HIV infection who was initiated on Tenofovir–Emtricitabine–Efavirenz therapy on 26 November 2025. Initial HIV workup demonstrated a CD4 count of 220 cells/ μ L and viral load of 3550 copies/mL. Shortly after treatment initiation, he developed frequent nightmares, delayed sleep onset, daytime somnolence, brain fog and giddiness. Despite dose reduction, symptoms persisted. He subsequently developed low mood, anhedonia, poor motivation, impaired concentration, self-harm behaviour and suicidal thoughts, affecting academic performance. Owing to the temporal relationship between symptom onset and efavirenz initiation, neuropsychiatric toxicity was suspected. Efavirenz was discontinued and replaced with Tenofovir–Lamivudine–Dolutegravir (TLD). Following transition, nightmares, brain fog, suicidal thoughts and self-harm behaviour resolved completely without psychiatric pharmacotherapy.

Discussion: Efavirenz-related neuropsychiatric symptoms may overlap with psychological distress following HIV diagnosis, making recognition difficult. Complete symptom resolution after switching to TLD strongly suggested treatment-related neuropsychiatric toxicity.

Conclusion: Early recognition of efavirenz-associated neuropsychiatric adverse effects is essential to improve patient safety and treatment adherence.

Keywords: HIV; Efavirenz; Neuropsychiatric adverse effects

Clinical Case Report / Case Series 92

Beyond the Baby Bump: Diagnosing a Giant Cell Tumour During Pregnancy — A Case Report

#FMSC2026-224

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Introduction: Giant Cell Tumour of Bone (GCTB) is a locally aggressive benign neoplasm commonly affecting adults aged 20–40 years, with higher incidence among Asian females. Pregnancy-associated hormonal changes, particularly progesterone-mediated upregulation of Receptor Activator of Nuclear Factor Kappa-B Ligand (RANKL), may accelerate tumour progression through enhanced osteoclast activation and bone destruction. Early recognition in primary care is challenging due to its non-specific musculoskeletal presentation.

Case Presentation: A 33-year-old Malay woman, gravida 3 para 2 at 20 weeks' period of amenorrhoea, presented with a two-month history of progressive right knee pain and lower limb weakness. She had attended multiple private general practitioner consultations and was treated symptomatically for presumed musculoskeletal pain. During a routine antenatal follow-up at primary care, the attending doctor noted undisclosed wheelchair dependence and significant functional decline. Examination revealed right knee swelling and reduced lower limb power. Urgent orthopaedic referral was arranged. Knee aspiration yielded haemoserous fluid, while magnetic resonance imaging (MRI) demonstrated a distal femur epi-metaphyseal lesion. Core biopsy confirmed GCTB.

Discussion: GCTB may mimic benign mechanical joint

pathology, contributing to diagnostic delays. In pregnancy, hormonal influences may potentiate tumour growth and increase risks of pathological fracture, local recurrence, and pulmonary metastasis. This case highlights missed opportunities for earlier recognition of red flags despite repeated primary care encounters.

Conclusion: This case underscores the importance of early recognition of musculoskeletal red flags and comprehensive functional assessment, particularly in pregnant women, to enable timely specialist referral and minimize morbidity and mortality associated with delayed diagnosis of bone tumours.

Keywords: Giant Cell Tumour; Pregnancy complication; Neoplastic; RANK Ligand

Clinical Case Report / Case Series 93

Antenatal Diagnosis of Bronchopulmonary Sequestration in a Low-Risk Pregnancy: A Case Report of Primary Care Perspective

#FMSC2026-226

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Introduction: The detection of congenital anomalies is of paramount importance in high-risk pregnancies, where active screening through a detailed anomaly scan is routinely performed during the midtrimester. In contrast, low-risk pregnancies carry a substantially lower prior probability of fetal congenital anomalies, rendering such conditions more susceptible to being overlooked or presenting de novo in the absence of identifiable predisposing factors.

Case Presentation: We report a case of a low-risk multigravida who had an uneventful pregnancy until 31 weeks and 3 days of gestation, at which point she presented with excessive maternal gestational weight gain. Subsequent antenatal ultrasonography revealed massive left-sided fetal pleural effusion. The patient received a detailed clinical explanation and comprehensive counselling from the attending primary care physician, following which a prompt referral to a Maternal-Fetal Medicine specialist was initiated.

Discussion: Further evaluation identified bronchopulmonary sequestration, a rare congenital pulmonary malformation occurring sporadically in the absence of any identifiable risk factors. Notwithstanding active multidisciplinary interventions, the fetus did not survive, succumbing to complications directly attributable to the anomaly. Both parents experienced profound psychological distress throughout the clinical course; however, their emotional well-being was supported through structured psychosocial care provided by the primary care physician.

Conclusion: This case underscores the critical importance of thorough and systematic clinical assessment at each antenatal visit, while also illustrating the pivotal role of the family medicine specialist in orchestrating coordinated, multidisciplinary management of complex congenital anomaly cases.

Keywords: congenital abnormalities, prenatal diagnosis, bronchopulmonary sequestration

Clinical Case Report / Case Series 94

Integrating Family Therapy into Adolescent Depression Management: Learning Points from Primary Care

#FMSC2026-227

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Introduction: Adolescent Major Depressive Disorder (MDD), increasingly encountered in primary care, is often associated with family relational difficulties, maladaptive communication patterns and psychosocial stressors. Family physicians managing adolescent mental health require practical and culturally sensitive interventions beyond pharmacotherapy. This case highlights the application of Structural Family Therapy (SFT) and Systemic Family Therapy (SysFT) in managing adolescent depression within a primary care setting.

Case Presentation: A 15-year-old girl presented with depressive symptoms, self-harm behaviour, aggression, and behavioural difficulties following prolonged bullying at school. Assessment revealed authoritarian parenting, rigid family hierarchy, poor emotional communication, and blurred sibling-parent roles contributing to her distress. She was managed in primary care with antidepressant therapy, psychiatric referral, and six sessions of family therapy integrating SFT and SysFT principles. Interventions included genogram exploration, circular questioning, reframing, family life cycle discussion, and restructuring of family roles and communication. Parents were guided to shift from punitive to authoritative parenting while supporting the adolescent's developmental need for autonomy.

Discussion: Exploration of intergenerational parenting patterns improved parental insight into the impact of authoritarian discipline and emotional invalidation. Systemic interventions enhanced empathy, communication, and collaborative problem-solving, while structural interventions clarified family boundaries and reduced parentified sibling roles. The culturally attuned approach facilitated therapeutic change while respecting family values within an Asian collectivist context.

Conclusion: Family therapy can be a practical and effective intervention for adolescent MDD in primary care. Integrating systemic and structural approaches improved family dynamics, reduced self-harming behaviour, and supported psychological recovery, highlighting the important role of family physicians in delivering relational mental health interventions.

Keywords: Adolescent, Depressive Disorder, Major, Family Therapy

Clinical Case Report / Case Series 95

Beyond Physical Recovery: The Invisible Psychological Burden of Young Stroke and Missed Psychosocial Opportunities in Primary Care

#FMSC2026-229

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Introduction: Stroke incidence among younger adults is rising, yet psychological dimensions of chronic disease management and post-stroke recovery remain underaddressed in primary care. Mental health disorders — anxiety, depression, burnout, and treatment fatigue — contribute to poor cardiovascular risk control and barriers to rehabilitation. Routine non-communicable disease (NCD) follow-up continues to prioritise biomedical targets over psychosocial wellbeing.

Case Presentation: We describe a 39-year-old secondary school teacher and part-time emcee with poorly controlled type 2 diabetes (HbA1c 11.4%), hypertension, dyslipidaemia, and chronic kidney disease stage 3B who presented with a left lacunar infarct (NIHSS 4). A prior diagnosis of generalised anxiety disorder had been inadequately managed for years. Longstanding occupational stress, perfectionistic coping, emotional isolation, and polypharmacy had quietly eroded his self-management long before the stroke. Post-stroke, persistent vocal symptoms triggered severe anxiety around his professional identity — a distress physical recovery alone could not resolve. Multidisciplinary rehabilitation incorporating physiotherapy, speech therapy, cognitive behavioural therapy, assertiveness training, family counselling, and workplace reintegration produced significant gains: Modified Barthel Index rose from 71 to 98, grip strength from 2.5 to 19.8 kg, and he returned to teaching and emceeing.

Discussion: This case illustrates missed psychosocial opportunities accumulating during routine NCD follow-up, and the particular vulnerability of high-functioning young adults whose non-adherence reflects treatment fatigue rather than indifference.

Conclusion: Post-stroke rehabilitation must extend beyond physical recovery. Early psychological assessment, adherence support, and person-centred multidisciplinary care — led continuously by primary care — are essential for addressing both the visible and invisible consequences of young stroke.

Keywords: young stroke; psychosocial burden; primary care

Clinical Case Report / Case Series 96

Caught in the Web of Gaming: A Young Woman's Battle with Addiction, Anxiety, and Depression: A Case Report

#FMSC2026-230

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Introduction: Internet Gaming Disorder (IGD) is increasingly recognised as a behavioural addiction associated with emotional dysregulation, social withdrawal, and impaired functioning. The COVID-19 pandemic and prolonged digital exposure may further aggravate maladaptive gaming behaviours.

Case Presentation: A 19-year-old first presented to us with interpersonal difficulties, low self-esteem, sleep disturbance, and recurrent self-harm behaviour. She described self-injury as a coping mechanism, with physical pain offering temporary relief. Psychosocial stressors included unresolved grief following her father's death from lung cancer, perceived emotional neglect by her mother, and ongoing family conflict. She reported spending prolonged hours online, including chatting with AI platforms for comfort during distress. Self-harm episodes intensified following

distress related to online gaming interactions. Follow-up revealed anxiety and depressive symptoms linked to excessive gaming, accompanied by social withdrawal, disrupted sleep-wake cycles, poor eating habits, weight loss, and diminished motivation for studies and employment. Collateral history from her mother highlighted excessive screen exposure since childhood, markedly worsening during the pandemic. Gaming behaviour led to neglect of self-care, skipping meals, stealing money to purchase internet access, and loss of previous interests. Mental state examinations demonstrated poor insight into the severity and impact of her online gaming addiction.

Discussion: Management included psychoeducation, sleep hygiene advice, structured daily routines, gradual reduction of gaming time, counselling, and referral to psychiatric addiction services.

Conclusion: This case highlights the complex interaction between problematic gaming behaviour, unresolved grief, emotional dysregulation, family conflict, and comorbid anxiety-depressive symptoms. Early identification and multidisciplinary intervention are essential to prevent worsening psychosocial and functional impairment.

Keywords: Internet Gaming Disorder

Clinical Case Report / Case Series_97

Beyond Hospital Walls: The Life-Changing Impact of Community Vision Screening in Pediatric Ocular Trauma

#FMSC2026-233

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Introduction: Pediatric ocular trauma is a significant cause of preventable visual impairment. When left undetected and untreated, traumatic cataracts can lead to severe, irreversible complications, profoundly impacting a child's development and quality of life. Community-based vision screening programs are critical in identifying these vulnerable children who are not reached by the traditional hospital network.

Case Presentation: This case series highlights two profound instances of traumatic cataracts discovered through outreach initiatives: Case 1: A 10-year-old girl diagnosed with a traumatic cataract. Following identification during community screening, she received timely intervention, preventing long-term amblyopia and restoring her visual potential. Case 2: A 12-year-old girl who presented with a neglected traumatic cataract that had progressed into secondary glaucoma. This advanced case illustrates the severe consequences of delayed care and underscores the urgency of early detection.

Discussion: The emphasis of the case series is that both patients were invisible to the healthcare system until the screening team reached them. However, the sequelae of these two cases show the spectrum of delay—one detected in time for a straightforward recovery, and the other serving as a cautionary tale of progression into glaucoma.

Conclusion: These cases powerfully demonstrate that vision screening must extend "beyond hospital walls." Community

outreach is not just an administrative initiative; it is a life-changing intervention. By bridging the gap between remote or underserved communities and tertiary eye care, outreach screenings are vital in preventing permanent blindness and managing devastating complications like secondary glaucoma in children.

Keywords: vision screening, pediatric cataract, traumatic

Clinical Case Report / Case Series_98

The Importance of Early Antenatal Booking in Advanced Maternal Age Pregnancy: Lessons from a Suspected Trisomy 18 Case

#FMSC2026-236

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Introduction: Advanced maternal age (AMA) pregnancy is associated with an increased risk of foetal chromosomal abnormalities. Early antenatal booking enables timely prenatal screening, diagnostic confirmation, and informed reproductive counselling. Delayed booking may lead to missed opportunities for early detection of severe congenital anomalies.

Case Presentation: A 37-year-old gravida 7 para 4+2 woman presented as a late antenatal booker at 22 weeks and 3 days of gestation. She missed the optimal first-trimester screening window for foetal aneuploidy assessment. Subsequent antenatal follow-up revealed foetal growth restriction, polyhydramnios, and later raised suspicion of a chromosomal abnormality. The pregnancy was further complicated by pre-eclampsia and breech presentation. An emergency lower segment caesarean section was performed at 36 weeks and 6 days of gestation, delivering a low-birth-weight infant weighing 1.47 kg. The neonate exhibited clinical features suggestive of trisomy 18 and died on day 7 of life.

Discussion: This case highlights the consequences of delayed antenatal booking in an AMA pregnancy, particularly the missed opportunity for timely prenatal aneuploidy screening and confirmatory diagnostic testing. Earlier presentation could have enabled screening with combined first-trimester screening, quadruple testing, or cell-free foetal DNA testing, followed by diagnostic procedures such as chorionic villus sampling or amniocentesis.

Conclusion: Early antenatal booking remains essential in advanced maternal age pregnancies to facilitate timely prenatal screening, multidisciplinary counselling, and informed decision-making about pregnancy management.

Keywords: advanced maternal age, trisomy 18, prenatal screening

Clinical Case Report / Case Series_99

Asymptomatic Methyldopa-Induced Liver Injury in Pregnancy: A Primary Care Perspective

#FMSC2026-238

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Introduction: Methyldopa is frequently prescribed in primary care for managing hypertension in pregnancy due to its established safety profile. However, rare cases of transaminitis may occur and can be easily missed, particularly in asymptomatic patients.

Case Presentation: A 28-year-old primigravida with chronic hypertension was started on oral methyldopa 250 mg three times daily in early pregnancy. At 14 weeks' gestation, routine antenatal investigations revealed significantly elevated liver transaminases with a hepatocellular pattern. She remained asymptomatic, with no history of alcohol intake, herbal medication use, or other hepatotoxic exposures. Clinical examination, including abdominal examination, was unremarkable. Viral hepatitis screening was negative. Given the temporal relationship and exclusion of other causes, methyldopa-induced liver injury was suspected. Methyldopa was discontinued in the primary care setting and replaced with oral labetalol 100 mg twice daily. Serial liver function monitoring demonstrated progressive improvement with normalization within weeks. Blood pressure remained well controlled on alternative therapy, and subsequent antenatal follow-up under the Obstetrics and Gynaecology team was uneventful.

Discussion: Methyldopa-induced hepatotoxicity is an uncommon adverse reaction. Mild transient elevation of liver enzymes has been reported in 5–35% of patients, while clinically significant liver injury remains rare. A pre-eclampsia profile is important to exclude pregnancy-related causes of transaminitis such as pre-eclampsia and HELLP syndrome, thereby supporting early identification of drug-induced liver injury.

Conclusion: This case underscores the importance of regular liver function monitoring in hypertensive patients on Methyldopa and the need for early detection in primary care to facilitate timely intervention and reduce the risk of severe maternal complications.

Keywords: methyldopa, pregnancy, liver injury

Clinical Case Report / Case Series_100

From Recurrent UTI to Genitourinary Syndrome of Menopause: The Value of a Comprehensive Primary Care Approach

#FMSC2026-239

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Introduction: Menopause is associated with a decline in estrogen levels, leading to urogenital atrophy and alterations in the vaginal microbiome. These changes predispose postmenopausal women to an increased risk of urinary tract infections, often recurrent and with atypical presentations in primary care.

Case Presentation: A 54-year-old postmenopausal woman presented with recurrent dysuria, suprapubic pain, and incomplete

voiding over 3 months. Initial urinalysis demonstrated leucocyturia (125 WBC/ μ L) with positive nitrite, and urine culture isolated *Escherichia coli*. She was treated for recurrent urinary tract infection (UTI) (4 episodes within 4 months) with multiple courses of antibiotics, including oral amoxicillin-clavulanate, which resulted in only temporary symptomatic relief before recurrence. A comprehensive biopsychosocial assessment in primary care later revealed underlying features suggestive of Genitourinary Syndrome of Menopause (GSM). The patient reported persistent vaginal dryness, dyspareunia, and disturbance of sexual intimacy, in addition to associated menopausal symptoms including hot flushes, sleep disturbance, and mood changes. Her menopause had occurred at the age of 52 years.

Discussion: Estrogen deficiency in menopause leads to thinning of the uroepithelium, decreased glycogen content, and loss of lactobacilli, promoting colonization by uropathogens. This case highlights the importance of a comprehensive biopsychosocial assessment in postmenopausal women. Treating symptoms in isolation may lead to repeated treatment failure, whereas a holistic MHT approach can significantly improve symptoms and life quality.

Conclusion: Postmenopausal women with recurrent urinary symptoms should be assessed beyond recurrent UTI. A comprehensive biopsychosocial approach helps identify underlying GSM and associated menopausal symptoms. Early recognition and appropriate MHT can reduce symptom recurrence and improve quality of life.

Keywords: MHT; Menopausal Hormone Therapy; GSM; Genitourinary Syndrome of Menopause; UTI; Urinary Tract Infection

Clinical Case Report / Case Series_101

Severe Dementia and Caregiver Burden in Primary Care: A Case Report

#FMSC2026-240

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Introduction: Managing dementia in primary care is challenging due to systemic barriers, limited resources, and insufficient geriatric training among providers. Early detection and comprehensive management are crucial for enhancing patient outcomes and quality of life.

Case Presentation: Mr OM, a 75-year-old man with diabetes, presented with progressive memory decline and behavioral changes. The Mini-Cog score (0/5) and MMSE (12/30) were indicative of severe cognitive impairment. His condition caused significant caregiver stress, leading to a diagnosis of Major Depressive Disorder for his wife.

Discussion: This case illustrates the importance of early diagnosis of dementia. The Family Medicine Specialist (FMS) coordinated a multidisciplinary approach, including pharmacological treatment and interventions like cognitive stimulation therapy. Challenges included communication breakdowns, delays in diagnosis, and limited geriatric-trained personnel. Addressing caregiver burden was integral, involving family education, respite care, and psychoeducation.

Conclusion: This case highlights the urgent need for structured care pathways and enhanced training in geriatric assessment for primary care providers. Early detection and FMS-led multidisciplinary management are essential for effective dementia care.

Keywords: Dementia, Primary health care, Caregivers

Clinical Case Report / Case Series_102

Dapsone-Induced Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) In Leprosy: Two Cases Highlighting a Fatal Hepatic Failure and Relapsing Disease

#FMSC2026-241

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Introduction: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome is a rare, potentially fatal drug reaction that can be caused by dapsone. Hepatic failure is a major contributor to mortality, and relapse after an initial recovery is an increasingly recognised complication.

Case Presentation: We report two cases of dapsone-induced DRESS syndrome with severe outcomes in Orang Asli (Indigenous) patients. Case 1: The patient initially experienced a delay in the diagnosis of both leprosy and DRESS syndrome. Three weeks after initiating the medications, the patient was admitted with diabetic ketoacidosis, at which point she developed severe jaundice and eosinophilia. Despite the cessation of dapsone and the initiation of systemic corticosteroids, the patient's condition worsened. The patient then defaulted from follow-up post-discharge and subsequently succumbed to the illness. Case 2: This patient presented with fever, multiple pruritic skin lesions, and eosinophilia four weeks after starting dapsone, which was complicated by microangiopathic haemolytic anaemia (MAHA). Initial clinical improvement was achieved with systemic corticosteroid therapy. However, a relapse occurred following steroid tapering. Treatment was escalated, improving his condition and allowing initiation of second-line therapy for leprosy.

Discussion: These cases highlight the variable and potentially fatal spectrum of dapsone-induced DRESS. Delayed recognition can significantly contribute to severe organ involvement and increased mortality. Relapse remains a crucial complication that necessitates prolonged monitoring and cautious tapering of corticosteroids.

Conclusion: In conclusion, dapsone-induced DRESS carries a high risk of fatal hepatic complications and relapse. Early diagnosis, immediate cessation of the offending drug, and prolonged follow-up are critical for improving clinical outcomes.

Keywords: DRESS syndrome, Hepatic Failure, Relapse DRESS

Clinical Case Report / Case Series_103

Navigating Diagnostic Uncertainty in Primary Care: Pregnancy of Unknown Location with Intrauterine Contraceptive Device In Situ

#FMSC2026-242

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Introduction: Pregnancy occurring with an intrauterine contraceptive device (IUCD) in situ is uncommon but clinically significant due to the increased risk of ectopic pregnancy, miscarriage, septic abortion and adverse obstetric outcomes.

Case Presentation: We report a case of a 33-year-old multiparous woman with a Copper IUCD in situ who presented to a primary care clinic with 6 weeks of amenorrhoea and a positive UPT without abdominal pain or vaginal bleeding. Initial transvaginal ultrasonography revealed no intrauterine gestational sac, adnexal mass or free fluid, while serum beta-human chorionic gonadotropin (β -hCG) levels were elevated, leading to a diagnosis of pregnancy of unknown location (PUL). The IUCD thread remained visible on per speculum examination. As the patient was haemodynamically stable, she was referred for specialist assessment and serial β -hCG monitoring. She subsequently developed an incomplete miscarriage requiring evacuation of retained products of conception (ERPOC) at 12 weeks' gestation.

Discussion: This case demonstrates the importance of considering pregnancy despite the presence of an IUCD, particularly in women presenting with amenorrhoea. Delayed recognition may occur because both patients and healthcare providers may perceive the risk of pregnancy to be negligible. Prompt pregnancy testing and early ultrasound assessment remain essential.

Conclusion: This case highlights the diagnostic and management challenges of pregnancy occurring with IUCD in situ, particularly when initial imaging is inconclusive. It underscores the importance of maintaining a high index of suspicion for pregnancy despite contraceptive use and ensuring close follow-up in patients diagnosed with PUL.

Keywords: Intrauterine Devices, Abortion, Primary Health Care

Clinical Case Report / Case Series_104

Peach, Fire and Drool - Decoding the Danger of Early Exposure to Pornography via Social Media Emojis in a Boy with Attention Deficit Hyperactivity Disorder – A Case Report

#FMSC2026-243

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Introduction: The digital landscape introduces new health risks, particularly for neurodivergent children. Early exposure to pornography is closely linked to behavioural complications and premature hypersexualization. This case highlights a child with Attention Deficit Hyperactivity Disorder (ADHD) who exploited

social media emojis as a concealed search language to bypass traditional internet safety filters and access adult content.

Case Presentation: A 9-year-old-boy was brought to a primary care clinic concerning his escalating daily masturbation habits over the past three years. The patient became agitated when unable to engage in sexual behaviours and reacted with aggressive outbursts to parental interventions. The behaviour progressed into severe boundary violations, notably coercing his younger brother into oral sex. This created acute family distress and sibling victimization. The boy admitted to circumventing digital safeguards starting at age six using targeted emoji searches. Clinical assessments revealed that prominent ADHD traits, specifically impulsivity and inattention, significantly impaired the patient's capacity to manage his sexual urges.

Discussion: The patient's actions represent problematic sexual behaviour that exceeds typical childhood exploration. These behaviours were fuelled by premature online exposure and compounded by the poor impulse control associated with ADHD. The marked distress, compulsivity, and aggression point toward a potential behavioural addiction. Crucially, the sibling's victimization creates severe safeguarding issues requiring immediate, multidisciplinary care. Comprehensive psychoeducation is also necessary to address resulting parental anxiety.

Conclusion: Early identification and a combined treatment approach including behavioural therapy, pharmacological management, and thorough parental guidance are essential to address pathological sexual exploration and mitigate future legal, psychological, and social ramifications

Keywords: ADHD, social media, masturbation

Clinical Case Report / Case Series_105

Navigating Diagnostic Complexity in Adolescent Mental Health: The Role of Primary Care in a Case of Evolving Bipolar Disorder

#FMSC2026-246

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Introduction: Behavioural and mood disorders in adolescents may present with overlapping features, particularly in the context of significant psychosocial adversity, resulting in diagnostic uncertainties and management challenges.

Case Presentation: In this case report, we describe a 13-year-old girl referred for recurrent behavioural disturbances, including stealing behaviour, emotional dysregulation, suicidal notes, declining academic performance, poor concentration, and interpersonal difficulties at school. Her background was notable for exposure to domestic violence, bullying, impaired family dynamics, and limited psychosocial support. Initial assessments in a primary care setting suggested oppositional defiant disorder and conduct disorder with possible comorbid attention-deficit/hyperactivity disorder (ADHD). Subsequent episodes of mood lability, irritability, and behavioural escalation later raised suspicion for paediatric bipolar disorder. During tertiary psychiatric

assessment, the diagnosis was revised to ADHD with intellectual disability due to cognitive and attentional difficulties, and she was commenced on methylphenidate. However, longitudinal follow-up and continued behavioural observation ultimately supported a diagnosis of bipolar disorder based on the episodic nature of symptoms and progression of affective manifestations, following which olanzapine and sodium valproate were added.

Discussion: This case highlights the diagnostic complexity encountered in child and adolescent psychiatry, particularly where symptom overlap exists between ADHD, disruptive behavioural disorders, intellectual disability, and bipolar disorder.

Conclusion: It further underscores the importance of longitudinal assessment, multidisciplinary collaboration, continuous diagnostic reassessment, and the pivotal role of primary care in early recognition, ongoing monitoring, care coordination, and psychosocial support within a biopsychosocial framework, especially among adolescents from socioeconomically vulnerable backgrounds.

Keywords: Bipolar disorder, adolescent

Clinical Case Report / Case Series_106

From Fetus with Small Bowel Dilatation to Child with Congenital Chloride Diarrhoea

#FMSC2026-255

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Introduction: Congenital chloride diarrhea (CCD) is a rare autosomal recessive disorder associated with fetal small bowel dilatation and polyhydramnios on antenatal imaging.

Case Presentation: A 34-year-old pregnant woman with a history of early neonatal death was found to have fetal small bowel dilatation and polyhydramnios during a routine ultrasound at 28 weeks' gestation. Cordocentesis and amnioreduction were performed at 30 weeks, with fetal blood sent for chromosomal karyotyping and 1 L of amniotic fluid drained. The infant was delivered spontaneously at 35 weeks' gestation with a birth weight of 2.74 kg. Postnatally, the neonate developed recurrent watery diarrhoea with approximately 20% weight loss and required admission to the neonatal intensive care unit. Blood investigations demonstrated multiple electrolyte abnormalities, predominantly hypochloremia, consistent with CCD.

Discussion: This case highlights the importance of close antenatal surveillance in pregnancies with previous neonatal loss, especially when gastrointestinal pathology is suspected. Early ultrasound at 16 weeks showed normal bowel findings, while progressive bowel abnormalities only became apparent at 28 weeks, demonstrating that some fetal gastrointestinal conditions evolve later in pregnancy. Antenatal bowel dilatation may mimic small bowel atresia, creating diagnostic and management challenges.

Conclusion: Fetal small bowel dilatation with polyhydramnios should raise suspicion for CCD. Early recognition and multidisciplinary management are essential to optimise neonatal outcomes and ensure timely referral for specialised paediatric care.

Keywords: Congenital chloride diarrhea, Small bowel dilatation, Polyhydramnios, Pregnancy

Clinical Case Report / Case Series_107

Exogenous Cushing's Syndrome Masked as Refractory Type 2 Diabetes Mellitus: A Case from Primary Care

#FMSC2026-256

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Introduction: Exogenous Cushing's Syndrome is a metabolic complication caused by prolonged use of systemic corticosteroids hidden in traditional medications. It presents with severe insulin resistance, truncal obesity, and dyslipidemia, mimicking or severely worsening metabolic syndrome. It often remains unrecognized in primary care, where patients are aggressively treated for refractory diabetes before the root cause is identified.

Case Presentation: A 43-year-old Indian lady with Type 2 diabetes (diagnosed 2023), dyslipidemia, hypertension, and morbid obesity presented with worsening glycemic control. Despite intensifying therapy from premixed insulin to a basal-bolus regimen, her HbA1c ranged above 10% with a latest reading of 12.4%. Her metabolic profile showed an LDL of 4.3 mmol/L and a BMI of 48 kg/m². She was referred to the Family Medicine Specialist (FMS) for treatment optimization. Physical assessment revealed a moon-like facies, buffalo hump, and abdominal purple striae. Further history-taking, she admitted to daily ingestion of an unidentified traditional Chinese medication for tiredness. Biochemical tests showed a low 24-hour urine cortisol (17 nmol/24 hr.) and low early morning cortisol (17 nmol/L), confirming adrenal suppression. She was referred to endocrinology for steroid tapering and management.

Discussion: This case highlights the importance of recognizing exogenous Cushing's syndrome as an under-diagnosed cause of severe, treatment-resistant Type 2 diabetes in primary care settings. It underscores the need for clinical recognition of cushingoid features and meticulous history-taking regarding complementary medicine in patients with uncontrolled hyperglycemia.

Conclusion: Early recognition of secondary causes of uncontrolled hyperglycemia in primary care is essential to ensure appropriate treatment.

Keywords: Cushing Syndrome, Diabetes Mellitus, Type 2 Medicine, Chinese Traditional

Clinical Case Report / Case Series_108

Applying the International Classification of Functioning, Disability and Health (ICF) Model in Geriatric Domiciliary Care: A Case-Based Approach to Frailty and Advanced Neurocognitive Disorder

#FMSC2026-258

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Introduction: In 2025, 4.1 million Malaysians were aged 60 and older. Dementia affects roughly 1 in 10 older persons, heavily

contributing to disability and caregiver burden. The WHO's International Classification of Functioning, Disability and Health (ICF) framework integrates medical, functional, and contextual factors to guide patient-centered geriatric domiciliary care. Providing this care requires rapid adaptation to fluctuating needs and coordination across clinical, social services, and caregivers.

Case Presentation: An 87-year-old woman with a probable major neurocognitive disorder with apathy, diabetes, hypertension, and dyslipidemia presented with progressive decline following recurrent hospitalizations for aspiration/hospital-acquired pneumonia, and urinary tract infections. Previously ambulant post corrected femur fracture, she is now bedbound and completely dependent in basic activities of daily living.

Discussion: The ICF framework highlighted cognitive decline and immobility, causing severe activity limitations. Environmental factors, including the family's preference for conservative management of a possible periprosthetic fracture, guided care decisions. Domiciliary management prioritizes comfort over regaining independence. A primary care role is mitigating caregiver distress by equipping them with homecare skills. To manage apathy, interventions rely on immediate social rewards and respectful communication to prevent care resistance. Care dually focuses on compensating for functional decline through social services while optimizing remaining abilities via rehabilitation to reduce hospital admission and provision end of life care

Conclusion: The ICF model enables holistic care planning for frail patients. Outcome success is measured not by disease cure, but by the patient and family achieving individualized comfort goals and better quality of life. Ultimately, supporting capacity-enhancing behaviors ensures a dignified late life.

Keywords: ICF model; frailty; dementia

Clinical Case Report / Case Series_109

Unmasking Dual Disability: Camouflaged ASD in a Teenage Girl with Co-occurring Mood Disorders- A Case Report

#FMSC2026-259

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Introduction: While neurodivergence can be identified early, diagnosing adolescent females remains challenging due to camouflaging. Core developmental traits are frequently masked by secondary psychiatric symptoms, leading to significant diagnostic delays in this population.

Case Presentation: A 14-year-old girl presented with anxiety-driven school refusal, secondary to a one-year history of low mood, anhedonia, fatigue, and recurrent self-harm. Her symptoms were acutely triggered by persistent school-related criticism and progressive social isolation, leading to chronic absenteeism. She met diagnostic criteria for Major Depressive Disorder and Social Anxiety Disorder, compounded by multiple psychosocial factors. Her initial developmental history was heavily clouded by acute affective distress.

Discussion: Management employed a comprehensive biopsychosocial approach, integrating tailored pharmacotherapy with structured psychosocial interventions. Following clinical stabilization of her mood symptoms, her underlying neurodivergence was

unmasked. She exhibited profound, long-standing social-communication deficits and a total absence of peer relationships, confirming a diagnosis of Autism Spectrum Disorder (ASD) based on DSM-5 criteria.

Conclusion: This case underscores the diagnostic complexity of dual disability in adolescent girls. Clinicians must maintain a high index of suspicion for camouflaged ASD in females presenting with anxiety-driven school refusal, as underlying neurodivergence typically emerges more clearly once acute affective symptoms are successfully treated.

Keywords: Mood disorders, Autism Spectrum Disorder, Biopsychosocial approach

Clinical Case Report / Case Series 110

Mounjaro®: Not the Medical Miracle? A Case Report of Paradoxical Weight Gain after Initiation of Tirzepatide

#FMSC2026-261

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Introduction: Obesity and Diabetes Mellitus are conditions resulting in high morbidity and mortality. In 2025, over 60% of Malaysian adults were overweight or obese, continuing an upward trend. Tirzepatide (Mounjaro) is a new GLP1 receptor agonist, for Diabetes Mellitus which also offers benefits of weight loss.

Case Presentation: This is a 41-year-old male with medical history of Obese Class III (BMI: 49 kg/m²), Hypertension, Dyslipidemia and pre-Diabetes, who came for his regular follow up at a primary care clinic. He was previously maintained on Atorvastatin and dual antihypertensive therapy. He was started on subcutaneous Mounjaro injections 4 months ago. Two months prior to presentation, the patient received his 6th dose of Mounjaro and shortly after, he started to experience weight gain, nausea, vomiting, lethargy, low mood and fatigue. His symptoms then resolved on cessation of this medication. His weight initially decreased from 146 kg to 128 kg initially on S/c Mounjaro 2.5 mg/week, but increased to 138 kg when the dose was increased to 5 mg weekly after his 4th dose. He denied taking any other supplements, herbal medications, alcohol consumption or illicit drug use. He also denied any recent changes in his diet.

Discussion: Weight gain on Mounjaro may occur due to a few reasons needing gradual dose adjustments.

Conclusion: Fluctuations in water weight, hormonal changes, or underlying inflammation can cause temporary weight increment on Mounjaro treatment. Clinical trials show improvement in weight loss efficacy at higher dosages, up to the maximum 15 mg per week.

Keywords: Glucagon like peptide (GLP1 RA), Tirzepatide, Mounjaro, weight gain

Clinical Case Report / Case Series 111

“The Dose Looks Too High”: A Primary Care Pitfall in Chronic Hypoparathyroidism Management

#FMSC2026-276

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Introduction: Chronic hypoparathyroidism is an important long-term complication following thyroidectomy and requires lifelong treatment. In primary care, calcitriol doses used for hypoparathyroidism may appear high when compared with routine supplementation, creating a risk of inappropriate dose modification during transfer of care. This case highlights iatrogenic symptomatic hypocalcemia following dose reduction of calcitriol in a patient with chronic post-surgical hypoparathyroidism.

Case Presentation: A 57-year-old woman presented to a primary care clinic with a two-month history of hand tremor and perioral paraesthesia. Symptoms began after calcitriol was reduced from 0.5 microgram twice daily to 0.25 microgram once daily following transfer of care from another community clinic, as the original dose was perceived to be high. Her background history included hypertension, dyslipidemia, and hypothyroidism following thyroidectomy 20 years earlier. Examination revealed stable vital signs and a well-healed post-thyroidectomy scar. Chvostek and Trousseau signs were negative. ECG showed sinus rhythm with no prolonged QTc. Laboratory results showed corrected calcium of 2.36 mmol/L (reference range 2.15–2.50) and PTH of 5.46 pmol/L (reference range 1.6–6.9). Her symptoms resolved after reinstatement of calcitriol 0.5 microgram twice daily.

Discussion: Patients with chronic post-thyroidectomy hypoparathyroidism require long-term active vitamin D replacement at doses higher than routine supplementation. Inappropriate dose reduction in primary care may precipitate symptomatic hypocalcemia despite normal biochemical parameters.

Conclusion: This case highlights the importance of medication reconciliation and continuity of care in chronic endocrine disorders within primary care. Primary care physicians should avoid inappropriate dose reduction, which may precipitate symptomatic hypocalcemia and compromise patient safety.

Clinical Case Report / Case Series 112

Challenges in Diagnosis of Exclusion: Intrahepatic Cholestasis in Pregnancy

#FMSC2026-281

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Introduction: Intrahepatic cholestasis in pregnancy (ICP) is a reversible liver disorder characterized by pruritus and elevated bile acids in late pregnancy leading to complication such as fetal distress, preterm birth and sudden stillbirth. It affects approximately 0.1–0.2% of pregnancies in Malaysia.

Case Presentation: A 30-year-old woman, gravida 2 para 1, developed pruritus at 31 weeks POA during antenatal follow up. She had no prior history of intrahepatic cholestasis in pregnancy and no relevant family history. She presented with a two-week history of generalized pruritus, predominantly nocturnal. There

was no history of rash, drug exposure, or other systemic symptoms. Clinical examination revealed no skin lesions or stigmata of chronic liver disease. Laboratory investigations demonstrated transaminitis with mild elevation of total bilirubin. Serum bile acid was significantly elevated at 45 $\mu\text{mol/L}$, consistent with intrahepatic cholestasis in pregnancy. She was referred for specialist management and commenced on ursodeoxycholic acid, with close maternal and fetal surveillance. She subsequently delivered at 37 weeks' gestation with no maternal and fetal complications. Postpartum, her symptoms resolved completely.

Discussion: Intrahepatic cholestasis in pregnancy may present without rash and with subtle clinical features, potentially delaying diagnosis. This highlights the importance of maintaining a high index of suspicion in pregnant lady with pruritus in primary care settings.

Conclusion: This case highlights the importance of recognizing pruritus without rash in pregnancy as an indication for evaluation of intrahepatic cholestasis. Primary care plays a crucial role in early recognition and timely referral for delivery planning to reduce fetal morbidity and mortality.

Keywords: intrahepatic cholestasis in pregnancy, Pruritis, Stillbirth

Clinical Case Report / Case Series 113

Spongiotic Drug Eruption Mimicking a Lichenoid Drug Eruption: A Case of Clinicopathological Discordance in a Drug Eruption

#FMSC2026-298

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Introduction: Lichenoid drug eruption and spongiotic drug eruption are distinct patterns of cutaneous adverse drug reactions with characteristic clinical and histopathological features. However, clinicopathological discordance may occasionally occur, creating diagnostic challenges.

Case Presentation: A 74-year-old man with multiple comorbidities, including stage 3 chronic kidney disease, developed a progressive pruritic papulosquamous eruption one month after restarting allopurinol therapy. The eruption involved the upper and lower limbs and upper chest and was clinically suggestive of a lichenoid dermatosis. Mucosal, nail, and palmoplantar involvement were absent. Laboratory investigations demonstrated mild eosinophilia with preserved hepatic function, while autoimmune and infectious screening were unremarkable. Histopathological examination revealed subacute spongiotic dermatitis with eosinophilic infiltrates and no evidence of interface dermatitis, favouring a drug-induced eczematous reaction. Withdrawal of anti-gout therapy and treatment with systemic corticosteroids resulted in marked clinical improvement.

Discussion: The clinical appearance was suggestive of a lichenoid drug eruption, whereas histopathological findings supported a spongiotic drug eruption, highlighting a rare clinicopathological discordance. To our knowledge, similar presentations associated with anti-gout therapy have rarely been

reported. This case emphasizes the importance of integrating clinical, histopathological, and pharmacological findings when evaluating suspected drug-induced dermatoses, in order to prevent misdiagnosis and inappropriate management.

Conclusion: Recognition of atypical presentations and careful clinicopathological correlation are essential for accurate diagnosis, identification of the offending agent, and appropriate management of cutaneous adverse drug reactions.

Keywords: Clinicopathological discordance, Lichenoid drug eruptions, spongiotic drug eruptions

Clinical Case Report / Case Series 114

Beyond Tuberculosis Prevention: Isoniazid-Induced Unilateral Gynecomastia in a Patient Receiving IPT

#FMSC2026-301

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Introduction: Although Isoniazid is widely used for tuberculosis preventive therapy, gynecomastia remains a rare adverse effect. Unilateral involvement is exceptionally uncommon and may pose a diagnostic challenge, especially in patients receiving concomitant medications known to cause breast enlargement.

Case Presentation: A 30-year-old man with Retroviral Disease (RVD) was started on Tenofovir/Emtricitabine and Efavirenz in September 2025. Isoniazid Preventive Therapy (IPT) was initiated two months later. After four months of IPT, he developed persistent painful left breast enlargement for one month, preceded by intermittent breast pain after starting Isoniazid. There was no nipple discharge, skin changes, trauma, substance use, endocrine symptoms, or family history of malignancy. Examination showed a firm, mobile, mildly tender 3.5 cm left subareolar swelling with nipple retraction and no axillary lymphadenopathy. Systemic and genital examinations were unremarkable. Laboratory and hormonal investigations were within normal limits. Following discontinuation of isoniazid, breast tenderness resolved completely with gradual regression of the swelling after six weeks. Based on the temporal relationship, exclusion of other causes, and improvement after drug withdrawal, Isoniazid-induced unilateral gynecomastia was diagnosed.

Discussion: Isoniazid was also known to cause altered Oestrogen-Androgen metabolism. It has been postulated that isoniazid probably acts by a phenomenon called "Refeeding Gynecomastia", which is supposed to be caused by restoration of weight, Gonadotrophin secretion, and Gonadal function.

Conclusion: This case highlights a rare but reversible presentation of unilateral gynecomastia associated with Isoniazid therapy and emphasizes the importance of recognizing medication-related causes in patients receiving tuberculosis prophylaxis.

Keywords: Unilateral Gynecomastia, Isoniazid, Tuberculosis Prevention

Clinical Case Report / Case Series 115

From Womb to Birth: Antenatal Diagnosis and Management of Congenital Pulmonary Airway Malformation

#FMSC2026-302

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Introduction: Congenital Pulmonary Airway Malformation (CPAM) is rare developmental abnormality of lungs. This report presents case diagnosed in the second trimester and the clinical dilemma of pregnancy prolongation.

Case Presentation: 28-year-old G2P1, booking done at 9 weeks 5 days. She has a family history of diabetes mellitus. The patient had 2+ glycosuria and a random blood sugar of 6.6 mmol/L. She was diagnosed with overt diabetes mellitus with HbA1c of 7.8%. At 19 weeks 4 days, ultrasonography revealed fetal ascites. An advanced structural anatomy scan performed by tertiary Maternal-Fetal Medicine unit at 20 weeks 2 days confirmed a large, microcystic CPAM Type II/III occupying the entire left hemithorax. Serial monitoring at 24 weeks demonstrated rapid disease progression with CPAM volume ratio (CVR) of 1.78, also severe rightward mediastinal shift, cardiac displacement, and worsening fetal hydrops. Multidisciplinary counselling done and the parents elected for termination at 26 weeks 4 days. She delivered a stillborn female infant weighing 1,070 grams. Gross examination confirmed presence of generalized hydrops fetalis and an asymmetric, markedly enlarged left lung mass consistent with CPAM.

Discussion: Antenatal diagnosis of CPAM has more favorable prognosis, also required nuances multidisciplinary counselling. The prognosis is optimal, with survival rates dependent on the pathological type 69% for Type I but significantly lower for Types II and III. Poor prognostic indicators include fetal hydrops, bilateral involvement, and the CVR exceeding 1.6.

Conclusion: Advances in imaging allow precise in-utero monitoring and identification of high-risk fetus, also management of CPAM.

Keywords: Lung Diseases, Congenital; Prenatal Diagnosis; Ultrasonography, Prenatal

Clinical Case Report / Case Series 116

"Not All Forgetfulness Is Dementia": Metastatic Lung Adenocarcinoma Presenting with Cognitive Decline

#FMSC2026-311

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Introduction: Cognitive impairment is a frequent presentation in primary care among older adults and is commonly attributed to dementia. However, clinicians must remain vigilant for red flags that suggest alternative diagnoses.

Case Presentation: We report a 73 year old man with diabetes, hypertension and dyslipidemia who presented with three months

of progressive forgetfulness, unsteady gait, reduced speech and intermittent right sided weakness. He had constitutional symptoms with 7 kg weight loss. Examination revealed an unsteady gait, right upper limb weakness (Medical Research Council 4/5) and mini mental state examination scores of 18/30. Initial systemic review was otherwise unremarkable. Brain MRI showed a left temporal lobe lesion with surrounding oedema, mass effect and 5 mm midline shift, suspicious for metastasis. CT thorax, abdomen and pelvis identified a left upper lobe pulmonary lesion with hepatic and adrenal deposits. Lung biopsy confirmed adenocarcinoma and liquid biopsy showed no actionable mutations. He received a whole brain radiotherapy for symptomatic control. After multidisciplinary discussion including oncology, palliative care and the family, management was directed towards palliative focused care prioritizing symptom relief and quality of life, with ongoing support from primary care.

Discussion: Further discussion in relation to this case will be included in the poster presentation.

Conclusion: This case emphasizes that new or subacute cognitive decline in older adults, particularly when accompanied by focal neurological signs, gait disturbance or systemic symptoms; warrants prompt imaging and investigation to exclude sinister causes.

Keywords: Brain metastasis Cognitive decline red flags

Clinical Case Report / Case Series 117

HIV Elite Controller in Primary Care: Challenges Beyond Viral Suppression

#FMSC2026-312

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Introduction: Elite Controllers are rare individuals with spontaneous HIV viral suppression without antiretroviral therapy (ART) despite current recommendations for universal treatment.

Case Presentation: A 47-year-old Chinese gentleman was diagnosed with HIV-1 infection in 2014 following screening after unprotected sexual exposure. The diagnosis was confirmed by rapid HIV Ag/Ab testing, Particle Agglutination (PA) and Enzyme-Linked Immunosorbent Assay (ELISA). His baseline CD4 count was 543 cells/ μ L. Despite declining ART, serial HIV viral load measurements using the COBAS TaqMan HIV-1 assay from 2014 to 2016 consistently demonstrated viral loads below 20 copies/mL. He remained asymptomatic, completed isoniazid preventive therapy and developed no opportunistic infections. Repeat HIV-1 RNA testing in 2020 using the GeneXpert assay again showed an undetectable viral load despite never receiving ART. His wife remained HIV-negative throughout follow-up. Although he maintained spontaneous virological suppression for nearly a decade, serial monitoring revealed a gradual decline in CD4 counts. Following discussion with an Infectious Disease physician, he was classified as an HIV Elite Controller. Unfortunately,

the patient subsequently died in 2022 from complications of cardiovascular disease.

Discussion: Current HIV guidelines recommend ART for all individuals living with HIV, including Elite Controllers. Despite prolonged spontaneous viral suppression, Elite Controllers may remain at risk of immunological decline and non-AIDS-related comorbidities.

Conclusion: This case highlights the importance of continued follow-up and shared decision-making when counselling patients who decline guideline-recommended treatment.

Keywords: 1. HIV Infections 2. Antiretroviral Therapy 3. Viral Load

Clinical Case Report / Case Series 118

The Headache That Wouldn't Quit: A Case of Spontaneous Subdural Haemorrhage Masquerading as Benign Antenatal Headache

#FMSC2026-315

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Introduction: Headache is a common complaint during pregnancy and is frequently attributed to benign primary headache disorders or hypertensive disorders of pregnancy. However, persistent headache may be the sole manifestation of serious intracranial pathology.

Case Presentation: A healthy 38-year-old G2P0+1 had an uncomplicated pregnancy until 34 weeks gestation where she presented with a two-day history of gradual-onset right frontal headache. There were no neurological symptoms, visual disturbances, or features of pre-eclampsia. Clinical examination, including vital signs, funduscopy and neurological assessment, were normal. She attributed the headache to work related stress. She was then diagnosed with tension-type headache and managed conservatively with paracetamol and close blood pressure monitoring. At one-week follow-up, the headache slightly improved with treatment and repeated examinations remained unremarkable. At 36 weeks gestation, she presented again with worsening headache and vomiting. Urgent CT Brain revealed right subdural haemorrhage. She subsequently underwent EMLSCS followed by craniotomy and evacuation of haematoma. Further investigations showed no underlying vascular malformation, connective tissue disorder, or other identifiable aetiology, consistent with spontaneous subdural haemorrhage.

Discussion: This case highlights the diagnostic challenge of spontaneous subdural haemorrhage in pregnancy, a rare but potentially life-threatening condition that may initially present with isolated headache and normal neurological findings. Persistent symptoms despite conservative treatment should be regarded as a red flag warranting diagnostic reconsideration and early neurology referral.

Conclusion: Persistent headache in pregnancy warrants careful reassessment despite normal initial findings. Repeated reassessment, appropriate safety-netting, and a low threshold for further investigation are essential to facilitate timely diagnosis and optimize maternal and fetal outcomes.

Keywords: Headache, spontaneous, persistent

Clinical Case Report / Case Series 119

More Than a Fungal Infection: Recognizing Extramammary Paget Disease in Primary Care

#FMSC2026-316

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Introduction: Extramammary Paget disease (EMPD) is a rare intraepithelial adenocarcinoma affecting apocrine-rich areas in older adults. Because it mimics benign dermatoses like tinea cruris, diagnosis is often delayed, with a documented median lag of two years.

Case Presentation: A 74-year-old Chinese female presented with a one-year history of an enlarging, pruritic, erythematous pubic plaque. It was managed initially as tinea cruris with oral itraconazole and topical antifungals, yielding negligible improvement. Following a negative fungal skin scraping, a 4-mm punch biopsy was performed. Histopathology demonstrated an intraepidermal proliferation of large, atypical epithelioid cells with pale cytoplasm and pleomorphic nuclei. Immunohistochemical staining was positive for CK7, GATA3, and PAS, but negative for CK20 and S100. This confirmed a diagnosis of non-invasive primary EMPD, ruling out melanoma and secondary malignancy. The patient was referred for wide local excision.

Discussion: EMPD poses a diagnostic pitfall in family medicine by mimicking common fungal infections. The crucial clinical lesson is recognizing standard treatment failure. When a genital lesion resists guideline-based antifungals, primary care physicians must pivot from empirical therapies to definitive testing. A prompt punch biopsy avoids multi-year diagnostic delays and ensures timely oncological referral.

Conclusion: Early recognition and referral for prompt biopsy of atypical groin lesions are vital to prevent extensive local disease progression and optimize long-term patient outcomes.

Keywords: Extramammary Paget disease, Tinea cruris, Punch biopsy.

Clinical Case Report / Case Series 120

Interrupted Care: Unplanned Pregnancy During Active Management of Malignant Breast Phyllodes Tumour: A Case Report

#FMSC2026-318

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Introduction: Malignant phyllodes tumour is a rare fibroepithelial breast neoplasm with potential for local recurrence and distant metastasis. Pregnancy during active oncological management may interrupt staging and adjuvant treatment, requiring careful balance between maternal oncological safety and fetal wellbeing.

Case Presentation: A 29-year-old woman, gravida 4 para 0+3, was diagnosed with malignant left breast phyllodes tumour and underwent mastectomy. Histopathology confirmed malignant phyllodes tumour with no lymphovascular space invasion. She was initially planned for computed tomography of the thorax, abdomen and pelvis and adjuvant radiotherapy. However, an unplanned pregnancy was detected during treatment planning. At 14 weeks and 2 days of gestation, ultrasound showed a viable singleton fetus with grossly normal early anatomical survey. The patient reported that she was unaware pregnancy should ideally be avoided during ongoing oncological staging and planned adjuvant treatment.

Discussion: Following multidisciplinary discussion, computed tomography staging and radiotherapy were deferred until postpartum. Antenatal surveillance included two-monthly breast and axillary ultrasound, serial fetal growth scans from 28 weeks, thromboprophylaxis with low molecular weight heparin from 28 weeks until six weeks postpartum, and planned delivery at 39 weeks if disease remained stable. Postpartum plans included computed tomography staging, oncology reassessment, copper intrauterine device insertion and breastfeeding counselling.

Conclusion: This case highlights the importance of early, explicit and documented counselling on pregnancy timing and contraception in reproductive-aged women undergoing cancer care. Family physicians can help reinforce patient understanding, coordinate multidisciplinary care and ensure postpartum follow-up.

Keywords: Phyllodes Tumor; Pregnancy; Unplanned; Contraception

Clinical Case Report / Case Series 121

Not All Folliculitis Needs Antibiotics: A Missed Case of *Malassezia* Folliculitis

#FMSC2026-320

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Introduction: *Malassezia* folliculitis (MF) is a common but frequently underdiagnosed fungal skin condition caused by *Malassezia* species. It often mimics acne vulgaris or bacterial folliculitis, leading to delayed diagnosis and inappropriate antibiotic treatment. Early clinical recognition is essential, as the condition responds well to antifungal therapy.

Case Presentation: A 15-year-old boy presented with a persistent, itchy rash over his chest and upper back. Initially diagnosed as bacterial folliculitis, he received repeated courses of topical and oral antibiotics without improvement. He was also prescribed steroids for symptomatic relief, which subsequently worsened the condition. Upon third visit with comprehensive reassessment, the presence of intensely pruritic, monomorphic papulopustules over seborrheic-rich areas strongly suspected MF. The persistent lesions caused significant psychosocial distress, including poor self-esteem and school absenteeism. Initiating antifungal therapy led to rapid clinical resolution and restored patient's quality of life.

Discussion: MF typically affects adolescents due to increased sebaceous activity, characteristically presenting in seborrheic-rich areas. Unlike bacterial folliculitis which usually presents with painful, polymorphic lesions in different distributions the hallmark of MF is intense pruritus. Rather than empirically prescribing antibiotics for all cases of folliculitis, clinicians should proactively differentiate fungal from bacterial causes during history taking by carefully evaluating symptom characteristics, lesion morphology, and distribution. Misdiagnosis often leads to inadvertent antibiotic or steroid use, which disrupts normal skin flora and exacerbates fungal proliferation.

Conclusion: MF should be suspected in adolescents presenting with an itchy rash in seborrheic rich distributions. Accurate clinical differentiation prevents inappropriate therapies, reduces psychosocial distress, and ensures prompt, targeted antifungal treatment.

Keywords: *Malassezia* folliculitis Fungal infection Primary Care Dermatology

Clinical Case Report / Case Series 122

Opioid Rotation in End-of-Life Care at Home: Practical Applications in Primary Care

#FMSC2026-321

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Introduction: Primary care clinicians provide care across the lifespan, including end-of-life care in the community. This case series describes three cases that required opioid rotation from oral morphine to transdermal fentanyl for different clinical indications.

Case Presentation: Case 1: A 65-year-old man with advanced hepatocellular carcinoma experienced uncontrolled abdominal pain despite morphine titration, requiring 6–8 doses daily. Visual impairment from bilateral cataracts meant his elderly wife prepared and administered each dose, resulting in significant caregiver stress. Worsening liver function further supported opioid rotation. Following conversion to transdermal fentanyl, pain control improved and caregiver burden lessened. Case 2: An 80-year-old woman with end-stage renal failure and advanced heart failure developed refractory breathlessness despite optimal medical therapy and home oxygen. Low-dose morphine initially relieved symptoms but increasing use led to drowsiness and reduced responsiveness. She was switched to low-dose transdermal fentanyl, which was well tolerated. She remained comfortable at home and died two months later in her preferred place of care. Case 3: A 55-year-old man with metastatic neuroendocrine anal carcinoma developed minimal oral intake, recurrent choking and signs of imminent death. Oral medications, including morphine, were discontinued and replaced with transdermal fentanyl. He remained comfortable and died peacefully at home without observable signs of pain.

Discussion: This report discusses opioid rotation indications in relation to the cases presented.

Conclusion: With appropriate training, primary care teams can safely implement opioid rotation to optimise symptom control and support patients wishing to remain at home at the end of life.

Keywords: Opioid rotation indication Opioid switching reasons

Clinical Case Report / Case Series 123

Beyond the Pills: Challenges in Managing Perinatally Acquired HIV in a Primary Care Setting

#FMSC2026-329

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Introduction: This is a case report of managing a young adult with perinatally acquired Retroviral Disease (RVD) facing complex clinical and psychosocial challenges in health clinic setting.

Case Presentation: A 22-year-old woman with vertically transmitted RVD in AIDS defaulted from tertiary follow-up due to financial constraints and geographic barriers. Following hospital admission for *Pneumocystis jirovecii* pneumonia, she opted for care under a Family Medicine Specialist (FMS). She exhibited severe immunosuppression (CD4: 13 cells/ μ L) and virological failure (Viral Load: 56,700 copies/mL). A recent resistance test showed no mutations against PIs, NRTIs, and INSTIs, proving that her treatment failure was entirely adherence-driven. Multi-session FMS counselling eventually uncovered profound pill fatigue and deep-seated internal stigma. Consequently, her therapy was simplified to a single daily tablet (T. Teldy – Tenofovir/ Lamivudine / Dolutegravir).

Discussion: Transitioning perinatally infected young adults to adult care is challenging. In this case, resistance testing revealed that treatment failure due to non-compliance rather than viral resistance. This highlights the critical importance of building long-term clinical trust to uncover hidden barriers. Furthermore, single-tablet regimens can drastically reduce the daily psychological burden of disease.

Conclusion: This case highlights how geographic barrier, pill fatigue, and internal stigma compromise ART adherence. Primary care teams are uniquely positioned to provide the empathetic, continuous counselling and simplified regimens necessary to overcome these complex barriers.

Keywords: Vertically transmitted HIV, Pill fatigue, Social stigma

Clinical Case Report / Case Series 124

When Syphilis Is Not Syphilis: Revisiting Childhood Yaws in an Elderly Woman with Positive Treponemal Serology

#FMSC2026-330

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Introduction: Yaws disease and syphilis are caused by *Treponema Pallidum* subspecies and cannot be distinguished by serological testing. In elderly adults from previously yaws endemic regions, positive treponemal serology may pose a diagnostic challenge.

Case Presentation: A 75-year-old woman with end stage renal failure on regular haemodialysis was referred for treatment of presumed late latent syphilis following positive serological screening. TPPA was reactive and RPR titre had increased from 1:4 to 1:16. She denied high risk behaviour and was asymptomatic. Physical examination was unremarkable. Further history revealed

that she had been diagnosed for yaws during childhood while living in Terengganu. In view of the rising RPR titre and inability to exclude latent syphilis, she was treated with benzathine penicillin 2.4 million units intramuscularly weekly for three doses.

Discussion: This case highlights the diagnostic dilemma of differentiating relapsed yaws from late latent syphilis in an asymptomatic elderly woman with rising RPR titres. Although the increase in RPR supported active treponemal infection, a history of childhood yaws and absence of sexual risk factors complicated interpretation. As routine serology cannot distinguish yaws from syphilis, management relied on clinical judgement and epidemiological context. The patient was treated as late latent syphilis to avoid the potential consequences of undertreatment.

Conclusion: Not every positive syphilis serology represents syphilis. This case reflects how a forgotten childhood history of yaws transformed a routine referral into a diagnostic dilemma. A comprehensive history still remains a powerful tool in guiding diagnosis and management when laboratory findings alone are inconclusive.

Keywords: Yaws, syphilis, treponema

Clinical Case Report / Case Series 125

Malignant etiology of chest pain in adolescent - a case report

#FMSC2026-046

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Introduction: Adolescent presenting to primary care for chest pain is commonly caused by benign cause. Rarely it is caused by malignant disease. Clinical history, physical examination are important in primary care to detect abnormality that warrants other investigations including electrocardiogram (ECG) and chest radiograph (CXR).

Case Presentation: This is a case report on adolescent with acute history of chest pain. ECG showed high voltage QRS complex and subsequent CXR revealed large left lung mass. Patient was referred and admitted for in-patient workout. Patient was diagnosed with rare primary mediastinal germ cell tumour requiring chemotherapy and surgery.

Discussion: Discussion on prevalence, causes of mediastinal tumour, prognosis and management are included in this case report. Role of primary care including detection, urgent referral, and support for adolescent with cancer diagnosis are highlighted.

Conclusion: This case study reported an adolescent who was diagnosed with rare malignancy from a chief complaint that most commonly dictates benign diagnosis in this age group.

Keywords: mediastinal, germ cell tumour, chest pain

Clinical Case Report / Case Series_126

Persistent Anosmia in An Elderly Patient: Post Viral or Neurogenic?

#FMSC2026-056

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Introduction: Anosmia is a common presentation with diverse etiologies, including sinonasal disease, neurogenic causes, and post-viral dysfunction. Its significance has increased in primary care following the COVID-19 pandemic.

Case Presentation: A 72-year-old Malay lady with underlying well-controlled diabetes mellitus, hypertension, dyslipidaemia, and knee osteoarthritis presented with persistent anosmia for seven months. She denied nasal obstruction, allergic rhinitis symptoms, head trauma, headache, visual changes, or personality changes. Examination revealed minimal nasal findings. Further history identified a preceding episode of upper respiratory tract symptoms, including fever, lethargy, and excessive whitish phlegm without cough or sore throat. No virological testing was performed at that time. She was evaluated by an otorhinolaryngology specialist. Nasoendoscopy showed no polyps or structural abnormalities. A neurogenic cause was suspected, and mecobalamin was initiated, with imaging planned.

Discussion: In this patient, post-viral anosmia remains the most likely diagnosis, given the preceding upper respiratory illness and absence of structural nasal pathology, with undiagnosed COVID-19 as a possible contributor. Age-related olfactory decline may play a role but is less likely as the primary cause due to the relatively acute onset. Neurogenic causes, including olfactory nerve dysfunction or central pathology, should be considered given the persistence of symptoms. Chronic sinonasal disease is less likely in view of normal endoscopic findings.

Conclusion: Persistent anosmia beyond six months warrants further evaluation. Recommended next steps include MRI brain focusing on the olfactory pathways, formal olfactory testing, and initiation of olfactory training. Early evaluation is important to guide prognosis and management.

Keywords: anosmia, neurogenic, post viral

Clinical Case Report / Case Series_127

Neonatal Diabetes Mellitus Due to a CNOT1 Mutation with Combined Endocrine–Exocrine Pancreatic Dysfunction

#FMSC2026-063

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Introduction: Neonatal diabetes mellitus (NDM) is an uncommon monogenic disorder presenting within the first six months of life. Pathogenic variants in CNOT1 are an infrequent cause and may lead to combined endocrine–exocrine pancreatic dysfunction with significant growth and nutritional consequences.

Case Presentation: Born at 35 weeks with a de novo CNOT1

variant, this infant presented with syndromic neonatal diabetes, bilateral cleft lip/palate, and pancreatic agenesis. Investigations confirmed profound insulin deficiency (HbA1c 12.5%), requiring immediate therapy during a neonatal course complicated by sepsis and growth failure. Post-discharge, the family transitioned to comfort-focused care and discontinued insulin, resulting in severe malnutrition and metabolic decompensation. However, active management—including continuous insulin infusion and pancreatic enzymes—was successfully resumed through the intervention of the primary care clinician working in Klinik Kesihatan by identifying critical red flags and utilizing trust-based counselling, bridging the gap between tertiary requirements and family preferences.

Discussion: This case highlights the pivotal role of the primary care clinician in managing rare CNOT1-related neonatal diabetes. Through longitudinal community surveillance at the Klinik Kesihatan, the clinician identified subtle growth faltering and evolving organ dysfunction that were often missed during episodic specialist reviews. By building sustained trust and coordinating shared care, the clinician bridged tertiary community gaps, supported family psychosocial needs, and facilitated a successful transition back to active multidisciplinary management.

Conclusion: Primary care anchors the management of rare monogenic diabetes. Through longitudinal surveillance and trust-based counselling, it bridges tertiary gaps, supports complex family decision-making, and coordinates multidisciplinary care for clinical stability.

Keywords: Neonatal diabetes mellitus, CNOT1 mutation, primary care clinician

Clinical Case Report / Case Series_128

The Copper IUD Nightmare- Anchored in False Security, Delayed Pregnancy Recognition and Severe Preeclampsia: A Primary Care Case Report

#FMSC2026-084

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Introduction: Hypertensive disorders in pregnancy remain a leading cause of maternal and perinatal morbidity. Early recognition of pregnancy in women with chronic conditions is essential for timely risk stratification and optimization of care. In primary care, diagnostic errors may arise from cognitive biases such as diagnostic anchoring, particularly in the presence of highly effective contraception like a Copper intrauterine device.

Case Presentation: A 31-year-old gravida 5 para 4 with chronic hypertension presented with amenorrhea, abdominal discomfort, and vaginal spotting. The presence of a copper IUD reduced clinical suspicion of pregnancy, resulting in delayed confirmatory testing. Subsequent evaluation confirmed an intrauterine pregnancy with the IUD in situ. Her hypertension was sub optimally controlled, with no prior preconception care. Following diagnosis, anti-hypertensive therapy was adjusted and the IUD removed. Despite intervention, she developed pre-eclampsia at 33 weeks' gestation, necessitating emergency caesarean delivery.

Discussion: This case illustrates how diagnostic anchoring bias may lead to premature exclusion of pregnancy in reproductive-aged women using contraception. Delayed recognition limits opportunities for early medication optimization, initiation of antenatal surveillance, and prophylactic measures, thereby increasing the risk of severe hypertensive complications. It underscores the need for probabilistic clinical reasoning and routine exclusion of pregnancy in appropriate clinical contexts.

Conclusion: Primary care clinicians should remain vigilant to cognitive biases and avoid overreliance on contraceptive efficacy. Routine pregnancy testing and strengthening preconception care are critical strategies to reduce preventable maternal morbidity.

Keywords: copper IUD, preeclampsia, cognitive bias

Clinical Case Report / Case Series_129

Beyond Referral: Integrating Patient Empowerment in Primary Care Management of Diabetic Foot Osteomyelitis — Experience from Klinik Kesihatan Batu 9

#FMSC2026-158

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Introduction: Diabetic foot ulcer (DFU) with osteomyelitis is a limb-threatening condition where surgical referral is often considered definitive care. However, patient refusal challenges conventional pathways and calls for a shift towards a more adaptive, patient-centred model that balances clinical expertise with respect for patient autonomy.

Case Presentation: A 46-year-old man with diabetes, hypertension, and dyslipidaemia presented with a 4-week history of foul-smelling right foot discharge. He was clinically stable. Examination revealed dorsum and plantar ulcers with purulent discharge and slough. Radiography confirmed osteomyelitis of the first and second metatarsals without gas formation. Despite counselling, he declined surgical referral and opted for primary care management. A structured outpatient approach was initiated, including incision and drainage, oral antibiotics, wound care, and strict offloading. Patient empowerment through shared decision-making was central. Motivational interviewing using the FRAMES approach was employed to support behavioural change, strengthen engagement, and reinforce patient ownership. This emerged as a component in care, transforming the patient from a passive recipient into an active partner, enhancing adherence and outcomes. Continuous glucose monitoring was introduced to optimise glycaemic control. Guided by T.I.M.E. framework, the wound achieved full epithelialisation over 12 weeks without complications.

Discussion: Successful management extends beyond clinical intervention. Patient engagement, self-management, and adherence, supported by structured behavioural strategies, are key determinants of outcome, particularly when referral is declined.

Conclusion: This case reframes patient autonomy not as a barrier, but as a therapeutic asset. When effectively engaged, it becomes the difference between compliance and commitment, and ultimately, between delayed care and meaningful recovery.

Keywords: Diabetic foot ulcer, Primary care, Patient-centered care,

Clinical Case Report / Case Series_130

From Neurosurgery to Neighbourhood: Primary Care as the Pivot in Managing Non-Accidental Injury with Chronic Subdural Haemorrhage in a Biopsychosocial Vulnerable Infant

#FMSC2026-169

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Introduction: Non-accidental injury (NAI), particularly abusive head trauma, is a major cause of infant intracranial haemorrhage and often reflects underlying psychosocial vulnerability. Abusive head trauma commonly presents with subdural haemorrhage (SDH), seizures, and long-term neurodevelopmental impairment; recurrence risk is elevated when caregivers have mental illness, poverty, or poor healthcare engagement. Acute management occurs in tertiary settings, but prevention of recurrence and optimization of development require sustained primary care follow-up.

Case Presentation: We report a 7 month old ex premature girl with a small atrial septal defect who presented in status epilepticus. Neuroimaging showed multifocal cerebral infarctions and bilateral intracranial haemorrhages of differing ages, strongly suggesting NAI. She later developed bilateral chronic SDH with raised intracranial pressure, necessitating burr hole drainage and subdural drains. Postoperatively she stabilized and was discharged to shared care between tertiary services and primary care. Biopsychosocial assessment revealed multiple safeguarding concerns: maternal schizophrenia with impaired caregiving, lack of contraception, fragmented caregiving, low household income, clinic defaults, and incomplete immunization.

Discussion: The case illustrates that chronic SDH in infants may be the neurological end point of cumulative biopsychosocial risks rather than solely a neurosurgical problem.

Conclusion: Primary care, through continuity of care, developmental surveillance, integration of reproductive health, immunization, psychosocial interventions, and coordination of multidisciplinary services, functions as the pivot linking tertiary rescue with long term safeguarding and family rehabilitation. Addressing maternal mental health, reproductive planning, and social determinants is essential to reduce recurrence and improve outcomes for vulnerable infants with suspected NAI.

Keywords: Non-accidental injury (NAI), chronic subdural haemorrhage, psychosocial vulnerability, schizophrenia

Clinical Case Report / Case Series_131

From Missed Red Flags to Life-Saving Interventions: Clinical Utility of the HEADDSS Framework in High-Volume Primary Care Settings

#FMSC2026-170

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Introduction: In high-volume adolescent consultations, the most significant clinical risks frequently stem from undetected underlying psychosocial crises rather than from the presenting symptoms. This serial case study examines the HEADDSS (Home, Education, Activities, Drugs, Sexuality, Suicide/Safety) framework as a structured and efficient tool for identifying these risks.

Case Presentation: Case 1: A 16-year-old female presented with low mood and academic decline and was initially assessed without a comprehensive psychosocial review. Ongoing symptoms led to a subsequent HEADDSS assessment, which identified bullying, emotional isolation, maladaptive coping, and self-harm thoughts. The diagnosis was revised to depressive disorder, resulting in pharmacotherapy, counseling, safety planning, and close monitoring, which produced significant improvement. Case 2: A 14-year-old male presented with low mood and academic decline and was initially reviewed without a comprehensive psychosocial assessment. A subsequent HEADDSS evaluation revealed sexual identity distress, online conflicts, family communication deficits, insomnia, hopelessness, and passive suicidal ideation. Collateral information uncovered alarming suicidal communications online, prompting urgent referral to emergency psychiatric care for moderate-to-high suicide risk. The patient remains under psychiatric and clinical psychologist follow-up and is receiving pharmacotherapy.

Discussion: Both cases demonstrate that incomplete psychosocial assessment may overlook critical warning signs, including bullying, family disconnection, and suicidality. The HEADDSS framework served as a practical and efficient tool for risk stratification and intervention, facilitating both early treatment and life-saving referrals.

Conclusion: HEADDSS is an essential safeguarding tool in adolescent primary care, especially in high-volume clinical settings. Structured psychosocial screening clarifies diagnoses, guides management, and determines the need for reassurance or urgent intervention.

Keywords: Adolescent mental health; HEADDSS; Primary care; Missed diagnosis

Clinical Case Report / Case Series_132

Multidisciplinary Antenatal Care for High-Risk Pregnancy Following Recent Dermatofibrosarcoma Protuberans Excision and Prophylactic Anticoagulation

#FMSC2026-183

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Introduction: Dermatofibrosarcoma Protuberans (DFSP) is a rare, locally aggressive soft tissue sarcoma. This case highlights the complexity of antenatal management in a patient requiring ongoing prophylactic anticoagulation, an important consideration due to the risk of peripartum hemorrhage and the necessity for coordinated, multidisciplinary care.

Case Presentation: A 38-year-old G2P1 at 32 weeks + 5 days presented for antenatal follow-up of a multi-factorial high-risk pregnancy. Key co-morbidities included Morbid Obesity with possible Obstructive Sleep Apnoea (OSA), and Gestational

Diabetes Mellitus (GDM) requiring Insulin and Metformin. The unique complicating factor was the recent wide local excision of DFSP at the lower back, which achieved clear margins. The patient is co-managed by Maternal Fetal Medicine, Internal Medicine, Surgical and Family Medicine teams. She is on prophylactic SC Clexane 60mg OD until delivery. Initial investigations confirmed controlled blood glucose levels and appropriate foetal growth. Follow-up includes ongoing blood sugar monitoring, a scheduled home sleep study for OSA, and a definitive decision on the mode of delivery, aimed at 38 weeks.

Discussion: This case underscores the challenges in applying standard obstetric guidelines to a patient with rare surgical and oncological co-morbidities. What makes it unique is the confluence of active management for a rare soft tissue sarcoma requiring ongoing anticoagulation, combined with morbid obesity. Early recognition of all compounding factors and detailed, centralized planning are crucial for mitigating risks associated with hemorrhage, thromboembolism, and maternal co-morbidities.

Conclusion: This case illustrates the importance of coordinated, multidisciplinary planning and delivery strategy in managing high-risk gravidity complicated by DFSP excision and ongoing prophylactic anticoagulation.

Keywords: Dermatofibrosarcoma Protuberans, High-Risk Pregnancy, Multidisciplinary Management

Clinical Case Report / Case Series_133

A Hidden Trigger: Amphetamine Type Stimulant (ATS)-Induced Psychosis Misdiagnosed as Psychotic Depression in Primary Care

#FMSC2026-189

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Introduction: Substance-induced psychosis represents a growing clinical challenge in Malaysia, particularly with the increasing use of amphetamine-type stimulants (ATS). Differentiating this condition from primary mood or psychotic disorders is often difficult in primary care, especially when substance use is concealed and clinical presentations overlap.

Case Presentation: A 24-year-old man was initially diagnosed with major depressive disorder (MDD) with psychotic features after presenting with depressive symptoms, including low mood, insomnia, reduced appetite, low energy, and functional decline, accompanied by auditory hallucinations and behavioural disturbances. Despite denial of substance use and an initial negative urine drug screen, subsequent violent behaviour towards his father prompted emergency assessment. Collateral history later revealed ongoing stimulant use, which was subsequently confirmed by a positive urine drug test during psychiatric admission. The presence of concealed stimulant use, episodic psychotic symptoms, aggression, and later toxicology confirmation supported the diagnosis of amphetamine-type stimulant (ATS)-induced psychosis in this patient.

Discussion: This case highlights the diagnostic challenge of distinguishing amphetamine-type stimulant (ATS)-induced

psychosis from major depressive disorder (MDD) with psychotic features. In psychotic depression, psychotic symptoms usually occur alongside persistent, severe depressive symptoms and are often mood-congruent. In contrast, substance-induced psychosis is more commonly associated with recent substance use, behavioural disinhibition, aggression, and fluctuating psychotic symptoms that may improve with abstinence.

Conclusion: Overall, this case illustrates the importance of diagnostic vigilance and longitudinal continuity of care in differentiating ATS-induced psychosis from primary mood disorders with psychotic features. Correlation between collateral history, serial mental state assessment, and toxicology results is important to avoid misdiagnosis, particularly when substance use is concealed.

Keywords: Amphetamine-Type Stimulant, Psychosis, Depression

Clinical Case Report / Case Series_134

Behind the Spirit of Possession: Severe Hashimoto Hypothyroidism Presenting with Myxedema Oedema & Neuropsychiatric Manifestation

#FMSC2026-210

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Introduction: Hashimoto thyroiditis is the most common cause of primary hypothyroidism in iodine-sufficient areas. Severe untreated disease may present with neuropsychiatric manifestation, including the rare entity of myxedema madness, leading to diagnostic confusion.

Case Presentation: A 32-year-old Malay woman, para 3, with past history of anxiety disorder & gastroesophageal reflux disease, presented with facial puffiness, weight gain, constipation, coarse hair, proximal myopathy and cognitive slowing. She also had culturally described episodes of "spirit possession" requiring traditional healer intervention. On examination, she was obese (BMI 34kg/m²), anxious & slow in cognition but hemodynamically stable. Thyroid function test revealed severe primary hypothyroidism with TSH > 50mIU/L and FT4< 3.2pmol/?. Lipid profile showed marked dyslipidaemia (total cholesterol 10.45mmol/L, LDL 7.8 mmol/L, TG 2.83mmol/L. Thyroid ultrasound demonstrated a heterogenous gland without nodules, consistent with thyroiditis. Anti-thyroid peroxidase antibody was markedly elevated (600IU/ml), confirming autoimmune thyroiditis.

Discussion: This case illustrates severe hypothyroidism with systemic metabolic derangements & prominent neuropsychiatric features consistent with myxedema madness. Psychiatric like manifestations, including behavioral changes & culturally interpreted dissociative episodes, may delay recognition of endocrine pathology. Dyslipidaemia & myopathy reflect reduced thyroid hormone action on lipid metabolism & muscle function. Elevated anti-TPO antibodies & sonographic findings support Hashimoto thyroiditis as underlying cause.

Conclusion: Hypothyroidism should be considered in patient presenting with neuropsychiatric symptoms, including myxedema

madness, especially when accompanied by systemic features. Early diagnosis of Hashimoto thyroiditis allows timely levothyroxine replacement & prevent further cardiovascular complications.

Keywords: Hashimoto thyroiditis, Myxedema, Hypothyroidism

Clinical Case Report / Case Series_135

Case Report: Hepatocellular Carcinoma Presenting as Obstructive Jaundice Detected with the Aid of POCUS Hepatobiliary

#FMSC2026-269

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Introduction: Hepatocellular carcinoma (HCC) usually presents with abdominal pain, weight loss, or chronic liver disease symptoms. Obstructive jaundice as the first presentation is uncommon and may delay diagnosis. Point-of-care ultrasound of the hepatobiliary system (POCUS-HBS) can help detect liver abnormalities early at the bedside.

Case Presentation: A 79-year-old man with hypertension and dyslipidaemia presented with dark urine, pale stools, and reduced appetite for two weeks. One month earlier, routine blood tests showed elevated liver enzymes, although he had no symptoms. Hepatitis A, B, and C screenings were negative. Bedside POCUS-HBS showed hepatomegaly with multiple heterogeneous liver lesions, raising suspicion of malignancy. Contrast-enhanced computed tomography confirmed multinodular hepatocellular carcinoma involving both liver lobes without vascular invasion or distant metastasis, consistent with Barcelona Clinic Liver Cancer (BCLC) Stage B. Intrahepatic duct dilatation was present without common bile duct dilatation. The patient was managed the surgical team and underwent endoscopic retrograde cholangiopancreatography (ERCP) with intrahepatic duct stenting.

Discussion: Obstructive jaundice is a rare presentation of HCC and may result from biliary compression or tumour invasion. This case highlights the importance of investigating unexplained liver enzyme abnormalities, even in asymptomatic patients. POCUS-HBS served as a rapid bedside tool that enabled early detection and expedited further imaging and management.

Conclusion: HCC should be considered in patients with obstructive jaundice and unexplained liver enzyme abnormalities. POCUS-HBS is useful in primary care settings for early detection and may accelerate diagnosis and management.

Keywords: Hepatocellular carcinoma, Jaundice, Ultrasound

Clinical Case Report / Case Series_136

Beyond the Milestones: Navigating the Rare Path of Trisomy 10p in Primary Care

#FMSC2026-272

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Introduction: Trisomy 10p syndrome is an exceedingly rare chromosomal abnormality characterized by distinct dysmorphic features, organ malformations, and significant neurodevelopmental challenges. In the “medical home” of family medicine, early recognition of developmental red flags is critical for the timely diagnosis and management of such rare conditions.

Case Presentation: We present the case of a 2-year-7-month-old boy who attended primary care clinic for routine child follow-up. His history was notable for a low Apgar score at birth, requiring intubation, followed by the development of microcephaly and global developmental delay at 3 months of age. The patient failed to achieve age-appropriate motor and language milestones. Physical examination revealed subtle craniofacial dysmorphism, including dolichocephaly, hypertelorism, and a depressed nasal bridge, alongside central hypotonia and a history of complex febrile seizures. The diagnosis was confirmed through genetic testing, which identified Trisomy 10p syndrome.

Discussion: Trisomy 10p represents a clinical “zebra,” typically involving duplication of the short arm of chromosome 10. Although phenotypic expression varies, the coexistence of microcephaly and developmental delay serves as an important sentinel marker. This case underscores the vital role of the family physician in early screening and the subsequent coordination of multidisciplinary care involving paediatrics, neurology, and early intervention services such as physiotherapy, occupational therapy, and speech therapy.

Conclusion: Rigorous developmental surveillance in primary care is the cornerstone of early detection. Timely diagnosis by the family physician enables anticipatory guidance, genetic counselling, and optimized supportive care, ultimately improving the quality of life for children navigating the rare path of Trisomy 10p syndrome.

Keywords: Trisomy 10p, milestone

Clinical Case Report / Case Series_137

Why is my Urine Purple? A Rare Case Report

#FMSC2026-292

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Introduction: Purple Urine Bag Syndrome (PUBS) is a rare syndrome where patients are presented with vivid purple urine in their catheter bag. This urine discolouration occurs as a result of accumulation of the metabolites of tryptophan. It usually happens in patients with long-term urinary catheter use and is associated with many risk factors such as advanced age, female gender, being a nursing home resident, urinary tract infection and constipation.

Case Presentation: Thus, we present this interesting phenomenon of purple urine in an 81 year-old Siamese gentleman who is on prolonged urinary catheterization. He has been on urinary catheterization for the past 2 years for Benign Prostatic Hyperplasia and this was his first presentation of purple urine. The urine was foul smelling but he denied any fever or loin/abdominal pain. He had a history of constipation recently and denied any new medication or traditional preparation.

Discussion: Urine culture revealed *Escherichia Coli* species. The

catheter and bag were changed and he was simultaneously treated with a course of antibiotics which led to normalization of his urine colour.

Conclusion: In primary care, the appearance of purple urine may induce unnecessary concern for both the patient and the physician. Hence knowing how to investigate and treat will give reassurance when faced with this rare condition.

Keywords: Catheter Urinary Tract Infection Purple Urine Bag Syndrome

Clinical Case Report / Case Series_138

Small Child, Silent Thyroid: A Case of Failure to Thrive Secondary to Subclinical Hypothyroidism

#FMSC2026-297

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Introduction: Failure to thrive (FTT) is defined as inadequate physical growth, typically when a child's weight gain falls significantly below expected norms for age, gender, and ethnicity. Subclinical hypothyroidism is characterized by elevated thyroid stimulating hormone (TSH) with normal free thyroxine (T4), occurring in less than 3% of children and adolescents. While most cases remain stable or resolve spontaneously, 10–15% progress to overt hypothyroidism, particularly in the presence of autoimmune thyroiditis or higher baseline TSH. Early identification in primary care is crucial, as untreated thyroid dysfunction may contribute to growth and developmental delay.

Case Presentation: A 1-year-old female child presented with poor weight gain despite completing immunization. Examination revealed severe underweight (< -3 SD) and short stature (-2 to -3 SD). Initial thyroid function tests showed elevated TSH (10.59 mIU/L) with normal T4, consistent with subclinical hypothyroidism. She was started on oral levothyroxine 12.5 mcg daily. Following treatment, her appetite improved, and she achieved age-appropriate milestones, including independent walking and simple speech. Serial monitoring showed normalization of thyroid function (TSH 1.9). Management included levothyroxine, multivitamins, and nutritional counselling.

Discussion: This case illustrates subclinical hypothyroidism as a reversible cause of FTT. Early detection and treatment in primary care can improve growth outcomes and prevent long term complications. Multidisciplinary management where combining pharmacological therapy, nutritional support, and developmental monitoring was key to recovery.

Conclusion: Subclinical hypothyroidism, though uncommon, should be considered in children with FTT. Timely diagnosis and levothyroxine therapy, alongside nutritional intervention, can restore growth and development.

Keywords: hypothyroidism, weight, development

Clinical Case Report / Case Series_139

Unilateral Nipple Discharge in Primary Care: Two Cases Highlighting Diagnostic Challenges and Red Flags

#FMSC2026-307

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Introduction: Unilateral nipple discharge is an important breast symptom encountered in primary care that warrants careful evaluation. Although many cases are benign, unilateral, persistent or spontaneous discharge may indicate underlying pathological breast disease. Early recognition and timely referral are essential to facilitate appropriate investigation and management.

Case Presentation: Case 1 involved a 30-year-old nulliparous woman who presented with a 6-month history of persistent unilateral right milky nipple discharge noted only upon expression. Clinical breast examination and hormonal investigations were normal. Breast ultrasonography demonstrated a complicated right breast cyst with additional bilateral simple cysts, prompting referral for further evaluation. Case 2 involved a 38-year-old nulliparous woman who presented with spontaneous unilateral serous nipple discharge from the right breast. Clinical examination and laboratory investigations were unremarkable. Breast ultrasonography revealed a focally dilated duct with an intraductal lesion (BI-RADS 4A), prompting urgent surgical referral.

Discussion: Unilateral nipple discharge may indicate significant underlying pathology despite minimal clinical findings. Physiological discharge is typically bilateral, multiductal and non-spontaneous, whereas unilateral, persistent or spontaneous discharge should prompt further evaluation. In both cases, no palpable breast masses were identified, and initial assessment appeared reassuring. However, imaging revealed underlying lesions requiring specialist referral. These cases highlight the importance of recognizing red flag features, maintaining a high index of suspicion and arranging timely breast imaging in primary care.

Conclusion: Unilateral nipple discharge should not be dismissed even in the absence of a palpable breast mass or abnormal hormonal investigations. Appropriate assessment, imaging and referral are essential to avoid missed or delayed diagnosis.

Keywords: Nipple Discharge; Breast Diseases; Ultrasonography, Mammary

Clinical Case Report / Case Series_140

The Silent Burden of a Pump Twin: A Rare Case of Twin Reversed Arterial Perfusion Sequence

#FMSC2026-310

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Introduction: Twin pregnancies account for approximately 2–3% of all births. Among the different types, monochorionic monoamniotic (MCMA) twins represent a rare and high-risk form of monozygotic twin, occurring about 8 per 100,000 pregnancies and comprising only 1% of all twin pregnancies.

Case Presentation: MCMA pregnancies are associated with several complications, including Twin Reversed Arterial Perfusion (TRAP) sequence, a rare and complex condition unique to monochorionic twins. TRAP sequence involves a viable “pump” twin and a non-viable acardiac twin. The acardiac twin depends entirely on the pump twin for circulation, creating significant hemodynamic stress that increases the risk of cardiac failure and death in the pump twin. While the acardiac twin has a mortality rate of 100%, the pump twin faces an estimated mortality rate of up to 50%.

Discussion: The incidence of TRAP sequence is approximately 2.6% among monozygotic twin pregnancies deliveries. Owing to its rarity and variable imaging features, diagnosis can be challenging and is often overlooked. Early recognition is essential, as fetal interventions performed before 20 weeks of gestation may improve outcomes and reduce mortality. We report a case of MCMA twin pregnancy complicated by TRAPs in which diagnosis proved difficult despite specialized obstetric clinic assessment. The condition was only recognized at an advanced stage of pregnancy, limiting available therapeutic options and contributing to an unfortunate outcome.

Conclusion: This highlights the diagnostic challenges associated with TRAP sequence and the importance of maintaining a high index of suspicion in high-risk twin pregnancies to facilitate good survival later.

Keywords: Monochorionic monoamniotic pregnancy (MCMA), Twin Reversed Arterial Perfusion (TRAP) sequence, acardiac twin.

Community Project_01

Effectiveness of an Interactive School-Based Intervention on Knowledge and Attitudes Towards Smoking and Vaping Among Malaysian Adolescents in Negeri Sembilan: The H.E.B.A.T Program

#FMSC2026-128

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Introduction: Tobacco use and vaping among adolescents remain major public health concerns in Malaysia. Family physicians frequently encounter adolescents at risk but face challenges in delivering effective preventive counselling. School-based health-interventions can complement clinical efforts by promoting healthier behaviours early in life. This study evaluated the effectiveness of the HEBAT (Henti, Elak, Basmi Asap Tembakau) program in improving knowledge and attitudes toward smoking and vaping among secondary school students.

Methods: The pre-post health education intervention study was conducted among secondary school students in Nilai, Negeri

Sembilan in November and December 2025. Participants attended a half-day, interactive program incorporating role-playing, peer-facilitated discussions and open forums. Knowledge and attitudes were assessed using a structured questionnaire pre and post-intervention. Paired t-tests and Wilcoxon signed-rank tests were used to evaluate changes.

Results: A total of 235 secondary students participated (mean age 14.4 ± 1.30 years; 54.9% boys). Mean knowledge scores increased significantly from 71.9 (SD = 16.30) pre-intervention to 82.2 (SD = 13.33) post-intervention (mean difference = 10.3; 95% CI: 8.1–12.5; $p < 0.001$). Attitude scores improved, with median scores decreasing from 35.0 (IQR = 15.0) to 31.7 (IQR = 15.0) ($p = 0.013$), indicating stronger rejection of smoking and vaping. Program acceptability was high, and 88.9% of students were willing to advise peers against tobacco use.

Conclusion: The HEBAT program effectively improved knowledge and attitudes among adolescents. For family physicians, integrating brief counselling with school-based programs may enhance tobacco prevention efforts in outpatient and community settings.

Keywords: Tobacco prevention; Vaping; School-based intervention

Community Project_02

Evaluating the Effectiveness of the Promosi Remaja Sejahtera Module on Adolescent Sexual Reproductive Health Literacy in the East Coast of Malaysia: A Linear Mixed-Effects Analysis

#FMSC2026-149

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Introduction: Adolescent health literacy plays an important role in preventing sexual health issues such as early sexual initiation, unplanned pregnancies, and sexually transmitted infections. However, gaps remain in delivering practical, culturally appropriate sexual and reproductive health (SRH) education in Malaysia. The Promosi Remaja Sejahtera module was developed to improve SRH knowledge and behaviour among adolescents in the East Coast of Malaysia.

Methods: A quasi-experimental one-group pre-test post-test study was conducted among 804 adolescents from 11 districts.

The intervention utilised a gamified, station-based “Explorace” approach covering six domains: gender, puberty, personal boundaries, teenage pregnancy, HIV/STIs, and pornography. Knowledge scores were assessed before and after the intervention using validated questionnaire. Paired t-tests evaluated mean differences, while Linear Mixed-Effects Modelling (LMM) adjusted for age, sex, and district, including interaction effects.

Results: Mean knowledge scores increased significantly from 5.41 (SD 1.94) pre-intervention to 7.10 (SD 2.17) post-intervention (mean difference 1.69, $p < 0.001$), representing a 31.2% improvement with a large effect size (Cohen's $d = 0.82$). LMM confirmed a significant effect of the intervention ($\beta = 1.06$, $p < 0.001$). Female participants demonstrated greater improvement compared to males (interaction $\beta = 0.63$, $p < 0.001$). Significant variability was observed across districts, with the largest gains in Pulau Redang and Cameron Highlands.

Conclusion: The Promosi Remaja Sejahtera module is an effective, scalable intervention for improving adolescent sexual reproductive health literacy. Its interactive, culturally sensitive design enhances engagement and may reduce disparities in health knowledge. Future studies should assess long-term behavioural outcomes.

Keywords: health literacy; adolescent health; sex education

Community Project_03

Development and Validation of a Questionnaire Assessing Sexual and Reproductive Health Knowledge Among Adolescents Based on the Promosi Remaja Sejahtera Module

#FMSC2026-150

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Introduction: Adolescent sexual and reproductive health (SRH) is a culturally sensitive priority. While the 'Promosi Remaja Sejahtera' module aims to enhance health literacy among Malaysian adolescents, validated instruments to measure its efficacy are lacking. This study aimed to develop and validate a questionnaire based on this module and evaluate its preliminary impact.

Methods: Items were generated by mapping module domains into measurable constructs. Content validity was established via expert review for cultural and pedagogical alignment. A pilot study (N = 71) using a single-group pre-test/post-test design provided data for knowledge evaluation and psychometric analysis using Classical Test Theory (CTT).

Results: A total of 12 items were generated across six domains. Expert review resulted in refinements to improve clarity, cultural appropriateness, and alignment with learning objectives. In the pilot study (N = 71), the mean total knowledge score increased significantly from 4.79 (SD = 1.82) to 6.68 (SD = 2.49), with a mean difference of 1.89 (SD = 2.53) ($t(70) = 6.29$, $p < 0.001$), corresponding to a large effect size (Cohen's $d = 0.75$). Significant improvements were observed in four of six domains, particularly in puberty and HIV/STIs. The instrument demonstrated acceptable

internal consistency ($\alpha = 0.64$). Two items showed non-significant declines in performance, with transition analysis suggesting potential limitations in teaching fidelity rather than item construction.

Conclusion: The questionnaire is a valid, reliable tool for assessing adolescent SRH knowledge. The module significantly improved health literacy, supporting its large-scale implementation. Item-level findings further identified specific areas to optimize teaching fidelity.

Keywords: Adolescent Health, Health Literacy, Promosi Remaja Sejahtera

Community Project_04

Prevalence and Socioeconomic Determinants of First-Trimester Vitamin D Deficiency among Pregnant Women in Langkawi, Malaysia

#FMSC2026-179

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Introduction: Vitamin D deficiency (VDD) is associated with numerous adverse health problems during pregnancy and for newborns. This study aims to determine the prevalence of VDD in the first trimester and its associated factors among pregnant women in Langkawi, Kedah.

Methods: A secondary analysis was conducted using data from 402 participants in an ongoing longitudinal birth cohort study. Socio-demographic characteristics and obstetric history were collected using structured questionnaires. Anthropometric measurements determined early pregnancy body mass index (BMI), categorised into overweight/obese and non-overweight/obese groups based on WHO 1998 Guidelines. First-trimester serum Vitamin D levels were measured and classified as severe deficiency (<25 nmol/L), mild deficiency (25–<50 nmol/L), insufficiency (50–<75 nmol/L) and sufficiency (≥75 nmol/L). Descriptive and Multiple Binary Logistic Regression analyses were performed using SPSS Version 30, with significance set at $p < 0.05$.

Results: The mean serum Vitamin D level was 37.49 ± 12.65 nmol/L. The prevalence of severe, mild deficiency, insufficiency and sufficiency was 14.7%, 69.2%, 14.9% and 1.2%, respectively. After adjustment for potential confounders, only tertiary education level was significantly associated with higher odds of VDD (AOR = 6.46, 95% CI: 2.11–19.78), while women from high-income households (T20) had lower odds (AOR = 0.18, 95% CI: 0.04–0.86). Other factors were not significantly associated.

Conclusion: VDD is highly prevalent among pregnant women in Langkawi, with socioeconomic disparities observed. Targeted interventions, including supplementation and health education, are needed to improve maternal Vitamin D status.

Keywords: Vitamin D, pregnant women, Malaysia

Community Project_05

Bridging Hospital-to-Community Rehabilitation: A Reflective Comparative Analysis from an Observership at the Royal Melbourne Hospital with Contextual Adaptation for Malaysia

#FMSC2026-028

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Introduction: Continuity of rehabilitation care beyond hospital discharge remains a key challenge in Malaysia, where services across hospital, primary care, and community settings often operate in parallel rather than as an integrated system.

Methods: This study presents a qualitative reflective analysis based on a structured observership at the Royal Melbourne Hospital (RMH), Australia, supported by comparative review of international community rehabilitation models.

Results: The RMH model demonstrates a coordinated rehabilitation continuum from acute care to community reintegration, supported by multidisciplinary teams and integrated social care systems. In contrast, Malaysia's existing services, including domiciliary care (PPD) and community programmes, are largely targeted at patients with severe dependency. A service gap exists for patients with moderate functional impairment who remain ambulatory but require ongoing rehabilitation support. Workforce limitations, particularly in allied health, further constrain continuity of care within primary care settings.

Conclusion: Strengthening community rehabilitation in Malaysia requires improved integration across hospital, primary care, and community services. Key strategies include structured caregiver training, enhancing primary care as a coordination hub, and expanding community workforce capacity. Integration—not ownership—should guide future development.

Keywords: Community rehabilitation; Primary care; Integration

Community Project_06

Cegah Bantut Initiative: A Community-Driven Nutritional Intervention for Stunting Reduction in Changkat Lada

#FMSC2026-030

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Introduction: Childhood stunting remains a major public health challenge, with national prevalence at 21.2%, and higher locally in Changkat Lada at 25%. Addressing modifiable nutritional factors, the Cegah Bantut programme was developed through collaboration between Klinik Kesihatan Changkat Lada and HOPE@PPUM, integrating community empowerment with targeted nutritional support.

Methods: Objective: To improve caregiver knowledge on child growth and nutrition, empower community mentors, and enhance

growth outcomes among children at risk of stunting. This two-phase programme (Cegah Bantut 1.0 and 2.0) combined caregiver training, mentorship, and a six-month protein supplementation intervention. A total of 29 at-risk children were recruited. Each child received 30 eggs monthly, with caregivers encouraged to provide one egg daily. A coupon-based system enabled redemption at local stores. Monthly follow-ups were conducted for weight and height monitoring alongside continuous counselling on practical, low-cost nutrition strategies.

Results: Eighteen children (62.1%) completed the programme. Among these, 10 (55.6%) demonstrated improvement in both weight and height. Caregiver knowledge, engagement, and peer-mentorship capacity also improved.

Conclusion: A low-cost, community-driven approach combining nutritional supplementation and caregiver empowerment can improve growth outcomes among at-risk children. Enhancing follow-up compliance is essential to maximise impact. This model is scalable and sustainable in primary care settings.

Keywords: Stunting Child Nutrition Primary Health Care

Community Project_07

Exploring the Determinants of Bullying Behaviour Among Malaysian Secondary School Adolescents in Kuantan

#FMSC2026-033

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Introduction: Bullying among adolescents in secondary schools is a significant public health and educational concern, manifesting in verbal, physical, and cyber forms. In Malaysia, particularly in Kuantan, evidence indicates a persistent prevalence of bullying, yet studies examining its determinants remain limited. This study aimed to explore the determinants of bullying behaviour among Malaysian secondary school adolescents in Kuantan.

Methods: A cross-sectional study was conducted from 16 to 29 April 2025 among students aged 13–16 years in Kuantan, Pahang (n = 507). Data were collected using structured self-administered questionnaires, including sociodemographic characteristics, academic performance, the Revised Malaysian Bullying Questionnaire (R-MBQ), Kessler Psychological Distress Scale (K10), and selected items from the Adolescent Health Survey 2022. Purposive sampling was applied, while data were analysed using SPSS Version 30, employing descriptive statistics, t-tests, ANOVA, and logistic regression. Ethical approval and informed consent were obtained.

Results: The mean bullying score was 37.61 ± 8.97 . Male gender ($\beta = -2.79$, $p < 0.001$), higher psychological distress ($\beta = 1.13$, $p < 0.001$), and poor academic performance ($\beta = -1.31$, $p = 0.04$) were significantly associated with higher bullying scores. In contrast, ethnicity and religion were not significantly associated.

Conclusion: Bullying behaviour among adolescents in Kuantan is influenced by gender, psychological distress, and academic performance. These findings highlight the need for targeted school- and community-based interventions focusing on mental health support and academic engagement to reduce bullying behaviour.

Keywords: bullying, school, adolescent

Community Project_08

From Clinics to Community: A Primary Care-Led Cognitive Stimulation Therapy Model Transforming Dementia Care

#FMSC2026-045

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Introduction: Population ageing is increasing the burden of cognitive impairment in primary care. Cognitive Stimulation Therapy (CST) is an evidence-based non-pharmacological intervention traditionally delivered in clinic or hospital settings, limiting community accessibility. This project aimed to develop a primary care-led, community-based CST model integrating screening and intervention to enhance dementia care delivery.

Methods: A community screening programme involved 128 older adults with memory complaints identified by themselves or caregivers. Cognitive assessment was performed using the Montreal Cognitive Assessment (MoCA). Individuals with MoCA scores $\leq 17/18$ were eligible for enrolment. Eleven participants were recruited into a 14-session CST programme conducted over 14 weeks at an elderly care centre. The intervention was led by a Family Medicine Specialist with support from nurses, occupational therapists, physiotherapists and dietitians. Outcomes included changes in MoCA scores and engagement domains.

Results: All participants completed the programme (100% retention), demonstrating excellent feasibility and acceptability. Mean MoCA scores improved from 15.2 (SD ± 3.1) to 17.1 (SD ± 3.4) (+1.9 points). High engagement was observed, with $\geq 85\%$ of sessions rated as moderate-to-high interest and enjoyment. Communication improved in 73% of participants, while positive mood was observed in 82%. Caregivers reported improved interaction, greater participation in daily activities, and fewer behavioural concerns. Community delivery enhanced accessibility and participation.

Conclusion: CST can be effectively delivered in community settings through primary care leadership. Integrating screening with intervention provides a scalable, person-centred model for dementia care, reflecting the evolving role of primary care in leading innovative, multidisciplinary, community-based care.

Keywords: Dementia; Primary Health Care; Cognitive Stimulation Therapy

Community Project_09

An Integrated Multi-Agency Home-Based Health Screenings: A Community Project in Kampung Santan Madani, Perlis

#FMSC2026-075

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Introduction: Noncommunicable diseases (NCDs) are leading cause of mortality and health burden in Malaysia. To align with the Health White Paper's goals of equitable access and health promotion, a multiagency collaboration—including Klinik Kesihatan Kangar, KPJ Perlis, and local community panels—implemented an outreach initiative to enhance health literacy and early NCD detection.

Methods: This three-week intervention (October 13 – November 2, 2025) involved 60 healthcare personnel. The project comprised two phases: a multiagency preparatory phase and an intervention phase featuring home-based screenings for 183 households. Services included diabetes, hypertension, dyslipidemia, and obesity screening, along with Integrated Care for Older People (ICOPE) assessments. Digital health monitoring and specialist-led educational talks were utilized to empower self-care and streamline referrals for high-risk individuals.

Results: Among 376 adult population screened (mean age 58.4 ± 4.4 years), the prevalence of known diabetes, hypertension, and hyperlipidemia was 18.4%, 34.0%, and 27.9%, respectively; 26.3% were obese. Notably, 13.3% of the population had previously undiagnosed chronic conditions, including abnormal capillary glucose (9.0%) and elevated blood pressure (7.2% SBP; 6.1% DBP). Only 47.9% of participants had entirely normal screening results. ICOPE findings revealed significant vulnerabilities: 80.1% were physically inactive, 65.7% had vision impairment, and 54.3% had hearing issues. All identified cases received specialist referrals and interventions via private hospital partnerships.

Conclusion: This multiagency initiative effectively identified significant unmet health needs and strengthened community preventive care. Sustained public-private collaboration and periodic follow-ups are vital to reducing NCD-related morbidity and mortality.

Keywords: Public-private Partnerships, Home-based Screening, Health awareness

Community Project 10

Preparing for an Ageing Nation: Outcomes of the "Old Is Gold – The Golden Era Begins at 40" Community Geriatric Care Initiative in Kulai, Malaysia

#FMSC2026-091

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Introduction: Malaysia is projected to become an "aged nation" by 2030, with 15.3% of the population aged over 60. This

initiative, "Old Is Gold – The Golden Era Begins at 40," aimed to prepare the community for healthy ageing by increasing knowledge of geriatric syndromes and promoting immediate lifestyle modifications.

Methods: Conducted in Kulai on 12 June 2025, this initiative addressed Malaysia's ageing population through clinical and community interventions. The program featured aerobic exercise, the launch of the Taman Puteri Senior Citizens Club, and a specialist-led forum on healthy ageing. Extensive screenings targeted "Geriatric Giants," cancer, and chronic diseases. Outreach included home visits to ten households by MyCHAMPION volunteers. Supported by the Wellness on Wheels (WOW) Truck, mobile dental clinic, and agencies like Malaysian Haji Pilgrims Fund Board, Prudential Insurance and Big Pharmacy, the event provided integrated health and social support.

Results: The program engaged 220 participants and 77 healthcare personnel. Key screening outcomes included 85 National Health Agenda (ANMS) screenings (identifying three cases of hyperglycemia), 30 clinical breast examinations, 21 Pap smears, 20 menopause screenings (identifying 5 cases with severe menopausal symptoms), and 72 cognitive/physical assessments. Physical evaluations identified two cases of mild sarcopenia, while mental health screenings referred one participant for severe depression. Furthermore, 32 individuals underwent colorectal cancer screening, and 34 were screened for urinary incontinence of which 4 needed intervention.

Conclusion: The project successfully identified hidden health needs and created a sustainable support network. Integrating community-clinical pathways is vital for maintaining health and productivity in an ageing population.

Keywords: Healthy Aging Geriatric Assessment

Community Project 11

Beyond the Clinic Walls: Infaq Kasih Ramadhan - A Statewide Community Outreach by Family Medicine Specialists in Terengganu

#FMSC2026-096

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Introduction: Addressing social determinants of health is fundamental to family medicine. Asnaf patients, particularly those with chronic illnesses, often experience financial hardship and psychosocial vulnerability, which may adversely affect health outcomes. Ramadhan presents a unique opportunity to extend compassionate, community-based care. The aim for this project is to provide targeted social support to asnaf patients across

Terengganu while strengthening therapeutic relationships between patients and primary care providers.

Methods: This statewide initiative involved Family Medicine Specialists from all eight districts in Terengganu (Kuala Terengganu, Kuala Nerus, Hulu Terengganu, Marang, Setiu, Besut, Kemaman, and Dungun). Each district team identified asnaf patients within their respective catchment areas. Contributions, including essential food items and financial assistance, were delivered through coordinated outreach visits. The programme was pioneered by Family Medicine Specialists in Besut in 2023 and has since expanded statewide, with implementation sustained annually over the past two years. Emphasis was placed on rapport building, continuity of care, and community engagement.

Results: Recipients benefited from improved access to essential resources, alleviating financial burden and supporting preparation for Hari Raya Aidilfitri. The initiative enhanced psychosocial wellbeing and strengthened trust in primary healthcare services. Healthcare providers reported improved teamwork, empathy, and greater engagement in community-oriented practice.

Conclusion: Infaq Kasih Ramadhan demonstrates the expanded role of Family Medicine Specialists beyond clinical care. Sustained, relationship-based community outreach is an effective strategy to address social determinants of health and enhance holistic primary care delivery.

Keywords: social determinants of health community project family medicine specialists

Community Project_12

Learning Disability Screening for Primary School Students in Kuantan, Pahang: A 2025 Report by IIUM Family Health Clinic (FHC)

#FMSC2026-138

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Introduction: Primary care physicians play a vital role in the clinical identification of children with learning disabilities (LD). In alignment with national initiatives like the LINUS program and its 2024 reactivation as ProSPER, FHC established an LD screening service in 2024. This service is a collaborative effort with schools in Kuantan and the District Education Department.

Methods: In-house training is conducted each semester for Family Medicine postgraduate residents at FHC, comprising theoretical lectures and expert-led practical sessions. Screening is delivered through both clinic-based appointments and school outreach programs. Diagnoses are made according to DSM-5 criteria, and management follows standardized clinical manuals.

Results: To date, 42 postgraduate doctors have been trained and have participated in the service. In 2025, 331 students from 61 schools were screened. Of these, 73% were assessed at the clinic, while 27% via outreach programs at five schools. The cohort was 63% male, with 88% of students in Standard 2 or above. A total of 249 students (72%) were identified as having an LD. Among the diagnosed cases, the distribution of LD types was: Intellectual Disability (79%), ASD (8.4%), ADHD (8.4%), and Specific Learning Disorder (4%).

Conclusion: By utilizing trained postgraduate residents and a hybrid outreach-clinic model, this sustainable initiative effectively supports Ministry of Health (MOH) clinics in addressing the community's neurodevelopmental needs.

Keywords: Learning disabilities, screening, IIUM Family Health Clinic.

Community Project_13

The Salty Side of Blood Sugar: Modeling Dietary Sodium and Potassium Impacts on Glycaemic Control

#FMSC2026-141

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Introduction: Managing blood sugar levels is a critical component of metabolic health, yet the influence of dietary sodium and potassium is often overshadowed by macronutrient intake. This study investigated the relationship between serum glucose and dietary sodium and potassium intake among a nationally representative adult population.

Methods: Data were derived from the 2024 Malaysian Community Salt Intake Survey (MyCoSS 2.0), a population-based cross-sectional study employing a two-stage stratified random sampling design. Objective dietary sodium and potassium intake were determined using a single 24-hour urine collection, while glycaemic status was assessed via fasting serum glucose levels. Complex samples general linear models were performed in SPSS version 26 to account for the multi-stage sampling design.

Results: A total of 886 participants were included in the analysis, representing an estimated population of 24.9 million adults. The sample comprised 52.8% males. Descriptive findings indicated a population with a high-salt diet, averaging 7.35 g/day of salt (2892 mg sodium), while potassium intake was low at 1141 mg/day. The sodium-to-potassium ratio was elevated, with a mean of 4.78. Regression analysis showed that sodium intake was a statistically significant positive predictor of fasting serum glucose ($p = 0.015$). Age remained the strongest determinant, with individuals aged 18–29 years having significantly lower fasting glucose levels compared to older age groups.

Conclusion: These findings suggest that high sodium consumption may independently contribute to elevated blood sugar, highlighting the need for public health strategies focused on salt reduction to support glycaemic control.

Keywords: sodium, potassium, serum glucose,

Community Project_14

Health Beyond Walls: Activating Communities, Preventing Diabetes

#FMSC2026-148

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Introduction: Diabetes mellitus affects 15.6% of Malaysian adults, many of whom remain undiagnosed. Clinic-based strategies alone are inadequate, highlighting the urgency for innovative, community-driven prevention models. This project reimagines health promotion by transforming a routine campaign into an interactive, community-empowering experience, proving that active living is achievable anywhere, for everyone.

Methods: A community health carnival was conducted on 15 November 2025 in conjunction with World Diabetes Day. A 3.5 km “Move and Learn” fun run served as the core intervention, embedding health education within physical activity through three interactive checkpoints addressing diabetes myths and facts. This was complemented by multidisciplinary health booths and opportunistic screening (BMI, blood pressure, capillary blood glucose). At-risk individuals received immediate counselling and referral for follow-up within primary care services.

Results: Of 282 participants, 60 underwent screening. Among these, 25.0% (15/60) were at risk of both diabetes and hypercholesterolaemia, while 28.3% (17/60) were at risk of diabetes alone. Among those screened for lipid profile, 27.1% (13/48) were at risk of hypercholesterolaemia only. Notably, 50.0% of participants were obese, highlighting a substantial burden of modifiable risk.

Conclusion: This “health beyond walls” model transforms prevention into an engaging, community-centred experience. By integrating movement, education, and screening, it enables early detection and empowers behavioural change. The model is scalable, low-cost, and highly adaptable for strengthening primary care-led non-communicable disease prevention.

Keywords: Diabetes, early detection, community project

Community Project_15

PROJECT CEMPAKA: Bridging Breast Cancer Screening Gaps Through Digital Education

#FMSC2026-171

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Introduction: Breast cancer is the most common malignancy among women in Malaysia, with many cases presenting at advanced stages. Mammogram uptake is alarmingly low, with

Methods: A descriptive pilot study was conducted among 23 participants recruited from community centres and social media. Participants explored the website for 10–15 minutes before completing a self-administered questionnaire. Usability was assessed using the validated SKAMA, while educational effectiveness was evaluated using PEMAT-A/V. Qualitative feedback was analysed thematically.

Results: Participants were predominantly female (87.0%, n=20), Malay (100%, n=23), and tertiary educated (100%, n=23). Most accessed the website via mobile devices (82.6%, n=19). The mean (SD) usability score was 75.3 (16.98), indicating good usability. PEMAT-A/V showed high agreement (95.7%–100%)

for clarity, logical flow, and understandability. Qualitative feedback highlighted the usefulness and ease of use, with suggestions for updated content and enhanced risk-assessment features.

Conclusion: The CEMPAKA website is a highly usable and effective digital health education tool with strong potential to bridge gaps in breast cancer screening by improving awareness and readiness for early detection. Wider implementation may enhance screening uptake and reduce late-stage presentation.

Keywords: Breast neoplasms; digital health; health education

Community Project_16

Bachok District Adolescent Sexual and Reproductive Health Program: “A Moment of Pleasure, A Lifetime of Regret”

#FMSC2026-193

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Introduction: The Malaysia Adolescent Health Survey 2022 reported that 7.6% of adolescents in Malaysia had ever engaged in sexual activity, with the highest prevalence recorded in Kelantan (9.5%). The prevalence of current sexual intercourse among adolescents was 5.7%, with Kelantan again reporting the highest rate at 7.3%. In addition, the overall prevalence of adequate HIV knowledge remained low (1.3%) among this population. This program aimed to raise awareness and knowledge among adolescents by focusing on sexual and reproductive health (SRH), empowering them to practice healthy behaviors and lifestyles.

Methods: The program was conducted at two primary and four secondary schools in Bachok district between July and August 2025. The program included 6 exploration stations, with themes: “Gender”, “Puberty”, “HIV and Sexually Transmitted Diseases (STD)”, “Teenage Pregnancy”, “Safe Touch”, and “Pornography”, which were derived from adolescent health programme modules designed by the Kelantan State Family Health Sector. Pre- and post-test questionnaires were administered to assess adolescents' knowledge of SRH.

Results: 430 adolescents aged 12–14 years participated in the program. Knowledge of SRH increased significantly following the interventions, from 43.95% to 59.97%. The greatest improvement rates were observed in knowledge of gender and puberty, with increases of 35.2% and 36.6%, respectively. Nevertheless, there was a modest increase in knowledge of STD (4.2%) post-intervention.

Conclusion: This adolescent SRH program effectively enhanced the adolescents' knowledge about SRH and encouraged active participation among them in health and prevention activities. A targeted approach to STD education is necessary

Keywords: Adolescent, Sexual and Reproductive Health

Community Project_17

Caring Beyond Clinic Walls: Advancing Early Breast Cancer Detection Through the Program Mobile Mammogram Cempaka-HoSZA

#FMSC2026-206

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Introduction: Breast cancer remains one of the leading cancers among women in Malaysia, yet screening uptake continues to be suboptimal due to limited accessibility and opportunistic screening practices. To bridge this gap, the Cempaka-HoSZA Mobile Mammogram Programme brought breast cancer screening directly into the community through eight outreach programmes conducted across Kuala Lumpur, Putrajaya, Johor, and Terengganu in 2025.

Methods: Diagnostic mammogram tomosynthesis was conducted during community and women's health outreach programmes throughout 2025. Participants' demographics, family history of breast cancer, mammogram findings based on BIRADS classification, ultrasound findings, and subsequent outcomes were summarised descriptively.

Results: A total of 194 women participated, with most aged 40–49 years (68.6%). One in five participants (20.1%) reported a family history of breast cancer, including 11.9% with affected first-degree relatives. Most mammogram findings were benign or negative, with 57.2% classified as BIRADS 2 and 14.9% as BIRADS 1. Importantly, 10.3% demonstrated BIRADS 4 lesions requiring urgent further evaluation. Supplementary ultrasound performed in 172 participants identified suspicious findings in 5.2%. Subsequent investigations confirmed two cases (1.0%) of breast malignancy, enabling early referral and intervention.

Conclusion: This initiative demonstrates the evolving role of primary care in advancing early breast cancer detection. By bringing screening services directly into the community, the programme improved screening accessibility, identified high-risk women, and enabled early referral for suspicious lesions.

Keywords: Breast Neoplasms; Mammography; Primary Health Care

Community Project_18

SHIFT-UP! : A Mental Health Programme

#FMSC2026-215

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Introduction: Clients with substance addiction often struggle

with mental health conditions that go undiagnosed and untreated. This may hinder the process of overcoming addiction and increase risk of relapse. This project aimed to screen the residents of an addiction rehab facility for depressive or anxiety disorder and to support addiction rehabilitation through structured activities. Additionally, our objective was to provide educational value to healthcare workers on managing addiction and mental health.

Methods: On 11 January 2026, we organized a 5-hour mental health program at Baitul Ridwan Hulu Langat- a private addiction rehabilitation facility involving 24 residents aged 20-66 years old. In collaboration with OSCA team KK Batu 9 Cheras, healthcare workers were trained to perform psychoeducation through group activities based on the KKM module HERO ("Healing & Recovery"). Participants were given self administered pre- and post-test questionnaires to gauge effectiveness of the session. They were also screened for depression and generalized anxiety disorder using Whooley and GAD-2 questionnaires. Those who screened positive were referred to KK Batu 9 for further assessment and intervention.

Results: Out of 24 participants, 41.6%(N=10) screened positive for depression, 16.6%(N=4) for anxiety and 8.3% (N=2) for both. Post-intervention analysis demonstrated 18.73% improvement in stress management and relaxation skills (mean score 3.49 to 4.14) and 25.72% improvement in assertiveness with mean score increment from 3.38 to 4.26.

Conclusion: This program highlighted the value of integrating structured mental health screening and psychosocial interventions into addiction rehabilitation settings.

Keywords: OSCA, Mental health, Rehabilitation

Community Project_19

Festival Penuaan Sihat Warga Emas @ Komuniti Tanjong Karang: Promoting Healthy Ageing and Frailty Awareness

#FMSC2026-286

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Introduction: Population ageing has increased the need for community-based strategies that promote healthy ageing, frailty awareness, and early detection of health risks among older adults. This program was designed to improve health awareness and provide comprehensive screening for older adults in Kuala Selangor.

Methods: Methods/approach: The program was conducted on 19th October 2024 at Klinik Kesihatan Tanjong Karang through collaboration between Klinik Kesihatan Tanjong Karang, Pusat Aktiviti Warga Emas Tanjong Karang, Universiti Teknologi MARA and BeVital. Activities included blood pressure and glucose checks, anthropometric measurements, Timed Up and Go testing, hand grip and strength assessment, cognitive screening, physical activity readiness assessment, and quality-of-life questionnaires. Mental health and nutritional status were assessed using DASS-21 and the Mini Nutritional Assessment Short Form. Health talks by a family medicine specialist, physiotherapist, and sports physician, together

with exercise demonstrations, reinforced key messages on frailty prevention and active ageing. Participants received personal diaries for follow-up monitoring.

Results: Outcomes/impact: Approximately 300 older adults attended. Participants showed strong engagement and enthusiasm in understanding their health status. The program also enabled smooth recruitment for a related community health study on nutritional and mental health status among older adults.

Conclusion: The Festival Penuaan Sihat Warga Emas @ Tanjong Karang demonstrated the value of a collaborative, community-based approach in promoting healthy ageing and frailty awareness. By integrating screening, education, exercise promotion, follow-up planning, and research recruitment within a single platform, the program strengthened local health partnerships and supported more proactive, person-centred care for older adults.

Keywords: healthy ageing, frailty, cognitive

Community Project 20

Bridging the Gap: A Multidisciplinary Community Outreach Model to Improve Preventive Healthcare Access Among Orang Asli Communities in Sepang, Malaysia

#FMSC2026-296

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Introduction: Despite ongoing national healthcare initiatives, Orang Asli communities in Malaysia experience disproportionate health inequities driven by geographical isolation, socioeconomic disadvantage, limited health literacy, and systemic barriers to preventive care. SAKOA 2025 was conceptualised as a structured, culturally responsive, multidisciplinary intervention to enhance preventive healthcare access, facilitate early detection, and strengthen community-provider engagement.

Methods: A one-day outreach programme was conducted on 23 February 2025 at Kg Orang Asli Sungai Melut, Sepang, by PKD Sepang, in collaboration with JAKOA Sepang, Pejabat Kesihatan Pergigian Sepang, Department of Radiology HSAAS (UPM), and LPPKN. Participants from four villages received: NCD screening, mental health and men's health assessments, breast ultrasound, HPV DNA testing, oral health evaluation, and health education.

Results: A total of 122 participants attended, surpassing the target by 22%. Of these, 64 (52.5%) underwent breast ultrasound, 33 (27.0%) completed HPV DNA screening, and 6 (4.9%) were referred for mammography at a LPPKN panel. Fifteen (12.3%) required follow-up at KK Salak OPD, 3 (2.5%) identified for mental health intervention, and 60 (49.2%) completed dental screening. Post-programme evaluation revealed high programme acceptability, with all respondents affirming measurable improvement in health knowledge and perceived benefit to the community following participation.

Conclusion: SAKOA 2025 affirms that a culturally sensitive, multidisciplinary outreach model improves preventive healthcare access and early disease detection among underserved indigenous populations. Intersectoral collaboration established linkages between the Orang Asli community and formal health services. This offers a scalable strategy for advancing health equity and reducing disparities among indigenous communities in Malaysia.

Keywords: Orang Asli, Indigenous Health, Community Outreach

Community Project 21

KACUK '25: A Community-Based Basic Life Support Training and Public Health Screening Programme — Impact and Outcomes

#FMSC2026-309

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Introduction: Out-of-hospital cardiac arrest carries low survival rates, with bystander CPR rates critically low across community settings. The Program Kemahiran Asas CPR Untuk Komuniti (KACUK '25) was initiated to elevate health awareness, equip citizens with Basic Life Support (BLS) skills, and promote early disease prevention through integrated public health screening.

Methods: Conducted at Masjid Mahmoodiah, Putrajaya, on 17 May 2025, this six-agency programme targeted residents aged 15 years and above. A BLS seminar and hands-on practical training, delivered by trained BLS providers, covered adult and paediatric CPR, automated external defibrillator (AED) deployment, and choking management. Concurrently, clinical booths provided health screenings (blood pressure, BMI, glucose), occupational therapy assessments, and mental health education. Outcomes were assessed via a post-programme questionnaire evaluating self-reported confidence, knowledge retention, and satisfaction. Informed verbal consent was obtained from all participants.

Results: The programme engaged 105 active participants spanning diverse age cohorts. Ninety-seven individuals successfully completed all CPR practical competencies. Post-programme feedback showed that 95% of attendees reported confidence and readiness to act in emergencies following training. Health screenings identified subclinical NCD risk factors, prompting clinical and occupational therapy referrals. Overall, 98% of respondents rated programme objectives as achieved.

Conclusion: KACUK '25 demonstrates feasibility as a community-level BLS education model integrated with preventive clinical screening, producing immediate gains in first-responder confidence and NCD risk identification. A key limitation was the absence of a pre-programme baseline to quantify knowledge gains. Future replication should incorporate objective skills assessments, extended follow-up, and multi-site evaluation to establish generalisability as a scalable Family Medicine-led community intervention.

Keywords: Basic Life Support; Community Health Screening; Family Medicine

Community Project 22

Healthier Me (SIHAT KU): A 12-Week Multi-Component Lifestyle Intervention Improving Behavioural and Body Composition Outcomes Among Primary Care Healthcare Workers

#FMSC2026-031

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Introduction: Primary care healthcare workers face a heightened risk of physical inactivity and occupational stress. The “Healthier Me (SIHAT KU)” programme was developed as a structured, multi-component workplace intervention to improve lifestyle behaviours and metabolic health.

Methods: This was a pre-post interventional programme conducted among 17 healthcare workers in a primary care clinic. The 12-week programme consisted of five biweekly lifestyle modules addressing nutrition, physical activity, stress management, sleep, and behaviour modification. Participants also underwent structured fitness assessments and exercise interventions, followed by one individualized consultation to establish SMART goals for lifestyle change. Outcomes measured included weight, body fat percentage (PBF), visceral fat level, skeletal muscle mass (SMM) and lifestyle behaviour scores. Paired analyses were performed.

Results: Participants had a mean age of 39.1 years; 94.1% were female, and the majority were Malay (82.3%). The cohort was predominantly nursing staff (58.8%), with a smaller proportion of doctors (23.5%) and allied health personnel (17.7%). Lifestyle behaviour scores improved significantly from 29.9 ± 3.9 to 36.2 ± 5.6 ($p=0.001$). Mean weight and PBF showed no statistically significant changes. However, favourable trends were observed, including reduction in visceral and peripheral fat, alongside a modest increase in SMM.

Conclusion: The programme demonstrated significant improvement in lifestyle behaviours, with positive trends in body composition. Longer-term implementation may yield significant metabolic improvements. This model is scalable for workplace wellness initiatives in primary care settings in Malaysia.

Community Project 23

Empowering Communities Through Diabetes Education: A Structured Intervention for Improved Outcomes

#FMSC2026-072

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Introduction: Modernization has accelerated the rise of diabetes in Malaysia, with the data from National Health and Morbidity Survey (NHMS) 2023 reporting a national prevalence of 15.6% among adults. The crisis is particularly evident in Pahang, which

recorded the nation's second-highest prevalence of raised blood glucose at 21.5%.

Methods: In response, Klinik Kesihatan Triang, serving as the Diabetic Centre of Excellence (DCoE) in Bera has launched a structured, 10-month multidisciplinary education program. The program's ultimate mission is to empower patients by enhancing their diabetes knowledge and self-management skills while providing the essential psychosocial support needed for long-term health. This pilot initiative enrolled 30 patients in a comprehensive curriculum designed to improve diabetes management through targeted lifestyle interventions.

Results: While the program faced typical retention challenges, leaving a final cohort of 10 participants, the clinical impact was significant: 60% achieved reduction in HbA1c levels, and 75% demonstrated a marked increase in diabetes knowledge.

Conclusion: These outcomes validate this model as a scalable and adaptable framework for improving local health.

Keywords: diabetes mellitus, education, community

Community Project 24

Healthy Ageing, Better Quality of Life – A Community-Based Health Screening Initiative for Senior Citizens of Kelab Warga Emas Junjang

#FMSC2026-115

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Introduction: Malaysia's aging population faces increasing health challenges including chronic non-communicable diseases, functional decline, falls, and cognitive impairment. Community-based preventive programmes are essential to promote healthy aging and maintain quality of life. The objectives are to promote healthy aging among senior citizens through structured community-based health screening, health education, and appropriate primary care referrals, with specific focus on identifying functional limitations, fall risk, sarcopenia, cognitive impairment, cancer risk factors, and oral health concerns.

Methods: A community health screening programme was conducted on 10 February 2026 at Dewan Kuarters Klinik Kesihatan Jinjang for members of Kelab Warga Emas Jinjang. Seventy elderly participants (42 females, 38 males; mean age not specified) underwent multidisciplinary health assessments including hand grip strength, calf circumference measurement, breast and colorectal cancer screening, dental care education, and cognitive improvement activities. Health education talks and social engagement activities were also conducted.

Results: All 70 participants completed screening activities. Breast cancer screening (38/42 females) revealed no abnormal findings. Colorectal cancer screening involved 32 participants aged 50-75 years. Sarcopenia screening identified 30% of participants as new cases requiring referral, with 60% already under clinic follow-up. Appropriate referrals were made for identified health concerns.

Conclusion: This multidisciplinary, community-based programme

successfully promoted healthy aging through early screening and health education, demonstrating the effectiveness of accessible preventive care in primary care settings.

Keywords: Healthy aging, community health, cancer screening, fall prevention, primary care, senior citizens

Community Project 25

Screening for Cardiovascular Risk Factors in a Suburban Community: Findings from the SeHaTi MADANI Community Program in Nilai, Negeri Sembilan

#FMSC2026-205

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Introduction: Early detection and treatment of non-communicable diseases (NCDs) are important in preventing complications. SeHaTi MADANI is a community program focusing on health, and one of its objectives is to screen for cardiovascular risk factors in a suburban population in Nilai, Negeri Sembilan.

Methods: A cross-sectional study was conducted on 22 November 2025 as a part of a community program at Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan. Participants aged 18 years old and above were screened for body mass index (BMI), blood pressure and capillary blood glucose during the one-day multidisciplinary health carnival event. Data were analysed using descriptive analysis.

Results: A total of 111 participants were screened, with a mean age of 34.4 years. Overweight and obesity were identified in 73 participants (65.8%). Hypertensive blood pressure readings ($\geq 140/90$ mmHg) were detected in 21 participants (18.9%), while 8 participants (7.2%) had elevated blood glucose levels. Notably, 20 of the 21 participants (95.2%) with hypertensive readings and 5 of the 8 participants (62.5%) with elevated blood glucose were previously undiagnosed. Those with abnormal health screening findings were scheduled for an appointment at the USIM Specialist Clinic for further follow-up with the family physician.

Conclusion: The program identified a substantial burden of modifiable cardiovascular risk factors, particularly overweight, obesity and undiagnosed hypertension, within a relatively young suburban population. Community-based screening initiatives are practical strategies for early case detection and may strengthen preventive and primary care interventions aimed at reducing future cardiovascular morbidity.

Keywords: Health screening, community health program, primary prevention.

Community Project 26

Bulatan Mekar: A Collaborative Primary Care and NGO Initiative for Caregivers.

#FMSC2026-295

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Introduction: Caregivers of mental health patients experience a heavy psychosocial burden. "Bulatan Mekar" is an initiative by the Malaysian Mental Health Awareness Association (MeCare) in collaboration with the community, which commenced in early 2025. Initiated by the late Areefah, the program is led and fully delivered by Family Medicine Specialists. This ongoing project aims to deliver psychoeducation, reduce burnout, provide a supportive environment for emotional expression, and build a sustainable caregiver support network.

Methods: This initiative received strategic support and funding from the National Centre of Excellence for Mental Health (NCEMH, MOH) and Yayasan Hasanah. Throughout 2025, nine structured modules were implemented, ranging from introduction to crisis management. Publicity was conducted through social media. As a pilot phase, sessions alternated between Google Meet and physical meetings, maintaining 10 caregivers per session to ensure a conducive environment.

Results: This clinic-NGO collaboration successfully brought clinical expertise directly into the community. Objective evidence of success was translated through qualitative analysis; participants reported significant emotional relief, reduced burnout, and an increase in mental health literacy, particularly regarding effective communication, crisis management, assistance methods, and awareness of the HEAL 1555 helpline. Participants also suggested expanding the series and the target audience. Consequently, operations have been sustained with plans for deploying trained volunteers and integrating counselors for specialized group therapy sessions.

Conclusion: The Bulatan Mekar project proves that the collaborative integration of primary care mental health expertise with NGOs enhances caregiver resilience, thereby serving as a replicable model for community mental health.

Keywords: Caregivers, Community Mental Health Services, Social Support.

Community Project 27

Wira Kita Tunjang Bangsa: A Community-Based Psychosocial Empowerment Programme for Methadone Clients in Kuala Selangor District

#FMSC2026-322

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Introduction: Methadone Maintenance Therapy (MMT) is an effective harm reduction strategy for opioid dependence. However, stigma, social isolation, unemployment, poor coping skills, and mental health challenges remain barriers to long-term recovery. Wira Kita Tunjang Bangsa was developed to address these challenges through a holistic, community-based psychosocial empowerment approach

Methods: This community intervention involved 50 methadone clients from three health clinics and was implemented using the Plan-Do-Check-Act (PDCA) cycle. The programme adopted a recovery-oriented approach through multidisciplinary collaboration involving Family Medicine Specialists, Public Health Specialists, Medical Officers, counsellors, religious agencies, community leaders, and peer support volunteers. Strategic stakeholder engagement strengthened programme sustainability, with the District HIV Unit serving as the programme coordinator, while PKNS supported landscape development and gardening preparation. The Department of Agriculture contributed 25 lime saplings and gardening tools, and provided technical guidance on cultivation, irrigation, fertilisation, pest control, and harvesting. PAID, AADK, and counsellors conducted spiritual enrichment, motivational, and stigma-reduction activities, while the District TB Unit provided lung health screening. Additional interventions included psychosocial assessments, peer support sessions, resilience-building workshops, family engagement initiatives, and community participation activities aimed at promoting recovery, social reintegration, and overall well-being among participants

Results: Participants reported improved self-confidence, emotional well-being, social connectedness, family relationships, and motivation towards recovery. Increased treatment adherence and community participation contributed to stigma reduction and social reintegration

Conclusion: The programme demonstrates the feasibility of integrating psychosocial, spiritual, health, and livelihood empowerment into district-level methadone services and offers a scalable model for community-based recovery in Malaysia

Keywords: Methadone Maintenance Therapy, Harm Reduction, Psychosocial Intervention

Community Project 28

REACH (Recovery, Empowerment and Community Healing): Promoting Psychosocial Recovery Among OSCA and MENTARI Clients in Segamat

#FMSC2026-151

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Introduction: Substance abuse and mental health challenges are significant public health concerns in Malaysia. In 2020, over 128,000 Malaysians were affected by drug addiction, with 95.5% being men aged 19–39. Concurrently, 4.6% of Malaysian adults experience depression, and 63% of individuals with drug addiction have at least one co-occurring mental health diagnosis. The REACH Program, held on October 30, 2025, at the Segamat District Health Office and Community Mental Health Centre

(MENTARI), aimed to foster skill-sharing, connection, resilience, and emotional well-being among participants.

Methods: The REACH Program was led by the author as Chairperson of the Board of Visitors (ALP), Psychiatry, Segamat Hospital. It was a collaborative effort involving the District Mental Health Unit, MENTARI, One Stop Centre for Addiction (OSCA), Community College, AADK, Eco-Shop, AK Maju, and the Segamat Member of Parliament. The program offered diverse skills training, including computer skills, electrical work, laser engraving, animation, and plumbing. Activities also encompassed aerobic exercise, talks on smoking cessation and motivational recovery, interactive agency booths, a lucky draw, and National Health Screening Initiatives (NHSI).

Results: The program attracted 110 participants, including 40 male clients from MENTARI and OSCA, along with their caregivers, family members, and staff. Positive feedback and testimonials were received from participants and their families. NHSI health screenings were successfully conducted for 61 individuals.

Conclusion: The REACH Program demonstrates potential benefits for clients, aligning with evidence suggesting that community-based, skills-focused, motivational, and interactive peer-involved programs lead to improved outcomes in recovery, engagement, social functioning, and relapse prevention.

Keywords: substance abuse, community-based programs, psychosocial interventions

Community Project 29

Program Warga Berilmu dan Sihat di Usia Emas (WISE) Kuala Selangor

#FMSC2026-273

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Introduction: As Malaysia becomes an aging nation, addressing the health needs of older adults is a critical priority. Grounded in national policies championing healthy aging and autonomy, the "Program Warga Berilmu dan Sihat di Usia Emas" (WISE) was established to empower this demographic. The initiative aimed to enhance health literacy, deliver primary healthcare services, and introduce specialized medical services from Hospital Al-Sultan Abdullah (HASA) UiTM to the local population.

Methods: Executed on June 29, 2024, in Kuala Selangor, this outreach united academic, clinical, and corporate stakeholders, including the UiTM Faculty of Medicine, HASA, and Pfizer Malaysia. The program engaged the community through targeted

health seminars, medical screenings, and educational exhibitions specifically focusing on mental health, healthy nutrition, frailty, and fall prevention.

Results: A total of 70 elderly individuals participated and directly benefited from the targeted interventions. Through primary care screenings, participants received vital diagnostic assessments, including blood sugar tests, anthropometric measurements, and DASS mental health screenings. Geriatric and dental evaluations successfully identified risks like cognitive decline, fall vulnerabilities, and oral health issues. Furthermore, specialized clinical booths and expert seminars elevated health literacy, equipping seniors with actionable knowledge on nutrition, medication safety, and rehabilitation to maintain independent living.

Conclusion: By bridging tertiary specialized care and grassroots communities, the WISE program successfully fostered health independence and proactive wellness among senior citizens. This framework offers a scalable blueprint for community-level geriatric interventions.

Keywords: Healthy aging, Nutritional status, Mental health.

Clinical Study / Trial_01

The Effectiveness of Using Digital Technology to Reduce Excessive Screen Time and Screen Dependency Scores among Pre-School Children in Kuantan

#FMSC2026-041

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Introduction: The use of technology is effective in reducing screen time. However, little is known about the effectiveness of technology in reducing screen dependency behaviour. This study evaluated whether a digital application-based behavioural intervention was more effective than a knowledge-based parental education programme in reducing Screen Dependency Disorder (SDD) scores and screen time among preschool children in Kuantan, Malaysia.

Methods: A quasi-experimental study was conducted among 29 preschool children aged 4–6 years. Participants received either a digital application-based intervention or a knowledge-based programme. Outcomes were assessed at baseline, one month, and three months. Changes in SDD scores were analysed using repeated measures ANCOVA, while weekday and weekend screen time were analysed using binary Generalised Estimating Equation models.

Results: Children receiving the application-based intervention showed a substantially greater reduction in SDD scores, decreasing from 35.80 at baseline to 21.93 at three months (reduction: 13.87 points). In comparison, the knowledge-based group showed a smaller reduction from 27.79 to 23.79 (reduction: 4.00 points). This represents more than a threefold greater improvement in dependency-related behaviours in the application group ($p < 0.001$). Weekday screen time reduced significantly over time, and children in the application group were significantly less likely to exceed one hour of weekday screen use at three months ($OR = 0.13$, $p = 0.040$). Weekend screen time also declined significantly across the study

period, although differences between groups were not statistically significant.

Conclusion: The digital application-based intervention was effective in reducing screen dependency behaviour among preschool children.

Keywords: Screen Dependency Disorder; screen time; digital intervention; behavioural change; Malaysia

Clinical Study / Trial_02

Prevalence of Limited Health Literacy and Its Associated Factors among Patients with Type 2 Diabetes Mellitus Attending Government Health Clinics in Kuantan

#FMSC2026-044

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Introduction: Health literacy (HL), defined as the ability to access, understand, and use health information, is crucial for improving outcomes in Type 2 Diabetes Mellitus patients. This study aims to determine the prevalence of limited HL and its associated factors among patients with T2DM.

Methods: A cross-sectional study was conducted among 440 participants from four selected government health clinics in Kuantan, using random sampling. Sociodemographic and clinical data were obtained through interviews and diabetic records. HL was assessed using the Short-Form Health Literacy Survey (HLS SF-12).

Results: The prevalence of limited health literacy (HL) was 48.8% and was associated with age, ethnicity, education, diabetes education frequency, and number of information sources. Older age increased the odds of limited HL ($OR\ 1.068$, 95% $CI\ 1.032–1.105$, $p < 0.001$), and Chinese participants had higher odds than Malays ($OR\ 2.684$, 95% $CI\ 1.336–5.392$, $p = 0.006$). Higher education was protective; secondary ($OR\ 0.316$, 95% $CI: 0.163–0.611$) and tertiary ($OR\ 0.125$, 95% $CI: 0.045–0.344$) education reduced the odds compared to primary ($p < 0.001$). Diabetes education frequency ($OR\ 0.169$, 95% $CI\ 0.101–0.284$) and information sources ($OR\ 0.347$, 95% $CI\ 0.211–0.570$) were protective ($p < 0.001$).

Conclusion: The prevalence of limited health literacy (HL) in this study was lower compared to previous studies. Importantly, modifiable factors such as patient education and access to reliable information sources were protective, emphasizing the need for targeted interventions.

Keywords: health literacy, limited, type 2 DM

Clinical Study / Trial_03

Barriers and Facilitators Encountered by Carers When Providing Care for Patients with Type 2 Diabetes Mellitus on Insulin: A Qualitative Study

#FMSC2026-050

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Introduction: As insulin therapy often requires external assistance, understanding the experiences of caregivers is vital for glycemic control. This study explored the barriers and facilitators faced by carers managing patients with Type 2 Diabetes Mellitus (T2DM) on insulin in a primary care setting.

Methods: A qualitative study using a phenomenological approach was conducted at an urban primary care clinic (Klinik Kesihatan Luyang), Sabah. Twenty-two carers were interviewed via semi-structured and one-on-one sessions by the author. Data were analyzed using thematic analysis, guided by the Theory of Planned Behavior (TPB).

Results: Five major themes emerged: Knowledge, Patient Attitude, Patient Ability, Availability, and Hypoglycemia. Barriers included a lack of knowledge regarding insulin titration, patient resistance due to fear of pain, and work commitments that disrupted injection schedules. Conversely, facilitators included previous medical exposure, patient independence, and the presence of retired or flexible carers. A significant barrier identified was the lack of authority among paid carers (maids) to enforce treatment adherence. While insulin is subsidized, the financial burden of consumables remains a hurdle for low-income families.

Conclusion: Carer involvement is a complex interplay of socioeconomic factors and patient-carer dynamics. Healthcare providers should shift from generic advice to tailored education that addresses specific carer burdens and patient attitudes. Early screening for carer literacy and socioeconomic constraints is recommended to improve the success of insulin initiation. These findings emphasize the need for a "carer-inclusive" approach in primary diabetes management to bridge the gap between clinical prescription and home implementation.

Keywords: Type 2 Diabetes Mellitus, Insulin, Carers

Clinical Study / Trial_04

SGLT-2i Use and Regular SMBG: Key Predictors for Successful Insulin De-Intensification in T2DM

#FMSC2026-070

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Introduction: Insulin de-intensification is an essential component of personalized Type 2 Diabetes Mellitus (T2DM) management, shifting from the traditional unidirectional "escalation-only"

approach. This study aimed to evaluate the clinical outcomes of insulin de-intensification and to identify independent predictors of its success.

Methods: A retrospective observational study was conducted across seven primary health clinics in the Petaling district. Adults with T2DM undergoing insulin de-intensification were recruited, and their clinical and laboratory parameters were analyzed over six months. "Successful de-intensification" was defined as maintaining or improving HbA1c. Independent predictors of success were identified using multivariable logistic regression analysis.

Results: 261 patients were included. The median total daily insulin dose decreased from 0.90 U/kg/day (IQR 0.60–1.25) to 0.70 U/kg/day (IQR 0.40–0.98). A statistically significant reduction in body weight was observed (mean change: -0.41 ± 2.82 kg; $p=0.012$). Glycemic control remained stable ($p=0.334$), with median HbA1c changing from 8.9% (IQR 7.1–10.6) to 8.7% (IQR 7.3–10.4). Multivariable logistic regression identified SGLT-2 inhibitor (SGLT-2i) use (aOR 3.23; 95% CI 1.28–8.18; $p=0.013$) and regular self-monitoring of blood glucose (SMBG) (aOR 2.00; 95% CI 1.05–3.81; $p=0.035$) as independent predictors of successful insulin de-intensification.

Conclusion: Insulin de-intensification can be effectively implemented in primary care without compromising glycemic control. The use of SGLT-2i and consistent SMBG are key factors that facilitate a successful reduction in insulin burden.

Keywords: insulin, de-intensification, primary care

Clinical Study / Trial_05

Prevalence of Asymptomatic Bacteriuria among Pregnant Patients with Gestational Diabetes Mellitus in Klinik Kesihatan Kuala Lumpur and Its Associated Factors

#FMSC2026-074

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Introduction: Urinary tract infections (UTI) pose significant health risks to maternal and foetal outcomes, in which one of the predisposing factors is untreated asymptomatic bacteriuria (ASB) in pregnancy. Pregnant patients with gestational diabetes mellitus (GDM) are more susceptible to developing this. However, data on its prevalence and associated risk factors in Malaysia are limited. This study aimed to determine the prevalence of ASB and its associated sociodemographic and clinical factors among pregnant women with GDM attending the Maternal Child Health Clinic in Kuala Lumpur Health Clinic.

Methods: This cross-sectional study involved 192 participants. Sociodemographic and clinical variables were collected via self-administered questionnaires. Urine culture was collected to

diagnose ASB. Descriptive statistics, Chi-square tests, and logistic regression were used for analysis.

Results: The prevalence of ASB was 26.6%, with *Streptococcus agalactiae*, also known as Group B *Streptococcus* (GBS), accounting for 82.4% of positive cultures. Only one factor was found to be significantly associated with ASB, which was maternal education level ($p = 0.026$, OR = 0.657, 95% CI: 0.454–0.951), with tertiary education being protective.

Conclusion: This study revealed that ASB is common in GDM pregnancies and is strongly associated with lower maternal education. The predominance of GBS warrants special attention for intrapartum antibiotic coverage. Tailored ASB screening policies that incorporate educational risk factors may enhance preventive care.

Keywords: Asymptomatic bacteriuria, Gestational diabetes mellitus, Urinary tract infection

Clinical Study / Trial_06

Knowledge, Awareness and Practice of Cardiopulmonary Resuscitation (CPR) among Household Members of Patients with Heart Disease

#FMSC2026-086

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Introduction: Household members of patients with heart disease represent a high-risk population for witnessing cardiac emergencies, yet their cardiopulmonary resuscitation (CPR) preparedness remains inadequately characterized, particularly in Southeast Asian contexts.

Methods: A cross-sectional study was conducted among 276 household members at primary care and cardiology clinics in Universiti Malaya Medical Centre (February 2025). Participants were recruited via convenience sampling. A validated questionnaire adapted from Gao et al. assessed CPR awareness, 12-domain knowledge, training experience, barriers, motivations, and attitudes. Data were analysed using descriptive statistics, non-parametric tests, and multivariable logistic regression.

Results: Participants had a mean age of 44.4 ± 13.0 years; 66.3% were female and 72.8% had tertiary education. CPR awareness was high (95.3%), primarily from digital media (76.8%). However, significant knowledge gaps were identified, with five domains demonstrating poor median scores (≤ 2.0). Only 40.9% had received formal CPR training, and most training was outdated (>2 years). While 97.5% expressed positive attitudes toward CPR, only 11.4% had performed CPR. The main barrier was lack of information on training availability (59.5%), while heart disease awareness was the key motivator (61.3%). Logistic regression identified motivation related to heart disease (AOR=3.10, $p=0.003$) and information barriers (AOR=3.28, $p=0.002$) as significant predictors of willingness to undergo training.

Conclusion: Despite high awareness, CPR knowledge remains poor and practice is infrequent, indicating a preparedness gap. Improving access to targeted, family-centred CPR training is essential to enhance emergency preparedness among high-risk households.

Keywords: Cardiopulmonary resuscitation; Household members; Emergency preparedness

Clinical Study / Trial_07

Views and Experiences of Metabolic Dysfunction-Associated Fatty Liver Disease (MAFLD) Diagnosis and Management among Primary Care Doctors in Klang Valley

#FMSC2026-097

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Introduction: Metabolic dysfunction-associated fatty liver disease (MAFLD) is a rising global and Malaysian health concern, and it is closely linked to type 2 diabetes, hypertension, dyslipidemia, obesity, and cardiovascular disease. Primary care doctors play a pivotal role in the early detection of MAFLD, yet local research on their approach to MAFLD is limited. This study aims to explore primary care doctors' approaches to the identification and management of MAFLD in Malaysia.

Methods: A qualitative study using focus group discussions and in-depth interviews was conducted across five clinics in Klang Valley, Malaysia. Twenty-four participants (Family Medicine Specialists, trainees, and medical officers) were selected via convenience sampling. Data were collected through audio-recorded interviews, transcribed verbatim, and checked for accuracy. Data collection continued until data saturation was achieved. The data were analysed using an inductive thematic analysis approach.

Results: Four themes emerged: (1) various perspectives, knowledge, and confidence on MAFLD, (2) disparities in access to diagnostic investigations of MAFLD, (3) unclear care pathway in managing MAFLD, and (4) suggestions for improvement in the diagnosis and management of MAFLD. Knowledge and prioritisation varied among doctors, heavily influenced by their postgraduate training and clinic settings. Systemic constraints, including limited access to imaging, laboratory investigations, and unclear referral criteria, were key contributors to variability in care.

Conclusion: To improve MAFLD care in primary settings, the study recommends developing clear clinical guidelines, improving diagnostic access, and integrating MAFLD training into continuing medical education. Strengthening patient education and establishing structured referral pathways are also essential for early diagnosis and more consistent management.

Keywords: primary care, fatty liver, diagnosis

Clinical Study / Trial_08

Thalassemia Knowledge and Its Associated Factors among Individuals Attending Pre-Marital Course in Kuantan, Pahang

#FMSC2026-100

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Introduction: Thalassemia is a prevalent inherited hemoglobinopathy in Malaysia, imposing significant health, psychosocial, and economic burdens. Although targeted screening for students began in 2016, its long-term effectiveness remains unclear. This study evaluates knowledge of thalassemia and associated factors among participants in pre-marital courses in Kuantan.

Methods: This cross-sectional study used simple random sampling to recruit 430 Malaysians attending pre-marital courses in Kuantan. Participants completed a validated 21-item questionnaire assessing sociodemographics and thalassemia knowledge (total score 21). Data were analyzed using descriptive statistics, bivariate tests, and multiple linear regression to identify predictors of knowledge scores.

Results: The mean knowledge score was 9.06 (SD=5.25). Participants previously screened for thalassemia achieved significantly higher scores of 11.02 compared to those never screened 7.54 ($p<0.001$). Bivariate analysis showed a significant association between thalassemia knowledge score and female gender, tertiary education, and professional status ($p<0.001$). Multiple linear regression confirmed female gender ($p=0.002$), tertiary education ($p<0.001$), and identified carrier status ($p=0.041$) as independent predictors of higher literacy. Participants who had previously been screened demonstrated higher knowledge scores than those who had not been screened. Overall, education and screening exposure were key determinants of knowledge variability.

Conclusion: This study revealed suboptimal thalassemia knowledge, particularly among unscreened individuals, males, and those with lower educational attainment. While general awareness may be lacking, prior thalassemia screening significantly enhances health literacy. Consequently, targeted educational interventions for these vulnerable groups and expanded screening initiatives are crucial to improve awareness and prevention outcomes.

Keywords: Thalassemia, Health Knowledge, Primary Prevention

Clinical Study / Trial_09

Short Interpregnancy Interval and Its Associated Factors among Multigravida Women Attending Government Health Clinics in Kuantan, Pahang

#FMSC2026-112

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Introduction: Short interpregnancy interval (IPI), defined as less than 24 months between a live birth and subsequent conception, is associated with adverse maternal and neonatal outcomes, including preterm birth, low birth weight, maternal anaemia, and postpartum haemorrhage. This study aimed to determine the prevalence of short IPI and its associated factors among multigravida women in Kuantan, Pahang.

Methods: A cross-sectional study was conducted from January to

June 2025 among 660 antenatal mothers attending six government health clinics, selected using stratified proportionate and systematic random sampling. Data were collected via a validated questionnaire and cross-verified with antenatal records. Statistical analysis was performed using SPSS version 29 and included chi-square tests and multiple logistic regression to identify the associated factors.

Results: The overall prevalence of short IPI was 30.3%. Bivariate analysis showed significant associations with maternal age, parity, menstrual cycle pattern, breastfeeding duration, contraceptive method, and pregnancy intention ($p < 0.05$). In multivariable analysis, maternal age, pregnancy intention, and breastfeeding duration remained significant. Women aged 19–25years (AOR = 5.050; 95% CI: 2.591–9.846) and 26–30years (AOR = 3.709; 95% CI: 2.273–6.052), unintended pregnancy (AOR = 2.079; 95% CI: 1.404–3.078), and shorter breastfeeding duration (<12months: AOR = 4.387; 13–23months: AOR = 10.287) were associated with higher odds. These findings highlight the stronger influence of behavioural factors over knowledge alone.

Conclusion: Short IPI remains a significant public health concern. Strengthening family planning, optimal breastfeeding, and addressing unintended pregnancy are essential to improve birth spacing and maternal-child outcomes.

Keywords: Birth Intervals, Maternal Health, Contraception

Clinical Study / Trial_10

Knowledge, Attitude, and Practice of Pre-Pregnancy Care (PPC) to Women of Childbearing Age and Factors Associated with Its Delivery among Primary Care Physicians (PCPs) in Klang Valley, Malaysia

#FMSC2026-125

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Introduction: PPC is a key strategy to improve maternal and neonatal outcomes by addressing health risks pre-pregnancy. Despite national recommendations, PPC implementation in Malaysian primary care is inconsistent. This study aimed to (i) adapt and validate a KAP questionnaire for use among PCPs in Malaysia, (ii) assess their KAP related to PPC, and (iii) identify factors associated with good PPC practice in Klang Valley.

Methods: A two-phase study: Phase 1: adaptation, validation, and reliability testing of the (PCC-KAP-Andarg-Ethio) questionnaire. Phase 2: a cross-sectional online survey among 227 PCPs in government health clinics. Descriptive statistics and logistic regression identified predictors of good PPC practice.

Results: Phase 1 demonstrated good validity and excellent internal consistency. In Phase 2, 26.9%, 60.4%, and 12.8% of PCPs demonstrated good, moderate, and poor knowledge of PPC. Most demonstrated positive attitude (71.4%) with good/moderate PPC practice (73.6%). Multivariate analysis showed moderate knowledge (AOR 38.19, 95% CI: 2.09, 698.77), good knowledge (AOR 13.79, 95% CI: 1.40, 135.62), and formal PPC training (AOR 49.20, 95% CI: 2.37, 1019.64) were more likely to have good PPC practice. The negative association with (GCFM/DFM)

(AOR 0.03, 95% CI: 0.001, 0.60) should be interpreted cautiously due to the small subgroup size and wide CI.

Conclusion: Higher PPC knowledge and formal training are associated with good PPC delivery among PCPs. The negative association with postgraduate qualification likely reflects sample limitations; findings require cautious interpretation and confirmation in larger studies.

Keywords: pre-pregnancy care; primary care physicians; Malaysia

Clinical Study / Trial_11

Prevalence of Allergic Rhinitis among Adult Patients Attending an Academic Primary Care Centre in Selangor, Malaysia

#FMSC2026-191

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Introduction: Allergic rhinitis (AR) is a global health concern as it causes disrupted sleep, cognitive impairment, irritability, and fatigue. Its prevalence among Malaysian adult primary care patients is unknown. Therefore, this study aimed to determine the prevalence of allergic rhinitis among this population.

Methods: A cross-sectional study utilising the systematic random sampling method was conducted among adult patients aged ≥18 years old at an academic primary care centre from June 2025 to March 2026, using a self-administered questionnaire. The first section of the questionnaire gathered the participants' sociodemographic and clinical information. The second section consisted of the Malaysian version of Score for Allergic Rhinitis (MySFAR) questionnaire. Allergic rhinitis was defined by a score of >9.

Results: A total of 295 participants completed the study. The majority were female (55.9%), Malay (88.5%), had tertiary education (52.5%), were currently not working (60.3%), and belonged to the B40 household income group (69.8%), with a mean age of 59 (SD ±14) years. The prevalence of allergic rhinitis (AR) was 14.6% (43/295). Only 44.2% (19/43) of those with AR were receiving treatment. Additionally, 5.6% (14/252) of participants without a diagnosis of AR were also on treatment. Among those with AR, 55.8% (24/43) reported having food allergies, with seafood being the most common trigger.

Conclusion: AR is prevalent among this adult primary care population. Screening and appropriate treatment should be considered in these patients. Further research involving other primary care settings in Malaysia should also be conducted.

Keywords: Rhinitis, Allergic; Adult; Primary Health Care

Clinical Study / Trial_12

Heart and Lifestyle (HEAL) Initiative in Klinik Kesihatan Penampang, Sabah

#FMSC2026-219

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Introduction: Cardiovascular disease poses a huge public health burden in Malaysia. In Sabah, patients referred to tertiary cardiology services through standard pathways encounter long waiting times, delaying critical diagnoses and overwhelming specialist centres. To address this, the Heart and Lifestyle (HEAL) Initiative was established at Klinik Kesihatan Penampang. This study aims to determine the proportion of suspected cardiac patients manageable within primary care via echocardiography, measure the time-to-diagnosis, and evaluate the initiative's impact on clinical efficiency and tertiary referral optimization.

Methods: This observational study analyzed secondary data from the HEAL pilot project at Klinik Kesihatan Penampang (September 2025–April 2026). Adult patients suspected of cardiac pathology underwent targeted, point-of-care echocardiography performed by a trained Family Medicine Specialist utilizing the Basic Echocardiography Examination Certificate (BECC) protocol.

Results: Among 114 patients evaluated (53.5% female; mean age group 60–69 years; most frequent categories: ischaemic heart disease [21.1%] and heart failure [19.3%]), the definitive time-to-diagnosis target was successfully achieved within 2 weeks. The initiative demonstrated high efficacy in clinical triage, detecting complex cases that warranted specialist referral and determining their level of urgency. Consequently, tertiary hospital referrals were directly reduced, with 51.8% (n = 59) of cases managed at the primary care level. The remaining 48.2% (n = 55) required specialist involvement.

Conclusion: Point-of-care echocardiography streamlines diagnostics; as a triage filter, it ensures rapid intervention and de-congests tertiary services by managing over half of cardiac cases locally.

Keywords: Primary Care, Echocardiography, Cardiovascular diseases

Clinical Study / Trial_13

Behind the Recovery Curve: Assessing Prevalence and Associated Factors of Poor CD4 Reconstitution among Late-Presenting HIV Patients in Bintulu

#FMSC2026-266

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Introduction: In Malaysia, late presentation of HIV with advanced immunosuppression remains a critical challenge, with approximately 44% of patients exhibiting baseline CD4 counts below 200 cells. Despite effective antiretroviral therapy (ART), a subset of patients fails to achieve adequate immunological recovery. This study investigates the prevalence and predictors of poor CD4 recovery among severely immunosuppressed patients in Bintulu Division.

Methods: A retrospective analysis was conducted on 210 HIV-positive patients attending primary care services between 2020 and 2024. Data on demographics, clinical presentation, and CD4 counts were extracted. Descriptive statistics and multivariable logistic regression were employed to identify independent predictors of poor CD4 recovery (<200 cells) after 3–6 months of Highly Active Antiretroviral Therapy (HAART).

Results: The cohort was predominantly male (91%), young (mean age 27.6 years), and identified as homosexual or bisexual (73.3%). Iban (48.1%), Malay (30.5%), and Chinese (14.8%) were the primary ethnic groups. At baseline, 34.8% of patients had CD4 counts (40 years, presence of systemic symptoms and Iban ethnicity with poor CD4 increment. Multivariable analysis identified the presence of systemic symptoms at the first encounter as the sole independent predictor of poor CD4 recovery.

Conclusion: A significant portion of patients in Bintulu present with advanced HIV, leading to suboptimal early immune restoration. The findings suggest that symptomatic presentation is a key red flag for poor prognosis. Targeted screening and fast-track treatment drastically improve clinical outcomes.

Keywords: Advanced HIV, symptomatic presentation, clinical outcome

Clinical Study / Trial_14

Awareness and Attitudes towards Advance Care Planning among Primary Care Patients in Sarawak

#FMSC2026-013

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Introduction: Advance care planning (ACP) allows individuals to express preferences for future medical care if they lose decision-making capacity. Awareness of ACP in Malaysia remains limited, and Sarawak's diverse ethnic population may influence awareness and attitudes toward ACP. This study aimed to assess awareness and attitudes toward ACP among patients attending primary care clinics in Sarawak.

Methods: A multicentre cross-sectional study was conducted in

four public primary care clinics in Sarawak. Adult patients aged ≥18 years were recruited using convenience sampling. A validated bilingual questionnaire assessed sociodemographic characteristics, health status, ACP awareness, and attitudes. Descriptive statistics summarised responses, while chi-square tests and multivariable logistic regression identified associated factors.

Results: Among 405 respondents, ACP awareness was low: 23.2% had heard of ACP and 15.8% understood its meaning. Awareness of proxy decision makers and power of attorney was also limited. Despite this, attitudes towards ACP were positive. Most respondents agreed ACP discussions are necessary (93.1%) and supported ACP services in primary care clinics (92.1%). Tertiary education was associated with greater ACP awareness (AOR 1.88, 95% CI 1.15–3.08), while respondents aged ≥60 years were less likely to perceive ACP discussions as necessary (AOR 0.23, 95% CI 0.10–0.54).

Conclusion: Although awareness of advance care planning (ACP) among primary care patients in Sarawak remains limited, attitudes towards ACP are highly favourable. Primary care clinics provide an important platform to introduce ACP discussions and strengthen patient-centred end-of-life care in Malaysia.

Keywords: Primary Health Care, Advance Care Planning, Malaysia

Clinical Study / Trial_15

Prevalence of Loneliness and Its Associated Factors among Elderly in FELDA Community in Kuantan, Pahang

#FMSC2026-026

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Introduction: Loneliness among the elderly is a growing public health concern associated with adverse physical and mental health outcomes. In Malaysia, evidence on loneliness, particularly within Federal Land Development Authority (FELDA) communities, remains limited. This study aimed to determine the prevalence of loneliness and its independent predictors among elderly residents in FELDA in Kuantan, Pahang.

Methods: A cross-sectional study was conducted among 370 individuals aged ≥60 years from five selected FELDA areas using simple random sampling. Data on sociodemographic, socioeconomic, and medical characteristics were collected through structured questionnaires. Descriptive statistics and Chi-square tests assessed bivariate associations, while multivariable logistic regression identified independent predictors. Variables with $p < 0.25$ in univariate analysis and clinically important factors were included in the regression.

Results: The prevalence of loneliness was 70.6%, with low (56.6%), moderate-to-severe (39.7%), and intense (3.8%) levels. Emotional loneliness was most common (56.6%), followed by mixed (34.7%) and social loneliness (9.2%). Multivariable analysis showed that living alone significantly increased the odds

of loneliness (AOR = 5.30; 95% CI: 1.14–24.57; $p = 0.033$). Higher educational attainment was protective, while multiple comorbidities were associated with increased odds (AOR = 1.76; 95% CI: 1.00–3.09; $p = 0.050$). Other factors were not significant.

Conclusion: Loneliness is highly prevalent among elderly residents in FELDA communities. Targeted interventions focusing on social support, educational engagement, and chronic disease management are crucial to mitigate loneliness and improve well-being among the elderly.

Keywords: Loneliness, Elderly, FELDA

Clinical Study / Trial_16

Adherence to Clinical Practice Guidelines in Managing Hypertensive Patients with Cardiovascular Diseases in Gombak, Selangor: Prevalence and Associated Factors

#FMSC2026-032

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Introduction: Hypertension is a major modifiable risk factor for cardiovascular diseases, significantly contributing to global morbidity. In primary care, adhering to clinical guidelines is essential for effective management. This study used a validated evaluation to determine the prevalence of guideline adherence and identify associated factors in a high-risk subpopulation already living with cardiovascular disease.

Methods: This cross-sectional study reviewed 455 hypertensive patients with CVD (2020–2023) across Gombak, Malaysia. A multistage sampling method (weighted stratified and systematic) was used to ensure representative data collection, and adherence was evaluated using JL Milchak's validated adherence framework aligned with guideline recommendations. Multivariate logistic regression identified factors associated with adherence, while subgroup analysis examined its impact on blood pressure (BP) control.

Results: A high prevalence (79.1%) of adherence to the 5th hypertension guideline was found. This adherence is significantly associated with smoking risk factor (odds ratio, OR = 2.26, 95% CI: 1.12, 4.53, $p = 0.021$) and stroke as a CVD type (OR = 0.51, 95% CI: 0.28, 0.92, $p = 0.026$). However, the overall association between CPG adherence and blood pressure (BP) was not significant. In sub-analysis, BP control was higher in Category B among guideline-adherent (66.7%) compared to non-adherent (63.9%), while Category A showed lower BP control (45.5%) among adherents.

Conclusion: High adherence failed to improve blood pressure control, with smoking and CVD type affecting results. Addressing systemic barriers, such as polypharmacy, is crucial. Integrating standardised registries with individualised care in primary settings is essential to translate guideline compliance into improved outcomes.

Keywords: Adherence, Clinical Practice Guideline, Blood Pressure Outcome

Clinical Study / Trial_17

Prevalence of Primary Sarcopenia among Community-Dwelling Older Adults in Seberang Perai Utara District, Penang and Its Associated Factors

#FMSC2026-035

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Introduction: Sarcopenia is an age-related decline in skeletal muscle mass, strength, and physical performance, associated with adverse outcomes such as frailty, disability, and mortality. This study aimed to determine the prevalence of primary sarcopenia and its associated factors among community-dwelling older adults in Penang, Malaysia.

Methods: A cross-sectional study was conducted among adults aged ≥ 60 years in Seberang Perai Utara, Penang, using convenience sampling. Sarcopenia was diagnosed based on the Asian Working Group for Sarcopenia (AWGS) 2019 criteria based on muscle mass, muscle strength, and physical performance. Sociodemographic data, comorbidities, and physical activity levels (IPAQ short form) were collected. Logistic regression analysis was performed to identify associated factors.

Results: A total of 226 participants were included. The overall prevalence of sarcopenia was 32.7%, comprising 17.7% with sarcopenia and 15.0% with severe sarcopenia. Multivariate analysis showed that increasing age was independently associated with higher odds of sarcopenia (adjusted OR 1.096, 95% CI 1.017–1.181). In contrast, higher body mass index (adjusted OR 0.778, 95% CI 0.703–0.861) and greater physical activity levels (adjusted OR 0.954 per 100 MET-min/week, 95% CI 0.925–0.983) were associated with lower odds of sarcopenia.

Conclusion: Sarcopenia is highly prevalent among older adults in this community. Increasing age is a key risk factor, while higher body mass index and physical activity are protective. Targeted interventions promoting active lifestyles and healthy body composition are essential to reduce the burden of sarcopenia.

Keywords: Sarcopenia, physical activity, older adult

Clinical Study / Trial_18

Prevalence of Prediabetes and Its Associated Factors among Adults Attending Outpatient Primary Health Clinic in Kuantan Pahang

#FMSC2026-040

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Introduction: Prediabetes is a major public health concern due to its risk of progression to type 2 diabetes and related complications. Early identification of risk factors is essential for timely prevention. This study aimed to determine the prevalence of prediabetes and its associated factors among adults attending a primary health clinic in Kuantan, Pahang.

Methods: A cross-sectional study was conducted among 180 respondents. Sociodemographic, clinical, and lifestyle data were collected using a structured questionnaire. Blood glucose status was categorized as non-diabetes or prediabetes. Descriptive statistics summarized the data, while independent t-tests and Chi-square tests were used for bivariate analysis. Variables with $p < 0.25$ were included in multivariate logistic regression to identify independent predictors. Statistical significance was set at $p < 0.05$.

Results: The prevalence of prediabetes was 8.3%. The mean age of respondents was 33.37 ± 12.31 years. Bivariate analysis showed that age ($p = 0.038$), waist circumference ($p = 0.018$), and psychological status ($p = 0.041$) were significantly associated with prediabetes. Logistic regression analysis revealed that increasing age (AOR = 1.051, 95% CI: 1.002–1.103, $p = 0.040$), central obesity (AOR = 4.779, 95% CI: 1.004–22.751, $p = 0.049$), and depression (AOR = 5.283, 95% CI: 1.070–26.084, $p = 0.041$) were significant predictors.

Conclusion: Despite the low prevalence of prediabetes, increasing age, central obesity, and depression were significant predictors. These findings emphasize the need for early screening and targeted interventions on weight management and mental health.

Keywords: prediabetes, risk factors, primary care

Clinical Study / Trial_19

Knowledge, Attitude, and Practice of Exclusive Breastfeeding among Mothers in Kerian District

#FMSC2026-052

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Introduction: The exclusive breastfeeding rate in Malaysia is low despite its significant health benefits for both infants and

mothers. This study aims to determine the prevalence of exclusive breastfeeding practice up to 6 months post-delivery and factors associated with it.

Methods: A cross-sectional study was conducted between 3rd March and 29th May 2025, across 11 government health clinics with maternal and child care service in Kerian district. Using convenience sampling, a validated self-administered questionnaire was given to mothers with infants aged 6 to 12 months. The data were analyzed using Chi-square tests, Mann-Whitney tests, and multivariate logistic regression.

Results: A total of 402 mothers participated in the study. The prevalence of exclusive breastfeeding practice up to 6 months in Kerian district was 67.4% (271/402). Multivariate logistic regression identified maternal occupation, intention to breastfeed and knowledge as significant predictors for exclusive breastfeeding practice. Housewives had higher odds of exclusively breastfeeding compared to mothers working in the private sector or self-employed (AOR=1.867). Mothers who had the intention to exclusively breastfeed were significantly more likely to do so (AOR=3.373). Higher breastfeeding knowledge scores were significantly associated with practice of exclusive breastfeeding (AOR=1.063).

Conclusion: The prevalence of exclusive breastfeeding in the Kerian district (67.4%) is approaching the global target of 70%. Because maternal unemployment, breastfeeding intention, and high breastfeeding knowledge are strong predictors of this practice, the researchers recommend strengthening prenatal breastfeeding education and providing targeted support for working mothers to encourage continued breastfeeding.

Keywords: Exclusive breastfeeding, 6 months, Kerian district

Clinical Study / Trial_20

Exploring the Unmet Needs of Women with End Stage Renal Failure on Haemodialysis in Primary Care Settings: A Qualitative Study

#FMSC2026-054

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Introduction: Women with end-stage renal failure (ESRF) on haemodialysis experience complex physical, psychological, and social challenges, yet care in Malaysia remains predominantly centred in dialysis units rather than in the community. The needs of this group of women have been largely neglected, with little emphasis placed on supportive interventions that might assist and support them in their ongoing care. The aim is to explore the unmet needs of women with ESRF on haemodialysis in Malaysia and to identify opportunities for primary care doctors to better support their ongoing care, well-being, and family and social roles.

Methods: This qualitative study explored women's perceived needs, support received, and unmet needs from initiation of dialysis onwards. Semi-structured interviews were conducted with 21 women with ESRF from six dialysis centres, recruited through

purposive sampling. Interviews were audio recorded, transcribed verbatim, and analysed thematically using NVivo 15.

Results: Four key themes emerged, including 1) limited integration and continuity with primary care leading to heavy reliance on dialysis centres, 2) inadequate attention to the negative impact of being dependent on haemodialysis, 3) neglected gender-specific and women's health needs, and 4) missed opportunities for holistic primary care, causing distress and uncertainty in them.

Conclusion: Women undergoing haemodialysis experience disproportionately high levels of physical and psychological distress, highlighting a critical gap in support that extends well beyond standard clinical care. Supportive intervention by primary care doctors is essential to improving outcomes and quality of life.

Keywords: End-stage renal failure, haemodialysis, unmet need

Clinical Study / Trial_21

Factors Associated with Knowledge, Attitudes, Practices, and Awareness (KAPA) towards Sexual and Reproductive Health (SRH) among Secondary School Students in Segamat, Malaysia

#FMSC2026-059

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Introduction: Adolescence is a critical stage for sexual and reproductive health (SRH) development. In Malaysia, cultural and religious sensitivities may limit comprehensive SRH education, leaving adolescents vulnerable to risky behaviours, unintended pregnancies, and sexually transmitted infections. This study assessed the KAPA levels among secondary school students in Segamat, Johor, and identified associated demographic factors.

Methods: A cross-sectional study was conducted among 218 secondary school students in Segamat. Data were collected using a validated KAPA questionnaire measuring knowledge, attitudes, practices, and awareness related to SRH. Descriptive statistics summarized socio-demographic characteristics and KAPA levels, while chi-square tests were used to identify associations between demographic factors and KAPA components ($p < 0.05$).

Results: While 80.7% of students demonstrated good SRH practices and 52.8% reported positive attitudes, only 47.7% had good knowledge levels (mean = 11.10/15) and 38.5% showed good awareness (mean = 2.39/6). Knowledge, attitudes, and awareness were significantly associated with race, form level, and religion ($\chi^2 = 11.43-26.51$, $p < 0.05$), while practices were associated with form level and gender ($\chi^2 = 8.64-19.09$, $p < 0.05$).

Conclusion: The findings highlight a knowledge-practice gap among adolescents. Targeted, culturally sensitive, and age-appropriate SRH education programs, including curriculum enhancement, are needed to replace the current generalized SRH

education approach. Awareness campaigns, teacher training, and parental engagement may help bridge the knowledge-practice gap.

Keywords: Sexual and reproductive health, adolescents, KAPA, Secondary school, Malaysia

Clinical Study / Trial_22

Beyond Blood Pressure: High Burden of Metabolic Syndrome and Its Modifiable Determinants among Hypertensive Patients in Primary Care

#FMSC2026-062

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Introduction: Hypertension rarely occurs in isolation and often coexists with metabolic syndrome (MetS), increasing cardiovascular risk beyond blood pressure control. Local data in Malaysian primary care are limited. This study aimed to determine the prevalence of MetS and identify associated modifiable factors among hypertensive patients in Kuantan, Pahang.

Methods: A cross-sectional study was conducted among 420 hypertensive patients attending primary health clinics. Sociodemographic, lifestyle, and clinical data were obtained using validated tools and medical records. MetS was defined using the International Diabetes Federation (IDF) criteria. Factors associated with MetS were analysed using multivariable logistic regression.

Results: The prevalence of MetS was 49.5% (95% CI: 44.7–54.3). The mean age was 59.3 years, with a predominance of females (55.5%) and Malays (69.5%). Most participants were overweight or obese (88.4%), and more than half were physically inactive (57.4%). In multivariable analysis, significant predictors of MetS included higher diastolic blood pressure (AOR 1.06, 95% CI: 1.03–1.09), physical inactivity (AOR 2.77, 95% CI: 1.73–4.43), higher body mass index (AOR 1.15, 95% CI: 1.08–1.23), and presence of comorbidities (AOR 2.70, 95% CI: 1.59–4.60) (all $p < 0.001$).

Conclusion: One in two hypertensive patients met IDF criteria for metabolic syndrome, indicating a substantial cardiometabolic burden. Targeting modifiable factors, particularly obesity and physical inactivity, should be prioritised. These findings support shifting from a blood pressure-centric approach to comprehensive, patient-centred cardiometabolic risk management in primary care settings.

Keywords: Metabolic syndrome, hypertension, primary health care

Clinical Study / Trial_23

Urinary Incontinence in Older Adults with Diabetes: Prevalence and Factors Influencing Symptom Burden

#FMSC2026-073

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Introduction: Urinary Incontinence (UI) is a common but underreported geriatric syndrome that impairs quality of life. Older adults with diabetes mellitus have increased risk due to neuropathy, polyuria, functional decline, and polypharmacy, yet it remains poorly characterised in Malaysian primary care patients.

Methods: A multicentric clinical-based cross-sectional study was conducted across seven primary care clinics in Negeri Sembilan. Older adults aged 60 years and above with diabetes mellitus attending routine follow-up were consecutively screened using the validated Malay ICIQ-UI SF. Those with a score of 1 and above (UI positive) completed a clinician-administered add-on questionnaire on functional, behavioural, and clinical factors. Mann-Whitney U, Kruskal-Wallis, and chi-square tests were used for association analyses.

Results: Of 1,130 patients screened, 139 (12.3%) had UI. Most had mild (43.9%) or moderate (45.3%) severity. Urgency UI was most common (46.0%), followed by stress (24.5%) and mixed UI (23.0%). Over two-thirds had nocturia (66.2%) and caffeine intake (69.8%). Mobility limitation was the strongest predictor of UI impact, with mobility aid use and toilet access difficulty significantly associated with higher ICIQ scores ($p < 0.001$). Diuretic use ($p = 0.013$), nocturia ($p = 0.002$), and musculoskeletal disease ($p = 0.007$) were also significant. Mixed UI showed the greatest impact on daily life ($p = 0.003$).

Conclusion: UI affects approximately 1 in 8 older adults with diabetes in primary care. Functional limitation is the strongest predictor of UI impact. Routine UI screening and functional assessment should be integrated into primary care diabetes management for older adults.

Keywords: urinary incontinence, diabetes mellitus, older adults

Clinical Study / Trial 24

Breastfeeding Self-Efficacy and Its Associated Factors in Primiparous Working Women in Kuantan

#FMSC2026-103

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Introduction: Breastfeeding self-efficacy is a key determinant of breastfeeding success, particularly among working mothers. Factors such as workplace support, breastfeeding practices, and maternal sociodemographic characteristics may influence confidence in breastfeeding. This study aimed to determine the level of breastfeeding self-efficacy and its associated factors among primiparous working women.

Methods: A cross-sectional study was conducted among 210 primiparous working women. Data on sociodemographic characteristics, breastfeeding practices, and workplace support were collected. Breastfeeding self-efficacy was measured using the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF), while workplace support was assessed using the Workplace Breastfeeding Support Scale (WBSS). Statistical analyses included descriptive statistics, bivariate analysis, and multiple linear regression.

Results: The mean BSES-SF score was 60.54 ± 8.59 , and the mean WBSS score was 48.76 ± 10.11 . Breastfeeding self-efficacy was significantly associated with mode of delivery ($p = 0.003$), breastfeeding practice ($p < 0.001$), husband support ($p = 0.036$), and WBSS score ($r = 0.487$, $p < 0.001$). In multivariate analysis, WBSS score ($B = 0.262$, $p < 0.001$), breastfeeding practice, vaginal delivery ($B = 0.188$, $p = 0.002$) and education level ($B = 3.408$, $p = 0.007$) were significant factors. Compared to mixed breastfeeding with predominant formula feeding, exclusive breastfeeding and mixed breastfeeding with predominant breastmilk were associated with higher BSES-SF scores by 12.5 and 8.3 points, respectively.

Conclusion: Breastfeeding self-efficacy among primiparous working women is significantly influenced by workplace support, breastfeeding practices, and education level, emphasizing the need for supportive interventions to improve outcomes.

Keywords: breastfeeding, primiparous, workplace support

Clinical Study / Trial 25

Bridging Access and Continuity: Adherence, Persistence and Retention of Pre-Exposure Prophylaxis in Sabah Primary Care

#FMSC2026-116

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Introduction: Pre-exposure prophylaxis (PrEP) is a cornerstone of HIV prevention, yet its real-world effectiveness depends on sustained adherence, persistence, and retention in care. Data from Malaysian primary care settings, particularly in East Malaysia, remain limited. This study addresses a key evidence gap within a primary care setting in Sabah.

Methods: A retrospective cohort study was conducted at Klinik Kesihatan Putatan, Sabah, including all clients initiated on PrEP from programme introduction in 2023 to 2025. Data were extracted from the PrEP registry records to measure adherence (missed doses), persistence (continuous prescription refill without interruption > 30 days), retention at 1, 3, 6, 12, and 24 months, and reasons for discontinuation. Descriptive statistics were used.

Results: A total of 235 clients were included, with a median age of 31 years. Most were male (94.9%) and identified as men who have sex with men (90.2%). Event-driven PrEP accounted for 86.0% of prescriptions. Overall, 95.3% of initiations were client-driven requests, with inconsistent condom use reported in 38.7%. Adherence was 97.9%, while persistence was 98.3%. Retention was 100% at 1, 3, and 6 months, declining to 91.5% at 12 months and 70.9% at 24 months. Loss to follow-up was the main reason for discontinuation (8.9%).

Conclusion: Primary care-based PrEP delivery in Sabah demonstrated outstanding adherence and persistence, reflecting strong programme feasibility and high client motivation. However, declining retention highlights a critical implementation gap. Strengthening structured follow-up and re-engagement strategies will be essential to sustain long-term HIV prevention impact.

Keywords: PrEP, HIV, Primary Care

Clinical Study / Trial_26

Prevalence of Erectile Dysfunction and Its Associated Factors among Non-Communicable Disease Patients in Johor Government Primary Health Care Clinics

#FMSC2026-119

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Introduction: Erectile dysfunction (ED) is a highly prevalent sexual health disorder that serves as a critical clinical marker for broader systemic vascular and metabolic health. Understanding its prevalence in primary care is essential for holistic patient management. This study assessed the prevalence and clinical correlates of ED among men with NCDs attending public primary care clinics in Johor, Malaysia.

Methods: This cross-sectional study was conducted from May to August 2024 across 4 government health clinics in Johor. Through simple random sampling, 304 men aged ≥18 years with diabetes mellitus, hypertension, and/or dyslipidaemia were enrolled. Participants completed the 5-item International Index of Erectile Function (IIEF-5) questionnaire, and a demographic and clinical data sheet. Independent predictors of erectile function scores were identified through multivariate linear regression models and one-way ANOVA.

Results: The mean (SD) age was 56.7 (9.7) years, and 87.8% were from the B40 socioeconomic group. The overall prevalence of ED was 63.8%, with severity levels ranging from mild to severe. Multivariate analysis identified lower income ($p=0.001$), dyslipidaemia ($p=0.014$), heart disease ($p=0.048$), and neuropathy ($p=0.018$) as significant independent predictors of lower IIEF-5 scores. One-way ANOVA further confirmed that elevated body mass index and severe systolic hypertension (≥ 180 mmHg) were significantly associated with poorer erectile function ($p<0.05$).

Conclusion: Strong links between ED prevalence, metabolic and socioeconomic factors in NCD patients reinforce the 2025 Malaysian ED Clinical Practice Guidelines recommendations, supporting routine ED screening and multidisciplinary primary care management to improve patient health.

Keywords: Erectile Dysfunction, Non-communicable Diseases, Primary Healthcare

Clinical Study / Trial_27

Prevalence of Postpartum Depression and the Associated Risk Factors in Primary Health Care Clinic Bandar Baru Bangi, Seksyen 7 Shah Alam and Beranang, Selangor Malaysia

#FMSC2026-124

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Introduction: Postpartum depression (PPD) is a prevalent mental health disorder that can lead to serious consequences, including impaired maternal-infant bonding and increased maternal morbidity. This study aimed to determine the prevalence of PPD and its associated risk factors among postnatal women at three primary healthcare clinics in Selangor, Malaysia.

Methods: A cross-sectional study was conducted involving 360 women at four weeks postpartum. Data were collected using a structured questionnaire covering sociodemographic and obstetric variables, alongside the Edinburgh Postnatal Depression Scale (EPDS). A score of >12 on the EPDS indicated probable PPD. Logistic regression was utilized to identify independent risk factors.

Results: The prevalence of postpartum depression among the participants was 7.2%. Univariable and multivariable analyses identified a prior history of depression or PPD as the most significant independent risk factor (OR = 25.47; 95% CI: 8.66–73.26, $p < 0.001$). Marital status also showed a significant association ($p = 0.005$), with higher odds of PPD observed among married women compared to single mothers, potentially linked to marital dissatisfaction. Other sociodemographic and clinical factors, including age, race, and income, were not significantly associated with PPD.

Conclusion: A previous psychiatric history is a powerful predictor of PPD. These findings emphasize the necessity of integrating routine mental health screening into postnatal care and providing targeted support for at-risk mothers.

Keywords: Postpartum Depression (PPD), Edinburgh Postnatal Depression Scale (EPDS)

Clinical Study / Trial_28

Association of Depression, Anxiety, and Stress with Help-Seeking Intention among Late Adolescents in Government Secondary Schools in Kuantan

#FMSC2026-136

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Introduction: Late adolescence is a challenging stage marked by academic demands, emotional changes, and future uncertainties that may affect learning, relationships, and daily life. However, adolescents remain reluctant to seek mental health support. Understanding how symptoms of depression, anxiety, and

stress relate to help-seeking intention and its associated factors is important for early recognition and care.

Methods: A cross-sectional study was conducted among Form 6 students aged 18–19 years from four government secondary schools in Kuantan between October 2024 and February 2025. Data were collected using a self-administered bilingual questionnaire comprising sociodemographic items, the Depression Anxiety Stress Scale-21, and the General Help-Seeking Questionnaire. Descriptive statistics described mental health status and help-seeking intention, while linear regression analyses identified factors associated with help-seeking intention.

Results: A total of 555 students were included. The prevalence of depressive, anxiety, and stress symptoms was 33.3%, 39.5%, and 27.9%, respectively, with anxiety being the most common. Adolescents showed greater intention to seek help from informal than formal sources. Parents were the most preferred source (55.7%; mean 4.54 ± 2.08), followed by friends (43.2%; mean 3.81 ± 1.90). Among formal sources, counselors were most preferred (27.2%; mean 3.03 ± 1.87), followed by doctors (26.5%; mean 2.90 ± 1.90). Male gender, non-Malay ethnicity, T20 household income, and depressive symptoms were significantly associated with help-seeking intention.

Conclusion: Psychological distress was common among adolescents, while intention to seek formal help remained low, highlighting the need for school-based strategies to improve mental health literacy and support.

Keywords: Adolescent; Mental Health; Help-Seeking

Clinical Study / Trial_29

Identifying Responsibilities, Challenges and Solutions of Healthcare Providers for Teleconsultation with Older Patients in Primary Care: A Qualitative Study

#FMSC2026-162

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Introduction: Teleconsultations are becoming a popular complementary method to deliver integrated care services for older people. Local telemedicine guidelines do not specify clear responsibilities and real-world challenges of healthcare professionals in providing teleconsultation for older adults. Therefore, this study aimed to identify responsibilities, challenges and solutions of healthcare providers in teleconsultation with older patients at an academic primary care clinic in Malaysia.

Methods: This qualitative study included three face-to-face meetings with five doctors and three nurses at the Klinik Primer-Hospital Canselor Tuanku Muhriz (KP-HCTM) in a participatory workshop approach with a semi-structured topic guide. All meetings were audio-recorded and transcribed verbatim, and thematic analysis was done.

Results: Participants were three family medicine specialists, two medical officers and three staff nurses who were involved in

teleconsultations at KP-HCTM. The nurses were responsible for communicating with patients/caregivers, doctors and clinic staff, scheduling, setting up equipment and troubleshooting for teleconsultations. Doctors were responsible for selecting suitable patients, reviewing lab results and medications, and providing teleconsultations. Main challenges were related to telecommunication, lower digital literacy and sensory impairments in older patients, and limited healthcare workforce and equipment designated for teleconsultation. Participants suggested training a larger number of healthcare professionals for telemedicine, revising teleconsultation guidelines frequently and developing patient-selection criteria and pathways for teleconsultation.

Conclusion: Nurses and doctors had distinct roles in providing teleconsultations for older patients at this clinic. Potential solutions were offered for current challenges faced by healthcare providers in providing teleconsultations for older patients in primary care.

Keywords: Primary Health Care, Aged, Remote consultation

Clinical Study / Trial_30

Effectiveness of Fixed-Dose Intramuscular Low Molecular Weight Iron Dextran in Treating Iron Deficiency Anemia in Pregnancy: A Clinical Audit at Klinik Kesihatan Simpang Kuala, Alor Setar

#FMSC2026-172

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Introduction: Iron deficiency anemia (IDA) in pregnancy is a significant contributor to maternal and perinatal morbidity. In primary care settings, a fixed-dose 500 mg intramuscular (IM) Low Molecular Weight Iron Dextran (LMWID) regimen is frequently employed due to its operational simplicity. However, the adequacy of this approach compared to individualized iron requirements remains uncertain. This clinical audit assesses the effectiveness, safety, and adequacy of dosing for the fixed-dose regimen in relation to individualized iron needs.

Methods: A retrospective clinical audit was conducted at Klinik Kesihatan Simpang Kuala, Alor Setar, including all 25 pregnant women with IDA who received 500 mg IM LMWID in 2025. Key outcomes measured were gestational age at intervention, baseline, and four-week post-treatment hemoglobin (Hb) and serum ferritin levels, treatment response, and safety profiles.

Results: Treatment initiation occurred at a mean gestational age of 31.4 weeks. The mean hemoglobin (Hb) increased from 10.27 g/dL to 10.74 g/dL, representing a mean rise of 0.47 g/dL. Only 32% of patients achieved the target Hb of at least 11 g/dL, while 68% remained anemic after intervention. Notably, 88% of the cohort received a dose substantially below their calculated physiological requirement. No severe adverse events were observed, supporting the regimen's safety profile.

Conclusion: Fixed-dose IM LMWID demonstrates safety and practicality but is associated with suboptimal hematological correction and systematic underdosing. Earlier detection and individualized iron replacement, in accordance with guideline recommendations, are necessary to optimize maternal outcomes.

Keywords: Iron deficiency anemia; Pregnancy; Parenteral iron; Low Molecular Weight Iron Dextran; Clinical audit; Primary care

Clinical Study / Trial_31

Body Composition Profiles and Sarcopenic Obesity Risk among Employees at a Public University in Selangor

#FMSC2026-181

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Introduction: Sarcopenic obesity increases the risk of metabolic dysfunction and long-term disability, especially in ageing populations. Body composition assessment offers better risk stratification than BMI alone. A workplace-based study at a public university in Selangor was conducted to investigate sarcopenic obesity in an occupational setting.

Methods: A total of 135 adults participated in the screening using the Seca 769 Column Scale and Omron HBF375 Scan. Measurements were performed according to standard protocol and the results were analysed.

Results: The participants had a mean age of 37.96 ± 10.76 years with female predominance (71.85%). The mean anthropometric values were: weight 71.19 ± 19.87 kg, BMI 27.33 ± 5.85 kgm⁻², body fat % (BF%) 33.34 ± 6.03 %, visceral fat (VF) 11.69 ± 6.65 and skeletal muscle (SM) 26.64 ± 3.79 respectively. Based on BMI, 78.52% were overweight and 40.74% were obese. Furthermore, 68.89% had high BF% and 50.37% had high VF. Correlation analysis showed that BMI was strongly correlated with VF ($r=0.927$) and BF% ($r=0.550$), but negatively correlated with SM ($r=-0.348$). Age demonstrated weak positive correlations with BF% ($r=0.290$) and VF ($r=0.198$), but was negatively correlated with SM ($r=-0.330$).

Conclusion: The predominantly female, middle-aged study population exhibits a significant burden of obesity and visceral adiposity. A clear trend toward sarcopenic obesity is evident, as increasing age and BMI are associated with elevated central adiposity and a concurrent decline in skeletal muscle mass.

Keywords: body composition, sarcopenic obesity, BMI

Clinical Study / Trial_32

Views and Experiences on HIV Pre-Exposure Prophylaxis (PrEP) among Family Medicine Specialists in Klang Valley

#FMSC2026-200

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Introduction: Human immunodeficiency virus (HIV) remains a major global health challenge, with transmission in Malaysia shifting from mainly intravenous drug use to predominantly

sexual transmission, especially among key populations. Pre-exposure prophylaxis (PrEP) is an effective HIV prevention strategy recommended by the World Health Organization (WHO). This study explored the views and experiences of Family Medicine Specialists (FMS) in Klang Valley regarding PrEP prescribing. The study was conducted in 2021, before PrEP was officially introduced in Malaysia.

Methods: A qualitative study was conducted among 15 FMS working in primary healthcare clinics in Klang Valley, Malaysia. Participants were recruited using purposive and snowball sampling methods to ensure diversity in background and experience. Data were collected via physical or virtual semi-structured interviews using a topic guide developed from literature review, the Theory of Planned Behavior, and study objectives.

Results: Four major themes emerged: physician knowledge and patient-related factors influencing PrEP prescription, religious and ethical considerations, resource limitations, and lack of standardised guidelines and training. Patient awareness, physician knowledge, and support from non-governmental organisations facilitated PrEP prescribing, while limited resources, unclear policies, and ethical concerns acted as barriers.

Conclusion: Generally, FMS demonstrated good knowledge and positive attitudes towards PrEP. However, its implementation is hindered by several barriers, including resource constraints, ethical and religious considerations, and the absence of standardised guidelines. These findings highlight the need for strengthened training and more comprehensive policy development to support PrEP integration into primary care.

Keywords: HIV Infections; Pre-Exposure Prophylaxis; Primary Health Care

Clinical Study / Trial_33

Outcome of Routine Fundus Screening in Diabetic Patients in Primary Care Setting: A Retrospective Study in Klinik Kesihatan Nilai

#FMSC2026-207

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Introduction: Routine diabetic eye screening is essential in detecting diabetic retinopathy (DR) and preventing visual impairment among diabetic patients. Although diabetic eye screening is routinely conducted at Klinik Kesihatan Nilai (KKN), the prevalence of DR and other ocular findings among screened patients remains unknown. This study aimed to determine the prevalence of DR and other ocular findings among diabetic patients in KKN.

Methods: A retrospective cross-sectional study was conducted among diabetic patients who underwent fundus examination at KKN in 2025. Sociodemographic characteristics and fundus examination findings were obtained from clinical records and analysed descriptively. The presence and severity of DR, diabetic

macular edema (DME), and other ocular findings were reported as frequencies and percentages.

Results: A total of 751 diabetic patients in KKN underwent fundus screening in 2025. The majority were aged 41–60 years (47.8%), female (56.2%), and of Malay ethnicity (57.5%). A total of 15.5% of screened patients were found to have DR, comprising mild non-proliferative diabetic retinopathy (NPDR) in 8.1%, moderate NPDR in 5.6%, severe NPDR in 1.3%, and proliferative diabetic retinopathy in 0.5%. DME was identified in 4.1% of screened patients. Other ocular findings included cataract (13.8%), glaucoma (0.8%) and other abnormalities (1.2%).

Conclusion: Routine diabetic eye screening in primary care serves an important role in detecting DR and other ocular abnormalities among diabetic patients. Strengthening this strategy in primary care may improve early detection of retinopathy, facilitate timely referral, and reduce preventable visual impairment among diabetic patients.

Keywords: Diabetic, Retinopathy, Nilai

Clinical Study / Trial_34

The Prevalence of Catch-Up Pneumococcal Vaccine Refusal towards Under-5 Children and the Factors That Influence This Practice among Parents Attending Primary Care Clinics in Rompin, Pahang

#FMSC2026-218

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Introduction: Pneumococcal disease remains a major contributor to morbidity and mortality among children under five years of age worldwide. In Malaysia, the Ministry of Health introduced the Catch-Up Pneumococcal Vaccination Programme (CHUPP) for children born in 2018 and 2019 to improve vaccine coverage and reduce vaccine-preventable diseases. However, uptake of the catch-up pneumococcal vaccine in Pahang remains below the national target and factors contributing to parental refusal are not well understood. This study aims to determine the prevalence of catch-up pneumococcal vaccine refusal among parents of under-five children attending primary care clinics in Rompin, Pahang and to identify factors influencing this practice.

Methods: A cross-sectional study was conducted among parents aged 20 years and above who were biological or adoptive parents of at least one child born in 2019 and attended any of the ten selected government primary care clinics in Rompin. Participants

were recruited during routine outpatient and child health clinic visits. Data were collected using a structured self-administered questionnaire distributed through a QR code-linked Google Form. The questionnaire addressed socio-demographic characteristics, reproductive history, postnatal care and reasons for vaccine refusal or non-attendance for catch-up vaccination. A total of 398 participants were recruited.

Results: The prevalence of parental refusal towards catch-up pneumococcal vaccination was 21.9% (87/398). Busy schedules, poor awareness and partner disagreement contributed to vaccine refusal and non-attendance.

Conclusion: The prevalence of catch-up pneumococcal vaccine refusal in Rompin, Pahang remains considerable. Strengthening parental education, improving appointment accessibility and enhancing follow-up strategies may improve vaccine uptake in this area.

Keywords: Pneumococcal Vaccines; Vaccination Refusal; Primary Health Care

Clinical Study / Trial_35

Prevalence of Substantial Postpartum Weight Retention and Its Associated Factors among Kuantan Mothers

#FMSC2026-223

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Introduction: Substantial postpartum weight retention (SPPWR), defined as retaining ≥5 kg at six months postpartum, contributes to maternal obesity and metabolic complications. However, data on SPPWR among Malaysian mothers, particularly in the East Coast region, remain limited.

Methods: A cross-sectional study was conducted among 475 mothers at six months postpartum attending six government maternal health clinics in Kuantan between February and July 2025. Participants were selected using multistage sampling and systematic random sampling. Data on sociodemographic characteristics, obstetric factors, pre-pregnancy BMI, gestational weight gain, breastfeeding practices, hormonal contraception use, and physical activity were collected through questionnaires, anthropometric measurements, and maternal health records. Data were analysed using SPSS version 29.

Results: Among 475 mothers, the prevalence of substantial postpartum weight retention (SPPWR) was 22.3% (106/475), with a mean retained weight of 7.79 ± 3.01 kg at six months postpartum. Bivariate analysis showed significant associations between SPPWR and gestational weight gain (GWG), pre-pregnancy BMI, and physical activity level. In multiple logistic regression analysis, excessive GWG and moderate physical activity remained significant independent predictors of SPPWR. Mothers with excessive GWG had 3.87 times higher odds of developing SPPWR (AOR = 3.867, 95% CI: 2.402–6.224, p < 0.001), while

those with moderate physical activity had 50.8% lower odds of SPPWR (AOR = 0.492, 95% CI: 0.297–0.815, $p = 0.006$). Pre-pregnancy BMI was not significant after adjustment.

Conclusion: Excessive gestational weight gain increases the risk of SPPWR, while moderate physical activity reduces the risk among mothers at six months postpartum.

Keywords: SPPWR, GWG, BMI

Clinical Study / Trial_36

Psychological, Clinical, and Sociodemographic Predictors of Erectile Dysfunction among Young Men Attending Primary Care Clinics in Sabah

#FMSC2026-247

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Introduction: Erectile dysfunction (ED) is an increasingly recognised health issue among young men that may adversely affect quality of life and psychosocial well-being. However, evidence from East Malaysia remains limited. This study aimed to determine the prevalence of ED and its associated sociodemographic, clinical, and psychological factors among young men attending primary care clinics in Sabah.

Methods: A cross-sectional study was conducted from August to November 2024 in six primary care clinics in Sabah. A total of 350 sexually active men aged 18–40 years were recruited. Data were collected using validated self-administered International Index of Erectile Function (IIEF-5) and Depression, Anxiety and Stress Scale-21 (DASS-21) questionnaires, complemented with medical records. Multiple logistic regression analysis was performed to identify independent predictors of ED.

Results: The mean (SD) age was 31.6 (5.3) years. The prevalence of ED was 52.9%. ED was significantly associated with being single or divorced (aOR=4.77, 95% CI: 2.64–8.63), non-tertiary education (aOR=3.36, 95% CI: 2.04–5.53), moderate-to-severe anxiety (aOR=2.22, 95% CI: 1.19–4.14), cardiovascular risk factors (aOR=2.98, 95% CI: 1.28–6.97), and Buddhist or Hindu religious affiliation compared with Muslim participants (aOR=7.03, 95% CI: 1.79–27.66).

Conclusion: ED is prevalent among young men attending primary care clinics in Sabah and is significantly associated with sociodemographic, psychological, and clinical factors. Early

opportunistic screening and integrated primary care interventions addressing mental health and cardiovascular risk factors are warranted.

Keywords: Erectile dysfunction; Young adult; Primary health care

Clinical Study / Trial_37

Medication Adherence and Its Associated Factors among Heart Failure Patients in Hospital Pakar Universiti Sains Malaysia

#FMSC2026-267

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Introduction: Heart failure (HF) is associated with high hospital readmission rates, with poor medication adherence being a major contributing factor. Limited data are available regarding medication adherence among HF patients in Kelantan, Malaysia. **Methods:** This cross-sectional study was conducted among 194 patients with chronic HF in Hospital Universiti Sains Malaysia from June to August 2025 using convenience sampling. Validated questionnaires were used to assess medication adherence, psychosocial factors, and social support. Data were analysed using descriptive statistics and logistic regression analyses.

Results: The response rate was 97.9%. Multivariable analysis showed that older age (OR 1.09, 95% CI 1.03–1.17) and lower medication barriers (OR 1.26, 95% CI 1.04–1.51), such as medication side effects, high pill burden, frequent medication changes, and cost-related issues, were significantly associated with good medication adherence.

Conclusion: Older age and lower medication barriers were significantly associated with better medication adherence among HF patients. Addressing medication-related barriers may improve adherence and patient outcomes in the local primary care setting.

Clinical Study / Trial_38

Knowledge and Attitude towards Gestational Diabetes Mellitus among Women with GDM in Kelantan

#FMSC2026-268

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Introduction: Gestational Diabetes Mellitus (GDM) is a significant metabolic challenge in pregnancy that requires both clinical understanding and positive psychological adaptation. The study aimed to determine the level of knowledge and attitude on gestational diabetes mellitus, identify the associated factors for mean knowledge scores, as well as to determine the correlation between attitude and knowledge scores on gestational diabetes mellitus among women with gestational diabetes mellitus in Kelantan.

Methods: A cross-sectional study was conducted from January

to June 2025 among women with gestational diabetes mellitus in Kelantan using a validated self-administered questionnaire. Descriptive statistics and multiple linear regression were used to analyse the data.

Results: Participants had a mean age of 33.59 years (SD 4.95) and were predominantly from the B40 income group (88.3%). The mean total knowledge score was relatively high at 11.54/15 (SD 2.46), with high proficiency in dietary management knowledge. Conversely, the mean attitude score was lower (51.42/95; SD 7.95), indicating a perceived burden of disease and moderate-to-low favourable attitudes. A weak negative correlation was found between knowledge and attitude ($r = -0.181$, $p = 0.011$), suggesting a "paradox of knowledge" where increased awareness may heighten diabetes-related distress. Multiple linear regression revealed that educational level was the only significant independent predictor of knowledge ($p < 0.05$).

Conclusion: Women with GDM in Kelantan demonstrated good knowledge of their condition but experienced emotional and psychological stress. Holistic, patient-centered care including medical education and psychosocial support is essential to improve maternal health outcomes.

Keywords: Gestational Diabetes Mellitus, Knowledge, Attitude

Clinical Study / Trial_39

A Retrospective Cohort Study on the Efficacy and Medication Adherence of Pre-Exposure Prophylaxis (PrEP) for Human Immunodeficiency Virus (HIV) Prevention among Clients at Klinik Kesihatan Jalan Masjid (KKJM), Kuching

#FMSC2026-275

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Introduction: The implementation of Pre-Exposure Prophylaxis (PrEP) in Malaysia commenced in late 2017 through a pilot initiative involving private clinics and non-governmental organizations. This initiative subsequently expanded into a government-funded program, which was launched across 35 designated public health clinics nationwide in 2023. Klinik Kesihatan Jalan Masjid (KKJM) has become one of the pioneers of the PrEP program in Sarawak since 2023.

Methods: A retrospective cohort study was conducted, following up PrEP clients over a 12-month period at KKJM. The primary objective was to determine the sociodemographic characteristics and to assess the seroconversion rate of PrEP clients at KKJM.

Results: The analysis of this cohort, comprising 299 PrEP clients, revealed a male predominance (97.3%) and identified homosexuality as the primary mode of transmission (80.9%). The findings underscore the substantial efficacy of PrEP in the prevention of HIV, as evidenced by a minimal seroconversion rate of 2.7% within the study population. Nevertheless, the results also highlight a significant challenge, with 45.8% of clients categorized as non-adherent to the treatment regimen.

Conclusion: This study showed that PrEP is a highly effective

intervention for HIV prevention when patient adherence is maintained. Consequently, it is essential to implement targeted strategies to address the multifaceted challenges associated with medication non-adherence.

Keywords: preexposure prophylaxis, HIV, adherence

Clinical Study / Trial_40

Met and Unmet Needs of Older Adults in Self-Funded Care Centres in Hulu Langat, Selangor

#FMSC2026-279

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Introduction: Unmet needs are described when a person is unable to access quality care when needed. This study aimed to assess the met and unmet needs of older adults residing in self-funded care centres within Hulu Langat, Selangor.

Methods: This cross-sectional study involved older adults aged 60 years and above residing in eight self-funded care centres in Hulu Langat, Selangor from December 2025 to April 2026. Montreal Cognitive Assessment (MoCA) and Camberwell Assessment of Need for the Elderly (CANE) were used in face-to-face interviews with the participants. CANE covers 24 areas of social, psychological, and environmental needs. Multivariate linear regression was used to analyze factors associated with total needs score.

Results: A total of 116 older adults participated (mean age 69.7 ± 5.2 years); 60.3% were male and 54.3% Malay, 37.1% Chinese, and 8.6% Indian. The mean total needs score was 24.3 ± 9.6 . Overall, 65.5% reported all needs were met, while 24.1% had one unmet need and 10.3% had two or more unmet needs. The most common unmet needs were money/budgeting (23.3%), intimate relationships (8.6%), and benefits (6.0%). MoCA scores and marital status were independently associated with total needs score ($p < 0.05$).

Conclusion: While most participants have their needs fulfilled, significant gaps persist in financial budgeting and psychosocial support, influenced by cognitive health and marital status. As Malaysia transitions into an ageing nation, care models might evolve beyond basic provision to address these complex socioeconomic and emotional requirements.

Keywords: Aged, Needs Assessment

Clinical Study / Trial_41

Cardiovascular Disease Knowledge and Risk Perception among Patients with Dyslipidemia in a Malaysian Primary Care Clinic

#FMSC2026-280

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Introduction: Cardiovascular disease (CVD) is Malaysia's leading cause of mortality, accounting for 34.8% of deaths. While dyslipidemia is a critical modifiable risk factor, its clinical management is frequently hindered by patient-level risk misperception. Despite robust guidelines and effective treatments, profound discrepancies in risk awareness persist among high-risk cohorts. This study evaluated CVD knowledge and risk perception among dyslipidemic patients in a primary care setting.

Methods: This cross-sectional study evaluated 210 dyslipidemic patients at Universiti Malaya Medical Centre (UMMC) using the validated Attitudes and Beliefs about Cardiovascular Disease (ABCD-M) questionnaire and the Framingham Risk Score (FRS). Multivariate regression identified predictors of CVD knowledge and perception, while Cohen's kappa assessed agreement between perceived and objective risk.

Results: With a 95% response rate, the median participant age was 65.6 years. Overall, 71.4% demonstrated good CVD knowledge (median: 7.0/8.0, IQR: 6.0–8.0), which was independently predicted by tertiary education (aOR = 7.36, $p = 0.009$). Conversely, homemakers had significantly lower risk perception (aOR = 0.44, $p = 0.039$). Objectively, 68.6% were classified as high risk by FRS, yet there was zero agreement between perceived and objective risk (kappa = 0.000, $p = 0.997$).

Conclusion: Adequate general CVD knowledge fails to translate into accurate personal risk perception in high-risk cohorts. Primary care interventions must pivot from generic health education to personalized, culturally tailored risk communication, prioritizing vulnerable subgroups such as homemakers and individuals with lower educational attainment.

Keywords: Cardiovascular disease, knowledge, risk perception

Clinical Study / Trial_42

Frailty and Quality of Life among Older Patients with Non-Communicable Diseases Attending Outpatient Clinics in Universiti Sains Malaysia Specialist Hospital

#FMSC2026-282

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Introduction: Frailty is commonly found in older adults, and the prevalence is higher in patients with non-communicable diseases (NCDs), which is linked to lower quality of life and increased risks of hospitalisation and poor health outcomes. This study examined factors related to frailty in older patients with NCDs at a tertiary institutional primary care clinic and their association with Quality of Life (QoL).

Methods: A cross-sectional study was conducted between June 2025 and December 2025 using the Pictorial Fit-Frail Scale-Malay version (PFFS-M). It consists of a pictorial tool that scores across 14 health domains, including mood, number of medications, mobility, function, balance, social interaction, daytime tiredness, memory and thinking, vision, hearing, pain, unintentional weight

loss, aggression, and bladder control. The QoL was assessed using the WHOQOL-BREF, comprising four domains: physical health, psychological well-being, social relationships, and environmental health.

Results: A total of 274 older patients participated in the study, achieving a 100% response rate. The population included 144 males (52.6%) and 130 females (47.4%). The prevalence of frailty was 37.6%, with a higher prevalence in patients aged 70 years and above (73.8%). Key factors linked to frailty included age, gender, education level, and polypharmacy. Frailty was associated with poorer QoL in all domains.

Conclusion: These findings indicate that frailty is a strong and consistent independent predictor of poorer QoL, and a targeted intervention may be recommended to improve QoL.

Keywords: Frailty, non-communicable diseases, Quality of Life

Clinical Study / Trial_43

Mental Health Status and Workplace Stress among All Healthcare Staff in Hulu Langat District, Selangor: A Universal Study

#FMSC2026-284

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Introduction: This study aimed to determine the prevalence of depression, anxiety, and perceived stress among healthcare workers in Hulu Langat District, Selangor. Additionally, it examined associated sociodemographic factors and assessed participants' willingness to receive further mental health support.

Methods: A cross-sectional study using universal sampling was conducted via an online Google Forms survey distributed to healthcare workers across Hulu Langat District Health Office and Health Clinics from 30th June 2025 to 1st September

2025. Eligible participants included staff employed for at least three months, excluding those on extended leave or who declined participation. Participants completed self-administered questionnaires consisting of sociodemographic items, PHQ-9, GAD-7, and the Perceived Stress Scale (PSS).

Results: Out of 367 respondents, the prevalence of depression, anxiety, and moderate-to-severe perceived stress was 44.7%, 24.3%, and 42.5%, respectively. Both moderate and severe depression were more prevalent in respondents aged 30–39 years. Moderate anxiety was prevalent among those working in clinics, working >40 hours/week, and married individuals. Job role was significantly associated with moderate-to-severe anxiety ($\chi^2=5.645$, $p=0.018$), with nurses demonstrating a lower prevalence. Ninety-one healthcare workers with abnormal screening results welcomed further mental health support.

Conclusion: Depression, anxiety, and workplace stress are highly prevalent among healthcare workers in Hulu Langat. Clinical evaluation, referral pathways, and mental health interventions are urgently needed.

Keywords: Health Personnel, Mental Health, Occupational Stress

Clinical Study / Trial_44

High-Intensity Focused Electromagnetic Therapy on Patients with Erectile Dysfunction in Hospital Universiti Sains Malaysia: A Pre- and Post-Study

#FMSC2026-285

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Introduction: Erectile dysfunction (ED) is a common male sexual dysfunction worldwide that can affect the quality of life of patients and their partners. It has a correlation with premature ejaculation (PE) and lower urinary tract symptoms (LUTS). High-intensity focused electromagnetic (HIFEM) therapy is a non-invasive modality that stimulates supramaximal pelvic floor muscle contractions and may improve male sexual and urinary function. This study aimed to evaluate changes in erectile function, ejaculation control and LUTS following HIFEM therapy.

Methods: This was a single-arm pre- and post-intervention trial of HIFEM therapy. Participants were recruited among men with ED from the men's health clinic, Hospital Universiti Sains Malaysia. Participants received six weekly sessions of HIFEM therapy using a specialised device. Erectile function, ejaculation control and LUTS were assessed using the International Index of Erectile Function-5 (IIEF-5), Malay Premature Ejaculation Diagnostic Tool (MAPET) and International Prostate Symptom Score (IPSS), respectively. Data were analysed using repeated measures ANOVA with Greenhouse–Geisser correction and Bonferroni-adjusted pairwise comparisons.

Results: A total of 58 participants were included. The mean age was 56.98 years. IIEF-5 scores increased from 14.21 (baseline) to 17.09 (week 5) ($F=6.33$, $p<0.001$, $\eta^2=0.165$). MAPET scores

decreased from 34.50 (baseline) to 25.31 (week 5) while IPSS scores decreased from 5.43 (baseline) to 3.52 (week 5). Significant improvements were observed from week 4 onward with the greatest mean improvement at week 5.

Conclusion: HIFEM therapy was associated with significant improvements in all three outcomes.

Keywords: Erectile dysfunction, HIFEM, IIEF-5, MAPET, IPSS

Clinical Study / Trial_45

Light at the End of the Tunnel: Opportunities for Primary Care Engagement in Vaccine-Hesitant Mothers in Pasir Puteh, Kelantan

#FMSC2026-304

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Introduction: Malaysia's National Immunisation Programme was introduced in the 1950s to prevent vaccine-preventable diseases. However, complete primary immunisation coverage declined from 95.3% in 2016 to 87.1% in 2022, threatening herd immunity. As mothers are primary caregivers and healthcare decision-makers for children, this study aimed to describe the maternal and child characteristics associated with vaccine refusal in Pasir Puteh, Kelantan.

Methods: This cross-sectional study utilised secondary data obtained from the district Maternal and Child Health records. Vaccine refusal was defined as any documented refusal of vaccination under the National Immunisation Programme registered in 2025. Sociodemographic and healthcare-related characteristics of both mothers and children were extracted and analysed descriptively.

Results: Among 60 vaccine refusal cases, most reflected vaccine hesitancy rather than complete healthcare rejection. The majority of the children were born to multiparous mothers (81.7%), of whom 91.8% had previously vaccinated older children. Fear of side effects (65.0%) was the main reason for refusal. Most mothers had secondary education (60.0%) and were housewives (86.7%). Despite refusal, healthcare utilisation (58.3%) and prior vaccination uptake among mothers (98.3%) remained high. Despite vaccine concerns, mothers continued utilising healthcare services, providing opportunities for intervention. Recent evidence suggests that ongoing primary care engagement facilitates health education, trust-building, and correction of misinformation through effective counselling, enabling healthcare providers to improve vaccine confidence among hesitant parents.

Conclusion: Vaccine refusal in this setting reflects vaccine hesitancy with high healthcare utilisation, highlighting opportunities for targeted primary care interventions.

Keywords: Vaccine refusal, Mother, Pasir Puteh

Clinical Study / Trial_46

Knowledge of Obesity-Related Pregnancy Risks and Its Associated Factors among Reproductive-Age Women in Kota Bharu, Kelantan

#FMSC2026-308

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Introduction: Obesity during pregnancy is associated with adverse maternal and foetal outcomes. Understanding public awareness regarding these risks is crucial for developing effective maternal health policies and targeted educational campaigns. Our objectives are to determine the proportion of good knowledge of obesity-related pregnancy risks and identify associated sociodemographic and clinical factors among women of reproductive age in Kota Bharu.

Methods: A cross-sectional study was conducted among 299 women attending specialist clinics at HPUSM, Kota Bharu between June and August 2025. Data were collected using a newly developed and validated questionnaire. Descriptive analysis was performed to assess knowledge levels, while multiple logistic regression analysis was used to identify factors associated with good knowledge of obesity-related risks in pregnancy.

Results: Only 9.7% of participants demonstrated good knowledge of obesity-related pregnancy risks. Educational level and household income were significantly associated with knowledge status. Women with tertiary education had higher odds of possessing good knowledge than those with primary or secondary education (adjusted OR=6.26, 95% CI: 1.43–27.31, p=0.02). Participants from higher-income households were more likely to have good knowledge than the lower-income groups (adjusted OR=4.44, 95% CI: 1.18–16.63, p=0.03). No other sociodemographic or clinical variables showed significant associations after adjustment.

Conclusion: Knowledge of obesity-related pregnancy risks among women in Kota Bharu remains inadequate. While higher education and household income improve the knowledge level, educational interventions on obesity-related pregnancy risks are needed to improve awareness, especially among women of lower education and household income groups.

Keywords: Knowledge, Risk, Obesity

Clinical Study / Trial_47

Nonadherence to Inhaler Use and Its Associated Factors among Elderly with Asthma and Chronic Obstructive Pulmonary Disease in Hospital Universiti Sains Malaysia

#FMSC2026-324

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Introduction: Asthma and chronic obstructive pulmonary disease are common among the aging population and pose significant challenges to healthcare management. Nonadherence to inhaler therapy among elderly patients remains a growing concern as it may compromise treatment outcomes.

Methods: A cross-sectional study was conducted among elderly patients with asthma or COPD attending outpatient clinics at Hospital Universiti Sains Malaysia from 1 June 2023 to 31 January 2024. Participants were recruited through convenience sampling. Sample size calculation was based on a single proportion formula for prevalence estimation and comparisons of proportions and means for associated factors. Data were collected using a case report form incorporating the Malay versions of the TAI and BMQ. Data were analysed using descriptive statistics, simple logistic regression, and multiple logistic regression with SPSS version 26.

Results: A total of 213 elderly patients were included. The prevalence of inhaler nonadherence was 42.7%. Married patients were more likely to be nonadherent (aOR 2.85, 95% CI: 1.32–6.15). Patients with strong beliefs that inhalers were unnecessary were also more likely to be nonadherent (aOR 3.64, 95% CI: 1.90–6.97). In contrast, the use of combination inhalers was associated with a lower likelihood of nonadherence (aOR 0.05, 95% CI: 0.01–0.26).

Conclusion: Inhaler nonadherence remains common among elderly patients with asthma or COPD. Marital status and beliefs regarding medication necessity influence adherence, while combination inhalers may improve adherence. Targeted interventions addressing patient beliefs and inhaler management may enhance treatment adherence in this population.

Keywords: Asthma; COPD; Inhaler nonadherence; Elderly patients; Beliefs about medicines; Inhaler therapy

Clinical Study / Trial_48

Prevalence of Sarcopenia and Its Associated Factors among Older Persons with Diabetes Type 2 in Primary Health Clinic in Kubang Pasu, Kedah

#FMSC2026-328

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Introduction: Sarcopenia is an age-related decline in skeletal muscle mass and function that commonly affects older adults with Type 2 Diabetes Mellitus (T2DM), resulting in increased disability, falls, and mortality. This study aimed to determine the prevalence of sarcopenia and its associated factors among older persons with T2DM attending primary health clinics in Kubang Pasu, Kedah.

Methods: A cross-sectional study of 357 older adults with T2DM was conducted in eight primary health clinics in Kubang Pasu, Kedah. Data were collected using validated instruments, and

factors associated with sarcopenia were identified using logistic regression analysis.

Results: The mean age of participants was 67.6 ± 5.6 years, and 60.8% were female. The prevalence of sarcopenia was 35.3% (n=126), while severe sarcopenia was present in 13.4% (n=48). Multiple logistic regression analysis demonstrated that increasing age (AOR=1.12, 95% CI: 1.07–1.17, $p<0.001$), higher HbA1c level (AOR=1.21, 95% CI: 1.08–1.34, $p<0.001$), and moderate physical activity compared with high physical activity (AOR=2.45, 95% CI: 1.39–4.32, $p=0.002$) were significantly associated with sarcopenia. Hypercholesterolemia was associated with lower odds of sarcopenia (AOR=0.08, 95% CI: 0.01–0.82, $p=0.032$).

Conclusion: More than one-third of older adults with T2DM had sarcopenia. Older age, poor glycaemic control, and lower physical activity were independently associated with sarcopenia. Routine screening and targeted interventions may help reduce its burden in primary care settings.

Keywords: Sarcopenia, Type 2 Diabetes Mellitus, Older Persons, Prevalence, HbA1c, Physical Activity

Clinical Study / Trial_49

Unravelling Association of Increased Body Mass Index with Sarcopenia and Related Outcomes among Older Population in Perlis

#FMSC2026-071

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Introduction: Sarcopenia is a geriatric syndrome defined by the loss of muscle mass, strength, and physical performance. While underweight status is a known risk factor, the impact of increased BMI on sarcopenia and associated clinical outcomes, such as falls and hospitalization, remains poorly understood. This study aims to evaluate the relationship between BMI, sarcopenia, and these adverse health events in older adults.

Methods: A cross-sectional study was conducted from July 2024 to December 2025 involving 468 older adults aged 55 years and over attending 13 physiotherapy units in primary health clinics in Perlis. Data were collected via an assisted self-administered questionnaire. Data were analyzed using logistic regression for the outcomes of sarcopenia, falls, and hospitalization with reference to normal BMI.

Results: At follow-up, a baseline BMI ≥ 30 kg/m² was associated with a significantly higher risk of sarcopenia [RR (95%CI): 2.42 (1.41–4.15)], falls [RR (95%CI): 1.90 (1.13–3.20)] and hospitalization [RR (95%CI): 1.74 (1.06–2.85)] compared to normal BMI. After adjusting for covariates—including age, gender, and education—the increased risks for sarcopenia diabetes [RR (95%CI): 1.88 (1.01–3.50)] and falls level [RR (95% CI): 1.85 (1.07–3.21)] remained statistically significant $p<0.5$.

Conclusion: Increased BMI with sarcopenic obesity was associated

with an elevated risk of falls and hospitalization. Older adults should adopt preventive strategies, such as maintaining regular physical activity, to preserve muscle mass and reduce the risk of falls and hospitalization.

Keywords: Increased BMI, Sarcopenia, Fall, Hospitalization

Clinical Study / Trial_50

Efficacy of a 12 Week Oral Fixed Dose Combination of Alpha Lipoic Acid and B Vitamins in the Management of Symptomatic Diabetic Peripheral Neuropathy: A Randomized Controlled Trial

#FMSC2026-090

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Introduction: Diabetic Peripheral Neuropathy (DPN) is a microvascular complication of diabetes that significantly impairs quality of life. However, effective symptomatic treatment remains limited. This study investigates the efficacy of a fixed-dose combination of alpha-lipoic acid (ALA) and B vitamins in patients with symptomatic DPN.

Methods: A randomized, double-blind, placebo-controlled trial was conducted in 80 patients with DPN. Participants were randomly assigned to receive oral ALA with vitamins B12, B6, and B1 (Bionerv[®]; n=40) or placebo (n=40) for 12 weeks. Treatment efficacy was assessed using the Total Symptom Score (TSS) and Neuropathy Symptom Score (NSS) at baseline, 6 weeks, and 12 weeks. The Neuropathy Disability Score (NDS) and safety parameters, including renal and liver function tests, were evaluated at baseline and week 12.

Results: The intervention group showed a significant reduction in TSS mean score from baseline (6.72 ± 2.82) to (2.49 ± 1.88) at 12 weeks, with notable improvement in stabbing pain, paraesthesia, and numbness. Mean NSS significantly declined from 7.45 ± 1.15 at baseline to 4.18 ± 2.39 at week 12 in the intervention group. Mean NDS in the intervention group decreased significantly from 8.28 ± 1.63 to 7.11 ± 1.95 after 12 weeks; however, the between-group difference did not reach statistical significance ($P=0.057$). There were no significant changes in renal or liver function tests after 12 weeks of treatment.

Conclusion: The 12-week oral treatment with ALA and B vitamins is effective in reducing DPN symptoms and has a favourable safety profile.

Keywords: alpha-lipoic acid, diabetic peripheral neuropathy, neuropathy symptom score, neuropathy disability score, total symptoms score

Clinical Study / Trial 51**Bridging the Gap in Pre-Pregnancy Care: Knowledge and Associated Factors among Healthcare Providers in a Primary Care Setting - A Single-Centre Study**

#FMSC2026-254

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Introduction: Pre-pregnancy care (PPC) is essential for improving maternal and neonatal outcomes through early risk identification. Its effectiveness depends largely on healthcare providers' knowledge, which remains inadequately explored in the local setting. Addressing this gap can strengthen service delivery.

Methods: A cross-sectional study was conducted from 1 September to 1 October 2025. Data were collected using a validated self-administered questionnaire. Data were entered and analysed using IBM SPSS Statistics for Windows, version 31. Descriptive and inferential analyses were performed, with Fisher's Exact Test used to assess associations. Statistical significance was set at $p < 0.05$.

Results: The response rate was 100% ($n = 25$), with 40% demonstrating good knowledge of PPC. Less than 10 years of experience and allied health profession were significantly associated with better knowledge ($p < 0.05$). No PPC-related exposure factors were significantly associated with knowledge. In contrast, higher proportions of good knowledge were observed among those who had not read PPC guidelines (66.7% vs 25.0%, $p = 0.087$), had not attended PPC training (71.4% vs 27.8%, $p = 0.075$), and had not attended HIV-related training (45.5% vs 35.7%, $p = 0.697$).

Conclusion: Knowledge of PPC among healthcare providers was suboptimal. PPC-related exposure alone was not significantly associated with knowledge, suggesting that exposure may not translate into effective learning. Therefore, there is a need to evaluate and strengthen the quality of training and guideline dissemination.

Keywords: Pre-pregnancy care, healthcare providers, primary care

Clinical Study / Trial 52**Awareness, Knowledge and Attitude towards Human Milk Sharing and Human Milk Bank among Primary Care Doctors in Malaysia**

#FMSC2026-300

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Introduction: Human milk banks (HMBs) are critical for preterm infants who are at increased risk of complications such as necrotising enterocolitis (NEC), yet primary care doctors' (PCDs) perspectives on human milk sharing (HMS) and HMBs remain underexplored. This study aimed to determine HMB awareness among Malaysian PCDs, and the factors predicting it, including socio-demography, knowledge on HMS, attitude towards HMS and attitude towards HMB.

Methods: A cross-sectional survey was conducted among 383 Malaysian PCDs using convenience sampling via an online self-administered questionnaire. All collected data were analysed using SPSS version 29.

Results: Participants demonstrated good HMS knowledge with a median score of 8 out of 10. While 51.4% had heard of HMBs, only 26.1% were aware of their existence in Malaysia. Attitudes were moderately positive towards both HMS and HMBs. Higher awareness was independently associated with older age, specialist designation, university-affiliated practice, female gender, and fewer years of clinical experience. Notably, a majority of 64.5% supported the establishment of HMBs in Malaysia.

Conclusion: This study reveals significant knowledge gaps and limited formal training among Malaysian PCDs regarding HMBs, despite moderately positive attitudes toward their establishment. Cultural, religious, and demographic factors influenced acceptance of HMB services, with safety concerns and milk kinship considerations representing key barriers. These findings underscore the need for targeted educational interventions, culturally sensitive guidelines, and explicit safety protocols to facilitate equitable HMB implementation in Malaysia.

Keywords: human milk bank, human milk sharing, primary care doctors

