

# Malaysian Family Physician

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Official Journal of the Academy of Family Physicians of Malaysia  
and Family Medicine Specialist Association of Malaysia

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# INNOVATIONS



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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. The MFP is published three times a 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.

**Publisher:** Academy of Family Physicians of Malaysia

**All correspondence should be addressed to:**

**Professor Dr. Ping Yein Lee**

The Editor

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## Publication Ethics

**Ethics:** Evidence of ethics approval from a recognised ethics committee and informed consent should be included in the manuscript for studies involving animal experiments or human participants. When manuscripts describe studies with vulnerable populations (refer ICH-GCP guideline) and there is a risk of coercion or incomplete consent, the manuscript will undergo further evaluation by an internal editorial oversight committee (Chief Editor, Deputy Chief Editor and Editorial Advisors). Consent is necessary for all personally identifiable data, encompassing biomedical, clinical, and biometric information. If requested, documentary proof of consent must be provided.

**Competing interests:** MFP requires authors to declare all conflicts of interest in relation to their work. All submitted manuscripts must include a 'competing interests' section at the end of the manuscript (before references) listing all competing interests.

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Authorship credit should be based only on:

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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.

All manuscripts must be submitted through the Open Journal System (OJS).

## SUBMISSION REQUIREMENTS

1. The author must declare that the manuscript has not been previously published, nor is it being considered for publication in another journal concurrently.
2. **The Main Manuscript** should be submitted in electronic form only and in **Microsoft Word**.
  - The manuscript **contains all the sub-headings required** for the article type (refer below).
  - The manuscript uses a **single-spaced, 12-point font and uses italics rather than underlining** (except URL addresses).
  - **All figures, tables and illustrations are placed at the appropriate sections in the manuscript file** rather than at the end of the manuscript or submitted separately.
  - 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.
  - Provide URLs for references where available.
  - Where available, URLs for the references have been provided.
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.”
5. All authors must sign the **Declaration Form** and submit it together with the manuscript and cover letter. Please download the form here.
6. Please enter **all authors’ name and email address** in the submission portal.
7. When preparing your manuscript, please follow the Uniform Requirements for Manuscripts Submitted to Biomedical Journals recommended by the International Committee of Medical Journal Editors (<http://www.icmje.org/icmje-recommendations.pdf>).
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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
- **Title:** Please state the title in detail to include the study design, particularly for original research.
- **Author(s):** The full names, professional qualifications and institutions of all authors.
- **Shortened name of author(s):** should be written in the style of surname or preferred name followed by initials, e.g. Abdullah KS, Rajakumar MK, Tan WJ, for future indexing.
- **Corresponding Author:** Corresponding author’s mailing address, designation, institution and contact details (email, telephone and fax numbers)

## MAIN MANUSCRIPT

For every article submitted, please follow the requirements according to the type of article.

### 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 3000 words with a maximum of 5 tables or figures and 30 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. 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.
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8. **Acknowledgements:** Acknowledge the people who have contributed significantly to the study (but do not qualify for authorship).
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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 (<https://www.equator-network.org/reporting-guidelines/prisma/>) must be followed. For a scoping review, the PRISMA-ScR checklist (<https://www.equator-network.org/reporting-guidelines/prisma-scr/>) should be followed. The length should **not exceed 4000 words with a maximum of 5 tables or figures and 40 references**. Please include the following sub-headings in the manuscript:

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3. **Keywords:** 3-5 keywords, preferably MeSH terms.
4. **Introduction:** Describe the topic and objective of the review.
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8. **Any relevant subheadings (\*for narrative review):** A narrative review may have any other relevant sub-headings according to needs.
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10. **Acknowledgements:** Acknowledge the people who have contributed significantly to the study (but do not qualify for authorship).
11. **Author contributions:** Describe the contributions of every authors in the study.
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13. **Conflicts of interest:** All authors must declare any conflicts of interest.
14. **Funding:** Please state if the study was funded; if so, by which institution and the funding ID.
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16. **References:** Refer to the References section below for more details.

## 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 case report must be written in a **patient-centred manner instead of a disease-centred focus**. The length should **not exceed 1500 words 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.
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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?
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## CPG Review

The CPG should be relevant to primary care. Its length should **not exceed 4000 words 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.
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6. **Key recommendations of the CPG:** Describe the key recommendations primary care doctors should know.
7. **Key changes in the CPG (only applicable for revised CPGs):** Describe the key changes or updates from the previous CPG.
8. **How to apply the CPG into practice in primary care?:** Explain how the CPG can be used in primary care practice.
9. **Case vignettes as examples of application:** Use case vignettes to illustrate the application of the CPG.
10. **Conclusion:** Summarise the key learning points.
11. **Acknowledgements:** Acknowledge the people who have contributed significantly to the study (but do not qualify for authorship).
12. **Author contributions:** Describe the contributions of every authors in the study.
13. **Conflicts of interest:** All authors must declare any conflicts of interest.
14. **Funding:** Please state if the work was funded; if so, by which institution and the funding ID.
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 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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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**, 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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Please use the AMA reference style. Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables and legends by Arabic numerals (in superscript). **In AMA style, the reference number goes after a period or comma but before a colon or semicolon.** For indexed journals, the short forms for the journal names can be accessed at the PubMed website (search within Journal Database). Where possible, avoid citing abstracts, personal communication or unpublished data as references. Include among the references manuscripts accepted but not yet published and designate the journal followed by "in press" (in parenthesis). When referencing a website, please include the full title and accessed date. Notice article titles are capitalised in sentence case; book and journal titles are capitalised in title case. Include DOI if available. **Some examples of reference list entries:**

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- **Standard journal article-Corporate Author:** International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *N Engl J Med.* 1997 Jan 23; **336**(4):309-316. doi:10.1056/NEJM199701233360422
- **Books and other monographs-Personal Author(s):** Stewart M, Brown JB, Weston WW, et al. Patient-Centered Medicine: Transforming the Clinical Method. Thousand Oaks, California: Sage Publications; 1995.
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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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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.

Click [HERE](#) to submit your manuscript to our online submission portal. Please also read the Submission and Publication Fees and Peer Review Process and Timeline sections below before submitting your manuscript to us.

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All authors are needed to submit a **RM50 Submission Fee** electronically when submitting these types of articles. Payment of the submission fee does not guarantee article acceptance. Therefore, authors should ensure that their article is relevant to primary care/family medicine; contains new important learning points; is methodologically sound; and follows all the formatting requirements before submitting it to our journal. The article will only be processed and reviewed after the payment has been received.

The Publication Fee will be payable once the article is accepted for publication. The fee is based on the categories below:

- Academy of Family Physicians of Malaysia (AFPM) members = RM250
- Malaysian Family Medicine Specialists’ Association (FMSA) members = RM250
- Non-AFPM/FMSA members (Malaysian) = RM450
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For those who are interested in joining the AFPM or FMSA as a member, please visit these websites:

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## ORAL PRESENTATION

### OP1

#### Adverse Maternal and Neonatal Outcomes in Mothers with Early and Late Gestational Diabetes Mellitus: A Comparison Study in Muar Primary Care (MAGIC study)

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**Introduction:** Gestational diabetes mellitus (GDM) is known to be associated with adverse fetomaternal outcomes, and Malaysia has seen an alarming spike of GDM cases in the last decade. This study aims to investigate the association between pregnancy outcomes among women with early and late GDM in a real-world setting, to provide data that may potentially guide recommendations for GDM screening and management.

**Methods:** This multi-center retrospective cohort study was conducted in 11 government primary health clinics in Muar district, Johor, and involved 352 women with singleton pregnancies diagnosed with early (<24 weeks) or late (>24 weeks) GDM in 2023. Data was collected by review of medical and blood investigation records, and analysed using Chi-Square and logistic regression analyses.

**Results:** Findings showed that 66.5% of women were diagnosed with GDM before 24 weeks' gestation. The early GDM group had a higher incidence of preeclampsia and Caesarean delivery compared to the late GDM group (7.3% vs 0.8%,  $p=0.005$ ; 40.9% vs 28.0%,  $p<0.05$ , respectively). The rate of intrauterine fetal death and neonatal NICU admission were also significantly higher in the early GDM group (6.0% vs 0.8%,  $p<0.05$ ; 22.2% vs 11.9%,  $p<0.05$ , respectively). Early diagnosis of GDM was independently associated with an increased risk of preeclampsia, after accounting for covariates (adjusted OR 9.49, 95% CI 1.22-70.06).

**Conclusion:** An early diagnosis of GDM was associated with certain adverse pregnancy outcomes compared to GDM diagnosed at 24 weeks or later. These findings emphasize the need for rigorous surveillance and management strategies to improve pregnancy outcomes among women diagnosed with early GDM.

**Keywords:** Gestational Diabetes, Maternal Complication, Neonatal Outcome

### OP2

#### Assessing Unmet Needs for Stroke Information Among Caregivers Attending Outpatient Follow-Up in Two Hospitals in Negeri Sembilan, Malaysia: A Cross-Sectional Study

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**Introduction:** Improvement in stroke mortality have led to more stroke patients surviving with varying degrees of disability making continuous care from family members crucial. This study aimed to assess the unmet needs of caregivers, particularly focusing on factors related to unmet stroke information needs.

**Methods:** A total of 202 caregivers at different stages of recovery and care-giving recruited from two rehabilitation Hospital in Negeri Sembilan. Participants completed a self-administered questionnaire addressing four domains : Stroke related information, post-stroke care, stroke support and financial aid. Descriptive analysis was used to determine the percentage of unmet needs in each domains, and logistic regression was employed to identify significant factors associated with the unmet needs using SPSS version 25.0.

**Results:** The three most common unmet needs were related to support group (84%), financial aid (82%) and financial support sources (80%). Care givers of patient who had been post stroke for less than one year reported significantly higher unmet needs compared to those caring for patient beyond five years, (OR = 8.46,  $p = 0.00$ ). Caregivers providing care more than five days per week experiencing higher unmet needs comparing to those providing care fewer days per week (OR = 4.11,  $p = 0.01$ ).

**Conclusion:** Caregivers in Negeri Sembilan faces significant challenges related to limited information about stroke, stroke support group and financial aid. New caregivers and those providing care more frequently reported higher unmet needs. Addressing this gap is critical for supporting caregivers and improving the care provided to stroke patients.

**Keywords:** stroke information, stroke caregivers, unmet needs

### OP3

#### COVID-19 Booster Dose Hesitancy among Malaysian Healthcare Workers: A Mixed Methods Study

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**Introduction:** COVID-19 vaccination booster dose (CVBD) hesitancy is defined as the refusal to receive the next vaccination, and the high incidence among healthcare workers raised

significant concern given their critical role in patient care and public health advocacy. This study aims to determine the prevalence and elucidate the determinants of CVBD hesitancy among healthcare workers in Malaysia

**Methods:** An embedded mixed-method study was conducted among 554 healthcare workers of all categories in Malaysia via an online survey from 1st November 2023 until 28th February 2024. The participants completed a sociodemographic, COVID-19 vaccine-related questionnaire, and three validated instruments on perception and attitudes toward COVID-19 vaccines. The determinants of CVBD hesitancy were examined using multiple logistic regression analysis. The reasons for accepting or rejecting the next CVBD were asked using open-ended questions and analyzed using thematic analysis.

**Results:** The prevalence of hesitancy to CVBD was 42.8% (n = 237). CVBD hesitancy was associated with longer service duration, being a Muslim, having negative attitudes towards COVID-19 vaccines and CVBD, receiving two COVID-19 vaccinations and experiencing COVID-19 vaccination adverse effects. The perception towards CVBD was classified into five main themes: Perceived benefits of vaccination, concerns for the safety and efficacy, trust and confidence in authority, personal and social responsibility, and practical considerations (convenience and workplace requirements).

**Conclusion:** There was a high prevalence of CVBD hesitancy among healthcare workers in Malaysia, whose perceptions are influenced by their concerns on adverse effects, efficacy and practical considerations.

**Keywords:** Hesitancy, COVID-19 Vaccinations, Healthcare workers

#### OP4

### Effectiveness of Pictorial Personalised Asthma Action Plans in Malaysian Public Primary Care Clinics: A Randomised Controlled Trial

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**Introduction:** Asthma self-management, supported by a personalised asthma action plan (PAAP), improves clinical outcomes. Pictorial-PAAP has the potential to overcome the inequity of text-based asthma action plan (text-PAAP) and benefit all patients regardless of their health literacy. We aimed to compare the effectiveness of pictorial-PAAP and text-PAAP for asthma control.

**Methods:** We recruited 180 adult asthma patients who were treated with daily inhaled corticosteroids from four public primary care clinics. Enrolled patients were randomly assigned

to receive either a pictorial-PAAP or a text-PAAP and followed up at 3-, 6- and 12-month via phone call. Asthma control was measured using the validated Global Initiative for Asthma (GINA) Asthma Control Tool and the status of asthma control was classified into uncontrolled, partly controlled and controlled. We have obtained the ethical approval from MREC MOH Malaysia and Edinburgh Medical School Research Ethics Committee, United Kingdom.

**Results:** There was no difference in sociodemographic characteristics between the two groups (pictorial-PAAP and text-PAAP). Asthma control improved over time in both groups. Proportion of well controlled asthma in pictorial-PAAP users was 21.1%, 28.7%, 40.7%, 64.3% and text-PAAP was 21.1%, 28.9%, 45.5%, 44.6% respectively at baseline, 3-, 6- and 12-month follow-up. Generalized Estimating Equation (GEE) analysis revealed that the pictorial-PAAP group had a higher probability of achieving good control compared to the text-PAAP at 12-month follow-up (p=0.013).

**Conclusion:** Both pictorial-PAAP and text-PAAP showed improvement in asthma control over the 12-months of follow-up. Primary care doctors should consider providing pictorial-PAAP as an option to facilitate asthma self-management for patient with limited health literacy.

**Keywords:** asthma; self-management; personalised asthma action plan

#### OP5

### Knowledge And Attitude of Covid-19 Infection and Vaccination and It's Associated Factors Among Pregnant Women in Malaysia

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**Introduction:** Pregnant women are considered a high-risk population for COVID-19 related complications due to physiological changes in immunity and cardiopulmonary function. Despite growing evidence supporting the safety and efficacy of COVID-19 vaccination during pregnancy, the vaccine uptake remains suboptimal in Malaysia. Understanding the level of knowledge and attitude towards COVID-19 infection and vaccination among pregnant woman is crucial for guiding public health strategies. The aims of this study is to assess the level of knowledge and attitude on COVID-19 infection and vaccination among pregnant women in Malaysia.

**Methods:** We conducted a cross-sectional study using a multistage sampling at ten antenatal clinic in Malaysia. Data were collected using a self-administered questionnaire available through Google Forms or a printed copy in case there is no internet access. The statistical analysis was performed using IBM SPSS Software. Descriptive statistics were used to describe

participants' characteristics, knowledge and attitude. Multiple linear regression was employed to identify factors associated with knowledge and attitude scores.

**Results:** A total of 595 pregnant women participated (response rate 99.2%), mostly Malays (78.5%) and Muslims (88.7%). Many demonstrated limited knowledge on COVID-19 symptoms, risks and vaccine effects during pregnancy. Attitudes varied, shaped by concerns over vaccine safety. The significant associated factors for knowledge ( $p < 0.05$ ) were age, ethnicity, education, income, history of COVID-19 infection, vaccination status and family members/friends died due to COVID-19. However, none for the attitudes.

**Conclusion:** Pregnant women showed varying levels of knowledge and attitudes toward COVID-19 and its vaccination. Targeted health education is needed to address misconceptions and promote informed- decision making.

**Keywords:** Attitude, COVID-19 infection, Knowledge, Pregnant women, Vaccination

## OP6

### Medication adherence among hypertensive patients in primary care clinics in Sarawak, Malaysia: a mixed-methods study

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**Introduction:** Hypertension affects 30-40% of people globally, with nearly half of hypertensive patients in Malaysia having uncontrolled blood pressure due to poor medication adherence. Factors influencing adherence include polypharmacy, medication knowledge, ethnicity, side-effects, traditional medicine use and socio-economic. While most studies focus on West Malaysia, there is limited research in Sarawak, highlighting the need for a mixed-methods study to explore medication adherence in this region.

**Methods:** This study used a mixed-methods explanatory sequential design in government health clinics with hypertensive patients. The quantitative phase assessed medication adherence and associated factors using the Medication Compliance Assessment Form. The qualitative phase involved in-depth interviews to explore factors affecting adherence identified in the quantitative phase. Quantitative data were analysed with means, percentages, and logistic regression, while qualitative data were analysed thematically.

**Results:** Quantitative study with 548 hypertensive patients from 23 health clinics found that 40% were male, Bidayuh ethnicity (43.6%) with mean age of 58.6 SD 11.34 years. About half (58.6%) had well-controlled hypertension, while 32.3% were non-adherent to their medication. Uncontrolled blood pressure was significantly associated with non-adherence ( $p = 0.001$ , OR: 1.83, 95% CI: 1.27-2.63). Factors influencing adherence included age ( $p = 0.035$ , OR: 0.98, 95% CI: 0.97-0.99) and taking multiple medications ( $p = 0.002$ , OR: 1.55, 95% CI: 1.18-

2.05). Qualitative interviews with 24 patients revealed that age improved understanding but increased forgetfulness, impacting adherence both ways, while managing multiple medications led to frustration and confusion, hindering adherence.

**Conclusion:** This study highlights key factors affecting medication adherence in Sarawak, including age and polypharmacy, suggesting the need for targeted interventions to improve adherence.

**Keywords:** Hypertension, medication adherence, primary care

## OP7

### Outcome of Hepatitis C Screen-and-Treat Program at a Drug Rehabilitation Center in Perlis State

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**Introduction:** Hepatitis C virus (HCV) infection is prevalent among people who inject drug (PWID) globally and in Malaysia. Drug rehabilitation centers (PUSPEN) offer opportunities for intervention, but the feasibility of HCV care cascade in this setting requires evaluation. This study aims to evaluate the outcome of an integrated HCV screen-and-treat program implemented at PUSPEN Perlis, Malaysia.

**Methods:** This retrospective cohort study analysed data from an HCV screen-and-treat program conducted between October 2022 till December 2023 at PUSPEN Perlis. The program involved initial screening with rapid antibody testing, confirmatory HCV RNA testing, APRI-based fibrosis assessment, and Direct-Acting Antiviral (DAA) treatment, with Sustained Virologic Response at 12 weeks post-treatment (SVR12) as the primary outcome.

**Results:** Screening of 461 individuals during study period identified 62 (13.4%) as HCV antibody positive. Significant attrition occurred before confirmatory testing, with 34 (54.8%) undergoing HCV RNA tests, of whom 33 (97.0%) were positive. Treatment initiation was also limited with 17 (51.5%) starting DAA therapy, primarily due to anticipated short rehabilitation stays. One participant transferred during therapy; the remaining 16 completed the 12-week regimen, all achieving SVR12 (100%) without reported adverse effects.

**Conclusion:** HCV screen-and-treat program are feasible in Malaysia drug rehabilitation centers but the challenges in linkage to confirmatory testing and treatment initiation, largely due to limitations imposed by the durations of stay and limitation of staff handling. While DAA therapy is highly effective when completed, strategies addressing diagnostic streamlining, potential shorter regimens, and continuity of care post-release are crucial to optimise HCV elimination efforts in the vulnerable population.

**Keywords:** Hepatitis C, drug rehabilitation center, screen-and-treat

**OP8****Perceptions Of Informal Stroke Caregivers Regarding Respite Care In Kedah, Malaysia: Insights Into Evolving Filial Attitudes From An Exploratory Qualitative Study**

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**Introduction:** Filial piety significantly influences caregiving practices in Asia, strongly impacting informal caregivers' acceptance of respite care. This study explores informal stroke caregivers' perceptions towards respite care and how filial attitudes shape and identify shifting generational attitudes, informing primary care physicians' strategies for sustainable long-term caregiver support.

**Methods:** This exploratory qualitative study was conducted from December 2023 to April 2025, involving 18 informal stroke caregivers selected through purposive sampling from healthcare facilities in Kedah, Malaysia. Ethical approval was obtained from the Ministry of Health Medical Research and Ethics Committee (NMRR ID: 23-03527-Z3J). Semi-structured interviews were conducted, and data were analyzed thematically using Atlas.ti software (version 25).

**Results:** Participants' mean age was 40 years (SD 12.7 years), primarily female (61%), predominantly Malay ethnicity, and mostly unemployed or retired. Filial responsibility emerged as a dominant theme, creating resistance to respite care due to perceived moral obligation and societal stigma. Caregivers perceived external caregiving assistance as violating filial duties, frequently expressing guilt. However, younger caregivers demonstrated more flexible attitudes, viewing respite care as complementary due to evolving socio-economic conditions, like urbanisation, increased employment demands, and smaller family structures. Barriers such as cultural expectations, financial constraints, and concerns about service quality persisted.

**Conclusion:** Filial attitudes significantly affect caregivers' decisions about respite care utilisation, yet perceptions are gradually shifting among younger generations. Family medicine physicians have an essential role in normalizing culturally respectful respite care, improving caregiver acceptance through targeted strategies, enhanced access, and advocacy in primary care settings.

**Keywords:** Caregivers, Respite Care, Cultural Characteristics

**OP9****Personalised Approaches to Treatment Intensification and De-intensification among patient with Type 2 Diabetes Mellitus attending Cheras Health Clinic**Mohamad A<sup>1</sup>, Dahlan AF<sup>1</sup>, Ab Rahaman MA<sup>2</sup>, Vitus MK<sup>1</sup>, Tuan Mat TF<sup>1</sup>, Jamaluddin NAS<sup>3</sup><sup>1</sup>Klinik Kesihatan Cheras, Outpatient Department, Kuala Lumpur, Malaysia; <sup>2</sup>Pejabat Kesihatan Cheras, Kesihatan Awam, Kuala Lumpur, Malaysia; <sup>3</sup>Klinik Kesihatan Cheras, Pharmacy, Kuala Lumpur, Malaysia

**Introduction:** Glycaemic control remains a key challenge in managing type 2 diabetes mellitus (T2DM), particularly among insulin-treated patients. Inappropriate treatment intensification or failure to de-intensify when appropriate may lead to adverse outcomes. This study aimed to determine the prevalence, associated factors of treatment intensification and de-intensification among T2DM patients attending the Enhanced Diabetes Clinic (EDC) at Cheras health Clinic and to assess the effectiveness of these approaches on glycaemic control.

**Methods:** A retrospective cohort study was conducted involving 177 T2DM patients with HbA1c more than 9% who had attended EDC for at least 6 months between 2021 to 2024. Data collected included socio-demographic, comorbidities, medication and diet adherence, reason for treatment approach and knowledge of medication score (DFIT). Patients were categorised into three groups: intensification, de-intensification or unchanged therapy. Multivariate logistic regression identified associated factors and paired t-test assessed HbA1c changes pre and post-intervention.

**Results:** 54.2% underwent treatment de-intensification and 41.8% underwent intensification. De-intensification was significantly associated with poor medication adherence (AOR: 6.11; 95% CI: 2.79-13.37; p<0.001). Conversely, younger age (AOR: 0.96; 95% CI: 0.93-0.99; p<0.009) and poor medication adherence (AOR: 0.13; 95% CI: 0.06-0.29; p<0.001) were associated with a significantly lower likelihood of receiving treatment intensification. Both groups demonstrated significant HbA1c reductions with intensification group (mean difference: 3.01 ±2.01%, p<0.001, Cohen's d=1.49) and de-intensification group (mean difference: 3.05 ±2.17%, p<0.001, Cohen's d=1.41)

**Conclusion:** Treatment intensification and de-intensification were effective in improving glycaemic control when tailored to patients. These findings highlight the importance of a personalised treatment approach with careful consideration of medication adherence to guide clinical decisions in T2DM management

**Keywords:** Type 2 diabetes mellitus, Intensification, De-intensification

**OP10****Preparing for Future Pandemics: Lessons from Parental COVID-19 Vaccine Hesitancy**Mohamed Isahan NI<sup>1</sup>, Ponniah MD<sup>2</sup>, Mohd Yusof E<sup>3</sup>, Mohamad NH<sup>4</sup>, Mohamed Khazin Z<sup>5</sup><sup>1</sup>Poliklinik UKM Bangi Avenue, Family Medicine, Kajang, Malaysia; <sup>2</sup>Klinik Kesihatan Dato Keramat, Family Medicine, Setiawangsa, Malaysia; <sup>3</sup>Poliklinik Nu Sentral, Family Medicine, Kuala Lumpur, Malaysia; <sup>4</sup>Klinik Kesihatan Telok Panglima Garang, Family Medicine, Telok Panglima Garang, Malaysia; <sup>5</sup>Klinik Kesihatan Salak, Family Medicine, Sepang, Malaysia

**Introduction:** The aftermath of the COVID-19 pandemic revealed persistent challenges, particularly vaccine hesitancy. This study aims to identify factors influencing parental COVID-19 vaccine hesitancy, which may help inform strategies to improve vaccine uptake in dealing with future re-emerging or novel infectious diseases.

**Methods:** A cross-sectional study was conducted from February 2023 to June 2024 involving 809 parents of children aged 5–11 years old, attending four primary care clinics in the Klang Valley. Data were collected via a self-administered questionnaire and analyzed using bivariate analysis and multiple logistic regression to assess associations between demographic, socioeconomic, and perception-related factors and vaccine hesitancy. Ethical approval of the study was obtained from the MREC.

**Results:** In bivariate analysis, higher parental education, better financial status, and prior vaccination were significantly associated with lower vaccine hesitancy. When adjusted to potential confounders, parents with higher knowledge scores (OR = 0.83,  $p = 0.005$ ), stronger trust in vaccine safety (OR 7.63,  $p < 0.001$ ), and greater physician influence (OR = 0.20,  $p < 0.001$ ) were more likely to vaccinate their children. Conversely, higher mistrust (OR = 2.05,  $p = 0.005$ ) increased hesitancy. The predictive model had strong discriminative performance (AUC = 0.877).

**Conclusion:** Parental vaccine hesitancy reflects broader public concerns around safety, trust, and information credibility. Preparing for future pandemics would require better patient education strategies to address these concerns and improve vaccine literacy. As trusted figures in primary care, family physicians are uniquely positioned to guide conversations, counter misinformation, and promote vaccine confidence within our communities.

**Keywords:** COVID-19, SARS-CoV-2 Infection, COVID-19 Pandemic

### OP11

#### Prevalence and Predictors of Anxiety Among Healthcare Workers in Setiu District Health Office: A Cross-Sectional Study

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**Introduction:** Healthcare workers (HCWs) face various stressors that may predispose them to anxiety, particularly in rural settings with resource limitations. Understanding the prevalence and contributing factors is crucial to ensure mental well-being and service sustainability. Hence, this study aims to determine the prevalence and predictors of anxiety among HCWs in Setiu District Health Office (DHO).

**Methods:** A cross-sectional study was conducted among 206 HCWs in Setiu DHO using stratified random sampling. Data were collected via a self-administered online questionnaire incorporating validated tools: GAD-7 for anxiety, Job Content Questionnaire, and structured items on personal, interpersonal, organisational, and environmental factors. Simple and multiple logistic regression were used to identify predictors.

**Results:** The prevalence of anxiety was 6.8%, with most experiencing mild symptoms. Multiple logistic regression identified three significant predictors: HCWs stationed at the district health office were 4.2 times more likely to experience

anxiety (aOR = 4.18; 95%CI: 1.19-14.75;  $p=0.03$ ), those with a history of workplace violence were 4.4 times more likely (aOR = 4.43; 95% CI: 1.24-15.90;  $p=0.02$ ), and those with unclear work roles had 5.0 times higher odds to experience anxiety (aOR=5.02; 95% CI: 1.33-18.91;  $p=0.02$ ).

**Conclusion:** Anxiety among HCWs in Setiu DHO is influenced by organisational and psychosocial factors. Addressing workplace violence, enhancing role clarity, and providing targeted mental health support may reduce anxiety burden and promote workforce resilience.

**Keywords:** anxiety, healthcare workers, prevalence

### OP12

#### Prevalence, Factors, and Inpatient Outcomes of Undiagnosed Major Cardiovascular Risk Factors Among Acute Ischaemic Stroke Patients in Hospital Seberang Jaya (2022–2024)

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**Introduction:** Undiagnosed major cardiovascular risk factors (UMRFs) including hypertension, diabetes mellitus, and dyslipidaemia are common yet often asymptomatic contributors to acute ischaemic stroke (AIS). Early identification is crucial for effective primary prevention. This study aimed to determine the prevalence of UMRFs among AIS patients and examine associated factors and inpatient outcomes.

**Methods:** A cross-sectional study was conducted using secondary data from the National Neurology Registry on AIS admissions to Hospital Seberang Jaya from January 2022 to December 2024. Patients were categorized into two groups based on admission history: those with undiagnosed major cardiovascular risk factors (UMRF group) and those with at least one known risk factor (DMRF group). Univariate analysis (SPSS Version 22) was used to examine differences in associated factors and inpatient outcomes.

**Results:** Of 1,495 AIS admissions, 989 patients with complete data were analyzed. UMRFs were identified in 31.9% ( $n = 315$ ); among these, 86.7% had newly diagnosed dyslipidaemia, 43.2% hypertension, and 25.7% diabetes mellitus (all  $p < 0.001$ ). UMRF patients were younger (mean age 55.8 vs. 61.2 years,  $p < 0.001$ ), more likely male ( $p = 0.022$ ), and current smokers ( $p < 0.001$ ). In-hospital mortality was similar ( $p = 0.318$ ), but UMRF patients had better functional outcomes (mRS  $<3$ : 54.1% vs. 43.3%,  $p < 0.002$ ) and shorter hospital stays ( $p = 0.006$ ).

**Conclusion:** Nearly one-third of AIS patients had previously undiagnosed cardiovascular risk factors. Targeted screening, especially among younger, high-risk individuals, is essential to prevent stroke and improve clinical outcomes.

**Keywords:** Acute ischemic stroke, Undiagnosed major cardiovascular risk factors, screening

OP13

Levels of Active Ageing and its Influencing Factors Among Older Adults: A Systematic Review

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**Introduction:** The growing population of older adults in the 21st century has made ageing a global concern. Exploring the factors associated with active ageing is therefore of interest to futher promoting transtions to it among older adults.

**Methods:** A systematic literature search was performed, and relevant articles were retrieved until August 2024. The databases searched included PubMed, CINAHL, Scopus, and CNKI. Studies with quantitative, qualitative, or mixed designs were extracted. We included those that invovled individuals aged above 60 yeas and reported on the rasults of active ageing. Our study following PRISMA 2020 guidelines and used a Health Ecological Model to guide the analysis and synthesis of factirs influencing active ageing. In addition, all included studied were evalutaed.

**Results:** Our research identified 23,469 studies, 65 of which were included in this review. The quality ratings were positive for 53 studies. Nineteen instruments were used to evaluate active ageing. The levels of active ageing varied widely across studies, owing to the diverse instruments used and population characteristics. Developed countries consistently reported higher levels of active ageing than developing ones. Five core themes were identified as the factors influencing active ageing: sciodemographic profiles, socioeconomic status and environment, health-related factors, psychological factors and mental health, and social connections. The demographic profiles primarily encompassed intrapersonal and interpersonal factors, whereas the remaining themes reflected interactions across various ecological health models.

**Conclusion:** High levels of active ageing were reported in a number of developed countries. Providing support to help older adults engage in active ageing can be highly beneficial.

**Keywords:** active ageing; factors; older adults

OP14

Development and initial validation of a web-based paediatric dehydration fluid management tool for primary care

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**Introduction:** Timely and accurate fluid management in

paediatric dehydration is critical yet remains challenging in busy primary care settings. To support clinicians, a web-based tool was developed to assist in determining appropriate fluid regimens based on the Paediatric Protocol for Malaysian Hospitals, 4th Edition. The objective of the study is to describe the development and initial validation (including content and face validation) of a web-based paediatric dehydration fluid management tool for use in primary care settings.

**Methods:** Initial validation was conducted in two phases. Expert validation by two Family Medicine Specialists (FMS) and three Paediatricians assessed through qualitative feedback. Pilot usability testing was conducted with 12 FMS using the System Usability Scale. SUS scores were recorded before any modifications, and qualitative feedback from pilot users was then used to refine the tool.

**Results:** SUS scores from 12 FMS yielded a median of 96.3, with an interquartile range of 8.8 (Q1: 89.4; Q3: 98.1). All scores exceeded the standard SUS cutoff of 68. The Cronbach's alpha of the SUS responses was 0.72. Qualitative feedback from pilot user highlighted strong agreement that the tool supports accurate fluid management. Pilot users recommended improving the user interface and addressing potential data entry errors. In response, the tool was refined to address feedback from pilot users.

**Conclusion:** Pilot testing demonstrated usability and feasibility of the tool for integration into primary care. Its impact on improving the accuracy of prehospital fluid management in pediatric dehydration requires further evaluation, which will be conducted in a randomized controlled trial scheduled for July–August 2025.

**Keywords:** Clinical Decision Support System, Primary Care, Fluid Therapy

Systematic and Scoping Review

SSR1

Beyond the Nursery: The Role of Primary Care in Supporting Preterm, Small for Gestational Age and Low Birthweight Infants – A Scoping Review

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**Introduction:** Preterm, low birthweight (LBW) and small for gestational age (SGA) infants have higher risks of mortality and morbidity, including neurodevelopmental and behavioural disorders, respiratory issues, and growth faltering. Follow-up interventions can help reduce these risks, but there are limited guidelines for implementation in low- and middle-income countries (LMIC). This review aims to define from existing literature, follow-up care for these infants, with the goal of developing an inventory of interventions for potential implementation in LMIC.

**Methods:** We included studies describing preventive, promotive, diagnostic, and treatment interventions during the first five years for preterm, LBW or SGA infants. We searched CINAHL, Cochrane Library, EMBASE, Medline, and PsycINFO on 15 January 2024. The study protocol was registered on the Open Science Forum.

**Results:** A total of 25,240 records were screened, and 83 records of 73 studies were selected for inclusion after full-text review. Six were systematic reviews. Thirteen were from LMIC settings. Most interventions involved professionals, with three involving paraprofessionals. Mapping resulted in eight groups of interventions: home visits and multicomponent home programmes (n=19), neurodevelopmental and behavioural interventions (n=10), immunisation (n=9), breastfeeding and kangaroo mother care (n=8), nutrition and growth (n=13), home oxygen (n=7), retinopathy of prematurity screening (n=3), and other interventions (n=4).

**Conclusion:** Systematic reviews of selected follow-up interventions for preterm, LBW and SGA infants may be necessary before guidelines can be developed. Primary care may potentially play a central role in coordinating care beyond the nursery, ensuring continuity of follow-up, early detection of complications, and providing family-centred support within the community.

**Keywords:** Preterm, SGA, LBW, Follow-up, Scoping

## Translational Research

### TRI

#### Opioid Access for Palliative Care Patients Across Sarawak through Domiciliary Palliative Care Program

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**Introduction:** Palliative care focuses on enhancing the quality of life for individuals with life-limiting illnesses, with pain management being a key component. Opioids are the most effective pharmacologic agents for moderate to severe pain relief, also addressing others symptoms to improve overall comfort. The Domiciliary Palliative Care (DPC) program in Sarawak was launched in early 2023 as a collaboration between the Asia Pacific Hospice Care Network (APHN) and Sarawak State Health Department to improve community palliative care services.

**Methods:** This retrospective cohort study analysed opioid access for adults using DPC services across 8 health clinic between July 1, 2023 and June 30, 2024. The study examined opioid prescription and usage, applying descriptive analysis to interpret the findings.

**Results:** Among 113 patients, (median age 68.5 years), 89.3% had advanced cancer requiring opioid administration, including immediate release morphine (69%), transdermal fentanyl (305), and oxycodone (1%). Opioid indications were primarily cancer-related pain (83.1%), breathlessness (16.8%), and non-cancer pain (1.7%). Initial administration routes included oral (62.8%), transdermal patch (30%), buccal (1.7%), and subcutaneous (0.8%), with an initial median oral dose of 30mg. A total of 24% of patients needed dosage increments during their last DPC visit.

**Conclusion:** The study underscores the significance of the DPC program in legally prescribing, dispensing and monitoring opioid use. The starting opioid dose of 25mg is similar to the 30mg reported by WHO for comparable upper middle-income countries<sup>3</sup>. Findings highlight the urgent need to expand the initiative to ensure appropriate opioid access for cancer patients, reinforcing its role in comprehensive palliative care.

**Keywords:** Domiciliary palliative care, opioid access, Sarawak

## Clinical Study/Trial

### CS/TI

#### 5-Years Trend for Intrauterine Contraceptive Device (IUCD) Insertion in Pendang District and Its Complications

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**Introduction:** Intrauterine Contraceptive Device (IUCD) is an effective contraceptive method. However, IUCD carries a small risk of complications such as unplanned pregnancies, device expulsion, abnormal bleeding, uterine infection, and perforation. This study aims to determine the 5-year trend of IUCD insertion in Pendang, Kedah, and its complications.

**Methods:** We conducted a retrospective cross-sectional study on all IUCD clients at three government health clinics in Pendang between 2020 and 2024. Demographic details, IUCD insertion date, and outcomes during follow-up were retrieved from patients' Family Planning Record books during the study period (January-March 2025). Data analysis was performed using Microsoft Excel. Descriptive analyses were presented as numbers and percentages.

**Results:** 503 women had IUCD insertion from 2020 to 2024 in Pendang. The majority of them are Malay women (95%) who are within the age group of 30-39 years old (46%). Most of them had IUCD insertion 12 months post delivery (60%). Overall, 89.86% of the clients used IUCD without complications. The complication percentage was generally low. 4.17% (n=21) had unplanned pregnancies, none of them was reported as ectopic. Only 1.59% (n=8) had device expulsion, and 1.39% (n=7) had abnormal vaginal bleeding. Meanwhile, uterine perforation and infection were low at 0.99% and 0.39%, respectively.

**Conclusion:** This study showed that IUCD is well used in Pendang with a low complication percentage. Further analysis is needed to determine the factors that are associated with complications. Strategies to enhance IUCD use and minimize complications should be practiced.

**Keywords:** Intrauterine Devices, Contraception, Copper Intrauterine Devices

### CS/T2

#### **An Audit of Management of Chronic Hepatitis B among People Living with HIV in a Tertiary Hospital in Terengganu**

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**Introduction:** Hepatitis B virus (HBV) infection among people who lives with HIV (PLHIV) is associated with liver related morbidity and mortality as compared to HBV mono-infection. There is concern on suboptimal HBV response to antivirals, for example tenofovir-based anti-retroviral therapy (ART) among PLHIV with chronic HBV coinfection. Thus, the aim of the audit is to study on the characteristic and outcomes of chronic HBV infection among PLHIV managed at a tertiary hospital in Terengganu and the adherence to local guidelines in the management.

**Methods:** A cross sectional study was conducted in March 2025 by auditing clinical records of 21 PLHIV with chronic HBV coinfection attending infectious disease clinic, Hospital Sultanah Nur Zahirah, Kuala Terengganu. Descriptive analysis is used for data analysis.

**Results:** Among 21 PLHIV with chronic HBV co-infection, 17(81%) were male, in which 11(52.4%) aged 30-39 years old, 13(61.9%) were homosexuals and all of them has suppressed HIV viral load. With mean duration of ART of 6.2 years, 19(90.5%) of them received tenofovir-based dual HBV-active ART and 16(76.2%) of them had HBV DNA viral load of <20 IU/mL. However, only 4(19%) attained Hepatitis B surface antigen (HepBsAg) seroconversion. Even though none of them had evidence of liver cirrhosis, more than 95% of them did not undergo routine hepatoma surveillance as per chronic HBV infection treatment protocol.

**Conclusion:** The audit showed poor adherence to standard protocol in hepatoma surveillance among HBV coinfection in PLHIV. Strengthening adherence to management protocol according to local guidelines is essential to improve liver outcomes in this high risk population.

**Keywords:** Hepatitis B virus, HIV infections, coinfection

### CS/T3

#### **Analysis of the Outcomes of Children with History of Maternal Diabetes in Pregnancy in Kuantan, Pahang**

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**Introduction:** Maternal diabetes can affect pregnancy outcomes, but most research focuses on the risk to the mother. There's less information on how it impacts the child's health. This study looked at how children born to mothers with diabetes are affected in the neonatal stage and early childhood period.

**Methods:** A cross-sectional study was conducted in 2024 with children aged 18 to 60 months whose mothers had diabetes during pregnancy. It took place at a 12 health clinic in Kuantan, Pahang. Information from the mother's antenatal records and children's health cards was analyzed with SPSS version 27.

**Results:** A total of 200 children (mean age 25.01 ± 10.41 months) were included in this study. Overall, 38% experienced at least one adverse outcome. Neonatal outcomes included neonatal jaundice (20%), hypoglycaemia (3%), and respiratory distress (1.5%), while early childhood outcomes included developmental delays (6.5%) and overweight status (8.5%). Most mothers (94%) had gestational diabetes mellitus (GDM), with generally well-controlled blood glucose. A key finding was that children of non-passive smoking mothers had a 48% lower risk of adverse outcomes (AOR = 0.52; 95% CI: 0.27–0.99; p = 0.047). Other maternal and child-related factors were not statistically significant (p > 0.05).

**Conclusion:** A significant proportion of children born to mothers with diabetes during pregnancy experienced adverse outcomes. Despite overall good glycaemic control, passive smoking during pregnancy was significantly associated with increased risk. These findings underscore the importance of addressing modifiable environmental exposures to improve neonatal and early childhood health outcomes.

**Keywords:** Maternal diabetes, adverse outcomes, passive smoking

### CS/T4

#### **Awareness and knowledge of dyslipidemia management among the medical officers in government health clinics in Gombak District: a cross-sectional study**

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**Introduction:** Several studies reported that management of dyslipidemia among primary care physicians were poor. This study assessed the awareness of dyslipidemia guideline and knowledge of lipid management among medical officers (MO) in Gombak district.

**Methods:** A self-administered questionnaire was distributed to MOs without postgraduate training at government health clinics in Gombak district. The questionnaire included sociodemographic data, awareness of guidelines, and knowledge of dyslipidaemia management. The cumulative score was calculated from the knowledge section, with each correct answer awarded 1 point and no deductions for incorrect answers. The median score was used to categorize knowledge as either good or poor. The association between knowledge scores and sociodemographic variables was analysed using chi-squared test and considered statistically significant when p < 0.05.

**Results:** 135 questionnaires were analyzed (98%). 76% of

respondents were aware of the national guidelines. The median knowledge score was 8 out of 10. 68% of respondents achieved good knowledge. The question with the lowest percentage of correct responses (10%) was to identify the primary target when triglyceride levels exceed 4.5 mmol/L. Knowledge regarding treatment targets and statin side effects remained inadequate, with only 57% and 58% of respondents answered correctly, respectively. There was no significant association between knowledge and sociodemographic characteristics.

**Conclusion:** This study showed high level of awareness of lipid guideline and the majority of MOs exhibited good knowledge. However, there were notable gaps in the knowledge identified. These findings highlight the need for targeted educational interventions and regular audits to address specific knowledge deficiencies and improve dyslipidaemia management practices.

**Keywords:** Dyslipidemia, primary care doctors, knowledge

### CS/T5

#### Blood Pressure Control And Its Associated Factors Among Patients With Type 2 Diabetes Mellitus Attending Government Health Clinic In Kuantan, Pahang

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**Introduction:** Studies have established that type 2 diabetes mellitus (T2DM) and hypertension are significant predictors of cardiovascular disease. The primary objective of this study was to assess the achievement of target blood pressure control based on the latest local guidelines among T2DM patients in a primary care setting. Additional objectives included identifying factors associated with achieving target blood pressure

**Methods:** A cross-sectional study was conducted among patients with type 2 diabetes mellitus (T2DM) at government clinics in Kuantan using simple random sampling. Data were collected from medical records and two validated questionnaires—the International Physical Activity Questionnaire (IPAQ) and the Malaysian Medication Adherence Assessment Tool (MyMAAT)—to assess factors influencing blood pressure control. The study is being conducted from October 2023 to December 2024 and includes patients with a minimum of two follow-up visits per year. Ethical approval was obtained on 23 June 2023

**Results:** Of the 380 participants, only 112 (29.5%) achieved optimal blood pressure control. Multiple logistic regression identified significant associations with HbA1c, physical activity, medication adherence, and the number of antihypertensive agents. Optimal control was more likely among those with good medication adherence (AOR 17.61; 95% CI: 6.1–51.2), good glycemic control (AOR 3.79; 95% CI: 2.2–6.5), those on two antihypertensives compared to three or more (AOR 2.64; 95% CI: 1.1–6.4), and those engaging in moderate (AOR 3.74; 95% CI: 2.1–6.7) or high physical activity (AOR 4.75; 95% CI: 2.0–11.3)

**Conclusion:** These findings highlight the need for targeted interventions, including physical activity promotion, glycemic

control, dual antihypertensive therapy, and improved adherence to reduce cardiovascular risk

**Keywords:** T2DM, hypertension, blood pressure

### CS/T6

#### Bridging Gaps in Stroke Recovery: A Community-Based Multidisciplinary Approach for Elderly Survivors in Johor, Malaysia

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**Introduction:** Stroke remains a leading cause of long-term disability among older adults in Malaysia. Many elderly survivors are discharged with persistent functional impairments and limited access to rehabilitation services, particularly in semi-urban and rural areas. This study aimed to evaluate a pilot community-based stroke care model implemented in two districts in Johor. The model sought to enhance functional recovery and caregiver preparedness through a multidisciplinary, home-based intervention.

**Methods:** A total of 78 post-stroke elderly patients (aged > 60 years) were recruited from public health clinics in the Kluang and Batu Pahat districts and enrolled in a 3-month intervention program. Core components included physiotherapy and occupational therapy home visits, medication reviews, caregiver education, and home safety assessments. Functional outcomes were measured using Modified Barthel Index (MBI), while caregiver burden was assessed using Zarit Burden Interview (ZBI) at baseline and post-intervention.

**Results:** Of the 78 enrolled participants, 78.2% completed the program. Stroke survivors showed significant improvement in functional status, with mean MBI increasing from 45.8 to 55.6 ( $p < 0.001$ ), particularly in self-care, mobility, and toileting. Caregiver burden reduced modestly, with ZBI scores decreasing by 2.2 points ( $p = 0.039$ ). Home safety risks were identified in 36% of households, leading to targeted interventions. Public education sessions reached over 1,000 people, significantly improving community awareness of stroke recovery and support services.

**Conclusion:** The intervention program was associated with statistically and clinically significant improvements in stroke survivor functional independence, and a modest but meaningful reduction in caregiver burden. Home safety risks were identified and addressed, while large-scale community education enhanced stroke literacy. These findings support the feasibility and impact of integrated post-stroke rehabilitation and caregiver support programs in resource-limited settings.

**Keywords:** Community-based care, stroke rehabilitation, elderly, multidisciplinary approach

CS/T7

**Bridging the Heart and Bones: Cardiovascular Risk Stratification among Patients with Osteoporotic Fractures in Hospital Canselor Tuanku Muhriz**

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**Introduction:** Cardiovascular disease and osteoporosis are major health concerns with increasing prevalence among the ageing population. This study aims to stratify cardiovascular risk (CV) among individuals with osteoporotic fractures and to describe their CV profile.

**Methods:** This cross-sectional study involved osteoporosis patients registered under the Fracture Liaison Service (FLS) at Hospital Canselor Tuanku Muhriz (HCTM) during the year 2022 to 2024. Patients' sociodemographic and clinical profile were extracted from the medical file and electronic medical records (EMR) system. The 10-year CV risk was estimated using the Framingham Risk Score.

**Results:** CV risk stratification of 293 patients showed 6.1% had low risk, 13.0% moderate risk and 80.9% high risk. Among those with high CV risk, the mean (SD) age was 76.22 (8.19) years, with higher proportion being male (93.4%), Indian (82.8%) and overweight (89.9%). Hypertension and dyslipidaemia were present in 87.7%, with mean (SD) blood pressure of 135 (16.04) over 72 (10.73) mmHg, LDL-cholesterol of 2.57 (1.18) mmol/L and HDL-cholesterol of 1.20 (0.40) mmol/L. Most of the patients were on anti-hypertensives (86.7%) and statins (87.9%).

**Conclusion:** Most patients with osteoporotic fractures were at high CV risk. This suggests that osteoporotic fractures could serve as an opportunity to screen for hidden CV risk, thus incorporating CV risk assessment into routine management may be of value.

**Keywords:** Cardiovascular risk, Osteoporosis, Framingham Risk Score

CS/T8

**Depression and Its Association with Diabetes Quality of Life in Elderly with Type 2 Diabetes Mellitus in Primary Care, Hulu Langat**

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**Introduction:** Depression is common among elderly patients with type 2 diabetes mellitus (T2DM) and can negatively affect self-care, treatment adherence, and overall health. This study aimed to determine the prevalence of depression and its relationship with diabetes quality of life (DQOL) in elderly patients with T2DM attending health clinics.

**Methods:** A cross-sectional study was conducted from December 2023 to February 2024 in selected health clinics in Hulu Langat.

Elderly patients (aged 60 years or older) with T2DM were recruited through consecutive sampling. Sociodemographic data were collected through questionnaires, and clinical data were obtained from medical records. Depression was assessed using the Malay version of the Geriatric Depression Scale (M-GDS-13), while DQOL was measured using the Revised version of Diabetes Quality of Life Questionnaire (RV-DQOL13). Multiple linear regression was used to identify predictors of DQOL.

**Results:** Out of 382 participants (96% response rate, median age 65, 55% female), 14.9% had depression. The median DQOL score was 29.23%, indicating a good quality of life (the lower the score, the better the DQOL). Depression was significantly linked to poorer DQOL. Other related factors included financial dependence, longer diabetes duration, and higher HbA1c. A better DQOL was observed among those with higher education and those not receiving pharmacological treatment.

**Conclusion:** Depression is significantly associated with poorer DQOL, highlighting the importance of routine screening for depression in elderly T2DM patients. Integrating mental health screening and psychological support into diabetes management in primary care can help improve diabetes control and diabetes quality of life in this population.

**Keywords:** Type 2 Diabetes Mellitus, Quality of Life, Depression

CS/T9

**Doctors Awareness On Screening Of Metabolic Associated Fatty Liver Disease (Mafld) In Type 2 Diabetes Mellitus (T2dm) Patients In Health Clinics Under Pejabat Kesihatan Daerah (Pkd) Hulu Langat**

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**Introduction:** Metabolic associated fatty liver disease(MAFLD) is highly prevalent among patients with type 2 diabetes mellitus(T2DM) in Malaysia and contributes significantly to morbidity. Despite its burden, MAFLD screening remains overlooked in primary care. This study aims to describe the knowledge and screening practices for MAFLD in T2DM patients among primary care doctors in health clinics under PKD Hulu Langat.

**Methods:** A cross sectional survey was conducted towards primary care doctors at 14 health clinics. A newly developed, validated self-administered questionnaire was distributed to 272 doctors.

**Results:** A total of 204 doctors responded. While 75% reported screening for MAFLD, only 25% were aware of its actual prevalence in T2DM patients. Most correctly identified key diagnostic criteria such as BMI >23kg/m<sup>2</sup> (92%) and T2DM(90%) in addition to hepatic fat accumulation. About 95% recognized MAFLD as a major health problem, and 99% were aware of non-pharmacological treatments. Although 67.6% were aware of screening guidelines, 52% had not read them or attended related continuous medical education(CME). The

perceived barriers for screening include limited awareness of its potential severity(93.6%) and suboptimal diagnostic methods available(88.2%).

**Conclusion:** While most doctors screen for MAFLD and understand its basic management, gaps remain in awareness of its true prevalence and familiarity with clinical guidelines. Barriers such as limited awareness of disease severity hinders consistent screening practices. This study highlights the need for CME and incorporation of MAFLD screening into existing non-communicable disease programs in primary care.

**Keywords:** diabetes mellitus, type 2 fatty liver primary health care

### CS/T10

#### Does Fasting Risk Influence The Fasting Patterns and Lifestyles During Ramadan?

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**Introduction:** Muslims, including those with Diabetes, fast during Ramadan. The impact of fasting risk on fasting patterns and lifestyle practices remains under-explored. This study evaluated the associations between the fasting risk, fasting patterns and lifestyle practices during Ramadan.

**Methods:** A prospective observational study was conducted in seven government health clinics in Petaling from March 14 to July 15, 2022. Data were collected via standardized questionnaires during telephone consultations. Participants were adult Muslims (>18years) with Type 2 Diabetes Mellitus (T2DM), diagnosed for at least 3 months and receiving pharmacological treatment. Fasting risk was assessed using the IDF-DAR Risk calculator and categorized as low, moderate, and high risk. Fasting patterns were based on the number of fasting days completed. Lifestyle changes included dietary, physical activity and sleep. Data were analysed using descriptive statistics and logistic regression.

**Results:** Data of 238 participants were analysed. Of these, 35.7% were low risk, 31.3% moderate risk and 33.2% high risk. Overall, 67.6% fasted the entire month. Sleep and physical activity changed in 42.9% and 43.3% respectively. Dietary pattern remained similar for 59.7% at suhoor and 60.5% at iftar. Compared to high risk participants, low risk participants were three times more likely and moderate risk participants 2.4 times more likely to fast the entire month. Moderate risk participants were 1.9 times more likely to alter sleep and 2.4 times more likely to adjust physical activity.

**Conclusion:** Fasting risk significantly influences fasting duration and lifestyles habits. These insights can guide diabetic individuals in balancing the religious obligations with health considerations.

**Keywords:** Fasting risk, Fasting patterns, Lifestyles

### CS/T11

#### Domiciliary Palliative Care Provision in Sarawak Health Clinics: A Retrospective Study

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**Introduction:** Palliative care is recognized as a basic human right. In 2023, the Asia-Pacific-Hospice-Palliative-Care-Network (APHN) and Sarawak Government partnered to meet this need by training eight government health clinics to provide community palliative care services. This study describes demographics and health service utilization data in the first-year post-implementation in Sarawak.

**Methods:** This retrospective cohort study was done among adults with life-limiting illnesses who accessed the domiciliary palliative care (DPC) services at the trained 8 government clinics across Sarawak from 1st July 2023 to 30th June 2024. Demographic and health service data were obtained from a local database. Descriptive analysis and Kaplan-Meier survival estimates were utilized. Ethical approval was obtained from Medical-Research-Ethics-Committee-Malaysia (MREC).

**Results:** Eight clinics were trained and they provided DPC care to a total of 113 patients with their median age being 68.5 years. Most patients (89.3%) had advanced cancer in origin [Gastrointestinal (27%), Thoracic (17%), Head & Neck (14%)]. Most (91%) had ECOG performance status of 3 or 4. The median time from referral to first DPC encounter was 4 days (IQR 2-7) that fell short of the Key-Performance-Index of working 3 days. The median time from first encounter to death was 23 days (IQR 9.5-48).

**Conclusion:** The implemented DPC program successfully treated 113 patients across Sarawak over its first year. Most patients had advanced cancer diagnoses, were referred within a month of death and seen within 4 days of referral. Future directions include integrating the DPC program earlier in the disease trajectory and expanding it to support more non-cancer palliative patients.

**Keywords:** Domiciliary Palliative Care (DPC), Palliative Care Service Provision, Sarawak

## CS/T12

**Effectiveness of a Multidisciplinary Person-Centered Coaching Program in Improving Glycemic Control among patients with Type 2 Diabetes Mellitus**

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**Introduction:** Poor glycemic control in type 2 Diabetes Mellitus (T2DM) remains a significant public health challenge in Malaysia. In Klang district, there were 35.2% of patients with HbA1C >8% in 2023. Studies reported poor adherence, lifestyle and low self-efficacy contributing to poor glycemic control. This study aimed to assess effectiveness of multidisciplinary person-centered coaching (MPCC) program to improve glycemic control among patients with uncontrolled T2DM.

**Methods:** This is a retrospective single-arm pre-post program evaluation study by reviewing medical records of patients enrolled in the MPCC program from February to July 2024 across 12 health clinics in Klang District. Over six months, the DM Self-care Wheel and Goal-Setting Sheet were implemented in addition to standard care. Demographic information and clinical parameters before and after the interventions were collected.

**Results:** A total of 390 patients with T2DM were enrolled, with 370 completing the study. The majority were Malay (53.5%) and female (60.2%), with a mean age of 54.8 +/- 10.6 years and an average duration of diabetes 8.9 +/- 6.9 years. There was a significant reduction in mean HbA1c by 1.2% (95% CI:-1.6% to -0.7%; p<0.001). The average weekly exercise duration increased by 35.3 minutes (95% CI:27.7 to 42 minutes; p<0.001), and self-care scores improved from 26 to 30. Additionally, 38.4% of participants achieved HbA1c levels below 8%, while 63.3% had a reduction of more than 1%.

**Conclusion:** The MPCC program implemented in Klang district was effective in improving the glycemic control and self-care efficacy among patients with uncontrolled T2DM.

**Keywords:** Uncontrolled diabetes, multidisciplinary person-centered coaching

## CS/T13

**Effects of Alpha-Lipoic Acid and B Vitamins on Quality of Life and Metabolic Parameters in Diabetic Polyneuropathy: A Randomized Trial**

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**Introduction:** Diabetic polyneuropathy (DPN) is a debilitating complication of diabetes mellitus that leads to reduced quality of life (QoL). This study evaluated the effects of alpha lipoic acid (ALA) plus B vitamins on QoL and laboratory parameters in patients with DPN

**Methods:** In this randomized, double-blind, placebo-controlled trial, 74 patients with DPN were allocated to receive either oral ALA plus B vitamins (B12, B6, B1) (n = 38) (intervention group) or placebo (n = 36) for 12 weeks. QoL was assessed at baseline and 12 weeks using the Revised Diabetes Quality of Life Questionnaire (Rv-DQoL), where higher scores indicate poorer QoL. Changes in metabolic parameters (HbA1c, fasting blood sugar [FBS], fasting lipid profile [FLP], body mass index [BMI], blood pressure [BP]) and safety profile (renal and liver function test [RFT, LFT]) were measured at baseline and 12 weeks.

**Results:** The intervention group showed a greater reduction in mean Rv-DQoL scores from baseline (29.39 ± 5.35) to 12 weeks (24.37 ± 3.53) compared to the placebo group (baseline: 29.86 ± 5.84; 12 weeks: 26.58 ± 4.20), though the difference was not statistically significant (P > 0.05). No significant changes were observed in metabolic (HbA1c, FBS, FLP, BMI, and BP) or safety parameters (RFT, LFT) in either group.

**Conclusion:** Twelve weeks of treatment with ALA and B vitamins resulted in a greater improvement in QoL among DPN patients, though this was not statistically significant, which could be due to small sample size and short duration of study. The treatment was well tolerated, with no significant alterations in metabolic, renal, or hepatic parameters, indicating a favorable safety profile.

**Keywords:** Diabetic polyneuropathy, Quality of life, Safety profile

## CS/T14

**Ethical and Legal Understanding of Third-Party assisted Reproductive Technology (ART) Among Medical Officers and Family Medicine Specialists in Malaysian Primary Care: A Cross-Sectional Study**

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**Introduction:** Malaysia's evolving reproductive landscape faces unresolved ethical and legal dilemmas regarding third-party assisted reproduction. Primary care providers, as first-contact clinicians, require comprehensive understanding to guide patients through these complexities. This study aims to assess Malaysian primary care doctors' knowledge of third-party ART law and ethics.

**Methods:** A quantitative method is used to conduct this online study. 300 government and private primary care physicians across Penang and Klang Valley were included in the survey, in which 279 completed responses. The validated questionnaire assessed

1) knowledge of gamete donation/surrogacy regulations, (2) attitudes toward providing services to non-traditional families, and (3) awareness of legal consequences for children born through ART.

**Results:** Four key findings emerged: First, 78% incorrectly believed third-party ART is clearly regulated. Second, 65% would decline requests from same sex couples despite uncertainty about legal restrictions. Third, only 22% understood citizenship challenges for donor-conceived children. Finally, practitioners with postgraduate training demonstrated 3.2 times greater legal awareness ( $p < 0.01$ ).

**Conclusion:** These results exposed a wide knowledge gap in Malaysia's primary care framework pertaining to third-party ART. To address this gap, we proposed three interventions: (1) MOH-mandated training modules, (2) clearer surrogacy guidelines from the Malaysia Medical Council, and (3) legal reforms addressing legal parentage issues. The study's generalizability is limited by its urban focus, suggesting the need for nationwide follow-up research incorporating more holistic as well as Islamic bioethics perspectives.

**Keywords:** primary care, third-party ART, surrogacy, reproductive technologies, healthcare laws

### CS/T15

#### Exploration of Views and Perceptions of Secondary School Teachers Regarding Smoking and Vaping Among School Students: A Qualitative Study

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**Introduction:** School teachers play a crucial role in tobacco control policies in Malaysia, as schools are designated as smoke-free areas and prevention programs are implemented, and teachers facilitate the education of students about the harms of tobacco. With the emergence of vapes, these policies have been expanded to include these products. Despite the presence of existing policies, the prevalence of vape use is increasing among Malaysian adolescents with a concurrent decrease in cigarette smoking. As teachers are important advocates for tobacco control, their perspective on this subject is a valuable resource to enhance the existing policies. This qualitative descriptive study aims to explore secondary school teachers' perspectives and attitudes toward adolescent smoking and vaping.

**Methods:** In-depth interviews were conducted with fifteen teachers selected via purposive sampling from six secondary schools.

**Results:** The analysis identified five key themes: (1) teachers hold negative perceptions of smoking and vaping, (2) they observe a marked increase in vaping among students, (3) various strategies have been implemented in schools to address tobacco use among students, however, they were met with challenges (4), and (5) teachers support anti-smoking legislation.

**Conclusion:** These findings emphasise the importance of enhancing school-based tobacco control programs and providing teachers with up-to-date tobacco control training. This is important as they face and manage students with smoking and

vaping problems at school. Furthermore, policymakers should enforce stricter tobacco control regulations guided by the latest Tobacco Control Act 852 policy as a critical step toward achieving a smoke-free generation.

**Keywords:** Tobacco, Adolescent, Educators

### CS/T16

#### Exploring parental beliefs and needs on using technology to prevent children's excessive screen time

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**Introduction:** Excessive screen time among children has become a growing concern in today's digital era, with increasing evidence linking it to developmental, behavioural, and emotional risks. Few parental mediation strategies are actively used to manage children's screen time. Among these, technology-based mediation, particularly the technical restriction method, which includes tools like parental control settings, has shown potential in regulating screen use. However, the adoption of such methods remains limited, particularly in culturally diverse settings like Malaysia.

**Methods:** This qualitative study explored how Malaysian parents perceive their children's screen time, their beliefs about using technical restriction tools, and their expectations for more effective digital solutions. Semi-structured interviews were conducted with 21 parents from four cultural backgrounds, selected through purposive sampling. Interviews were audio-recorded, transcribed verbatim, and thematically analysed using Nvivo 15 software.

**Results:** Four key themes emerged. First, realities of digital parenting captured concerns about child development, behaviour, and value conflicts, often linked to parental fatigue, guilt, and reliance on screen use as a coping tool. Second, balancing parenting values illustrated how mediation strategies were shaped by parenting experience, child maturity, and cultural or religious expectations. Third, navigating technology-based mediation revealed a mismatch between current digital tools and parents' practical needs. Lastly, needs in digital parenting tools highlighted parents' desire for user-friendly, intelligent, and culturally aligned features, supported by collective efforts from families, institutions, policymakers, and the wider community.

**Conclusion:** The findings can guide the future development of practical, culturally sensitive, and parent-friendly interventions that are contextually appropriate and aligned with the lived experiences of parents.

**Keywords:** Screen Time, Parental mediation, Health behaviour

### CS/T17

#### Hemoglobin Response to Intravenous Iron in Pregnant Women with Iron Deficiency Anemia: A Study from Northern Clinics in Seremban

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**Introduction:** Iron deficiency is the leading cause of anemia in pregnancy, impacting 31.6% to 34.6% of pregnant women in Malaysia. In 2021, several health clinics (HC) in northern Seremban district including Nilai, Mantin, Kwarters KLIA and Lenggeng HC introduced intravenous (IV) iron therapy. However its effect on hemoglobin (Hb) level among their pregnant mothers remained unassessed. Therefore this study aims to examine the clinical characteristics of pregnant women with iron deficiency anemia (IDA) and the impact of IV iron dextran and sucrose on their Hb concentration.

**Methods:** This study retrospectively reviewed data from all pregnant women with IDA who received IV iron in 2022 and 2023. Socio-demographic data, Hb concentration at 36 weeks of gestation, and pre- and post-infusion Hb levels were analyzed using SPSS version 22.

**Results:** A total of 275 pregnant women with IDA completed the therapy during the study period. Most of them were Malays (76.4%) aged 21-30 years (53.8%), with half (52.4%) were first and second-time mothers. The mean (SD) pre-infusion Hb and serum ferritin levels were 9.9 (0.64) and 11.2 (1.27) respectively, and the Hb level significantly ( $P < 0.001$ ) increased to an average of 11.3 (0.7) by 36 weeks of gestation. A comparison of interrupted infusion and total dose infusion revealed no statistically significant ( $P = 0.216$ ) difference in Hb outcomes.

**Conclusion:** The findings demonstrate that IV iron therapy effectively improves Hb level in pregnant women with IDA by 36 weeks of gestation. This underscores its importance and the need for stronger policies to prioritize IV iron therapy in maternal IDA management.

**Keywords:** iron, pregnant, seremban

### CS/T18

#### Integrating a Digital Communication Tool into a Community-Based Multidisciplinary Diabetes Education Program: Impact on Glycemic Control Among Patients in Labuan

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**Introduction:** Diabetes mellitus remains a major health concern in Malaysia, affecting 3.6 million adults (15.6%) in 2023. The Pharmacy Integrated Community Care (PICC) program, introduced in 2021, is a community-based, multidisciplinary

education program aimed at improving diabetes management through patient education and empowerment. This study evaluates the effectiveness of the PICC program in Labuan in 2023 and 2024 by comparing pre- and post-intervention HbA1c levels, with the integration of a WhatsApp communication platform in 2024.

**Methods:** This quasi-experimental, pre-post interventional study was conducted over two consecutive years. Eligible participants were diabetic patients with HbA1c 7% or above and under regular follow-up at a government primary care clinic in Labuan. The statistical analysis included only those who attended at least three of the four structured sessions: 8 in 2023 and 15 in 2024. In 2024, a WhatsApp group comprising doctors, pharmacists, and patients was introduced to enhance communication, facilitate information sharing, provide timely feedback, and support lifestyle modifications. HbA1c levels were measured at baseline and six months post-intervention.

**Results:** In 2024, 80% (12/15) of participants achieved HbA1c reduction compared to 25% (2/8) in 2023, representing a relative risk of 12.0 (95% CI [1.56, 92.3];  $p = .023$ , Fisher's exact test). Within the 2024 cohort, the mean HbA1c reduction was 1.27% (95% CI [0.17, 2.37];  $p = .026$ ), indicating significantly improved glycemic outcomes with the integration of a digital communication platform.

**Conclusion:** Integrating a digital communication platform into a multidisciplinary diabetes educational program significantly enhanced patient engagement and hence the glycemic control and warrants further exploration.

**Keywords:** diabetes mellitus, self-management, patient education, mobile health

### CS/T19

#### Knowledge and Practice of Menstrual Hygiene Management Among Secondary School Girls in Kuantan, Pahang

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**Introduction:** Menstrual hygiene management (MHM) is essential for adolescent health. However, data on MHM knowledge and practices among schoolgirls in Malaysia remain limited. This study aimed to assess the levels of knowledge and practice related to MHM and the associated factors among secondary school girls in Kuantan, Pahang.

**Methods:** A school-based, cross-sectional study was conducted from October 2023 to May 2024 among 715 students aged 13 to 16 in Kuantan. Multi-stage stratified random sampling was employed. Data were collected using a validated, self-administered Menstrual Health and Hygiene Questionnaire (MHHM-Q). Analysis was performed using SPSS, chi-square tests to explore the relationship between MHM knowledge and practice and bivariable and multivariable logistic regression to identify associated factors.

**Results:** Only 54.9% of students demonstrated good MHM knowledge, while 53.0% exhibited good practices. Factors significantly associated with good knowledge included being in Form 3 (AOR:1.81, 95% CI:1.17-2.82) and Form 4 (AOR:1.69, 95% CI:1.05-2.57), attending suburban schools

(AOR:0.20,95% CI:0.10–0.40), mothers with secondary education (AOR:0.50,95% CI:0.31–0.81), and experiencing menarche at a normal age (AOR:2.04,95% CI:1.03–4.04). Good MHM practice was significantly associated with being in Form 3 (AOR:0.49,95% CI:0.27–0.91), attending rural schools (AOR:2.18,95% CI:1.11–4.28), having older siblings (AOR:0.62,95% CI:0.38–0.99), fathers with secondary education (AOR: 2.53,95% CI:1.37–4.71) and no formal education/others (AOR: 2.15,95% CI:1.20–4.38), received premenstrual education (AOR:0.39,95% CI:0.18–0.87) and access to MHM facilities (AOR:6.10,95% CI:3.40–10.96). No significant association was found between knowledge and practice of MHM( $p=0.516$ ).

**Conclusion:** This study highlights a discrepancy between MHM knowledge and practice. While just over half demonstrated good knowledge and practices, no significant association was found between the two. Key factors, including education, family background, access to facilities, and premenstrual education, were significantly associated with better outcomes. These findings highlight the need for comprehensive school-based menstrual health programs and improved infrastructure to support adolescent girls' menstrual well-being.

**Keywords:** knowledge, practice, menstrual hygiene management

#### CS/T20

##### Knowledge regarding antimicrobial resistance and its associated factors among primary care doctors in Malaysia

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**Introduction:** Antimicrobial resistance (AMR) occurs when microorganisms become resistant to antimicrobial drugs, making infections harder to treat. This study assessed AMR knowledge among Malaysian primary care (PC) doctors and its associated factors.

**Methods:** A cross-sectional online survey was conducted using a 12-item questionnaire, which underwent content validation by an Infectious Disease Consultant. The questionnaire was distributed through social media platforms from December 2024 to February 2025. Bivariate and multiple linear regression (MLR) analyses were performed to identify factors associated with AMR knowledge, including demographics, AMR training, AMS programs, and National Antimicrobial Guideline awareness.

**Results:** Responses from 256 participants revealed a mean knowledge score of 9.9 (SD=1.69). While majority recognised that reducing antibiotic use (98%) prevents AMR, suboptimal antibiotic doses (98.8%) and incomplete antibiotic courses (98%) contributes to AMR, lower awareness was noted for antibiotic use in agriculture (42.6%) and animals (44.1%), as well as the impact on Malaysia's Gross Domestic Product (72.3%). Work experience was independently associated with AMR knowledge after adjusting for income, qualification, and presence of AMS in clinic ( $B=0.049$ , 95% CI=0.009,0.089,  $p=0.015$ ).

**Conclusion:** This study provides insights into knowledge on AMR among PC doctors, with nationwide representation and participation from public and private sectors. Although knowledge was good in some areas, gaps remain in recognising

AMR's multifactorial causes and economic implications. Working experience as the only predictor of AMR knowledge, emphasises the importance of practical and hands-on experience in acquiring good knowledge on AMR. It highlights the need for comprehensive education to address the gaps and reinforce practical experience in improving AMR knowledge.

**Keywords:** Antimicrobial resistance, primary care, knowledge

#### CS/T21

##### Knowledge, Attitude and Practice of Gestational Diabetes Mellitus Among Primary Care Doctors in Kuala Lumpur: A Cross-Sectional Study

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**Introduction:** Gestational diabetes mellitus (GDM) is a growing public health concern due to its increasing incidence and associated maternal and foetal complications. Despite the availability of national guidelines, GDM management in primary care remains suboptimal. To date, no published study in Malaysia has assessed the knowledge, attitude, and practice (KAP) of primary care doctors in managing GDM.

**Methods:** A cross-sectional study was conducted from February to March 2025 involving 294 primary care doctors across 16 government health clinics in Kuala Lumpur. A locally validated questionnaire (Cronbach's  $\alpha=0.64$ ; CVI= 0.98) was used to assess KAP. Data analysed using descriptive, univariate, and multivariate statistics.

**Results:** Out of 310 doctors approached, 294 responded (response rate: 94.8%). Mean scores were  $31.7\pm 3.7$  for knowledge (out of 45),  $29.4\pm 4.0$  for attitude (out of 35), and  $33.6\pm 2.8$  for practice (out of 43). Multivariable analysis showed Chinese ethnicity ( $\beta=1.455$ ,  $p=0.018$ ), Family Medicine Specialist (FMS) status ( $\beta=1.809$ ,  $p=0.004$ ), and Maternal and Child Health (MCH) clinic experience ( $\beta=3.472$ ,  $p<0.001$ ) significantly predicted knowledge. FMS status ( $\beta=2.606$ ,  $p<0.001$ ), MCH experience ( $\beta=3.063$ ,  $p<0.001$ ), and GDM training ( $\beta=1.213$ ,  $p<0.001$ ) predicted attitude. MCH experience alone predicted practice ( $\beta=3.060$ ,  $p<0.001$ ). A moderate positive correlation was observed between knowledge and practice ( $r=0.509$ ,  $p<0.001$ ).

**Conclusion:** Chinese ethnicity, FMS status, MCH experience, and GDM training were significant KAP predictors, with MCH experience being the strongest predictor of practice. This study provides a comprehensive KAP assessment among primary care doctors in urban Malaysia. Although limited by its cross-sectional design and self-reported data, this study provides valuable evidence to inform structured training to enhance GDM care in primary settings

**Keywords:** Gestational diabetes mellitus; primary care doctors; knowledge, attitude and practice

CS/T22

**Late Blooms: Exploring Factors Pursuing Pregnancy and Perception Risk of Pregnancy Among Women of Advanced Age at Primary Healthcare Clinic**

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**Introduction:** Advanced maternal age (AMA) refers to pregnancy at or beyond 40 years old. Association between AMA and negative outcomes of pregnancies have been reported. However, the factors pursuing pregnancy and perception risk of pregnancy among Malaysian women with advanced age were not explored.

**Methods:** This qualitative study employed a semi-structured interview design involving pregnant women aged 40 and above who attended antenatal care at Klinik Kesihatan Padang Rengas in 2022 and 2023. Participants were recruited through purposive sampling. Out of 25 eligible women, 11 consented to participate. One-on-one interviews were conducted in a private setting, with each session lasting approximately 30 to 45 minutes. Detailed notes were taken during and immediately after the interviews. The investigators reviewed the notes to identify recurring responses and group them into common themes.

**Results:** The mean age of respondents was 41.2 years. Half of them were housewives, and all had at least two previous pregnancies. Half were overweight or obese; one was hypertensive and one diabetic. 64% of the pregnancies (n=7) were unintended. Among those with intended pregnancies, the desire to expand their family was the main reason. Almost all respondents (10 out of 11) perceived their pregnancies as higher risk due to AMA. Their main concerns included hypertension (n=6), diabetes (n=4), chromosomal syndromes (n=2), congenital anomalies (n=2), and intrauterine death (n=1).

**Conclusion:** Although aware of higher risks, most AMA pregnancies were unintended. These findings highlight the need for improved family planning and antenatal counselling for older women in primary healthcare settings.

**Keywords:** Advanced maternal age, pregnancy risk

CS/T23

**Loneliness and Its Associated Factors Among Older Adults in Malaysian Primary Care Settings**

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**Introduction:** Loneliness is an emerging psychosocial concern in ageing populations and is associated with adverse health outcomes. Despite its significance, local data on loneliness among older adults in primary care remains limited.

**Methods:** This cross-sectional study was conducted across seven government primary care clinics in urban and rural areas of Negeri Sembilan. The objective was to determine the prevalence of loneliness and its association among older adults in Negeri Sembilan. A total of 332 community-dwelling older adults aged 60 years old and above were recruited via convenience sampling. Participants completed a structured questionnaire covering sociodemographic, health and psychosocial domains. Loneliness was measured using the validated 6-items Malay De Jong Gierveld Loneliness Scale. Chi-square tests were used to examine associations between loneliness categories and selected variables.

**Results:** Among 332 respondents, 14.2% reported moderate loneliness and 0.9% reported high loneliness. Significant associations were observed with marital status (p < 0.001), race (p= 0.009), perceived social support (p< 0.001), community engagement (p= 0.008), religious activity (p= 0.038), perceived mental health (p< 0.001), life satisfaction (p< 0.001), and stress level (p=0.002). Gender, education, living arrangement, polypharmacy, and perceived health were not significantly associated. Household income showed a borderline association (p=0.092).

**Conclusion:** Loneliness affects a significant minority of adults in primary care and is strongly associated with psychological and mental health factors. Screening for loneliness and integrating supportive social and psychological interventions into primary care is essential to promote health ageing.

**Keywords:** Loneliness, older adults, primary care

CS/T24

**Medication adherence and its associated factors among Type 2 Diabetes Mellitus (T2DM) patients attending primary care clinics in Rompin, Pahang**

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**Introduction:** Type 2 diabetes mellitus (T2DM) is a significant public health concern. Medication adherence is a crucial factor in achieving optimal glycaemic control among patients with type 2 diabetes mellitus (T2DM). This study aimed to assess the level of medication adherence and its associated factors among T2DM patients attending primary care clinic in Rompin, Pahang

**Methods:** A cross-sectional study was conducted in July 2024 involving nine primary care clinics in Rompin, Pahang. Data were collected using a structured questionnaire that included socio-demographic details, diabetes-related information, and the Malaysia Medication Adherence Tool (MyMAAT), a validated

instrument used to assess medication adherence. Data were analysed using SPSS version 25.

**Results:** A total of 280 respondents were recruited. The mean age was 54 years. The majority were Malay (n= 256, 91.4%), married (n= 217, 77.5%), and female (n= 181, 64.6%). A total of 61.4%(n= 172) had a MyMAAT score of less than 50, indicating moderate and poor adherence. Multiple logistic regression analysis showed that respondents with comorbidities (AOR=1.88, 95% CI: 1.03-3.44), those who did not engage in regular exercise (AOR=1.93, 95% CI: 1.15-3.24), and those with HbA1c>10% (AOR=2.48, 95% CI: 1.33-4.62) had significantly higher odds of moderate and poor medication adherence.

**Conclusion:** The prevalence of moderate and poor medication adherence among T2DM patients in the community remains high, especially among those with comorbidities, poor glycaemic control, and sedentary lifestyle. Targeted intervention, including patient education and lifestyle modifications, are crucial in improving adherence and reducing the burden of diabetes-related complications in the community.

**Keywords:** Diabetes Mellitus, Medication adherence, Primary health care

### CS/T25

#### Patients' experiences in using pictorial and text-based personalised asthma action plan

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**Introduction:** Personalised asthma action plans (PAAP) are important for guiding patients in self-managing asthma. We developed and implemented a pictorial-PAAP and compared its effectiveness with a text-based PAAP (text-PAAP) in a primary care-based trial (n=180). This paper highlights patients' experiences of using either pictorial-PAAP or text-PAAP.

**Methods:** A qualitative study was conducted in four primary care clinics. Patients with asthma were invited to join online focus group discussions. They were purposely selected for maximum variation in their sociodemographic characteristics and use of either type of PAAP throughout the 12-month trial. The interviews were audio-recorded, transcribed verbatim, and thematically analysed.

**Results:** Five focus group discussions (FGDs) with 21 patients were conducted. Four themes emerged from the analysis: 1) Perceived usefulness of PAAP in asthma self-management – agreed by both groups (pictorial- and text-PAAP); 2) Variation in continued use over time – some patients stopped using when they have memorised the PAAP or preferred their previous routine in asthma self-management; 3) Barriers and challenges using PAAP – these included inconvenience of carrying the card, poor understanding of the PAAP due to inadequate explanation

by healthcare professionals, and text-PAAP users found that it was time-consuming to read the text, and having difficulty remembering the content; 4) Advantages of pictorial PAAP – those who used it found visually attractiveness, easy symptom recognition and memory recall made it suitable for people with low literacy levels.

**Conclusion:** Both pictorial-PAAP and text-PAAP users found PAAP helpful in asthma self-management. Pictorial-PAAP was preferred as it was visually attractive and user friendly.

**Keywords:** personalised asthma action plan, asthma self-management, primary care

### CS/T26

#### Perception of Sexual Harassment Among Nursing and Medical Students at Health Campus, Universiti Sains Malaysia

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**Introduction:** Sexual harassment remains a serious issue in clinical environments, particularly affecting nursing and medical students who frequently interact with diverse individuals during clinical practice. Understanding students' perception is essential to develop preventive strategies and support mechanism. This study aims to assess the perception of sexual harassment among nursing and medical students during clinical practice at health campus and to examine associations with selected sociodemographic characteristics.

**Methods:** A cross sectional study was conducted among 210 nursing and medical students selected through disproportionate stratified random sampling. A validated questionnaire assessed perceptions related to causes, seriousness, reporting barriers, prevention methods, and necessity of awareness programs. Data were analyzed using SPSS version 26, with chi-square tests to identify the association.

**Results:** The majority of respondents (90.0%) had a positive perception of sexual harassment issues during clinical practice. Gender (X<sup>2</sup>=17.18, p=0.001) and program of study (X<sup>2</sup>=26.14, p=0.001) were significantly associated with perceptions of sexual harassment. However, there was no association was found with age (X<sup>2</sup>=4.41, p=0.110).

**Conclusion:** While most students exhibit a positive perception of sexual harassment, targeted interventions especially addressing gender-specific gaps and program-based are necessary to foster a safer clinical training environment. Awareness campaigns and prevention programs are strongly recommended.

**Keywords:** Sexual harassment, nursing, medica

### CS/T27

#### Predictors of Good Knowledge of Diabetic Foot Care among Primary Healthcare Providers in Northeastern Malaysia

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**Introduction:** Diabetic foot ulcers (DFU) represent one of the most debilitating complications of diabetes and contribute to significant morbidity, mortality, and healthcare costs. Despite the availability of national guidelines, there is a lack of data regarding diabetic foot care knowledge among primary healthcare providers in Malaysia, particularly in Kelantan.

**Methods:** A cross-sectional study involving 271 primary healthcare providers working in government health clinics across Kelantan utilised a validated self-administered questionnaire. Sample recruitment used convenience sampling. We categorized participants as having good knowledge if they scored above the mean knowledge score. Using multiple logistic regression, we assessed the association between the variables and good knowledge.

**Results:** The study revealed that 173 (63.8%) participants demonstrated good knowledge of diabetic foot care, with a mean score of 72.5 (SD=9.6). Multiple logistic regression analysis found the availability of the diabetic foot care guidelines at the clinic (AOR=1.91, 95% CI: 1.11- 3.29, p-value: 0.020) and attending wound care training (AOR=2.11, 95% CI: 1.10-4.05, p-value: 0.024) were significantly associated with good knowledge of diabetic foot care. There was no significant association with sociodemographic characteristics, duration of practice, current unit of practice, number of diabetic patients or DFU patients seen per week.

**Conclusion:** Despite most of the primary healthcare providers in Kelantan possessing a good level of knowledge on diabetic foot care, there remains room for improvement. It is essential to provide easily accessible guidelines, and a structured training program to enhance the skills of the primary healthcare providers in managing patients with DFUs.

**Keywords:** Diabetic foot, knowledge, primary healthcare providers

### CS/T28

#### Prevalence Of Female Sexual Dysfunction and Its Associated Factors Among Women with Type 2 Diabetes Mellitus and Chronic Kidney Disease in Hospital Pakar Universiti Sains Malaysia, Kelantan

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**Introduction:** Female sexual dysfunction (FSD) is common but under-recognized in women with type 2 diabetes mellitus (T2DM) and chronic kidney disease (CKD). This study aimed to determine the prevalence of FSD and its associated factors among women with T2DM and CKD in Hospital Pakar Universiti Sains Malaysia (HPUSM), Kelantan.

**Methods:** A cross-sectional study was conducted from July 2023 to July 2024, involving 290 women with T2DM and non-dialysis-dependent CKD. The sample size was determined based on a 95% confidence level and adjusted for a 10% non-response rate. Participants were selected using systematic random sampling, where every second eligible patient who fulfilled the inclusion criteria was recruited from the Family Medicine and Nephrology

clinics at HPUSM. Participants completed self-administered questionnaires covering sociodemographic and clinical characteristics, including the Hospital Anxiety and Depression Scale, Female Sexual Function Index-6, and Female Sexual Distress Scale-Revised. The data were analysed using bivariate and multivariate logistic regression analysis.

**Results:** The prevalence of FSD among women with T2DM and CKD was 76%. Multivariate analysis showed that women with no sexual activity had the highest odds of FSD (aOR: 22.70; 95% CI: 5.31-96.99; p < 0.001). Postmenopausal status (aOR: 5.05; 95% CI: 1.91-13.35; p = 0.001) and a household monthly income of less than RM 1000 (aOR: 3.23; 95% CI: 1.56-6.71; p = 0.002) were also significantly associated with FSD.

**Conclusion:** FSD is highly prevalent in women with T2DM and CKD. Routine assessment of sexual health should be integrated into clinical care to provide more comprehensive and patient-centered management.

**Keywords:** diabetes mellitus, chronic kidney disease, female sexual dysfunction

### CS/T29

#### Prevalence of Urinary Incontinence And Its Association with Quality Of Life Among Elderly Women Attending Government Health Clinics In Kuala Kuantan 1

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**Introduction:** Urinary incontinence (UI) is a common yet often underdiagnosed condition among elderly woman, impacting their quality of life (QOL). This cross-sectional study, conducted from January 2022 to December 2023, aimed to determine the prevalence of UI, its associated factors, and its impact on QOL among elderly women attending government health clinics in Kuala Kuantan1, Kuantan, Pahang.

**Methods:** A total of 250 women aged 60 and above participated. Data on sociodemographic characteristics, comorbidities, types and severity of UI, and QOL were collected using the International Consultation on Incontinence Questionnaire- Short Form (ICIQ UI SF) and the International Consultation on Incontinence Questionnaire Lower Urinary Tract Symptoms Quality Of Life (ICIQ LUTS QOL).

**Results:** The study found that 36% (90) of participants experienced UI, with stress (36.7%), mixed (35.6%), and urge (27.8%) as the most common types. The severity of UI was predominantly slight (62.2%), followed by moderate (30%) and severe (7.8%). Ethnicity was a significant risk factor, with Malay women having a higher likelihood of experiencing UI (OR 2.578, 95% CI 1.446-4.598, p=0.001). A 2-way ANOVA analysis demonstrated a significant association between the severity of UI and QOL (p<0.001), in which the more severe the UI, the poorer QOL. Respondents with mixed UI have the poorest QOL compared to urge and stress UI, regardless of the severity (p=0.011).

**Conclusion:** UI affects one-third of elderly women, with mixed incontinence having a notably negative impact on QOL. These

findings highlight the importance of screening and comprehensive management strategies for UI, especially for those with mixed incontinence.

**Keywords:** urinary incontinence, elderly, quality of life

### CS/T30

#### Stigma, Awareness, and Willingness: Factors Affecting Mental Health Dialogue with Healthcare Providers

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**Introduction:** Despite increasing awareness, mental health issues remain underdiscussed in clinical settings due to stigma, low awareness, and personal barriers. These challenges contribute to underdiagnosis and undertreatment, particularly in primary care. Understanding the determinants of patients' willingness to discuss mental health with healthcare providers (HCPs) is essential to improving early intervention and support. This study aimed to identify factors influencing patients' willingness to discuss mental health concerns with HCPs in an outpatient setting.

**Methods:** A cross-sectional study was conducted from January 3 to March 6, 2025, among patients attending Klinik Kesihatan Kulai and Klinik Kesihatan Kulai Besar. Systematic random sampling selected every 10th outpatient, and data were collected using a structured questionnaire. The Perceived Devaluation-Discrimination (PDD) Scale assessed self-stigma and perceived stigma. Chi-square tests identified associations between demographic and psychosocial factors and willingness to discuss mental health concerns.

**Results:** Of 115 participants, only 25.2% (n=29) had discussed mental health issues with their HCPs. Awareness of mental health services was significantly associated with a higher likelihood of discussion (OR=0.362, 95% CI:0.134-0.980, p = 0.041). Self-stigma indicators such as concealing concerns (OR=0.398, 95% CI:0.168-0.940, p = 0.033) and negative self-perception (OR=0.402, 95% CI:0.164-0.986, p = 0.043) were linked to reduced openness. Fear of being treated differently by HCPs (OR=0.344, 95% CI:0.144-0.822, p = 0.014) emerged as a key perceived stigma barrier. No significant associations were found with demographic factors.

**Conclusion:** Enhancing awareness and reducing stigma—especially fears of differential treatment—can promote open communication between patients and providers. Targeted interventions to normalize mental health dialogue in outpatient settings are crucial for improving access to care and patient outcomes.

**Keywords:** Mental health, patient-provider communication, self-stigma

### CS/T31

#### Stigma, Discrimination (S&D) and Knowledge, Attitudes, Practices (KAP) Towards PLHIV Among Healthcare Workers in Seremban Health Clinics: A Cross-Sectional Study

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**Introduction:** Stigma and discrimination (S&D) towards people living with HIV (PLHIV) remain persistent barriers to effective healthcare delivery. These negative perceptions and behaviours can affect the quality of care, discourage health-seeking behaviours, reduce adherence to treatment, and worsen health outcomes. Understanding the levels of S&D, as well as knowledge, attitudes, and practices (KAP) among healthcare workers (HCWs) is essential to designing targeted interventions. This study aimed to assess S&D and KAP towards PLHIV among HCWs in Seremban Health Clinic (SHC).

**Methods:** A cross-sectional study was conducted from 1 August 2024 to 31 August 2024 in SHC. A validated questionnaire provided by the Sector of HIV/STI/Hepatitis C, Ministry of Health Malaysia, was used to assess S&D and KAP. The S&D domains included infection control, facility environment, healthcare policies, and personal views towards PLHIV. Data were analysed using IBM SPSS V29. Associations were tested using Fisher's exact test analysis.

**Results:** The response rate was 77.8% (n = 179). Most respondents were nurses (28.5%), followed by medical officers (21.8%) and pharmacists (10.1%). The majority were female (86.6%) and Malay (79.9%), with most holding a diploma (35.5%) and having 11–20 years of experience (57%). A total of 76.1% of respondents demonstrated low S&D towards PLHIV. Most had high knowledge (93.3%), positive attitudes (89.9%), and positive practices (96.1%) towards PLHIV. Fisher's exact test showed that both education level (p = 0.01) and attitude (p = 0.04) were significantly associated with S&D towards PLHIV.

**Conclusion:** Overall, HCWs in SHC showed low levels of S&D and good KAP towards PLHIV. However, significant links between education level and attitude with S&D suggest the need for ongoing, targeted training to enhance equitable & supportive healthcare environment for PLHIV.

**Keywords:** Stigma, HIV, healthcare workers

### CS/T32

#### Strength in Adversity: Understanding Resilience Among Caregivers of Individuals with Down Syndrome in Kelantan

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**Introduction:** Caring for individuals with Down syndrome involves ongoing emotional, financial and social challenges. Resilience, the ability to adapt positively to adversity is essential for caregivers' well-being. This study explored the mean resilience score and its associated factors among caregivers of individuals with Down syndrome in Kelantan.

**Methods:** This cross-sectional study was conducted from September 2023 to April 2024 at four registered Down syndrome associations in Kelantan. Primary caregivers aged 18 and above were recruited during association-organised events. Data were collected using self-administered questionnaires covering sociodemographic and clinical profiles, resilience (Malay 14-item Resilience Scale), caregiver burden (Malay Zarit Burden Interview) and religious coping (Malay Brief Religious Coping Scale). Simple and multiple linear regression identified associated factors. Ethical approval was obtained from Universiti Sains Malaysia Human Research Ethics Committee (USM/JEPeM/KK/23030219).

**Results:** A total of 153 caregivers participated (66% female, 94.1% Malay, mean age 47.66 ± 12.2 years). Care recipients with Down syndrome ranged from 1 to 37 years. The mean resilience score was 74.25 ± 15.5, indicating moderate resilience. Caregiver burden was negatively associated with resilience ( $B = -0.24$ , 95% CI = -0.44, -0.33,  $p = 0.023$ ), while positive religious coping was positively associated ( $B = 1.84$ , 95% CI = 1.19, 2.49,  $p < 0.001$ ).

**Conclusion:** Caregivers demonstrated moderate resilience, with higher resilience associated with lower caregiver burden and greater use of positive religious coping strategies. However, causal inferences were limited by the cross-sectional design. Future longitudinal and interventional studies are needed to confirm these associations and guide the development of targeted caregiver support programmes.

**Keywords:** Down syndrome, resilience, caregiver burden

### CS/T33

#### **Strengthening The Role of Family Medicine Specialists (FMS) in Healthcare Transformation and Referral System Optimization**

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**Introduction:** Family Medicine Specialists (FMS) play a key role in delivering quality primary care services, yet current referral systems are fragmented, leading to delays, ED overcrowding, and inefficient resource use. The objective of the study is to identify strategic approaches to strengthen the role of FMS in the referral of patients requiring emergency care and hospital admission.

**Methods:** This is a retrospective observational descriptive study involving 980 referred patients from government health clinic to Emergency Department (ED) Hospital Sungai Buloh using

Klang Valley Ambulance Service (KVAS) from 1st January to 30th June 2023. The data include gender, age and final outcome in the ED either patients were admitted, discharged or discharged against medical advice (at own risk).

**Results:** Data shows 56.8% of patients were male, with a mean age of 28 years. 65.8% of FMS referrals warranted admission, supporting trust in FMS triage capability. Proposed strategies address gaps in triage accuracy, ambulance delays, and pre-hospital emergency care. Key interventions were designed based on a local referral outcome study and system analysis. These include: (1) fast-track admission for FMS-referred patients, (2) standardized national referral protocols, (3) ambulance prioritization based on clinical urgency, (4) structured emergency care training for FMS, and (5) digital e-Referral systems with teleconsultation features.

**Conclusion:** Empowering FMS through clear policies, structured training and the application of digital tools can improve care coordination, alleviate the burden on ED and support the goals of national healthcare transformation.

**Keywords:** Role of Family Medicine Specialists, referral to emergency department, healthcare transformation

### CS/T34

#### **The Fracture Triad: A Profile of Bone Health, Fall History and Treatment Patterns among Osteoporosis Patients in Fracture Liaison Service, Hospital Canselor Tuanku Muhriz**

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**Introduction:** Given the rising burden of osteoporosis and fragility fractures in the ageing population, this study aims to describe the bone profile, fall history and osteoporosis treatment patterns among patients with osteoporotic fractures.

**Methods:** Osteoporosis patients registered with the Fracture Liaison Service (FLS) at Hospital Canselor Tuanku Muhriz (HCTM) from 2022 to 2024 were included in this cross-sectional study. Sociodemographic and clinical data, including bone profile, history of falls and post-fracture treatment details were obtained from FLS records, medical files and the electronic medical records (EMR) system. Ethics approval and study permission were obtained from Ethics committee UKM, HCTM director and heads of orthopedic and FLS.

**Results:** Data from 293 patients were included in the analysis. The mean (SD) age was 76.3 (8.6) years, with most patients being female (74.1%) and Chinese (54.3%). A higher proportion had a low-risk Fracture Risk Assessment Tool (FRAX) score for major osteoporotic fractures (84.5%) but a high-risk score for hip fractures (75.4%). Recurrent falls were reported in 38.9%, with the hip being the most common fracture site (65.3%), followed by lower limb (10.6%) and spine (9.6%). Following fracture, 77.8% received anti-osteoporosis medication, mainly denosumab (71.5%) and to a lesser degree, bisphosphonates (16.7%). Calcium and vitamin D supplementation were widely prescribed, taken by 98.0% and 96.6% of patients respectively.

**Conclusion:** Most patients were elderly, female and had hip

fractures, with good rates of post-fracture osteoporosis treatment. However, the burden of recurrent falls remains high, suggesting the need for intergrated strategies that address both bone health and fall prevention.

**Keywords:** Osteoporosis, Fragility fracture, Fracture Liaison Service

### CS/T35

#### The Prevalence of Sarcopenia and Its Associated Risk Factors Among Elderly Patients Attending Physiotherapy Unit of Public Health Clinics in Perlis; A Cross-Sectional Study

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**Introduction:** Sarcopenia is a critical syndrome that diminishes the functional independence of older adults. However, its risk factors among elderly in Perlis are yet to be determined. This study examined the prevalence and associated risk factors of sarcopenia in elderly patients at health clinics in Perlis.

**Methods:** This cross-sectional study involved 406 older adults over 60 years old, recruited from nine physiotherapy unit of public health clinic in Perlis through convenience sampling. Participants were assessed using SARC-F questionnaire and calf circumference measurements as preliminary screening of sarcopenia. Detailed measurements comprised anthropometric data, skeletal muscle index and body composition via bioelectrical impedance analysis (BIA). Functional parameters were assessed using handgrip strength with a dynamometer and timed up-to-go tests. Sarcopenia diagnosis adhered to the Asian Working Group of Sarcopenia (AWGS) 2020. Nutritional status was determined using the Mini-Nutritional Assessment (MNA). Logistic regression was used to determine the factors associated with sarcopenia.

**Results:** Prevalence of sarcopenia was 46.5% with higher prevalence in women (36.7%) compared to men (31.2%). The mean age of women to have sarcopenia (70.3+<sub>6.5</sub> years old) was higher than men (65.3+<sub>5.8</sub> years old) ( $p<0.05$ ). Multivariate logistic regression analysis revealed that lower BMI of  $<18.5\text{kg}/\text{m}^2$  (OR=8.75,95% CI:4.44-17.39, $P<0.001$ ), MNA score of  $<24$  (OR=1.12,95% CI:1.02-1.22, $p=0.014$ ) and reduced percentage body fat (OR=2.75,95% CI:1.31-2.33, $P<0.001$ ) were independently associated with an increased risk of sarcopenia.

**Conclusion:** These findings highlight the critical need for proactive screening and targeted intervention in clinical practice for older adults particularly those with low BMI, poor nutritional status and reduced body fat to mitigate the impact of sarcopenia.

**Keywords:** Sarcopenia, Risk Factors, Health Clinics

### CS/T36

#### Childhood Stunting: Prevalence and Associated Factors in Orang Asli Communities

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**Introduction:** Orang Asli, the indigenous population of Peninsular Malaysia, face persistent health disparities. This study aimed to assess the nutritional status of Orang Asli children under five years old across Peninsular Malaysia and identify factors associated with stunting.

**Methods:** This cross-sectional study utilized secondary data from the Orang Asli Health Survey 2022, a nationwide community-based survey. Anthropometric measurements of 1,955 children were analyzed using WHO growth standards to determine the prevalence of underweight, wasting, stunting, and small head circumference. Binomial logistic regression was employed to identify associations between stunting and socio-demographic factors, household characteristics, child morbidities, vaccination status, and other nutritional indicators, with complex sample analysis and weighting applied for tribal-level representativeness.

**Results:** The prevalence of low birth weight was 24.4%. Overall, the malnutrition rates were high, with 32.9% underweight, 12.3% wasted, and 43.8% stunted. Stunting prevalence was significantly higher in the Negrito tribe [AOR=2.62,95%CI (1.25,5.47), $p=0.011$ ]. Low birth weight [AOR=2.09,95%CI (1.46,2.99), $p<0.001$ ] and being underweight [AOR=8.47,95%CI (5.90,12.17),  $p<0.001$ ] were significant predictors of stunting in the multivariable analysis. Socio-demographic factors, household characteristics, child morbidities, and vaccination status were not significantly associated with stunting.

**Conclusion:** Stunting is a crucial public health problem among Orang Asli children in Peninsular Malaysia, exceeding national and global averages. Low birth weight and underweight are key risk factors. The significantly higher stunting rate in the Negrito tribe warrants further investigation. Targeted nutritional interventions, particularly focusing on early childhood nutrition and addressing underweight, along with culturally sensitive health programs and multi-level stakeholder initiatives, are urgently needed to improve the nutritional well-being of this vulnerable community.

**Keywords:** Indigenous children, stunting, nutritional status

### CS/T37

#### Leveraging Machine Learning to Predict Adolescent Obesity: Findings from the Malaysian Adolescent Health Survey 2022

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**Introduction:** Adolescent obesity is an escalating public health concern, associated with increased risk of cardiovascular diseases and mental health disorders. In Malaysia, the prevalence of obesity among adolescents remains high, demanding improved methods of early detection and intervention. This study aimed to apply machine learning (ML) algorithms to predict adolescent obesity and evaluate the performance of different ML models in identifying at-risk individuals.

**Methods:** Data were obtained from the National Health and Morbidity Survey (NHMS) – Adolescent Health Survey 2022, comprising of 33,523 participants. Twenty variables spanning demographic, psychosocial, dietary, behavioral, and violence domains were analyzed. ML models tested included Decision Tree, Random Forest, Support Vector Machine (SVM), Naive Bayes, and Logistic Regression. Missing data were imputed using the K-Nearest Neighbors (KNN) method. Models were evaluated using accuracy, precision, recall, F1-score, and AUC-ROC. Analyses were conducted using R and Weka software.

**Results:** The Random Forest model outperformed others, achieving the highest AUC (0.951), accuracy (88.5%), precision (88.7%), recall (88.5%), and F1-score (88.5%). Feature importance analysis using Information Gain revealed body weight perception, parental marital status and soft drink consumption as the most influential predictors.

**Conclusion:** Random Forest is effective for early prediction of adolescent obesity. Its integration into school-based screenings or primary care could enable tailored interventions, such as targeted counseling for at-risk youths. Applying ML in screening practices enhances risk stratification and personalized prevention. While causality cannot be inferred due to the cross-sectional design, the model's high accuracy suggests practical value. Future external validation is essential to assess its generalizability.

**Keywords:** Obesity, Adolescent, Machine Learning

### Preclinical Research

#### PR1

#### Prevalence and Associated factors of Anemia at 36 Weeks' Gestation Among Antenatal Mothers in Batu Pahat District: A Cross-Sectional Study

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**Introduction:** Anemia in pregnancy remains a major public health concern in Malaysia, with implications for both fetal and maternal outcomes. Understanding its prevalence and contributing factors is vital for improving antenatal care in the primary care setting. This study aimed to determine the prevalence of anemia and its predictors among antenatal mothers at 36 weeks's gestation attending primary health clinics in Batu Pahat.

**Methods:** A cross-sectional study was conducted among 483 antenatal mothers attending seven government health clinic in Batu Pahat, Johor. Anemia was defined as hemoglobin < 11.0g/dL at 36 weeks of gestation. Data were collected using a validated, pre-tested, interview-guided questionnaire comprising sociodemographic details, obstetric history, and anemia status. Data were analyzed using SPSS, including descriptive and logistic regression.

**Results:** Anemia was observed in 113 mothers (23.4%), with 17.2% presenting with mild anemia and 6.2% with moderate anemia. The highest prevalence was recorded during the second trimester (45.2%). Mothers with interpregnancy intervals less than two years showed a higher prevalence of anemia (13.3%), compared to those with longer intervals (10.2%). Multivariate analysis identified significant predictors of anemia: no treatment initiation (AOR 4.738; 95% CI : 2.637-8.515), and non-compliance with treatment (AOR 7.832; 95% CI : 2.234-27.451). Initiation of iron prophylaxis emerged as a protective factor (AOR 0.383; 95% CI: 0.205-0.714).

**Conclusion:** Anemia remains prevalent among antenatal mothers at term, especially among those with late treatment initiation and poor compliance. Primary care strategies should prioritize early screening, timely iron supplementation and treatment, and strengthened counseling to improve adherence, hence reducing anemia-related complications.

**Keywords:** anemia, pregnancy, prevalence

### Clinical Case Report / Case Series

#### CCR / CS1

#### From Hero to Helpless: A Case Report of Frontotemporal Dementia in a Young Firefighter

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**Introduction:** Frontotemporal dementia (FTD) is a neurodegenerative disorder characterized by behavioural changes, language impairment, and cognitive decline. While it is the leading cause of young-onset dementia, onset before age of 40 is rare and often misdiagnosed due to nonspecific early symptoms. Timely recognition is critical for management and support.

**Case Presentation:** A 37-year-old male firefighter presented with forgetfulness and difficulty performing routine work tasks. Initially diagnosed with major depressive disorder (MDD), his condition failed to improve with antidepressant therapy. Over time, he developed emotional withdrawal, compulsive behaviours, disinhibition, and progressive aphasia. Collateral

history from his wife and colleagues revealed significant personality changes, poor judgement, and social disengagement. MRI showed frontal and temporal lobe atrophy, and PET scan revealed fluorodeoxyglucose hypometabolism at the bifrontal and left parietal and temporal cortices, leading to a diagnosis of FTD. Despite symptomatic treatment, the patient rapidly declined, becoming dependent on daily activities and requiring full nursing care within two years of symptom onset.

**Discussion:** This case report aims to raise awareness among primary care providers to consider frontotemporal dementia in young adults presenting with cognitive and behavioural symptoms. It emphasizes the importance of comprehensive history-taking for early diagnosis and outlines a management plan focused on symptomatic treatment, caregiver education, and long-term care planning to optimize patient and caregiver support.

**Conclusion:** FTD should be considered in young patients presenting with progressive cognitive and behavioural changes. Timely diagnosis, caregiver counselling, and social support are essential in mitigating the burden of early-onset dementia on patients and their families.

**Keywords:** frontotemporal dementia, young

#### CCR / CS2

##### A Case Report Of Familial Syringoma: Benign, Yet A Serious Cosmetic Concern

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**Introduction:** Syringomas are benign tumours originating from eccrine sweat ducts, typically presenting as small, firm papules in the peri-orbital region. While common in adolescent females, familial cases are rare and may pose diagnostic challenges, especially when lesions appear in atypical locations.

**Case Presentation:** A 14-year-old Chinese female presented with multiple small whitish to yellowish papules on the anterior neck, persisting for five years. The lesions were stable, asymptomatic and without overlying erythema. No similar lesions elsewhere. Her father had similar neck lesions, while her mother and elder brother were unaffected. Clinical examination confirmed multiple painless yellowish papules on the anterior neck. Given the patient's cosmetic concerns, topical tretinoin was prescribed. At a three-month follow-up, mild flattening of the lesions were observed, no significant adverse effects.

**Discussion:** Recognising syringomas is essential due to their benign nature and potential cosmetic concerns. In Klinik Kesihatan, where treatment options may be limited, topical tretinoin is often utilised. Studies have reported moderate improvement in patients with eruptive syringomas treated with topical tretinoin, observing lesion flattening. However, responses vary; some patients have no improvement. Potential side effects, such as skin irritation and erythema, should be discussed prior to treatment. As syringomas are benign, treatment focuses on cosmetic improvement. Other options include laser therapy, electrosurgery, cryotherapy and chemical peel.

**Conclusion:** In Klinik Kesihatan, clinicians should focus on

accurate diagnosis and reassuring patients about the benign nature of the condition. While topical tretinoin can offer cosmetic benefits, its efficacy varies. Comprehensive counselling is essential to ensure realistic expectations and understanding of treatment limitations.

**Keywords:** Syringoma; Eccrine Glands; Skin Neoplasms

#### CCR / CS3

##### A Case Report Of Osteoid Osteoma In A Female Patient; An Uncommon Entity In Primary Care Setting

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**Introduction:** Osteoid osteoma is a benign bone neoplasm characterized by osteogenic bone lesion and typically affect long bones. Despite being the third most common benign bone neoplasm, this condition is rarely encountered in primary care setting, often leading to missed diagnoses and inappropriate management.

**Case Presentation:** a 34-year-old female with no significant past medical history came in complaining of left thigh pain for the past 6 months. Pain describe to be at the distal part, throbbing in nature, worsened over time, however responding well to non-steroidal anti inflammatory drugs. It really affects her quality of life as the pain is more intense during the night. She also noticed a swelling at distal part of her thigh. Xray showed a periosteal reaction over the swelling site. MRI and CT scan further show a well-defined nidus at anterior cortex of distal third left femur. The clinical presentation and radiological findings are in keeping with osteoid osteoma

**Discussion:** This case report represents the uncommon presentation of osteoid osteoma in female and does not align with the typical affected age, leading to lesser index of suspicion. As osteoid osteoma is an osteoblastic bone tumor, there is ongoing new bone formation and remodeling. Characteristic of osteoid osteoma is the presence of nidus within the new formed bone. Osteoid osteoma typically respond well to NSAIDs and treatment mainly conservative

**Conclusion:** Although MRI and CT Scan is the diagnostic tool for osteoid osteoma, we at primary care plays a crucial role in assessing the initial presentation, leading to a timely diagnosis.

**Keywords:** Benign bone neoplasm, osteoid osteoma, female

#### CCR / CS4

##### A Case Report of Severe Preeclampsia with HELLP Syndrome in a Woman with Non- Functional Adrenal Adenoma

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**Introduction:** Non-functional adrenal adenomas are usually considered benign, their potential impact on pregnancy-related hypertension is not well understood. We present a case of a 39-year-old pregnant women with a non-functional left adrenal

adenoma, who developed severe pre-eclampsia with HELLP syndrome at 22 weeks of gestation, which ultimately resulted in intrauterine fetal loss.

**Case Presentation:** A 39-year-old primigravida known case of non-functional left adrenal adenoma presented with hypertension at 19 weeks of gestation, requiring multiple hospitalizations for blood pressure stabilization. Investigations revealed significant proteinuria but normal full blood count, renal profile and liver function. Autoimmune and endocrine workups were all within normal limits. Despite maximum doses of three antihypertensive medications, her blood pressure remained difficult to control. At 22 weeks of gestation, she presented with severe epistaxis and was diagnosed with severe pre-eclampsia with HELLP syndrome. Due to intrauterine fetal demise, a hysterotomy was performed. Intraoperative and histopathological findings confirmed placenta malperfusion with calcifications. Postpartum, her blood pressure normalized and all antihypertensive medications were discontinued.

**Discussion:** Functioning adrenal adenoma which produces excessive hormones increases the risk of hypertension and pre-eclampsia. Clinicians should monitor the emergence of hormonal activity in adrenal lesions that were previously thought to be non-functional. Although the adenoma in this case remained non-functional, its potential role in pregnancy-related hypertension cannot be entirely excluded and warrants further investigation.

**Conclusion:** This case highlights the rare but critical link between adrenal adenoma and severe pre-eclampsia. Early diagnosis and a multidisciplinary approach are crucial for optimising maternal and fetal outcomes in such complex case.

**Keywords:** Adrenocortical Adenoma, pre-eclampsia, HELLP syndrome

### CCR / CS5

#### **A Decade, Old Scar, and a Hidden Soft Tissue Sarcoma: A Case That Challenges Timely Diagnosis at Primary Care**

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**Introduction:** Soft tissue sarcoma, although one of the rarest malignancies in Malaysia, its known for its poor prognosis and tendency to present in advanced stages. Often posing a diagnostic challenge to clinician.

**Case Presentation:** A 57-year-old female presented with swelling over the posterior aspect of her left calf, located at the same site as a previous surgical operation performed over a decade ago. The swelling began as a small mass on the old surgical scar and had progressively increased in size. No radiographic imaging and histological evaluation were offered at that time. Local examination revealed an exophytic, fungating mass over the posterior aspect of the left calf, measuring approximately 8cm x 6cm x 4cm. A plain radiograph (Xray) of the left calf demonstrated calcified soft tissue mass at posterior calf region, along with tibial bone lesion. Magnetic resonance imaging (MRI) showed lobulated, enhancing soft tissue mass located at proximal posterior calf measuring 3.2 x 4.3 x 7.2cm. A focal enhancing

lesion measuring 1.1x2.0 cm was noted at the lateral aspect of tibial plateau, possibly representing bone metastasis.

**Discussion:** Soft tissue sarcoma (STS) are a heterogenous group of rare malignant tumor. Despite advancements in diagnostic and therapeutic modalities, the prognosis remain guarded, with 5-year survival rates.

**Conclusion:** A high index of clinical suspicion for soft tissue sarcoma is essential when evaluating lesion at previous sites of trauma or surgery, as early referral and diagnosis allows for more effective treatment.

**Keywords:** Soft tissue sarcomas, rarest malignancies, Malaysia.

### CCR / CS6

#### **A Fatal Case of Intracranial Bleeding in a Home-Born Infant: Is Vitamin K Deficiency or Non-Accidental Injury the Cause?**

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**Introduction:** In Sabah, home births among the undocumented immigrant population drive preventable morbidity and mortality in children under five and mothers, significantly exacerbating the public health burden.

**Case Presentation:** One weekend, a one-month-and-nine-day-old infant was brought deceased to a suburban health clinic by her grandmother. The on-call officer promptly attended to the child, but examination revealed no signs of life and unrecordable vital signs. A bruise on the back of the right lower limb raised concerns of possible non-accidental injury (NAI). After thirty minutes of cardiopulmonary resuscitation (CPR), the child was pronounced dead. A police report was filed, and the case was referred to the forensic team for postmortem examination. Subsequent inquiry revealed the child was home-delivered and had received no immunizations. Postmortem results indicated late-onset Vitamin K Deficiency Bleeding (VKDB).

**Discussion:** Vitamin K deficiency bleeding, a preventable condition, presents in three forms: early, classical, and late onset. Its common manifestation, excessive bleeding, can lead to significant morbidity and mortality if left untreated. Administering vitamin K to newborns is essential for preventing VKDB, underscoring the urgent need for timely intervention to mitigate severe complications.

**Conclusion:** This case is a preventable death from VKDB, exacerbated by a home birth and absent immunizations, brutally exposes critical healthcare exclusion for Sabah's undocumented immigrants. Urgent, coordinated action from all stakeholders is imperative to bridge these gaps, ensuring vulnerable populations receive vital neonatal care, including essential interventions like vitamin K prophylaxis, and comprehensive health services, thereby averting future tragedies.

**Keywords:** Vitamin K deficiency bleeding, infant, child abuse

## CCR / CS7

### A Pregnant Woman Diagnosed with HIV - A Case of False Positive or Elite Controller?

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**Introduction:** HIV diagnosis during pregnancy presents unique challenges due to its implications for maternal and fetal health. While confirmatory HIV tests are typically definitive, undetectable viral loads before treatment warrant further evaluation for rare conditions like elite controller status or false positives.

**Case Presentation:** We present the case of a 41-year-old G4P3 woman diagnosed with HIV at 23 weeks of gestation. The initial diagnosis was based on reactive HIV antigen/antibody screening and two positive confirmatory HIV PA tests. The patient was asymptomatic with no known risk factors, and her spouse tested HIV-negative twice, three months apart. The undetectable viral load before starting HAART treatment raised suspicion regarding the possibility of an elite controller or a false positive result. HAART was begun to prevent vertical transmission. However, subsequent follow-up tests continued to show undetectable viral load and discordant serological results, prompting reconsideration of the diagnosis.

**Discussion:** Two possibilities were considered: elite controller status and false-positive diagnosis. Her high CD4 count and undetectable viral load supported the former. However, the absence of symptoms, low epidemiological risk, and discordant results raised concern for a false positive. Immunological changes in pregnancy may affect test performance. Following the delivery, a multidisciplinary evaluation, including an Infectious Disease consultation and repeated undetectable HIV viral load results, supported a diagnosis of false-positive HIV. Antiretroviral therapy was discontinued postpartum.

**Conclusion:** This case highlights the diagnostic complexity of HIV in pregnancy. Inconsistent serological results and persistently negative viral loads require a multidisciplinary, cautious approach to avoid unnecessary lifelong treatment and ensure maternal and fetal safety.

**Keywords:** Elite controller, Pregnant, False-Positive HIV

## CCR / CS8

### A Primary Care Wake Up Call: How a Simple Examination Could Have Change Everything

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**Introduction:** Thorough physical examination remains a cornerstone of primary care, particularly in pediatric patients with nonspecific symptoms. This case highlights how a missed basic exam delayed the detection of a significant pathology.

**Case Presentation:** A 5-year-old boy initially presented to a primary care clinic with postprandial vomiting and lethargy, without abdominal complaints. He was seen twice

and provisionally diagnosed with an upper respiratory tract infection, then referred to a hospital where he was treated for bronchopneumonia. No abdominal examination was performed during any of these visits. After discharge, the child remained symptomatic with persistent vomiting and progressive abdominal distension. On his third primary care visit, a comprehensive physical examination—performed for the first time—revealed a firm, non-tender abdominal mass measuring approximately 10 cm × 15 cm. Imaging and referral confirmed the presence of a retroperitoneal cystic tumor. The delay in recognizing the mass reflected a missed opportunity for earlier diagnosis and timely management.

**Discussion:** This case underscores the dangers of diagnostic anchoring and clinical assumptions. Even in the absence of gastrointestinal symptoms, children with persistent nonspecific complaints warrant full physical assessments, including abdominal examinations.

**Conclusion:** Primary care providers must remain vigilant. A simple abdominal exam revealed a large mass that had gone unnoticed. Comprehensive examinations are essential to improving pediatric outcomes.

**Keywords:** Primary Health Care, Child, Abdominal Neoplasms

## CCR / CS9

### A Primary Care Wake-Up Call: Case Report of Ocular Syphilis in Advanced HIV Infection

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**Introduction:** Ocular syphilis is a rare but serious manifestation of *Treponema pallidum* infection that can cause permanent vision loss, particularly in immunocompromised individuals. This case highlights the challenges of diagnosis and managing ocular syphilis in a patient with AIDS.

**Case Presentation:** Initially presenting with maculopapular rashes, a 33-year-old man was subsequently diagnosed with AIDS (CD4 91, viral load 95,300) and secondary syphilis (RPR 1:64). He received intramuscular benzathine penicillin 2.4 MIU and commenced antiretroviral therapy. Although his RPR titer initially declined fourfold to 1:8, it later rebounded to 1:32, prompting re-treatment. Twenty months after symptom onset, he disclosed a one-year history of progressive central vision loss in the right eye. Visual acuity was 6/9 bilaterally, with no neurological deficits. He was referred urgently to ophthalmology but did not attend, only discovered four months later. By then, his right eye vision had deteriorated to light perception, with a positive relative afferent pupillary defect and retinal fibrosis involving the optic disc and macula. He declined admission and intravenous penicillin for suspected neurosyphilis, choosing traditional remedies, which led to irreversible blindness.

**Discussion:** This case highlights how HIV co-infection complicates syphilis, causing atypical, aggressive presentations. Delayed reporting, poor follow-up, and treatment refusal led to vision loss. In HIV-positive patients, ocular syphilis often involves the posterior segment and requires prompt diagnosis with systemic therapy.

**Conclusion:** Early recognition, visual symptom screening, and prompt ophthalmology referral are vital. Addressing stigma and improving patient education enhance adherence. Syphilis's systemic mimicry, including ocular signs, demands heightened clinical suspicion in primary care beyond dermatologic presentations.

**Keywords:** Syphilis, Ocular; HIV infections; Vision Disorders

### CCR / CS10

#### **A Silent Battle: Navigating Tuberculosis Treatment in an Undocumented Pregnant Woman in Sabah - The Intersection of Maternal Health, Tuberculosis and Migration**

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**Introduction:** Pregnancy increases tuberculosis (TB) risk, posing serious maternal and neonatal threats. About 200,00 women are affected annually. This case highlights TB management challenges in undocumented pregnant women in Sabah, where healthcare access is limited.

**Case Presentation:** 17 years old undocumented primigravida was diagnosed with pulmonary TB at 28 weeks gestation after presenting with respiratory symptoms and fever. She had no prior antenatal care due to financial constraints. Anti-TB therapy (ATT) and antenatal care were initiated during admission. Post discharge, she defaulted on directly observed therapy (DOT) and clinic visit, citing financial hardship and fear of deportation. Due to cost barriers, she delivered at home. After 90 days of intensive phase ATT, she remained acid base bacilli (AFB) positive, although no drug resistances were detected. Postpartum day25, a health inspector assisted in bringing the mother and infant to the clinic for follow up. The infant began TB preventive treatment (TPT) and the mother declined inpatient DOT due to lack of caregiving support.

**Discussion:** This case highlights the medical, ethical and systemic barriers to tuberculosis treatment in undocumented pregnant women in Sabah. Financial hardship, fear of deportation and limited health literacy led to delayed diagnosis, treatment non-adherences and home delivery, increasing maternal and neonatal risk. Addressing integrated care in TB, community outreach and policy driven protection. Investing in health system, research-backed planning and legal safeguard will enhance adherences and outcomes.

**Conclusion:** Implementing a migrant sensitive healthcare framework and robust social support is essential to improve TB treatment adherences and optimization in the high-risk population.

**Keywords:** Tuberculosis, Pregnancy, Undocumented migrant

### CCR / CS10

#### **A Surprising Revelation: Neck Swelling Unveils Nasopharyngeal Carcinoma in A Young Adult**

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**Introduction:** Nasopharyngeal carcinoma (NPC) is a malignant tumor originating from the epithelial lining of the nasopharynx. While globally rare, it is prevalent in Southeast Asia and typically affects males in their fifth to sixth decades of life. Diagnosis can be challenging due to non-specific symptoms and resemblance to benign conditions.

**Case Presentation:** We report the case of a 20-year-old Malay female with a three-month history of painful left-sided neck swelling, preceded by unprovoked epistaxis in December 2024. She also has left ear fullness and hearing loss. Examination revealed a large, firm and tender left lateral cervical mass. Otological assessment showed left otitis media with effusion. Contrast-enhanced CT scan demonstrated multiple enlarged cervical lymph nodes at levels II-IV, without distance metastasis. Nasopharyngoscopic biopsy confirmed undifferentiated nasopharyngeal carcinoma (WHO type IIb). The patient was diagnosed with Stage III NPC (T1N2M0). As of June 2025, she has completed two of four planned chemotherapy cycles and will proceed with seven weeks of radiotherapy.

**Discussion:** This case is notable due to its atypical presentation in a young female, deviating from the typical epidemiological pattern of NPC which is characterized by male predominance (male-to-female ratio of 2-3:1) and onset in middle age. It highlights the importance of considering NPC in young adults presenting with persistent neck swelling, regardless of demographic expectations. Early imaging and nasopharyngoscopy with biopsy are critical for accurate diagnosis and staging, enabling timely intervention.

**Conclusion:** Nasopharyngeal carcinoma should remain as heightened clinical suspicion in young adults with lateral neck masses. Prompt recognition and thorough evaluation can significantly improve outcomes.

**Keywords:** Nasopharyngeal carcinoma, cervical lymphadenopathy, young adult

### CCR / CS12

#### **An Atypical Presentation of Miller Fisher Syndrome with Unilateral Cranial Nerves and Bulbar Involvement**

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**Introduction:** Miller Fisher Syndrome (MFS), a rare subtype of Guillain-Barre Syndrome, is most often characterised by the triad of ophthalmoplegia, ataxia and areflexia. However, atypical presentations, especially involving asymmetrical cranial nerves and bulbar involvement may pose diagnostic challenges and delay appropriate treatment.

**Case Presentation:** We present the case of a 44-year-old female who developed a gradual progression of neurological symptoms. She developed symptoms of diplopia, hoarseness of voice, dysphagia, gait instability and subsequently developed right-sided facial weakness. Neurological examination revealed left abducens nerve palsy, bulbar dysfunction, right lower motor neuron facial paresis, generalised areflexia and ataxia. She also reported distal paraesthesia in all four limbs. The patient was admitted and managed conservatively without immunotherapy. Over the

following weeks, her symptoms gradually resolved, with near-complete recovery apart from mild residual facial asymmetry.

**Discussion:** Miller Fisher Syndrome typically presents with ophthalmoplegia, ataxia and areflexia, however this case had an atypical presentation with unilateral cranial nerve palsies and bulbar involvement. This may mimic other neurological conditions, potentially delaying diagnosis. The patient was managed conservatively due to late recognition, and the disease followed a self-limiting course. It remains uncertain whether earlier diagnosis and immunotherapy might have prevented progression. This highlights the need for greater awareness of atypical MFS presentations, especially in primary care, to guide timely interventions.

**Conclusion:** This case highlights an atypical manifestation of Miller Fisher Syndrome with unilateral cranial nerve involvement and bulbar features. Role of primary care in early recognition of such non-classical presentations is essential for improved outcomes and may prevent further progression of disease.

**Keywords:** Miller Fisher Syndrome; Guillain-Barré Syndrome; Ophthalmoplegia

#### CCR / CS13

##### An unusual presentation of Chronic Myeloid Leukaemia with Myeloid Sarcoma: A Case Report

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**Introduction:** Primary care plays a crucial role in early disease detection through precise assessment and timely referral, both essential for accurate diagnosis and effective treatment. The aim of this report is to present a rare and atypical manifestation of Chronic Myeloid Leukaemia (CML) with Myeloid Sarcoma (MS), highlighting the importance of early recognition, thorough evaluation, and timely referral to hospital specialists, ensuring patients receive the best possible care.

**Case Presentation:** This case report describes a 42-year-old female who presented to a primary care clinic with a one-month history of right shoulder pain. Despite multiple consultations and previous symptomatic treatment, her symptoms persisted without improvement. She had been reassured on several occasions that the pain was likely due to overexertion. The patient appeared mildly pale but was not jaundiced. Although there was no swelling of the right shoulder, range of motion was limited due to pain. A firm, non-tender, non-mobile swelling was noted at the head of the right clavicle. Abdominal examination revealed hepatosplenomegaly. Subsequent investigations confirmed a diagnosis of CML with MS, a rare extramedullary tumour composed of myeloid blasts.

**Discussion:** MS is a rare but significant complication associated with CML. It can present with vague and undifferentiated symptoms, making it challenging to diagnose as these signs are

often attributed to more common conditions.

**Conclusion:** This report highlights the clinical presentation, importance of early detection and timely referral, plus treatment approach for this rare condition. This case also underscores an important principle in primary care: patients presenting with seemingly benign complaints may herald serious underlying conditions.

**Keywords:** Chronic Myeloid Leukaemia, Myeloid Sarcoma, Chloroma

#### CCR / CS14

##### Beyond Polio: A Case of Scurvy Mimicking Acute Flaccid Paralysis in a Child with Autism Spectrum Disorder

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**Introduction:** Acute flaccid paralysis (AFP) surveillance remains a cornerstone in detecting sudden limb weakness among children. While poliomyelitis is a primary concern, the clinical approach must include a wide range of differential diagnoses. Nutritional deficiency such as scurvy can present with symptoms that mimic neurological conditions. This is especially relevant in children with Autism Spectrum Disorder (ASD), who are at increased risk due to restrictive dietary habits.

**Case Presentation:** We report a case involving a 7-year-old boy with ASD and speech delay who presented with a one-week history of progressive lower limb weakness and refusal to ambulate following an upper respiratory tract infection. Neurological examination revealed hypotonia with preserved reflexes. The case was notified under AFP surveillance and arranged for admission. Basic laboratory investigations showed mild microcytic anaemia, with normal creatinine kinase and electrolytes. Imaging and stool virology were unremarkable. A focused dietary history revealed minimal intake of fruits and vegetables. In light of this, empirical treatment with parenteral vitamin supplementation was initiated and continued orally upon discharge. The patient exhibited gradual functional improvement over the subsequent months, with restoration of independent ambulation noted during outpatient follow-up.

**Discussion:** Scurvy is an uncommon but important AFP mimic, particularly in children with neurodevelopmental conditions and selective eating patterns. Musculoskeletal symptoms may resemble neuropathies or myopathies, delaying diagnosis without careful nutritional assessment.

**Conclusion:** This case highlights the need for a holistic approach in AFP assessment. Recognising atypical presentations, such as scurvy, is crucial in avoiding diagnostic delays and ensuring timely, intervention particularly in vulnerable paediatric populations.

**Keywords:** Acute flaccid paralysis, Autism, scurvy

**CCR / CS15****Beyond the Usual Migraine: Typical Presentations yet Neurological Emergencies**

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**Introduction:** Headaches are seen commonly in both primary and acute care settings. Most of them are primary headache disorders, such as migraine or tension-type headaches, which are typically diagnosed based on clinical assessment rather than imaging or tests. The lack of definitive diagnostics test can make accurate diagnosis challenging in primary care, so it is crucial to first rule out potentially life threatening conditions like neurological emergencies

**Case Presentation:** A 39-year-old lady, Para 1+1 with no medical illness, presented to the primary care clinic with a sudden onset of severe right-sided headache for 2 days, throbbing in nature with multiple episodes of vomiting. She is previously well and not on oral contraceptives pill. Clinically, there was no significant neurological deficit. She was then referred to the emergency department immediately, where computed tomography revealed evidence of thrombosis in the right transverse and sigmoid sinus as well as the proximal internal jugular vein. She was treated and responded well with anticoagulant therapy.

**Discussion:** Cerebral venous thrombosis may mimic primary headache. A high index of suspicion is needed, especially in patient with red flag symptom and potential risk factor like dehydration, prothrombotic state, use of oral contraceptive and infection. Prompt diagnosis and treatment lead to good outcome in most cases but delay can result in complication such as seizures, venous infraction or even death.

**Conclusion:** Headache is a common presentation to primary health clinics. Thus it is crucial to be overvigilant in treating patients to ensure warning signs and symptoms are not overlooked as it may be a neurological emergency.

**Keywords:** Transverse and sigmoid sinus thrombosis, headache, migraine, neurological emergencies

**CCR / CS16****Case Report: PLEVA ( Pityriasis Lichenoides Et Varioliformis Acuta ) A Rare Cutaneous Lesion Which Mimics Chicken Pox**

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**Introduction:** Pityriasis lichenoides (PL) is a rare dermatological condition which may appear in 2 clinical forms : the acute variant as pityriasis lichenoides et varioliformis acute (PLEVA); and the chronic variant as pityriasis lichenoides chronica (PLC). The etiology of PLEVA remains unclear. However, several hypotheses have been proposed, like an inflammatory reaction triggered by infections or an immune-complex mediated hypersensitivity. It is self-limiting but has a prolonged course.

**Case Presentation:** A 9-year-old Indian girl was presented to the Pediatric Dermatological clinic with a one-month history of generalized papular eruptions. The skin lesions spread downwards in a cephalocaudal fashion. There wasn't any scalp lesions. There was mild itchiness but no prodrome prior to the skin lesions. There was no close contact with chicken-pox patients nor any recent infections. On clinical examination, child was well. There was generalized discrete erythematous papules with crusts and scales. The lesions appeared monomorphic with sparing the scalp, palms and soles. Some differential diagnoses were made which include lymphomatoid papulosis and PLEVA. Therefore, a skin biopsy was taken and it confirmed PLEVA.

**Discussion:** PLEVA is a rare skin condition which mimic chicken-pox in morphology. However, it leads a prolonged course than chicken-pox and spread in cephalocaudal fashion which is opposite from centripetal spread in chicken-pox. Another distinct feature is the rash is monomorphic whereas chicken-pox is polymorphic.

**Conclusion:** PLEVA is an uncommon skin condition that mimics chicken-pox. This rare skin condition needs to be considered when a child presented with a prolonged course of chicken-pox as the treatment is completely different.

**Keywords:** PLC, PLEVA, Chicken-pox.

**CCR / CS17****Case Report: False Positive Confirmatory HIV Test in a Primary Care Setting**

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**Introduction:** HIV testing typically follows a tiered protocol involving an initial screening test, often an enzyme-linked immunosorbent assay (ELISA), followed by confirmatory testing such as Western blot or nucleic acid amplification test (NAAT). Although confirmatory tests are designed to be highly specific, false positive results can occur due to technical errors, cross-reactivity or underlying condition.

**Case Presentation:** A 32-year-old male presented to a primary care clinic for routine health screening. The patient had no known risk factors for HIV and reported no significant past medical history. As part of routine workup, an ELISA test for HIV was conducted, yielding a positive result. Following the protocol, a Western blot assay was sent, and returned as positive. This led to significant distress for the patient, who expressed disbelief and requested further evaluation. A repeated ELISA was performed at tertiary care center alongside with NAAT for HIV

RNA. The repeated investigation came out as negative for ELISA and HIV RNA NAAT was not detected.

**Discussion:** False positive results in HIV confirmatory tests are rare but carry significant implications. Potential causes include laboratory errors, cross-reactivity with non-HIV antibodies for example autoimmune disease or any recent vaccination and infections. Although rapid antiretroviral initiation is widely implemented, it is important to correlate the clinical assessment with the confirmatory test prior to the initiation of treatment.

**Conclusion:** False positive HIV tests, though uncommon, can have profound psychological impacts. Primary care practitioners play a pivotal role in managing such cases by ensuring accurate diagnosis with clear communication and providing holistic support.

**Keywords:** HIV, Western blot, false positive, primary care

### CCR / CS18

#### Case Report: Importance Of Identifying And Addressing Barriers In A Non-Healing Diabetic Foot Ulcer

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**Introduction:** The prevalence of type 2 diabetes is increasing in Malaysia. Diabetes complications, particularly diabetic foot ulcers (DFUs) are common because patients have neuropathy, peripheral arterial disease and have an increased risk of infection. Wounds that are not managed effectively and remain chronic non-healing ulcers can lead to limb amputation.

**Case Presentation:** A 61 year old female with underlying type 2 diabetes, hypertension, dyslipidemia presented with a right heel diabetic foot ulcer for 1 month. She initially had an incision and drainage done for an abscess on her right heel at a private clinic. She received oral antibiotics and received antimicrobial silver dressing there but her wound cavity did not improve. It was this point that she presented to our wound clinic. She was assessed and was found to be non-adherent to her treatment for diabetes as well. She was also skipping meals and abstaining from eating certain foods. The wound was cleansed and sharp debridement performed to remove the slough and necrotic tissue. Flaminal Hydro was applied as the primary dressing followed by foam as the secondary dressing. Her diabetes control was managed along with her ulcer treatment. After 6-7 weeks her ulcer achieved healing.

**Discussion:** Diabetic ulcer management involves managing diabetes along with the ulcer. Adequate nutrition intake promotes healing. Enzyme alginate, for which Flaminal is the only one of its kind, has antimicrobial properties and promotes wound closure.

**Conclusion:** Holistic management of a patient with a DFU can significantly improve patient outcome. Applying an enzyme alginate to a non-healing diabetic foot ulcer can increase the rate of wound closure.

**Keywords:** Flaminal®, Diabetes, wound.

### CCR / CS19

#### Case Report: Non-Traumatic Incomplete Fracture of Implanon NXT

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**Introduction:** Implanon NXT, a widely used contraceptive implant, is recognized for its durability and effectiveness in preventing pregnancy. This report discusses a rare case of a non-traumatic incomplete fracture of Implanon NXT in a 24-year-old Malay female, diagnosed through clinical examination and confirmed upon removal.

**Case Presentation:** A 24-year-old Malay woman, Para 4, with underlying Graves' disease, presented 7 months after her implant inserted, with complaint of a palpable bend in the implant without any associated trauma or symptoms. Examination confirmed a mid-implant irregularity with no signs of inflammation. After counselled, patient decided for the implant to be replaced. Under local anesthesia, the implant was removed via a central incision and found to be fractured but incomplete. A new Implanon NXT was successfully inserted in the contralateral arm without complications.

**Discussion:** Implanon NXT fractures, although rare can even occur without significant trauma. Patient awareness played a key role in early detection. Limited evidence is available regarding contraceptive efficacy of a fractured implant but the uncertainty surrounding hormone release remains a concern. Therefore, shared decision making is important and the decision for removal was based on potential risk and patient preference. A small longitudinal incision was made at the site of the palpable bend instead of the usual distal end practice. As the implant remained in one piece, removal was straightforward and uneventful.

**Conclusion:** This case highlights that non-traumatic fracture of Implanon NXT is possible. Early detection through physical examination and effective communication with patient is key to ensure continued contraceptive efficacy and patient safety.

**Keywords:** Implanon, non-traumatic, fracture

### CCR / CS20

#### Case Report: Persistent Bleeding After Complete Miscarriage: Could It Be a Missed Scar Pregnancy?

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**Introduction:** Caesarean scar pregnancy is a rare form of ectopic pregnancy in which the gestational sac implants within the myometrial scar of a previous caesarean section. This case report highlights an atypical presentation of scar pregnancy and demonstrates the importance of maintaining a high index of suspicion and utilizing appropriate imaging modalities for timely management.

**Case Presentation:** A 36-year-old lady, Para 4+1, history of one previous scar a year ago, presented to health clinic for persistent per vaginal bleeding following a complete miscarriage a month ago, despite given tranexamic acid and contraceptive patch by her gynecologist. Urine pregnancy test was positive and transabdominal ultrasound showed thickened endometrium with cystic mass. She was referred to Pregnancy Assessment Centre (PAC) to rule out molar pregnancy. Beta HCG taken at PAC showed 286, excluded the diagnosis of molar pregnancy. Further scan by Maternal-Fetal-Medicine specialist showed trophoblastic tissues attached at scar niche. Final diagnosis is caesarean scar pregnancy. Patient was given intramuscular methotrexate followed by suction and curettage. Histopathological examination confirmed trophoblastic tissue /product of conception. She recovered well and subsequently opted Implanon as contraception.

**Discussion:** Caesarean scar pregnancy is rare, occurring in approximately 1 in 1800 pregnancies and accounting for less than 1% of all ectopic pregnancies. Its clinical presentation varies widely, ranging from asymptomatic to severe manifestation such as heavy per vaginal bleeding, abdominal pain, or uterine rupture. Abnormal per vaginal bleeding particularly in women with history of caesarean delivery should prompt further evaluation. It may be overlooked leading to delayed diagnosis.

**Conclusion:** Clinicians must maintain a high index of suspicion to facilitate early identification and appropriate management of this potentially serious condition.

**Keywords:** scar pregnancy, ectopic pregnancy

#### CCR / CS21

##### **Case Study: False Positive Urine Amphetamine Result In A Pregnant Patient On Methyldopa**

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**Introduction:** This case underscores a false-positive amphetamine result on a urine drug screen in a high risk pregnant patient treated with methyldopa for severe hypertension. It highlights the importance of interpreting urine toxicology results within the clinical context, as certain medications like methyldopa can cause cross-reactivity in immuno-assay tests.

**Case Presentation:** A 34-year-old pregnant woman at 8 weeks of gestation, with underlying uncontrolled hypertension and bronchial asthma, was prescribed with methyldopa 1g three times daily. She presented with unusual behavior during each consultation, consistently refusing hospital admission despite experiencing hypertensive emergencies, a history of absconding from the emergency department, and residing in a high risk area. Given these concerning behaviors, a urine drug screen was conducted, which returned a positive result. The patient denied illicit drug use, with family corroboration and no clinical signs of stimulant intoxication. A repeat urine toxicology test was negative for amphetamine, confirming the initial false-positive result.

**Discussion:** False-positive amphetamine results in urine drug screens can lead to patient stigmatization, unnecessary psychiatric or social work referrals, erosion of the doctor-patient relationship, and delays in appropriate medical care. In this case, the high-risk nature of the pregnancy necessitated careful medication selection and social risk assessment. Confirmatory testing with gas chromatography-mass spectrometry (GC-MS) was essential to avoid mismanagement and unfounded allegations of drug misuse.

**Conclusion:** Clinicians must be aware of the limitations of immuno-assay urine drug screens, especially in pregnancy where medications like methyldopa are commonly used, in order to avoid mislabeling and inappropriate management.

**Keywords:** False-positive Amphetamine Methyldopa

#### CCR / CS22

##### **Charlie, The Least Suspected Culprit Of An Unfamiliar Rash: A Case Report Of Paederus Dermatitis In A 5-Month-Old Infant From An Urban Setting**

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**Introduction:** Paederus dermatitis, commonly known as Charlie's rash, is a skin condition resulting from contact with rove beetles. This uncommon dermatitis, triggered by paederin toxin, predominantly affects individuals in tropical regions but is often overlooked in urban settings, especially in infants. This report describes a rare case of a 5-month-old infant with paederus dermatitis, emphasizing the importance of timely recognition and intervention.

**Case Presentation:** The infant, residing in an urban high-rise apartment, presented with erythematous and vesicular lesions on the head, neck, and upper back. There was no history of trauma or recent travel to an endemic area. However, the mother was unsure about any history of insect bites. The child exhibited fussiness without systemic symptoms such as fever or poor feeding. Clinical examination revealed characteristic linear lesions, leading to a diagnosis of Paederus dermatitis. The child was treated with oral analgesics, calamine lotion, and advised for proper hygiene. The lesions gradually resolved, with complete clearance noted by day 20 of follow-up.

**Discussion:** This case highlights the importance of considering Paederus dermatitis in urban environments, even among patients who are typically unaffected, such as infants. The discussion focuses on the challenges of diagnosing the condition in non-verbal patients and differentiating it from other dermatological conditions, such as herpes zoster. The findings underline the importance of early recognition, appropriate treatment, and preventive measures to avoid complications such as secondary infections and scarring.

**Conclusion:** The report contributes to the limited literature on Paederus dermatitis in infants, providing valuable insights for clinicians managing similar cases across diverse settings.

**Keywords:** Paederus Dermatitis, infant, urban

## CCR / CS23

### Chest X-ray 'starry sky' appearance: A Miliary Tuberculosis disguise

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**Introduction:** Chest X-ray is commonly used in diagnosing tuberculosis (TB). There are many diseases that can masquerade as pulmonary tuberculosis (PTB)/ miliary TB. The case illustrated below is a good example.

**Case Presentation:** A 63-year-old smoker presented with 10 months history of right sided neck swelling associated with chesty cough and nocturnal fever. He also had difficulty in swallowing, voice change, loss of appetite and significant weight loss in 5 months. No hemoptysis / PTB contact or family history of malignancy. On examination, there were multiple hardened and tender lymph nodes over right side of the neck. There were no other remarkable systemic examination findings. Investigations showed ESR 111 mm/hour, sputum acid fast bacilli direct smear negative and chest X-ray with miliary-like pattern. FNAC of the lymph node revealed metastatic adenocarcinoma with immunohistochemical profiling in favor of lung origin. CT thorax and neck was reported as lung carcinoma with nodal and bone metastasis with contralateral lung nodules. The final diagnosis was stage IV lung carcinoma T3N3M1. As patient refused biopsy, he was managed palliatively and deceased three months after the diagnosis.

**Discussion:** In this case, biopsy is the gold standard in diagnosing malignancy. Multidisciplinary team collaboration from ENT, chest and radiology is also crucial. Miliary nodules that are larger (>3mm) with variation in sizes and more localized distribution should prompt clinician to consider differential diagnoses like lung cancer.

**Conclusion:** This case highlighted the importance of exploring differential diagnoses of miliary TB to ensure timely correct diagnosis and proper treatment.

**Keywords:** lung cancer, miliary tuberculosis

## CCR / CS24

### Community-Based Rehabilitation in a Pediatric Patient with Japanese Encephalitis: A miracle made possible

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**Introduction:** Japanese Encephalitis (JE) is a mosquito-borne viral infection caused by the JE virus, a flavivirus transmitted primarily by Culex mosquitoes. JE can result in significant neurological morbidity and mortality, particularly among children. Survivors of JE frequently experience long-term complications, including cognitive impairment, motor dysfunction, speech disturbances, and behavioural changes, which severely impact their quality of life.

**Case Presentation:** This case report describes the remarkable recovery of an 8-year-old Malay boy diagnosed with JE, following

a presentation to primary care with fever, lethargy, vomiting, and status epilepticus. His condition was complicated by multiple failed extubation attempts, prolonged ventilatory support, and severe deconditioning. Upon enrolment into a domiciliary care program, he was functionally dependent, scoring 0 on the Modified Barthel Index (MBI) and required Ryle's tube feeding and tracheostomy care.

**Discussion:** A multidisciplinary rehabilitation plan was implemented through domiciliary team, involving physiotherapists, occupational therapists, and speech therapists. Over the course of his care, the patient demonstrated significant improvement which are regaining independent ambulation, oral feeding ability, and achieving an MBI score of 86. His caregiver also gained confidence in managing his tracheostomy independently.

**Conclusion:** This case illustrates the challenges of delivering complex rehabilitation in a non-hospital setting and emphasizes the pivotal role of community-based care in supporting pediatric patients with prolonged recovery needs. It underscores the effectiveness of integrated domiciliary rehabilitation in improving functional outcomes, reducing caregiver burden, and enhancing overall quality of life.

**Keywords:** Domiciliary Rehabilitation Japanese Encephalitis

## CCR / CS25

### Cornual Ectopic Pregnancy in Primary Care: A High-Risk Diagnostic Challenge

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**Introduction:** Cornual ectopic pregnancy is a rare but life-threatening variant, accounting for 2-4% of ectopic pregnancies. Due to its ability to grow longer before rupture, it presents a diagnostic challenge, especially in primary care. Early recognition is crucial for maternal safety.

**Case Presentation:** A 34-year-old multiparous woman presented to a primary care clinic with two weeks of minimal per vaginal bleeding and mild lower abdominal pain. She was haemodynamically stable. Abdominal exam showed mild suprapubic tenderness. A transabdominal ultrasound (used due to equipment limitations) revealed a gestational sac in the right cornual region with fetal heart activity and no free fluid. The patient was a chronic smoker.

**Discussion:** Cornual pregnancy can present subtly, even in stable patients. Risk factors such as smoking may impair tubal motility, increasing ectopic risk. Literature shows diagnostic delays are common due to non-specific symptoms. This case underscores the need for high clinical suspicion in early pregnancy with atypical bleeding. While transvaginal ultrasound is preferred, transabdominal imaging may still yield crucial findings in resource-limited settings. The patient was referred urgently and underwent successful laparoscopic surgery. Primary care physicians must recognise red flags and refer promptly.

**Conclusion:** Cornual ectopic pregnancy is rare but serious. This case highlights the importance of vigilance in primary care to

ensure early diagnosis and timely referral, ultimately improving maternal outcomes.

**Keywords:** Cornual Pregnancy, Primary Health Care

### CCR / CS26

#### Cutting Weight, Not Corners: The Unseen Struggles After Bariatric Surgery

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**Introduction:** Obesity is a chronic, multifactorial disease that affects both physical and mental health. While lifestyle changes are first-line therapy, some patients fail to achieve targeted results. Bariatric surgery can be effective, but its success depends on careful patient selection, thorough preoperative counselling, and consistent follow-up. Primary care doctors play crucial in guiding and supporting patients throughout this journey.

**Case Presentation:** A 50-year-old woman with type 2 diabetes, hypertension, dyslipidaemia, and morbid obesity (BMI 48.4 kg/m<sup>2</sup>; 135 kg) was under regular follow-up at KK Sandakan. Her obesity was complicated by knee osteoarthritis and obstructive sleep apnea. Despite dietary and physical activity interventions, she could not achieve weight loss. Although she did not receive anti-obesity medications, her high BMI, along with multiple comorbidities, made her a suitable candidate for bariatric surgery. Her strong commitment to follow-up and willingness to change her lifestyle further supported this decision. She was counselled on surgical risks and postoperative expectations. However, she developed complications post-operatively, which required reoperation and contributed to the onset of depressive symptoms. Even with the challenges, she markedly reduced her weight and no longer needed insulin.

**Discussion:** This case highlights the vital role of primary care in supporting patients living with obesity who have undergone bariatric surgery. It highlights personalised care and the importance of selecting motivated patients, preparing them thoroughly, and providing continuous care after surgery to manage both physical and emotional challenges.

**Conclusion:** Obesity care goes beyond surgery. Long-term, holistic support from primary care is essential for sustained patient outcomes.

**Keywords:** Obesity Primary care Bariatric

### CCR / CS27

#### Discovering The Missing X: The Crucial Role of Primary Care in Turner Syndrome

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**Introduction:** Primary amenorrhea, defined as absence of menstruation by age of 15 in girls with normal puberty or by age 13 without, can have various causes. One key but often overlooked etiology is Turner syndrome (TS), a chromosomal disorder that requiring timely diagnosis and multidisciplinary management. We report a case of 16-years-old girl with primary amenorrhea diagnosed with TS.

**Case Presentation:** A case of 16-year-old female presenting with primary amenorrhea. Upon physical examination, revealed features of TS: short stature, cubitus valgus, and delayed puberty. Bone age assessment showed a 4-year delay. Laboratory investigations reported elevated gonadotropins indicating hypergonadotropic hypogonadism (FSH:79.3 IU/L; LH:15.47 IU/L). Pelvic MRI revealed a hypoplastic uterus with rudimentary ovaries. Chromosomal analysis confirmed monosomy X(45,X), establishing the diagnosis of TS. She was started on somatotropin and oral Vitamin D by the pediatric endocrinologist. Oral estradiol was commenced by the the gynecologist but was later temporarily withheld to optimize final height. After 12 months of hormonal therapy, she demonstrated 5cm height gain (1.29m to 1.34m) and pubertal progression from Tanner stage I to II.

**Discussion:** TS affects approximately 1 in 2,500 live female births, characterized by complete or partial absence of one X chromosome. In adolescents, it presents with primary amenorrhea, short stature, and delayed puberty. Subtle clinical and physical cues in such cases should prompt early evaluation.

**Conclusion:** This case highlights the pivotal role of primary care in early recognition and coordinated management, which significantly improves growth, sexual, and psychological outcomes in TS patients, reinforcing the importance of vigilance and continuity in primary healthcare practice.

**Keywords:** amenorrhoea, short stature, delayed puberty

### CCR / CS28

#### Drug Interaction Between a Macrolide Antibiotic and a Second-generation Antihistamine

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**Introduction:** Drug interactions play a crucial role in patient safety and treatment outcomes. This report discusses a clinically significant interaction between erythromycin and loratadine, prescribed together for an upper respiratory infection. Erythromycin, a macrolide antibiotic, inhibits the cytochrome P450 3A4 (CYP3A4) enzyme, which metabolizes loratadine, a second-generation antihistamine. This inhibition can elevate loratadine plasma levels, increasing the risk of adverse effects such as QT prolongation and cardiac arrhythmias.

**Case Presentation:** A 30-year-old male presenting with cough, nasal congestion, and mild fever was prescribed erythromycin (500 mg twice daily) for bacterial coverage, and loratadine (10 mg once daily) for allergy relief. He had no history of cardiovascular disease or significant comorbidities. Two days after starting treatment, he reported palpitations and dizziness. While

his vital signs remained stable, an electrocardiogram (ECG) revealed QT prolongation. The suspected cause was elevated loratadine levels due to CYP3A4 inhibition by erythromycin. Erythromycin was discontinued, and an alternative antibiotic was prescribed. Within 48 hours, his symptoms resolved, and a follow-up ECG showed normalization of the QT interval. No further complications arose.

**Discussion:** This case underscores the importance of raising awareness and adhering to evidence-based guidelines to mitigate the risks associated with CYP3A4 inhibitors and their substrates. Clinicians should be cautious to avoid prescribing these medications concurrently.

**Conclusion:** This case highlights the crucial importance of comprehensive medication reviews, active pharmacovigilance, and prompt adverse reaction reporting, which unfortunately was not done in this case, to improve patient safety. It also highlights the importance of antibiotic stewardship to avoid unnecessary exposure to potentially interacting drugs.

**Keywords:** Drug Interaction, CYP3A4, QT Prolongation

#### CCR / CS29

### Early Detection of Complex Foetal Anomalies and the Integration of Palliative Care: A Case Report Highlighting the Role of Family Medicine Specialists in Primary Care

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**Introduction:** Antenatal care is pivotal in the early detection of congenital anomalies and facilitating coordinated management. This case highlights the important role of Family Medicine Specialists in identifying high-risk pregnancies and providing continuous care, including palliative support.

**Case Presentation:** A 34-year-old grand multipara (G6P7) with uncertain last menstrual period presented for antenatal booking. She was clinically well, but the first transabdominal ultrasound scan revealed a foetal abdominal cystic lesion at an estimated gestation of 28-29 weeks. Immediate referral was done to obstetric team which led to detection of a large intra-abdominal cyst. At 37weeks 4days, she delivered a baby boy via spontaneous vertex delivery weighing 2.35kg with good Apgar score. Multiple imaging including Magnetic Resonance Cholangiopancreatography (MRCP) and Upper and Lower Gastrointestinal Contrast Study revealed a large type 1 choledochal cyst, pyloric stenosis, duodenal atresia, multiple jejunoileal atresias, and long segment colonic atresia. Surgical intervention confirmed presence of severe gastrointestinal anomalies. In view of the complexity, a palliative approach was discussed and agreed.

**Discussion:** The early detection of anomalies in primary care enabled timely referral and anticipatory planning, although definitive prenatal diagnosis was limited. We played a crucial role in coordinating home-based palliative care. Regular home visits were conducted, providing symptoms management and guiding the family through the end-of-life care.

**Conclusion:** This case emphasises the value of primary care

in early anomaly detection and in delivering compassionate palliative support for neonates with life-limiting conditions. Empowering primary care capacity in antenatal and palliative services can significantly impact maternal and neonatal outcomes.

**Keywords:** Prenatal Diagnosis, Choledochal Cyst, Palliative Care

#### CCR / CS30

### Early Diagnosis of Nevus Anemicus in a 3-Mont-Old: A Case Report and Its Implication for Primary Care

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**Introduction:** Nevus anemicus is a rare benign vascular anomaly characterized by localized hypopigmented skin patches due to persistent vasoconstriction. Although it's harmless, it can raise concern among caregivers especially in infants. Early recognition in primary care is essential to prevent misdiagnosis and alleviate parental anxiety.

**Case Presentation:** A 3 month old male infant was brought to maternal and child clinic with pale patches on his trunk and face first noticed at one month of age. The lesion gradually became more prominent. Clinical examination revealed multiple well-demarcated hypopigmented areas without scaling, inflammation or systemic symptoms. The infant otherwise was healthy with no family history of similar conditions. Based on the clinical features, a diagnosis of nevus anemicus was made. The family physician reassured the parent about the benign nature of the condition and recommended observation without further intervention.

**Discussion:** Nevus anemicus can mimic other dermatological or congenital disorders including vascular malformation and hypopigmented neoplasms. Accurate diagnosis by primary care providers helps avoid unnecessary investigation and referrals. In this case, early identification and effective communication eased parental concerns and reinforced trust in medical care. The ability to differentiate benign from concerning lesion is vital in pediatric primary care.

**Conclusion:** Although this is uncommon, nevus anemicus is an important differential diagnosis in pediatric dermatology. This case highlights the critical role of primary care physician in early recognition, parental reassurance and appropriate management. Ongoing training in pediatric dermatology supports effective and compassionate care delivery in primary care settings.

**Keywords:** Nevus Anemicus, infant, primary care

#### CCR / CS31

### Early HIV Seroconversion Detected After Initiation Of EVENT-DRIVEN PRE- EXPOSURE PROPHYLAXIS (PREP): A Case For Vigilance In Window Period Screening

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**Introduction:** Pre-exposure Prophylaxis (PrEP) is a highly effective strategy for HIV prevention, particularly among men-having-sex-with-men (MSM). Initiating PrEP during HIV window period can

result in undiagnosed acute infection and potentially contribute to drug resistance.

**Case Presentation:** A 27-year-old MSM without medical illness came to request PrEP in April 2024. He reported a history of multiple sexual partners, infrequent condom usage, and receptive anal intercourse. His last sexual intercourse was 10 days prior. HIV screening conducted in February 2024 was non-reactive. A 4th-generation HIV test performed in our clinic was also non-reactive. He had no symptoms of acute retroviral syndrome or other sexually transmitted infections. Hence, event-driven PrEP was initiated. 2-weeks later, repeat 4th-generation test became reactive. PrEP was immediately withdrawn. The confirmatory test was also reactive. Viral load was 8,355 copies/ml. Anti-retroviral therapy (ART) was started. HIV genotypic resistance testing was sent but failed as repeated viral load declined to <150 copies/ml. Therefore, the first-line ART regimen was continued. Fortunately, he maintained an undetectable viral load by January 2025.

**Discussion:** This case highlights the importance of understanding the HIV diagnostic window period. Starting PrEP within window can lead to ineffective HIV therapy in patients with undiagnosed infection, increasing the risk of developing drug resistance.

**Conclusion:** Clinicians must always assess recent high-risk exposure before initiating PrEP. Defer PrEP if within the window period, counsel on condom usage, and repeat testing at least 18 days post-exposure. This case emphasizes the need for vigilance to prevent HIV drug-resistance and optimize long-term outcomes for individuals starting on PrEP.

**Keywords:** PrEP, window period, HIV

### CCR / CS32

#### Early Recognition of AIDS-Related Kaposi's Sarcoma at Primary Care: A Case Report

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**Introduction:** Kaposi Sarcoma (KS) is an AIDS-defining malignancy associated with human herpesvirus 8 (HHV-8). It is commonly seen in HIV-positive individuals with CD4 counts below 200 cells/mm<sup>3</sup>. Despite its characteristics sin manifestation, KS is often diagnosed late, leading to poorer outcomes. Early clinical suspicion can improved survival in affected patients and quick intervention.

**Case Presentation:** A 43 year old man with newly diagnosed HIV disease with CD4 count of 22 presented with wide spread purplish skin lesions over his entire body for six months associated with right sided facial and periorbital edema. Initially he was managed as suspected allergic reactions with prednisolone. A referral to the hospital was then made. A CT scan showed KS affecting the skin, nasopharynx, lungs, spleen, and extensive lymph nodes with biggest mass on the right temporal region (4cm x 1cm). A skin biopsy confirmed the diagnosis. The patient is currently receiving chemotherapy under oncology HKL and antiretroviral therapy

in primary care clinic. He is now showing improvements in viral suppression and recovery of CD4. Symptoms has improved with chemotherapy.

**Discussion:** KS may mimic hypersensitivity reactions, particularly periorbital edema, leading to inappropriate use of steroids and misdiagnosis. Delayed in diagnosis may result in progression of the disease and adverse outcomes. It is vital for early diagnosis of KS with high clinical suspicion of KS in unusual skin lesions among HIV-patients.

**Conclusion:** Greater awareness among healthcare providers is essential to prompt early diagnosis of KS to prevent delayed treatment, facilitate early oncology referral, and optimize prognosis in patients living with HIV.

**Keywords:** Kaposi Sarcoma, HIV infection, Early Diagnosis

### CCR / CS33

#### Early Recognition of Atypical Rheumatoid Arthritis (RA) in Primary Care: A Crucial Step in Preventing Long-Term Complications

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**Introduction:** Rheumatoid arthritis (RA) affects approximately 5% of the Malaysian population. As primary healthcare providers, we must remain vigilant for atypical presentations of RA to ensure timely diagnosis and prompt referral—key steps in preventing irreversible joint damage and systemic complications.

**Case Presentation:** A 28-year-old Malay female dental assistant presented with a one-year history of intermittent atraumatic right wrist pain associated with progressive swelling and functional impairment, significantly affecting her work performance, without other joint involvement or systemic symptoms. Physical examination revealed marked dorsal and volar wrist swelling with limited range of motion, while bedside ultrasound demonstrated swelling in all extensor compartments, FCU, FCR, and 2nd/3rd MCP joints. Serology showed positive RF, anti-CCP, and ANA, leading to a diagnosis of rheumatoid arthritis with atypical monoarticular onset. Given the impact on her occupation and ultrasound-confirmed synovitis despite initial monoarticular presentation, she was promptly referred to rheumatology for definitive DMARD therapy.

**Discussion:** Patients with early RA have a characteristic distribution of synovial thickening at the radial site of the 2nd and 3rd MCPJ and the ulnar side of the 4th MCPJ. This finding may be helpful in distinguishing RA from other types of arthropathy. Competency performing hand ultrasound may be a limitation in some primary care setting. Ultrasound training or collaboration with specialist could strengthened the case detection.

**Conclusion:** This case illustrates the importance of considering RA in young patients with persistent monoarthritis, even without classic polyarticular presentation. The Point-of-care ultrasound proved valuable in detecting subclinical synovitis and supporting early referral.

**Keywords:** rheumatoid arthritis, atraumatic wrist pain, arthropathy

### CCR / CS34

#### Early Recognition of Type 1 Diabetes Mellitus In A Child with Autoimmune Background: A Case for Primary Care Awareness

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**Introduction:** Type 1 Diabetes Mellitus (T1DM) is the most common form of childhood diabetes in Malaysia; accounting for 73-77% of all childhood diabetes cases as reported in Diabetes in Children and Adolescent Registry. T1DM is an autoimmune disease involving the immune mediated destruction of insulin producing pancreatic Beta cell, leading to insulin deficiency. Timely diagnosis of T1DM is crucial to initiate early treatment to reduce risk of progression to diabetic ketoacidosis.

**Case Presentation:** Herein, we report a case of 12-year-old girl who had frequent visits to primary health clinic for recurrent infections. This lead to suspicion of T1DM in view of strong family history of autoimmune disease whereby her mother died due to complications from Systemic Lupus Erythematosus (SLE), non-obese range of body mass index (BMI) paired with recurrent infections and urine glucose 4+ upon screening. This suspicion was then confirmed with elevated Glutamic Acid Decarboxylase 65(GAD 65). We did take the Panel Diabetes Antibodies for this girl due to high index of suspicion towards T1DM.

**Discussion:** The aim of this case report is to educate the primary care practitioners on early detection of T1DM and to discuss on significance of each antibody rise in Panel Diabetes Antibodies such as Anti-islet cell antibodies, Anti Glutamic Acid Decarboxylase antibodies, anti-insulinoma associated antigen 2 antibodies, and also the importance of C Peptide level in T1DM.

**Conclusion:** We hope this case study may help primary care practitioners to be able detect T1DM as early as possible and manage accordingly to prevent early target organ damage and complications.

**Keywords:** Type 1 Diabetes Mellitus, childhood diabetes, autoimmune disease

### CCR / CS35

#### Echo Beyond the Deep; Early Detection Saves Life

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**Introduction:** Blunt injury is the most common cause of injury in children, and intraabdominal trauma is the most missed injury that can cause mortality in children. This case report emphasizes the importance of Point of Care Ultrasound (POCUS) in primary care.

**Case Presentation:** A 1-year-old boy was brought by his mother after 4 hours of accidental injury to the abdomen. The child's cousin, weighing around 11kg, was sitting horseback, jumping on the child, who was in a prone position. Following the injury, the child didn't show any red flag symptoms and had normal vital signs. POCUS was done, given minimal redness on the abdomen and difficulties in assessing signs from the abdominal examination. POCUS indicates intraabdominal injury due to the presence of

free fluid in rectovesical, hepatorenal, and splenorenal recesses. Expedited management was carried out, and the child was referred to the emergency department (ED). CT scan confirmed the intraabdominal injury with evidence of liver and pancreatic injury. Despite having normal vital signs earlier, the child developed 1 episode of shock in the ED.

**Discussion:** It is difficult to rely solely on clinical symptoms and signs to diagnose intraabdominal injury in children due to the different physiological ability to compensate shock in addition to communication barriers. This could lead to mismanagement or wrong diagnosis, especially upon first encounter in primary care, which can compromise a child's life.

**Conclusion:** POCUS can serve as an adjunct and preliminary tool in primary care to help diagnose an injury when the diagnosis is doubtful so that proper management can be done to save a child's life.

**Keywords:** POCUS, primary care

### CCR / CS36

#### Eczema Herpeticum- Not Easy To Get It Right The First Time

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**Introduction:** Dermatological conditions account for a significant portion roughly 20% to 36% of primary care consultations. This poses a considerable diagnostic challenge due to their broad range and varied presentations. This often leads to misdiagnosis and prolonged patients' suffering.

**Case Presentation:** We present a 25 years old female student came with widespread, recurrent skin lesions on her trunk and limbs for two months. Her history was complex as she had multiple general practitioner visits and treatments for various misdiagnoses. Systemic and topical antifungal, steroid and emollient were started. Despite that, her lesions worsened. Examination shows numerous increasing ulcerated and crusted skin lesions. Given her treatment failures, progressive symptoms and new lesion characteristics, eczema herpeticum was diagnosed. Oral systemic acyclovir was immediately started and further follow up confirmed the diagnosis when she exhibits marked improvement after the initial regimen.

**Discussion:** This case underscores the necessity of gathering comprehensive patient information. Critical elements include detailed history of previous treatments and their outcomes, the initial presentation of the skin condition and close follow-up to assess treatment response. In dermatological practice where visual cues are paramount, integrating a patient's clinical journey especially failed prior treatments can be a powerful diagnostic tool in guiding clinicians toward the correct diagnosis.

**Conclusion:** This case demonstrates that with the right diagnostic tools and a strategic approach, accurate diagnosis are achievable even during the initial encounter. A thorough understanding of the patient's history, meticulous examination and careful evaluation of treatment responses are crucial in navigating the complexities of dermatological conditions for optimal patient outcomes.

**Keywords:** Eczema Herpeticum, Herpes Simplex, Diagnosis dermatology

**CCR / CS37****Effectiveness of Cognitive Behavioral Therapy in Treating Mild Major Depressive Disorder: A Case Report from Family Medicine's perspective**Mukhtar F<sup>1</sup>, Zulghaffar Z<sup>2</sup>, Khairiah NN<sup>3</sup>*<sup>1</sup>University Putra Malaysia, Department Of Psychoatry, Faculty Of Medicine And Health Sciences, SERDANG, Malaysia; <sup>2</sup>Ministry Of Health, Primary Care, Putrajaya, Malaysia; <sup>3</sup>Universiti Kebangsaan Malaysia, Faculty Of Medicine And Health Sciences, CHERAS, Malaysia*

**Introduction:** Major Depressive Disorder (MDD) is a prevalent psychiatric condition, significantly affecting individuals' quality of life and functioning. This case report aims to explore the efficacy of Cognitive Behavioural Therapy (CBT) as a psychotherapeutic intervention by Family Medicine Specialist (supervised by a Clinical Psychologist) for treating mild MDD in a Malaysian context.

**Case Presentation:** Madam F, 46 years old, blessed with two sons and raised them single handedly after divorce 22 years ago. She has underlying Grave's Disease in remission, presented with symptoms consistent with MDD, including persistent sadness and diminished interest in daily activities. She completed 7 sessions of CBT spread over 2 months. There were three phases of sessions: 1. Session 1-3 Psychoeducation and Cognitive Skills (3Cs) 2. Session 4-5 Behavior Activation and Problem Solving 3. Session 6-7 Support system, Relapse and Termination

**Discussion:** Utilizing cognitive models to identify and challenge dysfunctional thoughts, the CBT approach encouraged the patient to actively engage in behavioral activation and cognitive restructuring. To assess the treatment's effectiveness, three psychometric measures used were Beck Depression Inventory for Malays (BDI-Malay), Beck Anxiety Inventory-Malay (BAI-Malay) and Automatic Thoughts Questionnaire-Malay (ATQ-Malay). The psychometric assessments showed reduction between pre and post assessment in all three measures. This significant improvements were observed in both depressive and anxiety symptoms, showcasing the positive impact of CBT on the patient's resilience and coping mechanisms.

**Conclusion:** The findings highlight the potential of CBT as an effective intervention for MDD, especially in populations with limited access to pharmacotherapy. This case contributes to the growing body of literature advocating for the integration of psychotherapeutic methods in the management of depression, emphasizing the need for further exploration of CBT in diverse cultural settings.

**Keywords:** Major Depressive Disorder, Cognitive Behaviour Therapy

**CCR / CS38****Empowering Primary Care with Point-of-Care Ultrasound (POCUS): Early Detection of Post-Caesarean Subcutaneous Haematoma – A Case Report**Md Nor MZ<sup>1</sup>, Draman N<sup>2</sup>, Saiful Amini AS<sup>1</sup>, Mohamad Bashaabidin MS<sup>3</sup>*<sup>1</sup>Simpang Durian Health Clinic, Family Medicine, Negeri Sembilan, Malaysia; <sup>2</sup>School of Medical Science, Universiti Sains Malaysia, Family Medicine, Kubang Kerian, Kelantan, Malaysia; <sup>3</sup>District Health Office Jelebu, Public Health Medicine, Negeri Sembilan, Malaysia*

**Introduction:** Subcutaneous haematoma is a recognised postoperative complication of caesarean section and can be challenging to diagnose early in primary care settings without access to formal imaging by radiology personnel. Point-of-care ultrasound (POCUS) provides a bedside, non-invasive diagnostic tool that can help bridge this gap.

**Case Presentation:** We present the case of a 38-year-old woman who developed wound dehiscence and active bleeding one week after undergoing an emergency caesarean section. The clinical examination was inconclusive, prompting a bedside POCUS assessment using a high-frequency linear probe. POCUS revealed a hypoechoic subcutaneous collection measuring 2 x 1 cm, with no vascular flow or features suggestive of an abscess. These findings were consistent with a haematoma. The full blood count was unremarkable. These findings facilitated a timely referral to a tertiary hospital, where surgical exploration confirmed the diagnosis. The patient was managed with wound debridement, packing, antibiotics, and regular dressing changes, followed by scheduled obstetric follow-up.

**Discussion:** This case highlights the utility of POCUS in primary care for the early diagnosis of postoperative complications, particularly in resource-limited settings. Its portability, ease of use, and ability to differentiate haematomas from other conditions, such as seromas or abscesses, support its broader integration into routine clinical practice. However, its diagnostic accuracy remains highly dependent on sufficient operator training and ongoing proficiency.

**Conclusion:** POCUS is a practical and effective tool for the early detection of post-caesarean haematomas in primary care, facilitating timely management and reducing the risk of further complications.

**Keywords:** Point-of-Care Ultrasound, Postoperative complication, Primary care

**CCR / CS39****Empowering Rural Primary Care in Terminal Illness: A Case of Home-Based Palliative Management for Metastatic Papillary Thyroid Carcinoma**Ling LL<sup>1</sup>, Suxien Yong KC<sup>1</sup>, Ramzi HB<sup>1</sup>*<sup>1</sup>Klinik Kesihatan Asajaya, Asajaya, Kota Samarahan, Malaysia*

**Introduction:** Metastatic papillary thyroid carcinoma (PTC) causes significant morbidity in its terminal phase. In rural areas, limited access to specialized care underscores the importance

of robust palliative care practices within primary care. This case illustrates how a rural clinic supported a patient through the final stage of metastatic PTC with particular emphasis on respecting patient autonomy and preserving dignity.

**Case Presentation:** A 84-year-old woman diagnosed with metastatic PTC in 2024 initially achieved adequate pain control with oral morphine. As her condition worsened, she developed severe pain, dysphagia, and constipation, making oral medications intolerable. The patient expressed a clear wish to remain at home with her family and avoid hospitalization. In alignment with her wishes, the palliative care team at Klinik Kesihatan Asajaya (KKA) developed a home-based care plan. Oral morphine was replaced with subcutaneous administration, providing effective pain relief. Constipation was managed with bisacodyl suppositories. These interventions improved her comfort, allowing her to remain at home and maintain quality of life in her final days. She passed away peacefully at home, surrounded by her loved ones, with her dignity preserved.

**Conclusion:** This case demonstrates the value of primary care-led palliative services in rural settings. With proper planning and compassion, rural clinics can provide dignified, comfort-focused care during terminal illness. Strengthening palliative care at the primary level is key to improving end-of-life support in underserved communities.

**Keywords:** Rural, Primary care, palliative

#### CCR / CS40

### Erythema Annulare Centrifugum In A Patient With Latent Tuberculosis Infection On Anti Tuberculosis Medication: A Case Report

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**Introduction:** Reporting a case of rare skin lesion in 34-year-old lady, who was a respondent of Long Term Research Grant Study (LRGS) Prevention of Active TB Among Contact With LTBI. A Randomized trial.

**Case Presentation:** Patient on Tablet Isoniazid 900mg weekly and Tablet Rifapentine 900mg weekly. A week after taking the drugs, she developed multiple erythematous annular plaques on the upper and lower limbs including the inguinal areas. On examination, there were erythematous annular lesions over the upper and lower limbs including the inguinal areas. Clinical impression was Erythema Annulare Centrifugum (AEC) which could be due to infections, inflammations or drugs. Histopathological Examination (HPE) biopsy of the forearm lesion was consistent with EAC with underlying fungal infection. Fungal culture showed *Candida parapsilosis*. All other investigations including HIV and Viral Hepatitis were negative. Anti-TB regime was withheld and she was treated with a course of Tablet Itraconazole 200mg daily for 2 weeks. EAC lesions resolved upon completion of antifungal

medication and anti-TB regime was resumed as to be completed by the patient and there was no recurrence of the EAC lesion.

**Discussion:** EAC is a rare cutaneous disease characterized by erythematous annular plaques that usually involved the lower limbs. It has been documented to have association with underlying medical conditions and medications in 33-72% of cases. The most commonly associated conditions include fungal and mycobacterium infection and drug reactions.

**Conclusion:** This a case of EAC due to *Candida parapsilosis*. There is not much different in clinical presentations and HPE findings in both conditions, beholding the anti-TB medications is for patient's safety.

**Keywords:** LRGS LTBI, Erythema Annulare Centrifugum (AEC), *Candida parapsilosis*

#### CCR / CS41

### Facial Swelling Unveiled: Recognizing Superior Vena Cava Obstruction in Primary Care

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**Introduction:** Superior vena cava obstruction ( SVCO) is rare but serious condition, often associated with malignancies such as lung cancer. It may not be detected in initial evaluation but poses a significant risk of fatality.

**Case Presentation:** A 57 year old Chinese man presented with facial swelling for two months and mild reduced exercise tolerance for one month. He also experienced dizziness when changing positions. This was his second clinic visit. A chest radiograph showed widened mediastinum, prompting suspicion of superior vena cava obstruction. He was referred to hospital for further evaluation. A CT scan of the thorax revealed an anterior mediastinal mass encasing the superior vena cava and both brachiocephalic veins, causing severe stenosis. Biopsy confirmed an atypical carcinoid (neuroendocrine tumour) of the mediastinum.

**Discussion:** SVCO occurs when the superior vena cava is blocked, often due to various conditions, with malignant tumours being the leading cause. Neuroendocrine tumour, such as carcinoids, are less frequently associated with SVCO, as observed in the present case. In SVCO, facial swelling is a recognized cardinal and frequently reported early symptom. However, its presence as an isolated finding can be misleading, underscoring the crucial role of imaging for diagnostic support in primary care.

**Conclusion:** This case highlights the diagnostic challenges and the importance of recognising symptoms associated with SVCO. Early signs can be missed, especially when other symptoms or examinations are inconclusive. Due to the potential life-threatening risks associated with SVCO, it is crucial not to overlook the diagnosis of SVCO in primary care settings.

**Keywords:** Superior vena cava obstruction, facial swelling, neuroendocrine tumour

**CCR / CS42****Finding Her Voice: Case Report on Selective Mutism in a 14-Year-Old Female Patient**

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**Introduction:** Selective Mutism (SM) is an anxiety disorder, defined in the DSM-5 as a consistent failure to speak in specific social situations despite speaking in others. Cultural norms and limited awareness often lead to delayed recognition.

**Case Presentation:** A 14-year-old Chinese girl was brought to the clinic after her teacher raised concerns about her silence in class. She had been mute at school since early childhood but communicated normally at home. Her behaviour had long been regarded by family and teachers as extreme shyness, not warranting medical attention. Routine school health screenings had not identified any issues. By the time she was brought for evaluation, her mutism had become entrenched, interfering with her academic progress and peer interactions. She was diagnosed with SM and managed through psychoeducation, behavioural therapy, school collaboration, and family support. On follow-up, she showed progress by conversing with healthcare providers and began to interact with her teacher, even if minimal.

**Discussion:** This case illustrated how cultural norms can mask symptoms of Selective Mutism, delaying recognition and treatment. Quietness, especially in girls, is often seen as a virtue, and limited awareness of childhood mental health contributes to missed diagnoses. As in this case, delayed diagnosis may result in greater functional impairment and complicate treatment. It also highlights the role of primary care in managing childhood mental health conditions.

**Conclusion:** Family Medicine Specialists (FMS) play a key role in early recognition of SM and other childhood mental health issues, as well as coordinated care. Closer school-healthcare collaboration and awareness is essential for timely intervention

**Keywords:** Selective Mutism Childhood mental health Cultural Norms

**CCR / CS43****From ART to A-Cup: Efavirenz-Induced Gynaecomastia in a Young Gentleman with HIV**

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**Introduction:** Antiretroviral therapy (ART) has significantly improved survival among people living with HIV (PLHIV), but adverse drug reactions remain a concern. Efavirenz, a non-nucleoside reverse transcriptase inhibitor (NNRTI), is associated with gynaecomastia in approximately 1.8–8% of cases. This case highlights the importance of early recognition, differential diagnosis, and cost-sensitive management in primary care.

**Case Presentation:** A 22-year-old male, newly diagnosed with HIV, presented with an eight-week history of progressive,

painless bilateral breast enlargement. He had initiated first-line ART with Tenofovir-EM and Efavirenz (600 mg daily) 3 months before symptom onset. Examination revealed firm, symmetrical glandular tissue under both areolae. Breast ultrasonography confirmed bilateral gynaecomastia. Hormonal investigations—including prolactin, testosterone, and thyroid function—were within normal limits, although prolactin was at the high-normal to mildly elevated range, suggesting a possible efavirenz-related hyperprolactinemic mechanism. A diagnosis of efavirenz-induced gynaecomastia was made. The patient declined ART substitution due to financial limitations and was not keen for tertiary referral. Ibuprofen 400 mg twice daily was initiated, and mild symptom improvement was noted after one month.

**Discussion:** Efavirenz-induced gynaecomastia can impair psychosocial wellbeing and ART adherence. ART substitution is ideal, but in settings with limited access to integrase inhibitors, options like ibuprofen may be useful. In this context, ibuprofen could alleviate discomfort and may serve as a cost-effective, readily available interim therapy to reduce inflammation and discomfort. It may also help maintain patient confidence and continuity of care.

**Conclusion:** This case highlights the need for patient-centered care to identify and address ART-related side effects early. Simple, affordable interventions like ibuprofen may support adherence and improve treatment outcomes when ART changes are not immediately feasible.

**Keywords:** Efavirenz, Gynaecomastia, HIV, Antiretroviral Therapy, Primary Care

**CCR / CS44****From One to Many: A Tuberculosis Outbreak Sparked by Delayed Contact Screening**

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**Introduction:** Tuberculosis (TB) can silently spread within households and communities. Contact screening is crucial to identify both active TB and latent TB infection (LTBI), breaking the transmission. Delays in screening of more than 2 weeks may lead to missed opportunities for early diagnosis and containment.

**Case Presentation:** In January 2025, a household TB cluster was identified in Tumpat, Kelantan. The index case, a 42-year-old lady was diagnosed with smear-positive pulmonary tuberculosis (PTB) following prolonged cough. However, contact screening was not promptly enforced, allowing undetected transmission. Only a month later, her asymptomatic 40-year-old husband was found to have smear-positive PTB, after abnormal chest x-ray (CXR) and positive sputum AFB. Later, their 2-year-old son, the youngest of four, was diagnosed with smear-negative PTB based on abnormal CXR and negative gastric lavage. Unfortunately, their 12-year-old second child was then found to have LTBI following positive Mantoux test. Screening for other children was negative. This household, initially seen as an isolated case, was later identified as a TB cluster and declared as an outbreak.

**Discussion:** This case shows delayed contact screening contributed

to ongoing TB transmission, leading to two additional cases including a child and one LTBI. Early screening would facilitate earlier treatment and prevent further transmission, especially for vulnerable contacts. It highlights the importance for timely screening.

**Conclusion:** Delayed contact screening led to additional cases, showing missed opportunities for early intervention. Timely screening is key to diagnosis, treatment and TB control. Primary care plays a crucial role in early detection, contact tracing and inter-departmental collaboration to prevent outbreaks.

**Keywords:** Tuberculosis, Outbreak, Contact Screening

### CCR / CS45

#### From Positive to Negative: Unexpected Blood Group Changes in Pregnancy – A Case Report

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**Introduction:** Blood grouping is crucial in antenatal screening to prevent hemolytic disease of the newborn (HDN) and ensure safe transfusions. Despite standardised protocols, discrepancies in ABO and Rhesus (Rh) grouping can occur, requiring confirmatory testing. This report presents two cases from Klinik Kesihatan Cherang Ruku (KKCR) where initial Rh typing differed from previous records, necessitating immunohematology evaluation.

**Case Presentation:** Case A: A 31-year-old Malay lady (G2P1) attended antenatal booking on 21 August 2023. Though previously recorded as O-positive, new testing showed O-negative. Repeat testing confirmed O-negative. Subsequent Immunohematology test at Hospital Raja Perempuan Zainab II revealed: ABO Group: O, RhD: Negative, Phenotype: Cde/cde (r<sub>r</sub>), DAT/Antibody Screening: Negative. She was confirmed Rh-negative and received Rhogam at 30 weeks after referral to Hospital Pakar USM. Case B: Two months later, a 27-year-old Siamese lady (G3P1+1) with prior O-positive status tested O-negative. Repeat testing confirmed O-negative. Immunohematology showed: ABO Group: O, RhD: Weak positive, Phenotype: CDwe/Cde (Rw1r), DAT/Antibody Screening: Negative. A blood bank specialist confirmed her RhD status as weak positive, and she was categorized as Rhesus positive.

**Discussion:** Discrepancies may result from weak D antigen expression or technical variation. Modern gel card techniques was used, using forward (anti-A, B, D) and reverse (A1, B cells) grouping offer sensitivity exceeding 99%, automated detection of weak reactions, improving accuracy and reducing human error. Confirmatory testing ensures correct Rh immunoglobulin use, preventing alloimmunisation and HDN. Coordination between primary care, laboratories, and transfusion specialists is essential.

**Conclusion:** Misclassification of blood grouping may lead to inappropriate Rh immunoglobulin administration and increase HDN risk. Vigilance and confirmatory testing are key to safe maternal care.

**Keywords:** Blood Group Discrepancy, Rhesus Typing, Weak D Antigen

### CCR / CS46

#### From Prevention to Conception: A Case of Implanon Failure in an Efavirenz-based ARV - Treated Patient

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**Introduction:** Preventing unplanned or mistimed pregnancy allows a women with HIV to optimised her own health and has the potential to decrease maternal-to-child transmission of HIV. The use of long acting reversible contraceptives (LARCs) like Etonogestrel 68 mg implant (implanon) has been proven as a highly efficacious contraceptive device, however co-administration with antiretroviral (ARV) may alter its contraceptive efficacy

**Case Presentation:** Ms NNR, a 36-year-old woman, Gravida 6 para 5, is currently 36 weeks pregnant. She was diagnosed with HIV in March 2022 and started on first line ARV (tenofovir-emtricitabine, efavirenz). Her fifth child was initially first diagnosed with HIV at 2 years old after presenting with failure to thrive. Her husband tested negative. She contracted HIV through extramarital contact prior to her fifth pregnancy. Implanon was inserted in January 2023 for long-term contraception. She was also diagnosed with cervical intraepithelial neoplasia (CIN) 2 following a pap smear that showed low grade squamous intraepithelial lesion and underwent colposcopy with large loop excision of transformation zone. She conceived unexpectedly after 18 months on implanon despite dual contraception (Implanon and condom) and is planned for bilateral tubal ligation post delivery

**Discussion:** In HIV patients on efavirenz-based ARV, implanon effectiveness is reduced due to shared metabolism of antiretroviral therapy and etonogestrel implant through cytochrome P450 (CYP450), which may affect their effectiveness, leading to higher contraceptive failure rates

**Conclusion:** This case highlights contraceptive failure with the use of implanon in HIV patient on efavirenz-based ARV. We might need to consider other contraceptive method in patient taking efavirenz-based therapy

**Keywords:** Implanon failure, HIV positive, pregnancy

### CCR / CS47

#### From Tremor to Tumour: A Case Report on Parkinson's-like Symptoms in A Patient with Pituitary Macroadenoma

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**Introduction:** Pituitary macroadenomas are benign tumours of anterior pituitary that can cause hormonal disturbances or mass effects symptoms, while Parkinsonism is characterized as motor manifestations of neurodegenerative disorders or secondary to brain lesions.

**Case Presentation:** This is a 79-year-old gentleman who presented with Parkinsonism, exhibiting unilateral resting tremors, bradykinesia and rigidity, in absence of cognitive impairment, psychotic symptoms and dysautonomia. Examination revealed

absence of shuffling gait and cranial nerve palsy, with negative glabellar tap and cerebellar signs. CT brain revealed a large suprasellar mass with local extension and mass effects. Follow-up MRI confirmed a 'snowman' appearance (solid bilobed sellar tumour 2.1x1.8x3.5 cm) with suprasellar extension into left cavernous sinus, mild compression onto floor of third ventricle and optic chiasm, which represents a pituitary macroadenoma. Serum hormonal levels were normal, and referrals were made to neurosurgical, ophthalmology and medical teams for further interventions.

**Discussion:** The atypical presentation of Parkinsonism in this case has prompted us to proceed with neuroimaging. The discovery of pituitary macroadenoma in the absence of endocrine dysfunction or neurological symptoms is unusual. Previous studies have shown acute parkinsonism following resection of pituitary adenomas and tumoural parkinsonism secondary to brain tumours. Nevertheless, the association between pituitary macroadenomas and Parkinson's-like symptoms is relatively rare. This raises the possibility of mass effect leading to motor dysfunction due to pressure exerted onto structures which house the dopaminergic signaling pathway.

**Conclusion:** Parkinson's-like symptoms do not necessarily equate to Parkinson's disease. This case highlights, in cases of diagnostic uncertainties, neuroimaging should be carried out to ascertain the correct diagnosis.

**Keywords:** Parkinson's-like symptoms, Parkinsonism, Pituitary macroadenoma

#### CCR / CS48

### Impact of Adenotonsillectomy on ADHD symptoms in Children with Obstructive Sleep Apnea: A Case Report

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**Introduction:** To describe improvement of Attention Deficit Hyperactive Disorder (ADHD) symptoms in children with Obstructive Sleep Apnea (OSA) after adenotonsillectomy.

**Case Presentation:** A 8 year old boy with a BMI of 18 kg/m<sup>2</sup> was brought by his parents with concerns about hyperactivity, poor attention span, and impulsive behaviour that had been worsening over past 2 years. Teachers also reported that he struggled to focus in class, easily distracted, poor academic performance despite normal intelligence and sleepiness during the day in the class. His Epworth Sleepiness Scale was 7 and examination showed a narrowing of upper airway, grade III tonsil and Friedman Tongue Position 2. Nasopharyngoscopy revealed bilateral inferior turbinates hypertrophy and nasal adenoid hyperplasia. Polysomnography (PSG) showed moderate obstructive sleep apnea with nadir oxygen saturation 88%. He was referred to multi-disciplinary team involving pediatrician, child psychiatrist and otorhinolaryngologist. The child received adenotonsillectomy and recovered well after 6 months later with repeated PSG, the Apnea-Hypopnea Index (AHI) lowered down from 8.4/hour to 0.6/hour. The child's ADHD related symptoms improved after adenotonsillectomy.

**Discussion:** OSA is easily missed in children with ADHD, especially in those without risk factors. In children with OSA associated with adenotonsillar hypertrophy, behavioral issues, impulsiveness and attention deficit hyperactivity disorder are common and might vary in intensity. In this case, treating underlying OSA with adenotonsillectomy led to significant improvement in ADHD-like symptoms, avoiding unnecessary stimulant medication.

**Conclusion:** Children with ADHD-like symptoms presented to primary care clinic should be screened for OSA and be referred to multi-disciplinary evaluation and management.

**Keywords:** ADHD; OSA; Adenotonsillectomy

#### CCR / CS49

### Intrauterine Fetal Demise (IUFD) Secondary to Congenital Leukemia in an Amphetamine- Type-Stimulant (ATS) User Mother

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**Introduction:** Congenital leukaemia is a rare haematological malignancy typically diagnosed within the neonatal period. Its occurrence antenatally, particularly as a cause of intrauterine foetal demise (IUFD), is extremely uncommon. This report presents a rare case of IUFD secondary to congenital leukaemia in a mother with a history of amphetamine-type stimulant (ATS) use.

**Case Presentation:** A 44-year-old gravida 9, para 6, with a history of chronic ATS use and multiple comorbidities, presented at 31 weeks of gestation with decreased foetal movement. An ultrasound confirmed IUFD. Her antenatal history included chronic hypertension, gestational diabetes mellitus (GDM), mild anaemia, and recurrent positive urine drug screens for amphetamines. Emergency caesarean section with bilateral tubal ligation was performed, delivering a macerated stillborn weighing 1.8 kg. Histopathological analysis of the placenta and umbilical cord showed immature hematopoietic cells with high nuclear-to-cytoplasmic ratios, apoptotic bodies, and immunopositivity for CD34 and MPO, consistent with a diagnosis of congenital leukaemia or transient abnormal myelopoiesis (TAM).

**Discussion:** This case underscores the complex interplay of maternal ATS use, placental dysfunction, and possible in utero leukemogenesis. Although a direct causal relationship between maternal methamphetamine exposure and congenital leukaemia remains speculative, several mechanisms-such as placental toxicity, DNA damage, and immune dysregulation - may contribute. The presence of foetal haematopoietic cells in placental vessels serves as a critical diagnostic clue, particularly in cases of IUFD.

**Conclusion:** This case highlights the need for heightened awareness of congenital haematological malignancies in pregnancies complicated by substance abuse and calls for further research into the potential teratogenic effects of ATS exposure.

**Keywords:** Congenital Leukaemia, Intrauterine foetal demise (IUFD), Amphetamine-Type- Stimulants (ATS)

## CCR / CS50

### Latent Autoimmune Diabetes in Adults (LADA): Navigating Diagnostic Dilemmas and Treatment Complexities - A Case Report

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**Introduction:** Latent Autoimmune Diabetes in Adults (LADA) is a distinct subtype of diabetes that exhibits characteristics of both Type 1 and Type 2 diabetes mellitus (DM).

**Case Presentation:** This report details the case of a 42-year-old Malay man who presented with diabetic ketoacidosis (DKA) and acute kidney injury secondary to infective gastroenteritis. Initially diagnosed with Type 2 DM, he was treated with metformin and insulin therapy. However, persistent poor glycaemic control led to further investigations, which revealed the presence of anti-glutamic acid decarboxylase (GAD) and anti-islet cell antibodies. After a year, the managing endocrine team reclassified his condition as LADA and optimised his treatment to include insulin regimes and continuous glucose monitoring (CGM). However, managing his glucose levels proved challenging due to frequent episodes of hypoglycaemia and fluctuating hyperglycaemia.

**Discussion:** This case illustrates the diagnostic challenges associated with LADA, emphasising the need for early antibody screenings to prevent misdiagnosis and inappropriate management. Treatment for LADA balances controlling blood sugar levels with the risk of hypoglycemia, highlighting the need for personalised medication and lifestyle changes.

**Conclusion:** The role of primary care providers is crucial, underscoring the importance of early recognition, comprehensive care, and multidisciplinary collaboration in improving patient outcomes. Enhanced awareness, improved diagnostic tools, and personalised strategies are essential for optimising quality of life and reducing long-term complications in LADA patients.

**Keywords:** LADA DM SUBTYPES

## CCR / CS51

### Lymphatic Labyrinth: Decoding Sporotrichoid Cutaneous Tuberculosis (SCTB)

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**Introduction:** Sporotrichoid Cutaneous Tuberculosis (SCTB) is a rare form of cutaneous TB caused by direct skin inoculation of *Mycobacterium tuberculosis*. It presents as a primary lesion (papule, nodule, or ulcer) with ascending nodules along lymphatic channels, resembling sporotrichosis. This case report highlights this uncommon presentation and offers practical guidance for diagnosis and management.

**Case Presentation:** A 59-year-old healthy man presented with a year-long history of skin lesions starting as erythematous

patches on his upper limbs, progressing to nodules and blisters that ruptured spontaneously leaving crusted or eroded areas. The lesions spread in a linear pattern along lymphatic channels and eventually also appeared on his lower limb. Despite no TB contact or pulmonary symptoms, he had weight loss and poor appetite. Pus showed 3+ acid-fast bacilli. Skin biopsy revealed chronic granulomatous inflammation, though PCR and culture were negative. He improved with anti-tubercular therapy.

**Discussion:** Diagnosis of SCTB is challenging due to its resemblance to other nodular skin infections, including fungal and atypical mycobacterium infections. Early diagnosis requires a combination of histopathology, Ziehl-Neelsen staining, culture and molecular testing (e.g. PCR for *M. tuberculosis*). Prompt anti-tubercular therapy (ATT) is essential to prevent complications and improve patient outcomes.

**Conclusion:** Clinicians should consider SCTB in chronic nodular skin lesions, particularly in TB-endemic regions. Early recognition and appropriate treatment are crucial to prevent morbidity.

**Keywords:** Sporotrichosis Tuberculosis, Cutaneous

## CCR / CS52

### Lymphoedema - Filariasis or Soft Tissue Sarcoma - A Case Report

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**Introduction:** Chronic unilateral lymphoedema can be caused by variable pathologies. In Sabah, filariasis is endemic in certain district and is an important differential diagnosis. This is a case report of a middle-aged man presented with chronic unilateral lymphoedema with a mass on the same limb. Management of this case has involved multidisciplinary teams.

**Case Presentation:** A 47 years old man presented with 6 months duration of right lower limb swelling associated with a mass over the lower posterolateral aspect. The patient has history of travel to a district endemic of filariasis. Physical examination showed right unilateral lymphoedema with Brunner stage 1 classification, and a mass measuring 10x13 cm of smooth surface but hard consistency. Slipping test for lipoma was negative. X-ray showed soft tissue mass without bone involvement. MRI of right tibia/fibula showed large heterogenous, lobulated, multiseptated mass suggestive of soft tissue sarcoma with surrounding vessel compression. Wedge biopsy of the mass reported as pleomorphic spindled to epithelioid cell. CT-TAP showed right inguinal and para-iliac lymphadenopathy without distant metastasis. Patient underwent right below knee amputation and subsequently followed up under Orthopaedic surgeon.

**Discussion:** From primary care point as a gatekeeper, several characteristics of a mass warrants for expedite referral to Radiologist for MRI to exclude malignancy which include size >5 cm, location

on or below a fascia, matted to surrounding structure, rapid growth or or recurrent of a mass after prior excision.

**Conclusion:** Filariasis and soft tissue sarcoma are two diagnoses with important morbidity and risk of mortality for patient with lymphoedema and a mass.

**Keywords:** Lymphoedema, Filariasis, Soft Tissue Sarcoma

### CCR / CS53

#### Managing PrEP in a High-Risk Patient with Solitary Kidney: Rethinking HIV Prevention Options

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**Introduction:** Pre-exposure prophylaxis (PrEP) for human immunodeficiency virus (HIV) has been strongly recommended by World Health Organisation (WHO) for HIV prevention since 2015. In 2023, the Malaysian Ministry of Health launched a PrEP demonstration project in selected primary care clinics using a fixed-dose combination of Tenofovir disoproxil fumarate (TDF) 300mg and Emtricitabine 200mg (TDF/FTC).

**Case Presentation:** A 43-year-old male with a solitary kidney, hypertension, dyslipidaemia, and morbid obesity presented requesting PrEP. He was on multiple medications for his comorbidities, and had significant high-risk behaviour that warrants PrEP. His baseline creatinine was 120µmol/L and eGFR was 66.4ml/min/1.73m<sup>2</sup>. After detailed counselling regarding his kidney status, patient was started on TDF/FTC. Patient's renal function was closely monitored and his eGFR declined to 57.1ml/min/1.73m<sup>2</sup> (<60ml/min/1.73m<sup>2</sup>) by week 4, prompting the cessation of TDF/FTC, and counselled on risk reduction. Three months after PrEP discontinuation, eGFR was 63.8ml/min/1.73m<sup>2</sup>, and patient tested HIV-negative.

**Discussion:** This case highlights the importance of patient-centred, multidisciplinary approach in managing high-risk individuals on HIV PrEP with significant comorbidities. While ongoing counselling on lifestyle modifications, especially consistent condom use, remains essential for all patients regardless of PrEP, alternatives to TDF/FTC should be considered for those with renal impairment or side effects. Daily Tenofovir Alafenamide-FTC, and 2-monthly injectable cabotegravir are available in Malaysia's private sector. Emerging options like 6-monthly injectable lenacapavir show promise but are yet to be accessible.

**Conclusion:** This case emphasises the importance of individualised HIV prevention options available primary care when managing complex, high-risk patients with multiple comorbidities.

**Keywords:** PrEP, Alternative HIV Prevention Strategies, Post Nephrectomy

### CCR / CS54

#### Melioidosis: Endemic In Malaysia But 'A Great Mimicker'

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**Introduction:** Melioidosis, caused by *Burkholderia pseudomallei*, is endemic in Southeast Asia, including Malaysia, with an annual incidence of 3.41 per 100,000 (2014–2020). Transmitted through soil or water exposure, it frequently mimics other common infections, presenting as fever, pneumonia, or sepsis. Misdiagnosis or delayed treatment can be fatal.

**Case Presentation:** A 21-year-old Sabahan male, active smoker with no comorbidities, presented with a two-day history of fever, cough, and lethargy. Initially diagnosed with pneumonia at a private clinic, he was treated with oral amoxicillin. Worsening symptoms led him to a government clinic, where investigations showed a raised total white count and a normal chest X-ray. Despite continued antibiotics, his condition deteriorated, requiring hospital admission. A repeat chest X-ray revealed bilateral infiltrates; blood cultures later confirmed *B. pseudomallei*. He succumbed to multiorgan failure on day seven.

**Discussion:** Melioidosis remains under-recognized in primary care despite its prevalence. Its diverse presentations often result in empirical mismanagement. Resource limitations and reliance on initial imaging and broad-spectrum antibiotics contribute to delays. In endemic areas, heightened clinical suspicion is critical, especially when patients show a poor response to standard treatments.

**Conclusion:** This case highlights the need for increased awareness of melioidosis among primary care providers. Early recognition, timely referral, and appropriate empirical therapy in febrile patients unresponsive to first-line antibiotics can improve outcomes. Strengthening training and clinical suspicion in outpatient settings is vital in reducing melioidosis-related mortality.

**Keywords:** Melioidosis, *Burkholderia pseudomallei*, Primary health care

### CCR / CS55

#### Mimicry & Unmasking Skin Disease: Adolescent Psoriasis Mimicking Tinea Infection

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**Introduction:** Background: Psoriasis in children and adolescents is often under-recognized, especially when it presents with atypical or localized features that mimic common dermatological conditions such as tinea corporis. Delayed diagnosis may lead to disease progression, psychosocial impact, and increased risk of complications.

**Case Presentation:** We report the case of a 13-year-old child who presented with recurrent scaly plaques over the scalp, trunk, and limbs. The lesions were initially diagnosed as superficial fungal infections and treated with multiple courses of topical and oral antifungal agents without improvement. The delay in accurate diagnosis resulted in disease progression and significant impact on quality of life. Subsequent dermatological evaluation confirmed the diagnosis of plaque psoriasis.

**Discussion:** This case highlights the diagnostic challenge of psoriasis in the paediatric population, particularly when it presents with features resembling tinea infections. It emphasizes the importance of maintaining a broad differential diagnosis for

persistent or recurrent skin lesions in children. Early identification and appropriate treatment of psoriasis can prevent complications such as erythroderma, psoriatic arthritis, and long-term psychological distress.

**Conclusion:** Psoriasis in children can mimic more common skin conditions, leading to misdiagnosis and treatment delays. A high index of suspicion, timely referral, and awareness of clinical red flags are essential for early diagnosis and prevention of complications.

**Keywords:** Psoriasis; Diagnosis, Differential; Adolescent

## CCR / CS56

### Missed Marks, Lasting Scars

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**Introduction:** Leprosy or Hansen's disease, caused by Mycobacterium Leprae primarily affects the skin and peripheral nerves. If untreated, it can lead to permanent disability. This case report discusses a missed diagnosis with grade 2 disability and anaemia in primary care, highlights diagnostic challenges, implications of delays and strategies for improving early detection and management of the disease.

**Case Presentation:** An 80-year-old hypertensive woman presented with worsening bilateral hand ulcers unresponsive to multiple topical and oral medications. Initial diagnosis was impetigo, but further examination revealed Multibacillary Leprosy with Grade 2 disability. A skin slit smear (SSS) confirmed acid-fast bacilli. She was treated with multi drug treatment and anaemia on chronic disease was managed. Follow ups showed compliance and improvement with repeated SSS indicating successful treatment (Bacillary and Morphology Indices at 0).

**Discussion:** This case emphasises key aspects of leprosy management, highlighting its relation to anaemia of chronic disease and diagnostic challenges. Initial misdiagnosis delayed treatment, causing deformity. Early signs, like skin lesions were non-specific. Specialist access and accurate test proved crucial for confirmation and care. Increased awareness, training and improved access to diagnostic are vital to enhance early detection and outcomes.

**Conclusion:** This case highlights that leprosy, though treatable, remains a persistent diagnostic challenge due to limited awareness and healthcare provider experience, often leading to delayed diagnosis and complications like disability and anaemia. Early screening, active case detection, and targeted training for primary care are crucial for improved outcomes. Strong collaboration between public health and dermatology teams is essential to reduce disease occurrence and spread.

**Keywords:** Multibacillary Leprosy, Anaemia, Grade 2 Disability

## CCR / CS57

### More Than Just a Phase: A Case Report on Teenage Depression

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**Introduction:** A striking new trend emerging among adolescent is the "barcode" phenomenon, where individuals carve parallel lines into their skin, mimicking the product barcode, highlights urgent questions about its psychological and social impact.

**Case Presentation:** Miss L, a 14 years old girl, was found by medical school team with self-inflicted parallel cuts on her left forearm. She revealed that her self injury attempt was driven by deep feelings of sadness, neglect and loneliness triggered by her parents' separation. She also disclosed history of previous suicide attempts where she tried to drown herself and cut her wrist. She lives with her grandmother but both attempts were unnoticed. Despite her emotional struggles, she maintains good academic performance and conceals her distress from teachers and peers. During consultation, she became tearful, spoke with low and monotonous speech. Recognizing the severity of her condition, she was referred to psychiatrist.

**Discussion:** The "barcode" trend is an example of non-suicidal self-injury among adolescents, often seen as a cry for help or a desperate plea for attention. Nevertheless, this behavior can evolve into severe depression. Early detection of mood disorder among adolescent is crucial which school authorities e.g. counsellors play a vital role in identifying those at risk with timely referrals to medical provider. In addition, parental awareness of non suicidal self harm play a crucial role to support adolescents' mental and behavioral concern.

**Conclusion:** Early detection of mood disorder or self harm among adolescent is vital with school and parental awareness is key to timely intervention and support.

**Keywords:** barcode, self harm, depression

## CCR / CS58

### More Than Just Weight: Cases of Adolescent Obesity with Hidden Struggles

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**Introduction:** Adolescent obesity has become a critical public health issue in Malaysia, currently affecting approximately one in three adolescents. This alarming trend is closely linked to unhealthy dietary habits, physical inactivity, and excessive screen time. Beyond its physical consequences, obesity in adolescents often manifests through diverse medical symptoms and psychological challenges, which are frequently overlooked in standard treatment approaches.

**Case Presentation:** This presentation discusses five adolescent cases managed at our center, each presenting with distinct complaints: (1) headache, (2) osmotic symptoms, (3) shortness of breath, (4) anger outbursts, and (5) school refusal. In all cases, obesity was identified as a central, contributing factor prompting medical attention.

**Discussion:** Effective management requires a comprehensive assessment, including detailed history-taking, exploration of lifestyle patterns, family dynamics, and the bio-psycho-social impact of obesity. Crucially, individual and family motivation to

change was a key component in crafting successful intervention strategies. A personalized, multidisciplinary management plan was developed for each patient, involving collaboration between healthcare providers, families, and school authorities. This coordinated approach was essential for addressing the complex interplay of physical, emotional, and social factors in adolescent obesity.

**Conclusion:** In conclusion, adolescent obesity is not merely a matter of excess weight. If unrecognized and untreated, it can lead to long-term complications such as obstructive sleep apnoea, metabolic syndrome, asthma, mental health issues, and academic struggles. Early, integrated intervention across healthcare, family, and educational systems is vital to achieving sustainable, long-term health outcomes for affected adolescents.

**Keywords:** obesity in adolescent, personalized and multidisciplinary management

### CCR / CS59

#### **Mycoplasma-Induced Rash and Mucositis (MIRM) in a Young Woman: A Rare but Important Diagnostic Consideration**

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**Introduction:** Mycoplasma-induced rash and mucositis (MIRM) is a clinical entity characterized by mucosal involvement and cutaneous manifestations, primarily associated with Mycoplasma pneumoniae infection. It is a rare extrapulmonary complication, most commonly affecting children and adolescents, with limited cases reported in adults.

**Case Presentation:** A 33-year-old female with no significant medical history presented with a two-week history of an itchy maculopapular rash over the trunk and extremities. One week prior, she experienced fever, sore throat, and myalgia. She had no recent exposure to medications, detergents, or new food. On examination, she was afebrile, with an injected throat and dry, chapped lips. An erythematous macular rash was noted in the bilateral orbital region, along with scattered maculopapular lesions over the extremities and trunk, without epidermal attachment. Laboratory results showed a raised white blood cell count (14,000/mm<sup>3</sup>) with an elevated erythrocyte sedimentation rate (23mm/h). Serum IgM for Mycoplasma pneumoniae was positive. She was treated with supportive management, antibiotics and systemic steroids. There was complete resolution of lesions within two weeks.

**Discussion:** MIRM, though primarily reported in younger populations, can affect adulthood too. The condition is often mistaken for more severe mucocutaneous disorders, such as Stevens-Johnson Syndrome (SJS) or Toxic Epidermal Necrolysis (TEN) due to overlapping clinical features. Since primary care physicians are often the first point of contact, they should consider MIRM in patients presenting with mucositis and a mild, non-detaching rash, especially in absence of drug exposure.

**Conclusion:** Raising awareness of MIRM's presentations is essential for improving diagnosis and management, particularly in primary care settings.

**Keywords:** Mycoplasma-induced rash and mucositis (MIRM), Mycoplasma pneumoniae

### CCR / CS60

**Navigating complexities: A multidisciplinary approach to addressing sexual health concerns in an adolescent**

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**Introduction:** In Malaysia, adolescents with problematic sexual behavior including early exposure to pornography and risky sexual conduct, is growing due to increased internet access and insufficient sexual education, leading to emotional and psychological challenges

**Case Presentation:** A fourteen-year-old male was referred to the SCAN clinic due to a sexually transmitted disease. His history includes exposure to pornography at the age of nine and numerous risky sexual encounters, mainly consensual, with male partners aged between 14 and 28. He has engaged in 7 to 8 instances of unprotected sexual intercourse monthly and views pornography daily. The boy has also faced verbal abuse from peers, contributing to his low self-esteem, intermittent depressive thoughts and auditory hallucination including suicidal ideation. Currently, he is under the care of a multidisciplinary team, which includes the school counselor, pre-Exposure Prophylaxis Clinic, SCAN clinic and a Child and Adolescent Psychiatrist. After being prescribed antipsychotic medication and initiating PrEP as a preventive treatment, he has made tremendous progress, participating in only one protected sexual conduct in the last two to three months and significantly restricting his pornography use. His parents are supportive and optimistic about his rehabilitation.

**Discussion:** The case emphasizes the importance for unprejudiced, holistic, early intervention and an integrated approach in treating adolescent sexual health challenges. By integrating sexual health and mental health treatment, significant progress was made.

**Conclusion:** Ongoing support, comprehensive education, family involvement while maintaining cultural sensitivity in managing problematic sexual behavior are essential for sustained recovery and healthier sexual behaviors in adolescent.

**Keywords:** PrEP pre-exposure prophylaxis SCAN suspected child abuse and neglect

### CCR / CS61

#### **Nocturnal Enuresis as an Uncommon Presentation of Obstructive Sleep Apnea in an Adult: A Case Report**

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**Introduction:** Obstructive sleep apnea (OSA) is a sleep-related breathing disorder characterized by repetitive upper airway collapse which lead to breathing cessation and frequent arousals from sleep. It can significantly impair both physical and mental health

of the patient. This case report highlights nocturnal enuresis as an uncommon presentation of OSA in adults and emphasizes the role of a multidisciplinary team approaches in primary care setting.

**Case Presentation:** A 33-year-old man with underlying type 2 diabetes mellitus, hypertension, dyslipidemia, and morbid obesity presented with bedwetting for the past two weeks. This was his first episode and was associated with daytime somnolence and snoring. Secondary causes of nocturnal enuresis, such as urinary tract infection, poorly controlled diabetes, and diuretic use were excluded. A STOP-BANG score of 7 and polysomnography showing an apnea-hypopnea index (AHI) of 70 had confirmed the diagnosis of severe OSA. A trial of continuous positive airway pressure (CPAP) therapy resulted in marked improvement, reducing the AHI to 1.6 and achieving a complete resolution of his bedwetting. The case was co-managed with the otorhinolaryngology (ORL) team, while he was also holistically managed in the obesity clinic by family physician, dietitian and physiotherapist for optimization of his comorbidities.

**Conclusion:** Nocturnal enuresis is common in pediatric patients with OSA but is often underreported in adults, largely due to embarrassment or social stigma. Establishing good rapport with patients is essential to obtain this vital information. Early outpatient referral for polysomnography prior to otorhinolaryngology (ORL) referral can lead to prompt diagnosis and improve the patient's quality of life.

**Keywords:** Nocturnal Enuresis, Obstructive Sleep Apnea

#### CCR / CS62

##### Nodular Kaposi Sarcoma in a Non-HIV Dusun Ethnic Patient in Malaysia

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**Introduction:** Occurrence of Kaposi sarcoma (KS) in non-HIV patients remains rare. This report details a case of nodular KS in a Dusun patient from Malaysia without HIV, complicating anticoagulation management amid tuberculosis (TB) treatment.

**Case Presentation:** A 78-year-old Dusun man with atrial fibrillation on warfarin, hypertension, CKD, heart failure, and CVA was first presented to primary care with shortness of breath. CXR showed right-sided pleural effusion. The pleural biopsy identified Mycobacterium tuberculosis complex. Anti-TB therapy of EHRZ regime was initiated. Shortly, the patient developed liver injury likely secondary to Pyrazinamide, prompting a change to HRE regime. During follow-up, achieving stable INR control was difficult despite of high dose warfarin. Four months into anti-TB therapy, multiple painless, purplish nodules appeared on both calves, progressively spreading to his feet. HIV rapid test and serology was sent prior and after the lesion and both came back negative. Excision and punch biopsy of skin tissues revealed a nodular dermal tumour with immunohistochemistry confirmed the presence of HHV8 within the tumour cells, confirming the diagnosis of nodular KS. The Oncology team initiated intravesical Paclitaxel chemotherapy and patient was switched to apixaban for anticoagulation.

**Discussion:** This case illustrates the diagnostic intricacies of

nodular KS in a non-HIV Dusun patient, emphasizing importance of histopathology's role. Ethnic genetic profiles and comorbidities may synergistically potentiate HHV-8 oncogenesis, warranting heightened vigilance in elderly Asian populations.

**Conclusion:** Therapeutic challenges, particularly anticoagulant-chemotherapy interactions, underscore the need for multidisciplinary management. Future research should explore HHV-8 seroprevalence in Dusun communities and optimize treatment protocols for non-AIDS KS in resource-limited settings.

**Keywords:** Kaposi Sarcoma, non-HIV

#### CCR / CS63

##### Opioid-induced Neurotoxicity in Cancer Pain Management: Case-Based Insights

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**Introduction:** Opioids are essential for managing cancer-related pain, significantly improving patient comfort and quality of life. However, dose escalation without thorough assessment and monitoring (particularly in vulnerable populations) can lead to serious adverse effects, including opioid-induced neurotoxicity.

**Case Presentation:** Case 1: A 75-year-old woman with stage 4 vaginal adenocarcinoma and chronic kidney disease was admitted with an infected vaginal tumour. Her aqueous morphine dose was increased from 3 mg to 5 mg every four hours due to escalating pain. She subsequently developed drowsiness and myoclonic jerks, coinciding with worsening kidney function. Regular morphine was discontinued and replaced with transdermal fentanyl 12.5 mcg/h and as-needed morphine, leading to symptom resolution. Case 2: A 69-year-old man with metastatic prostate cancer to the bone was discharged on transdermal fentanyl 37.5 mcg/h and syrup methadone 2.5 mg daily. In the community, his doses were increased to fentanyl 50 mcg/h and methadone 2.5 mg twice daily. He later presented with delirium and seizure-like activity, which resolved after the opioids were withheld. His pain, exacerbated by psychosocial and emotional distress, was addressed accordingly, and his symptoms were effectively managed with transdermal fentanyl 25 mcg/h and as-needed morphine.

**Discussion:** This report discusses opioid-induced neurotoxicity in relation to the cases presented.

**Conclusion:** These cases highlight the importance of cautious opioid titration, particularly in community settings. Comprehensive, holistic pain assessments and regular reviews by trained clinicians are essential to minimise risks such as neurotoxicity and to ensure safe, effective pain management.

**Keywords:** opioid-induced neurotoxicity

#### CCR / CS64

##### Overcoming Barriers: Successful wound Care and Off-Loading in a Limited-resource setting during Hajj Pilgrimage

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**Introduction:** Diabetic foot ulcers (DFUs) are major complication in people with diabetes mellitus, particularly during physically

demanding activities like the Hajj pilgrimage. Off-loading techniques play a key role in wound management, especially in limited-resource settings.

**Case Presentation:** A 64-year-old man with diabetes on dual oral glucose-lowering drugs developed a new left heel ulcer after prolonged ambulation. He had no previous history of foot ulcers. He reported wearing sandals without socks and walking approximately 1 km daily. Foot examination revealed a solitary ulcer (3cm x 2.5cm, 0.3cm deep) with no signs of secondary infections. During the visit, off-loading method was innovated by modifying the footwear to reduce the pressure on the affected foot. Alongside this, the patient received daily wound dressing and close glycaemic control. Within four weeks, the ulcers showed a significant improvement and healed without needing tertiary referral.

**Discussion:** Walking long distances without proper foot protection increases the risk of developing DFUs which can impair mobility, reduce quality of life, and may lead to serious complications if not treated early. In a setting with limited resources, an off-loading method can be established through footwear modification. This approach helps redistribute pressure away from the ulcer site, mimicking total contact casting principles. This ensures that common but potentially serious conditions such as DFUs are managed promptly, reducing morbidity and enhancing their health, ensuring pilgrims can perform their religious obligation safely.

**Conclusion:** This case highlights the importance of prompt identification, timely intervention, and innovation on off-loading strategies in managing DFUs, particularly in the challenging Hajj season.

**Keywords:** Off-loading, Wound care, Pilgrimage

## CCR / CS65

### **Paternity Leave and Maternal Mortality: A Case Report on Placental Site Vessel Subinvolution**

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**Introduction:** Despite improvements in maternal healthcare in Malaysia, postpartum haemorrhage (PPH) remains a leading cause of maternal death. Common causes include uterine atony and retain products of conception. A rare but grave cause is placental site vessel subinvolution (VSI, often requiring emergency interventions like hysterectomy).

**Case Presentation:** A 32-year old woman, Para 6, day five postpartum, was found unconscious by her husband upon returning home from work and pronounced dead at the scene. The autopsy identified secondary postpartum haemorrhage from VSI as the cause of death. This tragedy was deemed preventable by the maternal mortality inquiry, highlighting a missed opportunity for earlier medical intervention in the absence of a postpartum

companion. Unfortunately, due to their unregistered marriage, the husband was not entitled paternity leave. Thus, the patient was left unaccompanied with her newborn. No other family support was available.

**Discussion:** Acceptable postpartum support, crucial for maternal well-being, traditionally involves family or local midwives. Some nations have enacted paternity leave policies to improve paternal involvement in early childcare and support. However, in Malaysia, paternity leaves benefits are restricted to legally married couples, leaving some mothers without necessary support.

**Conclusion:** This case emphasizes the need for comprehensive paternity leave policies that include all parental figures, irrespective of marital status. It also signifies the importance of formal marriage registration to qualify for such benefits. Ensuring that every mother receives support during the critical postpartum is vital in decreasing maternal mortality as it can ease prompt access to medical care and essential assistance.

**Keywords:** vessels subinvolution (VSI), maternal mortality, paternity leaves

## CCR / CS66

### **Penile Siliconoma Mimicking Suprapubic Tumor: A Diagnosis Challenge in Primary Care**

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**Introduction:** Penile siliconoma results from injection of silicone or paraffin for penile augmentation. It is a rare under-reported condition often seen in low-resourced settings. Symptoms may appear years later with chronic granulomatous inflammation. In primary care, this non-specific presentation can mimic neoplasia or infection creating a diagnostic challenge.

**Case Presentation:** A 58 years old male presented with suprapubic pain, urinary retention and a firm palpable suprapubic mass, raises suspicion of a tumor. He denied relevant history but through thorough questioning revealed self-injection of silicone into his penis for augmentation. Physical examination showed induration of penile and suprapubic tissues. Given this history, a diagnosis of penile siliconoma was established. Surgical management required multiple procedures including excision of granulomas and reconstruction.

**Discussion:** This case highlights a diagnosis dilemma in primary care. Penile siliconoma's rarity and non-specific presentation can mimic malignancy leading to misdiagnosis in elderly population. Complications of penile augmentation are under reported and patient may withhold augmentation history due to stigma causing delay in diagnosis. Open and nonjudgmental communication is essential to elicit relevant history, build patient trust and aiding diagnosis accuracy. Clinicians should consider foreign-body injection in the differential diagnosis of penile or suprapubic masses. Early recognition prevents unnecessary alarm and guides appropriate surgical referral.

**Conclusion:** Thorough history taking and clinician awareness of penile siliconoma are crucial to avoid misdiagnosis of tumor.

Recognizing this rare presentation enables correct management and underscores the importance of open, honest patient communication and trust in primary care.

**Keywords:** Mimicking Suprapubic Tumor

### CCR / CS67

#### PMTCT Challenges in a Seroconcordant Couple with Socioeconomic Barriers – A Case Study from Sabah, Malaysia

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**Introduction:** Prevention of mother-to-child transmission (PMTCT) of HIV is a national health priority in Malaysia, aligned with WHO's elimination certificate in year 2018. Effective antiretroviral therapy (HAART) and adherence are crucial for viral suppression and reducing vertical transmission. However, socioeconomic, logistic, and legal barriers complicate management, especially among non-citizens.

**Case Presentation:** Madam H, a 28-year-old local Dusun woman, gravida 2 para 1, was diagnosed HIV-positive during her second pregnancy at 7 weeks. Her spouse, Mr A, a non-local immigrant with high-risk sexual behaviour, also tested positive. Both were started on HAART, but Mr A's treatment was self-funded due to non-citizen status. Madam H showed poor adherence early on, while Mr A defaulted due to work-related travel. Inpatient Direct Observation Therapy (DOTS) was proposed under the Infectious Disease Control Act—rarely applied to HIV, after discussion with Infection-Control Consultant. This required careful consideration of Madam H's caregiving role. Forced admission risked damaging rapport, essential for long-term follow-up. A negotiated admission was arranged. She was warded for 3 weeks for monitoring and counselling. Mr A was traced and re-engaged. Both achieved viral suppression prior to delivery.

**Discussion:** This case highlights the complex clinical, legal, and social dynamics in PMTCT. While the Act provides legal basis for DOTS, patient-centred approaches and trust are crucial. Non-citizen status limits treatment access, and mutual transmission risks in seroconcordant couples require dual adherence.

**Conclusion:** Successful PMTCT requires multidisciplinary collaboration, socio-legal sensitivity, and patient empowerment. Tailored interventions addressing adherence, accessibility, and stigma are essential, particularly in resource-limited populations.

**Keywords:** PMTCT HIV Implementation Act

### CCR / CS68

#### Polycythemia Vera Presenting as Hypertension in a Young Patient: A Case Report

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**Introduction:** Polycythemia Vera (PV) is a rare hematological disorder, occurring at an incidence rate of 0.4-2.8 cases per 100,000 people annually. We report a case of a 30-year-old non smoking gentleman whose hypertension was unexpectedly linked to PV.

**Case Presentation:** At the age of 26, he was diagnosed with hypertension and dyslipidemia. Despite no family history of hypertension, investigations for secondary cause such as thyroid function test, renal profile, serum cortisol and renal ultrasound were unremarkable. Baseline hemoglobin was elevated but as patient remained asymptomatic, he was managed with oral Perindopril and Amlodipine. He later presented acutely with severe facial and hand flushing for a week. Vital signs revealed elevated blood pressure (145/91 mmHg) and a normal pulse rate. Physical examination showed widespread facial flushing, injected conjunctiva, and erythromelalgia. A prompt full blood count demonstrated erythrocytosis, elevated hemoglobin (22.4g/dL), and a hematocrit level of 66.9%, consistent with earlier trends. Referral to a tertiary center led to a diagnosis of polycythemia vera, confirmed by a positive JAK2 V617F blood test. Immediate venesection was performed, and he now undergoes biweekly venesections under hematological follow-up.

**Discussion:** This case highlights an unusual cardiovascular manifestation of PV in a young patient. PV is most commonly diagnosed at 60-70 years, with <12% of cases occurring before 40. Interestingly, hypertension often precedes PV, appearing in 60% of cases.

**Conclusion:** Hypertension is the most common cardiovascular condition in PV. Recognizing PV as a secondary cause of young hypertension is crucial, as early detection of blood routine abnormalities can mitigate cardiovascular risks.

**Keywords:** Polycythemia Vera, Hypertension

### CCR / CS69

#### Primary Care Management of Post-Tuberculosis Tracheobronchial Stenosis in a Young Woman Refusing Intervention: A Case Report with Future Reproductive Considerations

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**Introduction:** Post-tuberculosis tracheobronchial stenosis (PTTS) is a recognized complication of pulmonary tuberculosis. Bronchoscopic or surgical interventions are standard treatments, but some patients may decline invasive procedures, shifting long-term care responsibility to primary care. This case report illustrates the role of the primary care provider in monitoring a young woman with PTTS, supporting her health maintenance, and preparing for future reproductive plans.

**Case Presentation:** A 22-year-old female, previously treated for pulmonary tuberculosis in 2021, presented to the clinic in October 2024 for shortness of breath, productive cough & night sweats. Further investigations were done and confirmed as tracheobronchial stenosis. She declined interventional management but remained asymptomatic during the subsequent follow-ups. Anticipating future pregnancy, counselling was provided regarding pulmonary risk assessment, vaccination, and coordination with respiratory & obstetric care.

**Discussion:** This case highlights the expanding scope of primary care in managing complex chronic conditions when patients opt for conservative approaches. Key elements include symptom

surveillance, spirometry where available, immunizations, and anticipatory guidance for future events such as pregnancy. Respecting patient autonomy while ensuring safety through proactive, coordinated care is essential.

**Conclusion:** Primary care practitioners, respiratory physicians & O&G specialists play a vital role in the long-term, holistic management of young female patients with post-TB complications. When intervention is declined, structured monitoring, patient education, and reproductive planning become central to care delivery.

**Keywords:** post-tuberculosis tracheobronchial stenosis, conservative management, primary care

### CCR / CS70

#### **Psychosis in a Patient with Parkinsonism: Medication-Induced vs. Disease Progression**

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**Introduction:** Psychosis affects 20 to 40% of patients with Parkinson's disease (PD), arising either from disease progression or dopaminergic medication. Differentiating medication-induced psychosis (MIP) from disease-related psychosis is essential for management yet challenging because overlapping clinical features.

**Case Presentation:** A 64 year old man with Parkinson's disease, diagnosed at age 61, was on Carbidopa 25 mg and Levodopa 100 mg one tablet TDS. Trihexyphenidyl was added for persistent tremors. Subsequently, he developed psychosis symptoms, which were disorganized behavior, visual and auditory hallucinations and persecutory delusions. Physical and neurological examinations were unremarkable; CT Brain and laboratory investigations were normal. Trihexyphenidyl was discontinued and replaced with Propranolol. While the tremor improved, psychotic symptoms persisted and worsened. Following psychiatric referral, antipsychotic treatment was started, leading to significant improvement within one week.

**Discussion:** MIP typically improves following the withdrawal of the offending drug, with symptoms resolution often within days. In contrast, psychosis due to disease progression usually persists and requires anti psychotics. This case highlights awareness of the risk of psychosis when starting medication for motor symptoms. Besides, the importance of differentiating the cause of psychosis in PD for proper management and ensuring early psychiatric referral when symptoms persist or in doubt.

**Conclusion:** This case highlights the diagnostic challenge of differentiating medication-induced psychosis from psychosis due to Parkinson's disease progression. Besides, a need for vigilance when prescribing anticholinergics in elderly patients with Parkinsonism in Parkinson's disease, due to heightened risk of neuropsychiatric side effects. Furthermore, early psychiatric referral is important when psychosis occurs to avoid worsening of the symptoms.

**Keywords:** Psychosis, Parkinson's disease, Primary Care

### CCR / CS71

#### **Recurrent Contraceptive Failure of Both Etonogestrel Implant and Intrauterine Device in a Morbidly Obese Patient Leading to Consecutive Unintended Pregnancies: A Case Report**

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**Introduction:** Long-acting reversible contraceptives (LARC) such as etonogestrel implants and intrauterine contraceptive devices (IUCD), are effective contraceptive options for women with obesity. However, unintended pregnancies may still occur, particularly in those with elevated maternal body mass index (BMI), posing significant maternal and fetal risks.

**Case Presentation:** A 34-year-old multigravida woman with class III obesity (BMI 40.2kg/m<sup>2</sup>) and chronic hypertension experienced two unintended pregnancies despite LARC use. She conceived two months after receiving a subdermal etonogestrel implant post-delivery and delivered late preterm via emergency lower segment cesarean section (LSCS) for severe preeclampsia and intrauterine growth restriction. A postpartum IUCD was inserted without removing the implant. Six months later, she conceived again, with both devices confirmed in situ. Her pregnancies were complicated by hypertensive urgencies requiring multiple admissions. After counselling, she opted for bilateral tubal ligation during elective LSCS. The IUCD will be removed at delivery, and the implant later.

**Discussion:** Contraceptive failure in morbidly obese women using LARC may result from altered pharmacokinetics, hormonal metabolism, or anatomical challenges affecting device efficacy. In this case, obesity and chronic hypertension further elevated maternal and fetal risks, highlighting the need for personalized contraceptive counselling that starts preconceptionally and continues through the postpartum period. Multidisciplinary care involving primary care and specialist teams is essential to prevent unintended high-risk pregnancies.

**Conclusion:** Individualized contraceptive counselling and preconception weight optimization, supported by structured management strategies in pre-pregnancy care, are vital for improving pregnancy outcomes in women with obesity. Further research is needed to explore the pharmacokinetic limitations of contraceptive methods in this population.

**Keywords:** Contraceptive failure, Obesity

### CCR / CS72

#### **Rehabilitation Challenges In a Young Amputee with Stroke and Myocardial Infarction: From Community to Community: Enhancing Community-Based Rehabilitation Services In Malaysia**

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**Introduction:** Non-communicable diseases (NCDs) are rising globally, particularly affecting young adults in their productive years. This case illustrates the rehabilitation journey of a 32-year-old woman with young-onset hypertension, diabetes, and

dyslipidemia, complicated by stroke, myocardial infarction, and a recent right transtibial amputation due to acute limb ischemia.

**Case Presentation:** The patient is an ex-clerk, a single only child with poor social support and a strong family history of premature cardiovascular deaths, was admitted for inpatient pre-prosthetic rehabilitation. Her medical history began with an ischemic stroke at 27, followed by a myocardial infarction at 30. Despite recurrent hospital and primary care visits, she remained non-compliant to medication and follow-ups. By age 32, she developed critical limb ischemia that required right transtibial amputation.

**Discussion:** During a 2-month inpatient stay at Hospital Rehabilitasi Cheras, the patient received stump wound care, physical and cardiac rehabilitation, upper limb strengthening, ADLs retraining, psychosocial support and community reintegration under Social welfare home. She achieved meaningful gains of: a) Modified Barthel Index improved from 47% to 74% b) Regained independence in basic transfers and ADLs c) Improved stump wound healing d) Motivated to resume rehab under SOCSO disability management programme.

**Conclusion:** This case illustrates how a patient, if left unsupervised post major Cardiovascular event, can silently progress to more catastrophic disability. However despite events that occurred, rehabilitation may offer a second chance for independence and community participation once again. Primary care not only plays a strong role in risk identification, retention, and referral but also regain one's function. Community-based rehab must expand in Malaysia to close this critical gap.

**Keywords:** community rehabilitation non-communicable disease transtibial amputation/prosthesis

#### CCR / CS73

### Remission of Type 2 Diabetes Mellitus In A Young Adult Following Diet-Induced Weight Loss: A Case Report

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**Introduction:** Obesity can lead to several non-communicable diseases including Type 2 Diabetes Mellitus (T2DM), hypertension and hypercholesterolaemia. National Health and Morbidity Survey (NHMS) in 2023 reveals the prevalence of diabetes 15.6%, hypertension 29.3%, hypercholesterolaemia 33.3% and obesity among Malaysians are 54.4%. Obesity significantly increase the risk of developing T2DM due to insulin resistancy. Here we report a case of T2DM in remission following significant intentional diet-induced weight loss, eliminating the need of medications for T2DM, hypertension and hypercholesterolaemia.

**Case Presentation:** A 20-year-old girl who has been diagnosed with T2DM and hypertension since the age-of-12 with body mass index (BMI) between 36-37 kg/m<sup>2</sup> showing improvement in glucose control, blood pressure and cholesterol level when she began to restrict her calory intake aiming towards weight loss. She achieved 6% weight reduction within 6 months and reaching 10% within a year. She achieved HbA1c of 5.1% from 6.9% within 6 months duration and further reduce to 4.9% in a year. In addition

to controlled blood sugar, blood pressure and cholesterol level, she also started to experienced a regular menstrual cycle.

**Discussion:** The case study may discuss on corelation between body weight, obstructive sleep apnoea and occurrence of chronic diseases. We would want readers to understand that obesity is the main culprit in occurrence of chronic diseases and related health issues and that can be reversed! Not anymore dependent on medications are real!

**Conclusion:** Reducing weight helps to reverse metabolic syndrome and obstructive sleep apnoea thus protecting many vital systems and organs protecting against target organ damage and complications.

**Keywords:** Obesity, Type 2 Diabetes Mellitus, metabolic disorder

#### CCR / CS74

### Right Parasellar Meningioma In Pregnancy: A Case Report

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**Introduction:** Meningioma is the most common type of primary brain tumor, accounting for approximately 30% of all brain tumors. The tumor originates in the meninges which consist of three layers of tissue between the skull and the brain that cover and protect the brain named pia mater, arachnoid and dura mater. Meningioma grows out of the arachnoid and may cause compressions to nearby brain, nerves and vessels. They grow slowly and may exist for years before being detected.

**Case Presentation:** A 34-year-old woman, at 32 weeks of pregnancy, with no prior neurological problem, presented with sudden onset of right lateral gaze binocular diplopia while driving. CECT brain and orbit urgently done revealed impression of avidly enhancing, extra-axial, right parasellar lesion - likely meningioma measuring about 1.4cmx1.6cmx1.1cm. Unfortunately, symptom of right lateral gaze binocular diplopia worsened at 37 weeks of pregnancy thus proceed with MRI brain revealed a well-defined intensely enhancing right parasellar meningioma 2.2cmx1.3cmx1.2cm with dural tail encasing the right carotid artery. Clinically she exhibits right 6th cranial nerve palsy with no other neurological presentations. Obstetric assessment deemed her pregnancy fit for vaginal delivery. Consultation with neurosurgery was undertaken and stereotactic radiosurgery (SRS) was planned postpartum.

**Discussion:** This case emphasizes the influence of pregnancy-related hormonal changes on meningioma potentially leading to symptomatic growth during third trimester. Manifestations from right parasellar meningioma, management challenges between maternal neurological risks, maternal and fetal well-being will be discussed further in this case study.

**Conclusion:** Parasellar meningioma in pregnancy requires a multidisiplinary approaches.

**Keywords:** Parasellar meningioma, brain tumor, pregnancy-related hormonal changes

**CCR / CS75****Silent But Significant: Post-Tuberculosis Lung Collapse Detected During Routine Antenatal Care**Azalan H<sup>1</sup>, Zainol Rashid A<sup>2</sup><sup>1</sup>Klinik Kesihatan Jalan Putra, Outpatient/Maternal Child Health, Alor Setar, Malaysia, <sup>2</sup>KK Jalan Putra, Outpatient/Maternal Child Health, Alor Setar, Malaysia

**Introduction:** Malaysia has a relatively high incidence of tuberculosis (TB). We report a case of a 34-year-old pregnant woman (Gravida 2 Para 1), in whom left lung collapse was incidentally detected during routine antenatal care at 34 weeks of gestation.

**Case Presentation:** She presented with a one-month history of productive cough, chest tightness, and reduced effort tolerance, without dyspnea, fever, or other systemic symptoms. She had severe pulmonary TB in 2010, was intubated, and completed six months of treatment with no residual symptoms. Her previous pregnancy had been uneventful. Upon examination, she was clinically stable, with normal vital signs and an oxygen saturation of 99% on room air. The trachea was deviated to the left; auscultation revealed reduced breath sounds and crepitation over the left lung field. Chest X-ray reported left lower zone opacity with volume loss suggestive of old TB changes. Full blood count was normal. Sputum testing for acid-fast bacilli and mycobacterial culture was negative. A provisional diagnosis of pneumonia was made, and empirical antibiotic was initiated. She was urgently referred to a respiratory physician, who diagnosed a subacute cough, likely secondary to post-TB lung changes or bronchiectasis. Her symptoms resolved after treatment. The pregnancy progressed well. At 38 weeks, she delivered a healthy infant weighing 3.08 kg via spontaneous vaginal delivery. She was scheduled for CT thorax, spirometry, bronchoscopy, and echocardiogram post-delivery.

**Discussion:** Post-tuberculosis lung disease (PTLD) is a recognised long-term sequela of TB but is often underdiagnosed.

**Conclusion:** This case highlights the importance of long-term surveillance for PTLD in primary care.

**Keywords:** Tuberculosis, Pulmonary

**CCR / CS76****Silent Giant: An Incidental Ovarian Mass in a Young Hypertensive Patient**Chong MY<sup>1</sup>, Ismail SK<sup>2</sup><sup>1</sup>RCSI UCD Malaysia Campus (RUMC), Penang, Klinik Kesihatan Jalan Putra, Alor Setar, Malaysia; <sup>2</sup>PKD Kota Setar, KK Jalan Putra, Alor Setar, Malaysia

**Introduction:** Hypertension in young adult often warrants evaluation for secondary causes. We present an unusual case where a large ovarian mass was incidentally discovered during the secondary hypertension workup.

**Case Presentation:** NA, a 24 year old woman, presented for a routine medical checkup. Her blood pressure was significantly elevated at 225/146mmHg, decreasing to 197/146mmHg after rest. She was asymptomatic. Thus she was discharged and advised to monitor her blood pressure at home, which consistently ranged

between 142-155/96-124mmHg. A diagnosis of young onset hypertension was made, and she was started on T amlodipine 5mg once daily. Given her age and severe hypertension, secondary causes were considered, and the following investigations were performed: Serum cortisol, Thyroid function test, Ultrasound KUB with doppler. During imaging, an incidental large complex cystic abdominopelvic mass measuring 13.6 x 26 x 37.8cm with few thickened septa was detected. There is a mass effect with displacement of the liver, spleen, and both kidneys. Following the radiology's team recommendation, a contrast enhanced CT (CECT) scan was performed, revealing a large hypodense mass occupying the abdomen and pelvis, likely right ovarian origin. Tumor markers sent: CEA: 4, CA 125: 24.8, CA 19-9: <2.1. She is then planned for laparotomy and unilateral salpingo-oophorectomy.

**Discussion:** Young onset hypertension often has a secondary cause. The incidental discovery of an ovarian mass raises interesting considerations regarding its potential contribution to hypertension.

**Conclusion:** This case highlights the importance of thorough evaluation in young hypertensive patients and highlights the need for further research into potential links between ovarian pathology and hypertension.

**Keywords:** Young hypertension, ovarian mass

**CCR / CS77****Silent Threat: Listeriosis-induced Prematurity and Neonatal Loss - A Tale of Two Pregnancies**Abd Rahman MF<sup>1</sup><sup>1</sup>Klinik Kesihatan Simpang Empat, OPD, Simpang Empat Perlis, Malaysia

**Introduction:** Listeriosis in pregnancy, although rare, remains a significant cause of adverse perinatal outcomes. Often presenting with mild, nonspecific symptoms, maternal listeriosis can lead to severe neonatal complications, including preterm delivery, congenital infection, and mortality. Early recognition and preventive strategies are essential.

**Case Presentation:** We report two cases of listeriosis resulting in extreme prematurity and neonatal death. The first case; a 29-year-old primigravida who delivered spontaneously at 26 weeks gestation. The neonate, weighing 630g died shortly after birth due to severe prematurity. Diagnosis was confirmed via placental culture positive for *Listeria monocytogenes*. The second case; a 21-year-old G2P1 delivered at 28 weeks gestation 1240g neonate; initially demonstrated good Apgar scores but later succumbed to complications of congenital infection and severe intraventricular hemorrhage. Both maternal and neonatal blood cultures were positive for *Listeria*. Both mothers were treated postpartum with two weeks of intravenous antibiotic. A shared environmental exposure was identified: consumption of unboiled water from dispensing machines, although water samples tested negative. Other typical sources as unpasteurized milk and raw under-cooked food consumption were also considered.

**Discussion:** These cases illustrate the classical presentation of listeriosis precipitating premature labor, consistent with published literature. They highlight the need for greater awareness among antenatal care providers regarding food and water hygiene. From a

primary care prespective, cognitive aid tools can support antenatal counselling and early clinical suspicion of listeriosis in unresolved maternal illness.

**Conclusion:** Listeriosis represents a silent but serious threat to pregnancy outcomes. Improved antenatal education and clinical vigilance are key to reducing listeriosis-related complications in pregnancy.

**Keywords:** 1. Listeriosis 2. Pregnancy complications, infectious 3. Premature birth

### CCR / CS78

#### Stable Titres, Unstable Outcome: Unexpected Congenital Syphilis

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**Introduction:** Congenital syphilis remains a significant public health concern, associated with serious neonatal complications including stillbirth, prematurity and multi system involvement. Despite effective treatment options, cases continue to occur due to gaps in screening, diagnosis, and part management. This report presents a case of 33-years-old multigravida woman with previously treated late latent syphilis and stable low titre in pregnancy, whose neonate was diagnosed and treated for congenital syphilis, emphasizing the need for comprehensive parental screening protocols.

**Case Presentation:** A 33-year-old woman, G4P3, with a history of late latent syphilis treated in 2018 (3 doses benzathine penicillin G), had a 4-fold titre reduction post-treatment. In her current pregnancy, her RPR titre remained static at 1:2 throughout, and her husband's at 1:4 with last screening at 34 weeks POA. At delivery, the neonate was admitted to NICU with respiratory distress and congenital pneumonia. Screening revealed a neonatal RPR titre of 1:32 with a negative TPHA; the infant was treated for congenital syphilis. Postnatally, the father's RPR titre rose to 1:128, while the mother's remained at 1:2. Both parents denied high-risk behavior.

**Discussion:** Despite stable maternal titres, the neonate presented with signs of congenital infection and a significantly higher RPR titre. Rising paternal titres post-delivery suggested recent reinfection or treatment failure, highlighting the importance of ongoing partner surveillance and the potential for vertical transmission even with low maternal titres.

**Conclusion:** Further research is warranted to determine optimal intervals and screening criteria for partner screening, even when maternal titres remain low, to prevent overlooked reinfection and congenital transmission.

**Keywords:** Syphilis, congenital

### CCR / CS79

#### Sugar, Weight, and Gout: A Triple Win with Therapeutic Carbohydrate Restriction in a Complex Diabetes Case

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**Introduction:** Managing Type 2 Diabetes(T2DM) with comorbid Obesity and Gout often requires balancing competing therapies. While pharmacologic treatment is standard, dietary interventions like Therapeutic Carbohydrate Restriction(TCR) may simultaneously address multiple metabolic derangements. This case demonstrates how TCR achieved dramatic improvements in glycaemic control, weight, and hyperuricaemia in a high risk patient.

**Case Presentation:** A 60-year old man with 30-year history of T2DM, history of Stroke, Morbid Obesity(BMI 41.6kg/m<sup>2</sup>), Stage 3b Chronic Kidney Disease(CKD), and Gouty Arthritis presented with poor glycaemic control(HbA1C 8.4%) despite high-dose insulin therapy(Novomix 38 unit TDS). Intervention:A TCR diet was initiated, with structured self-monitoring of blood glucose to simultaneously titrate down carbohydrate intake and insulin dosage.Allopurinol was maintained throughout the titration process. Outcomes(8-week follow-up):Glycemic Control:HbA1C improved from 8.4% to 7.1%. Insulin requirements were reduced by 50%(switched to Insulatard 28 units BD). Weight Loss:A 9 kg reduction in weight was achieved (7.3% reduction). Gout Improvement:Uric acid levels decreased from 350 µmol/L to 150 µmol/L. Allopurinol dosage was reduced from 500mg to 300mg daily. Additional Benefits:Triglycerides decreased from 2.8 mmol/L to 2.2 mmol/L,and HDL cholesterol increased from 0.8 mmol/L to 1.1 mmol/L. Alanine Transaminase decreased from 35U/L to 26U/L.

**Discussion:** TCR yielded multifaceted metabolic improvements. The uric acid reduction suggesting a significant contributory role of dietary sugar in hyperuricaemia. Importantly, insulin deprescribing was achieved safely.

**Conclusion:** TCR may offer a valuable adjunct in managing patients with T2DM, Obesity, and Gout. It supports metabolic restoration and rational insulin reduction. Primary care teams should consider TCR alongside pharmacotherapy, using structured self-monitoring to guide safe implementation.

**Keywords:** Keywords: therapeutic carbohydrate restriction, type 2 diabetes,hyperuricemia

### CCR / CS80

#### Tachycardia in pregnancy, how far to investigate? A Case Series

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**Introduction:** Tachycardia in pregnancy is common; however, it may be challenging for primary care providers to distinguish between physiological and pathological tachycardia . Preliminary investigation can be done at the primary care level for example Hemoglobin level, Electrocardiogram, and Thyroid Function Test. However, only selected cases may need a referral to the hospital for further investigation, such as Holter, Echocardiogram, and Computed Tomography Pulmonary Angiography to exclude underlying cardio-pulmonary issues.

**Case Presentation:** We retrospectively reviewed all maternal tachycardia cases from January to March 2025 in Klinik Kesihatan Pendang. Maternal tachycardia is a heart rate of more than 100 beats per minute in either antenatal or postnatal patients.

**Discussion:** Each month, Klinik Kesihatan Pendang has an average of 3 maternal tachycardia cases for investigation. In this case series, we present six pathological cases of maternal tachycardia. 50% were diagnosed Pulmonary embolism (3 cases), and the rest are Mitral Regurgitation (2 cases), and Atrial Fibrillation (1 case). The common risk factors identified for these six cases are: i) maternal obesity and ii) a heart rate of more than 110 beats per minute.

**Conclusion:** Although most maternal tachycardia cases are deemed physiological, some patients may need further investigations to rule out pathological causes. Consultation with Family Medicine Specialist is recommended for cases of maternal tachycardia to identify cases that may require more advanced investigations at the tertiary level.

**Keywords:** Maternal tachycardia, Primary Health Care, Perinatal care

### CCR / CS81

#### **The Itch That Spoke Louder: Unmasking Intrahepatic Cholestasis of Pregnancy**

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**Introduction:** Pruritus in pregnancy is common and often benign. However, persistent or atypical pruritus without primary skin lesions may indicate a serious condition such as Intrahepatic Cholestasis of Pregnancy (ICP), a liver disorder unique to pregnancy that poses significant fetal risks, including preterm birth, fetal distress, and stillbirth.

**Case Presentation:** A 21-year-old primigravida at 30 weeks' gestation presented with a two-month history of pruritus, initially affecting the palms and soles before becoming generalized. During multiple antenatal visits, the itch was attributed to benign pregnancy-related causes, and no further investigations were pursued due to the absence of skin lesions. Antihistamines provided no relief, and symptoms progressively worsened. A comprehensive history and physical examination raised suspicion for ICP, prompting bile acid testing and specialist referrals. While awaiting results, the patient developed premature contractions requiring hospital admission. Bile acid results sent earlier from the clinic confirmed ICP. Ursodeoxycholic acid was initiated, and coordinated care across obstetrics, gastroenterology, and dermatology supported a stable course and uneventful term delivery.

**Discussion:** This case highlights the diagnostic challenges and structured approach to pruritus in pregnancy. The absence of visible dermatologic findings can lead to the underestimation of serious underlying pathology. A thorough evaluation, including detailed history of the onset of pruritus, its progression, clinical examination, and timely investigations, is essential to differentiate benign pregnancy-related itch from serious conditions like ICP and minimize maternal-fetal risks.

**Conclusion:** Pruritus in pregnancy, even without visible skin lesions warrants thorough assessment. Early recognition of ICP and prompt, multidisciplinary management are vital for optimal maternal and fetal outcomes.

**Keywords:** Pruritus, Intrahepatic Cholestasis of Pregnancy, Pregnancy

### CCR / CS82

#### **The Prozone Puzzle: A Case of False Negative RDT and High-Titre Syphilis in Pregnancy**

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**Introduction:** Syphilis in pregnancy is a major public health concern, with adverse outcomes affecting both the mother and fetus. Untreated syphilis increases the risk of fetal loss and stillbirth by almost 21% compared to pregnancies without syphilis.

**Case Presentation:** We present a case of a 27-year-old lady, who was married, with no history of sexual promiscuity or high-risk activities and was pregnant with her third child. During booking at 9 weeks of pregnancy, she tested negative for syphilis but later tested positive during second screening at 27 weeks with a high RPR titer. She had a miscarriage at 28 weeks of gestation. She was screened twice during her previous pregnancy, 3 years earlier and was negative for Syphilis.

**Discussion:** The initial false-negative result was likely due to the prozone effect, where high antibody levels can interfere with the syphilis screening test. The false negative response is due to presence of high antibody titre which interferes with formation of antigen- antibody lattice which is necessary to visualize a positive flocculation test.

**Conclusion:** This case highlights the importance of repeated syphilis screening during pregnancy, particularly in high-risk populations, and the need for clinicians to be aware of the prozone phenomenon. It is relatively common among patients' with Human Immunodeficiency virus (HIV) co-infection and in pregnancy. Hence it is pertinent to have a high index of suspicion and carry out repeat tests in these group of patients.

**Keywords:** Prozone effect, Syphilis, high-risk pregnancy

### CCR / CS83

#### **The psychological burden of severe eczema; anxiety and school refusal in an adolescent: A case report**

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**Introduction:** Chronic eczema can significantly affect adolescents' psychological well-being, increasing the risk of anxiety and school refusal. Early identification and multidisciplinary intervention are crucial. This case report illustrates how psychological stressors exacerbate eczema, forming a vicious cycle of flare-ups and delayed recovery.

**Case Presentation:** A 12-year-old girl presented with eczema not responding to treatment at klinik kesihatan. Social stigmatization led to school refusal and emotional distress. Initial dermatological consultation showed minor improvement with potent topical steroids. Referral to dermatologist, confirmed chronic eczema with prurigo nodularis. Azathioprine and hydroxyzine were

administered in addition to antihistamines and topical steroids. Although symptoms improved without adverse effect, eczema flared up repeatedly in response to school stressors. The transition to secondary school worsens school refusal, performance anxiety and panic attacks. The school counselling provided minimal relief, prompting psychiatric referral. Sertraline was initiated later switched to vortioxetine due to side effects, derealisation. With combined psychiatric and dermatological care, flare-ups became less frequent and less severe. Anxiety and panic symptoms improved, and she coped better in school.

**Discussion:** This case illustrates the strong link between chronic skin diseases and psychiatric morbidity. The visible skin lesion and school pressure triggered significant anxiety symptoms that perpetuated a vicious cycle of frequent exacerbations and delayed recovery. Individualised pharmacological treatment and collaborative care between dermatology, psychiatry and school were essential for recovery.

**Conclusion:** Severe eczema in adolescent can precipitate psychological complications. Early multidisciplinary management addressing both dermatological and psychiatric needs is critical for holistic recovery. Referral to clinical psychologist may further enhance cognitive and emotional resilience.

**Keywords:** eczema, school refusal, social anxiety

#### CCR / CS84

##### The Shoulder Shrug Mystery: A Case Report on Tics in Children

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**Introduction:** Tics are sudden, repetitive and non-rhythmic motor movements or vocalizations, frequently observed during childhood.

**Case Presentation:** A 10-year-old girl was brought to the clinic by her parents due to persistent shoulder shrugging over the past three months. The movements became more pronounced in moments of stress or excitement but diminished during focused activities such as reading. She did not experience significant distress from this. The family reported no prior history of trauma, seizures, developmental delays or neurological conditions. Additionally, there was no notable family history of tic disorders. Upon examination, the physical and neurological assessments revealed no abnormalities, aside from the observed shoulder shrugging while she engaged in gaming on her phone. Her cognitive, emotional and behavioural development aligned with her age. A diagnosis of provisional tic disorder was established. Both the child and her parents were educated about the benign nature of the condition. Referrals were made to occupational therapy and physiotherapy for further intervention.

**Discussion:** Tic disorders affect around 20% of children, typically being transient in nature. The diagnosis of provisional tic disorders is based primarily on clinical history and the observation of tics, as there are no definitive lab tests or imaging studies available for diagnosis. However, in some cases, the condition may progress into chronic tic disorders or Tourette syndrome, which may require investigations to exclude secondary causes.

**Conclusion:** This case underscores the importance of

identifying and addressing tic disorders in children. Leveraging a multidisciplinary approach that includes education, behavioural therapies and regular follow-ups can lead to favourable outcomes.

**Keywords:** Tics, Children

#### CCR / CS85

##### The Skin's Cry for Help: A Case of Acquired Acrodermatitis Enteropathica in Kwashiorkor

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**Introduction:** Acrodermatitis enteropathica is a rare dermatological disorder associated with zinc deficiency, typically hereditary but can also be acquired secondary to severe malnutrition. In indigenous communities, limited health knowledge and delayed health-seeking behaviour make early recognition crucial for prompt intervention.

**Case Presentation:** A 9-month-old Orang Asli boy, born prematurely at 32 weeks with global developmental delay and mild laryngomalacia, defaulted on paediatric follow ups and missed immunisations after six months. A home visit at 9 months, initiated due to missed immunisations, identified concerning skin changes. He was promptly referred to Klinik Kesihatan for further evaluation, which revealed extensive erythematous, scaly and lichenified rash involving cheeks, perioral area, neck, chest and back, along with puffy cheeks and sparse, thin scalp hair. Further evaluation uncovered exclusive feeding with condensed milk since birth. Social assessment disclosed overcrowded living conditions, maternal separation from her spouse with a new partner, and suspected neglect. He was admitted with a diagnosis of Kwashiorkor complicated by acquired acrodermatitis enteropathica. A dietitian-initiated nutritional rehabilitation plan led to significant improvement over 24 days. Post-discharge, Klinik Kesihatan provided catch up immunisation, micronutrient supplementation, and coordinated follow up by nutritionist for ongoing dietary management. The child recovered well.

**Discussion:** This case highlights how early cutaneous manifestations can serve as critical indicators of underlying malnutrition. In resource-limited, high-risk communities, proactive primary care outreach is essential for early detection and management of nutritional deficiencies, preventing complications and reducing morbidity.

**Conclusion:** Early recognition of acrodermatitis enteropathica enables timely referral and optimal management of malnutrition in high-risk indigenous communities.

**Keywords:** Kwashiorkor, Acrodermatitis Enteropathica, Orang Asli people

## CCR / CS86

**Thyroid Swelling Unveils Tuberculous Lymphadenitis: A Case Report**

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**Introduction:** Cervical tuberculous lymphadenitis is a common extrapulmonary manifestation of tuberculosis. However, in patients with underlying Graves' disease, its presentation can overlap with thyroid enlargement and systemic symptoms, leading to diagnostic confusion—particularly in the primary care setting.

**Case Presentation:** A 38-year-old woman with a background of Graves' disease presented to primary care with one month of appetite loss, intermittent fever, lethargy, neck tightness, and weight loss. Her thyroid function was initially normal. She had a strong family history of hyperthyroidism, with one sibling having undergone thyroidectomy and another treated with radioactive iodine. Neck ultrasound revealed a longstanding multinodular goiter with bilateral reactive cervical lymphadenopathy. Despite transient improvement with antibiotics, persistent symptoms, a strongly positive Mantoux test (20 mm), and elevated C-reactive protein (CRP) prompted further evaluation. Fine-needle aspiration cytology (FNAC) of the cervical lymph nodes was inconclusive. A subsequent FNAC of the thyroid mass revealed granulomatous inflammation consistent with tuberculous lymphadenitis. Positive TRAb and anti-TPO antibodies supported the diagnosis of Graves' disease. The patient was started on anti-tuberculosis therapy and managed through shared care. Her symptoms resolved, but she later developed overt hypothyroidism, which responded to levothyroxine.

**Discussion:** This case underscores the importance of maintaining a high index of suspicion for tuberculosis in endemic regions, especially when thyroid swelling presents with systemic symptoms. Targeted FNAC may be essential when initial investigations are inconclusive.

**Conclusion:** Primary care physicians play a pivotal role in early recognition and coordination of care. This case also highlights a possible immunologic interplay between tuberculosis and Graves' disease, warranting further study.

**Keywords:** goiter, extrapulmonary tuberculosis, endocrine

## CCR / CS87

**Triple Therapy in Diabetic Kidney Disease (DKD): Risk-benefit in SGLT2 Inhibitors, RAAS Blockers, and Diuretics**

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**Introduction:** Managing DKD often requires multiple drugs for glycemic, fluid, and cardiovascular control. Triple therapy with SGLT2 inhibitors, RAAS blockers, and loop diuretics in DKD offers synergistic benefits but carries hypoperfusion risks, highlighting real-world challenges in balancing efficacy and safety.

**Case Presentation:** A 49-year-old woman with poorly controlled diabetes (HbA1c 10.5%) presented with declining renal function and early fluid overload symptoms. ACEi was started but stopped due to >30% rise in creatinine. Despite discontinuation, renal function worsened. Renal doppler was inconclusive. Thus, ACEi was reintroduced with frusemide and empagliflozin, leading to a creatinine spike (228–327 µmol/L). Consequently, all three nephroactive agents were withdrawn, leading to partial recovery in one week time (280 µmol/L). Workup for secondary causes was unremarkable. No clinical dehydration observed.

**Discussion:** Although evidences support the effectiveness of this triple therapy, it carries some risks particularly on fluid balance and kidney hypoperfusion. A transient eGFR decline is common with SGLT2 inhibitors and RAAS blocker, and adding Frusemide may worsen this condition due to volume loss. Close monitoring of renal function and electrolyte especially after starting or adjusting therapy is essential. A temporary eGFR drop of up to 30% is acceptable, but further declines warrant reassessment. Guidelines support this combination with close patient monitoring, while educating patients on volume depletion signs and sick day management is equally vital.

**Conclusion:** Triple therapy with SGLT2 inhibitors, RAAS blockers and frusemide can be safe and effective in DKD if individualised and carefully monitored. For greater safety, these agents should be introduced/ re-introduced sequentially with close monitoring.

**Keywords:** SGLT2 INHIBITORS, DIABETIC NEPHROPATHIES

## CCR / CS88

**Understanding and Evaluating a Normal Metopic Ridge and a Pathological Metopic Craniosynostosis in an Infant**

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**Introduction:** A normal metopic ridge is a common anatomical variant in infants, often mistaken for metopic craniosynostosis, a condition requiring timely medical intervention. The metopic suture, which typically fuses between 3 to 9 months of age, can sometimes leave a palpable ridge without premature fusion (called metopic ridge) which may raise concerns for metopic craniosynostosis.

**Case Presentation:** This case report discusses an 11-month-old infant with a prominent midline forehead ridge, noted for a month. The infant was delivered via caesarean section due to foetal distress. The Apgar scores at 1 minute and 5 minutes were 9 and 10, respectively. Since then, feeding, weight gain, growth, and development have been normal. Clinical assessment, including a normal cranial shape, head circumference, and developmental milestones confirmed a benign metopic ridge without associated trigonocephaly or neurodevelopmental delays. As a result, unnecessary imaging was avoided and the parents were reassured,

explaining the benign nature of the ridge which may disappear in a few years.

**Discussion:** Differentiating metopic ridge from craniosynostosis is essential as the latter involves early suture fusion, leading to trigonocephaly, hypertelorism, and increased intracranial pressure. If craniosynostosis is suspected, imaging is necessary to confirm the crucial diagnosis which may require vault remodeling to prevent increased intracranial pressure and cognitive impairments.

**Conclusion:** This case underscores a thorough clinical evaluation in distinguishing normal skull variations from pathological conditions. General practitioners and paediatricians should be aware of normal metopic suture closure patterns to avoid unnecessary imaging and surgery in metopic ridge and to ensure timely intervention in metopic craniosynostosis.

**Keywords:** Metopic ridge, Metopic craniosynostosis, Trigonocephaly

### CCR / CS89

#### Unethical Penile Augmentation. Is it Worth the Desire? - A Case Report of Penile Paraffinoma

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**Introduction:** Penile paraffinoma is an aftermath condition following injection of liquid paraffin or oil substances into the penis for cosmetic augmentation. It is commonly done by non-medical personnel which triggers granulomatous reaction secondary to the presence of foreign material resulting in penile disfigurement and sexual dysfunction.

**Case Presentation:** A 35-year-old gentleman with primary subfertility presented to a health clinic complaining of painful erection and LUTS for 6 months after receiving liquid substance injected into the penis to increase girth 5 years ago. The outcome was acceptable until a year later when he noticed his penis and scrotum became hardened, non-retractable and disproportionately enlarged. Debulking and reconstruction surgery of the penis with split-thickness graft was performed by a urologist along with a plastic surgeon. Post-surgery, he immediately regained early morning erection. After 6 months, he was no longer on PDE5-inhibitor, had markedly reduced painful erections, normal urinary flow, and his wife conceived. Despite the successful surgery, it was complicated with penile shortening of up to 4 cm with permanent scarring.

**Discussion:** Penile augmentation using liquid paraffin raises ethical concerns related to patient safety, inadequate informed consent, and the exploitation of vulnerable Southeast Asia men. It activates foreign body lipo-granulomatous reactions, causing marked fibrosis through series of chronic inflammation responses. Hence, causing disfigurement, painful erection and sexual avoidance, often necessitating complex reconstructive surgery.

**Conclusion:** Penile paraffinoma causes significant penile pain, disfigurement and psychological distress. Manhood masculinity stereotyping can be overcome by improving men's health-seeking behaviours and raising health awareness to prevent long-term physical and psychological health consequences.

**Keywords:** Penile paraffinoma, penile augmentation, sexual dysfunction

### CCR / CS90

#### Unravelling Bullous Pemphigoid in Primary Care: The Mysterious Rash

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**Introduction:** This case report illustrates a bullous pemphigoid case first seen in a primary care clinic. Bullous pemphigoid represents the most prevalent autoimmune subepidermal blistering disorder, typically characterised by tense bullae and intense pruritus. This case report portrayed clinical findings, investigation, and management of bullous pemphigoid.

**Case Presentation:** A 60-year-old Malaysian woman who came for follow-up at the primary care clinic, presented with multiple scattered skin lesions starting from her extremities, face, abdomen and her back for the past 6 months. Dermatological examination was notable for scattered, sparse skin erosions with healing scars scattered over the trunk, face, extremities and only one small intact vesicle over her back. She was referred to a tertiary centre, and skin biopsy confirmed the diagnosis.

**Discussion:** Bullous pemphigoid is an autoimmune subepidermal blistering disorder that predominantly affects the elderly, with an average age of onset of 60 years, that can have a significant impact on quality of life. Characteristic clinical features of the disease include pruritus, urticarial or eczematous eruptions, and tense bullae, typically distributed over the trunk and flexural surfaces of the extremities. Bullous pemphigoid may remain undiagnosed in primary care due to its variable presentation.

**Conclusion:** This case highlights the importance of recognising bullous pemphigoid in primary care settings, especially given its variable and often subtle presentation. Early suspicion and timely referral are crucial for accurate diagnosis and management, as demonstrated in this case. Increased awareness among primary care settings can lead to earlier intervention, potentially improving patient outcomes and quality of life.

**Keywords:** Bullous Pemphigoid, Primary Care, Skin Rash

### CCR / CS91

#### Untangling Complex Interactions: A Case of Drug-Induced Acute Pancreatitis in a Psychiatric and Substance Use Disorder Patient

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**Introduction:** Drug-induced acute pancreatitis remains a diagnostic and therapeutic challenge, particularly in patients with complex psychiatric and substance use histories.

**Case Presentation:** This case report presents a 44-year-old male with a history of opioid dependence and psychiatric disorders who developed acute pancreatitis, likely triggered by interactions between methadone, duloxetine, and amitriptyline. The patient's

presentation included severe epigastric pain and biochemical evidence of pancreatic inflammation. imaging findings were consistent with interstitial edematous pancreatitis, necessitating a multidisciplinary approach in managing this patient.

**Discussion:** This case highlights the potential hepatotoxic and pancreatic effects of polypharmacy, particularly involving psychotropic and opioid medications. The overlapping metabolic pathways and pharmacokinetic properties of these drugs likely contributed to pancreatic injury, underscoring the need for careful medication reconciliation and routine biochemical monitoring in similar high-risk population. This case emphasizes the importance of evidence-based prescribing practices to address the rising prevalence of polypharmacy in psychiatric and addiction medicine. This will further aid in mitigating adverse drug interactions and in optimizing patient safety.

**Conclusion:** Clinicians must maintain a high index of suspicion for drug-induced pancreatitis in patients presenting with unexplained abdominal pain, especially those receiving multiple medications with hepatic and pancreatic implications. Further research and clinical guidelines are necessary to refine risk stratification and preventative strategies for drug-induced pancreatic injury.

**Keywords:** Methadone, Substance-Related Disorders, Drug Interactions

## CCR / CS92

### Unveiling the hidden twin in utero - Fetus in Fetu

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**Introduction:** Fetus-in-fetu (FIF) is an extremely rare congenital anomaly, characterized by the presence of a malformed parasitic fetus within the body of its normal host twin. FIF is typically asymptomatic during pregnancy and often undiagnosed until after birth.

**Case Presentation:** We report a case of a 26-year-old Malay primigravida with an uncomplicated pregnancy. A detailed scan was performed at 21 weeks of gestation, followed by growth ultrasound at 28 weeks, both did not detect any abnormality. However, at 36 weeks routine growth ultrasound revealed a non-viable fetal pole within a fluid-filled-sac inside the fetal abdominal cavity. The case was referred to maternal-fetal-medicine (MFM), and a fetal MRI confirmed the diagnosis of FIF. A multidisciplinary team(MDT) planned delivery at term, with postnatal surgical evaluation. At 40 weeks, the host twin was delivered via cesarean section, weighing 2880 g, measured 50cm, with abdominal distension. Surgical resection performed on day-6-postnatal, successfully removed a 6x6 cm cystic mass containing amniotic fluid and a malformed fetus with anencephaly, two upper limbs, and two lower limbs.

**Discussion:** FIF occurs approximately 1 in 500,000 births, with only 7% diagnosed antenatally. The primary differential diagnosis is teratoma. Optimal detection relies on detailed scan, ideally performed between 18-22 weeks, however third-trimester-surveillance remains essential for detecting late-appearing-

anomalies. Primary care plays a vital role in early detection, initiating referral, coordinating MDT input and improving neonatal outcomes.

**Conclusion:** This case report highlights the critical role of antenatal imaging in primary care to screen for fetal anomaly and further initiating the multidisciplinary collaboration to facilitate comprehensive perinatal care.

**Keywords:** Fetus-in-fetu, congenital abnormalities

## CCR / CS93

### Varicella-Induced Flare of Autoimmune Hemolytic Anemia in Early Pregnancy: A Rare Case Report

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**Introduction:** AIHA in pregnancy is rare but potentially life-threatening for the mother and fetus. Viral infections are known triggers of AIHA flares, but Varicella-zoster virus as a precipitating factor has rarely been reported, especially in pregnancy. This case highlights a unique clinical scenario of AIHA exacerbation following varicella infection during early gestation.

**Case Presentation:** We report the case of a 30-year-old G2P1 at 12 weeks gestation who presented to the clinic with typical varicella rashes over the body. Her Hb at that time was 9.0, but as she did not have any hemolytic crisis, she was treated conservatively. She was seen by FMS 2 weeks later and noted hemoglobin was 8.2. After discussing with hematologist, she was started on tapering dose Prednisolone (20mg, 10mg & 5mg). The detail scan was normal. She was seen regularly by FMS, O&G specialist and hematologist. Subsequent follow-ups showed increasing hemoglobin level, up to 10.6 prior to delivery. She was started on SC Enoxaparin from the 28th week of gestation until the onset of delivery. She delivered a healthy baby girl, 3.71kg, by SVD at 38weeks + 5 days gestation with no complications. Her latest Hb during postnatal checkup was 12.8.

**Discussion:** Severe maternal anemia can compromise oxygen delivery to tissues, leading to IUGR, preterm labor and low birth weight. Mother will develop hemolytic crisis, shock and increased risk of thromboembolism.

**Conclusion:** Complications of AIHA flare in pregnancy are rare. With comprehensive, coordinated care from multidisciplinary teams, the patient is able to complete the pregnancy journey without any complications to her and the baby.

**Keywords:** Autoimmune hemolytic anemia, pregnancy, varicella

## CCR / CS94

### Vision at Risk: The Unseen Consequences of Severe Preeclampsia

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**Introduction:** Hypertensive disorders of pregnancy can lead to

severe multisystem complications, including acute kidney injury, liver failure, thrombocytopenia, cerebrovascular accidents, and retinopathy. Although rare, hypertensive retinopathy serves as a critical indicator of disease severity. This case highlights a delayed presentation of retinopathy during the postpartum period, emphasizing the need for vigilant monitoring even after delivery.

**Case Presentation:** A 25-year-old primigravida, previously normotensive until 34 weeks of gestation, presented with elevated blood pressure (148/100mmHg), proteinuria, and a small-for-gestational-age fetus. Liver function tests revealed transaminitis. She was admitted and underwent an emergency caesarean section at 34 weeks 2 days, for fetal distress. 48 hours postpartum, she developed blurred vision. Fundoscopy revealed cotton wool spots near the optic disc. Hence, she was treated as severe pre-eclampsia complicated with grade 3 hypertensive retinopathy.

**Discussion:** Hypertensive retinopathy in preeclampsia reflects systemic vascular dysfunction. The presence of cotton wool spots signifies retinal ischemia due to severe hypertension. This case illustrates the correlation between preeclampsia severity and retinal involvement, underscoring the importance of prompt recognition of visual symptoms in affected patients.

**Conclusion:** This case emphasizes the importance of recognizing and managing hypertensive retinopathy in patients with severe preeclampsia. The development of retinopathy postnatally in this patient highlights the potential for significant visual complications. Vigilant postpartum monitoring and timely ophthalmologic evaluation are critical components of comprehensive preeclampsia management.

**Keywords:** Preeclampsia, hypertensive retinopathy

## CCR / CS95

### Vitamin B12 Deficiency as a Reversible Factor of Cognitive Decline in Elderly Woman: A Case Report

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**Introduction:** Cognitive decline in older adults is an increasing concern, significantly affecting their quality of life and the burden on caregivers. Vitamin B12 deficiency is one of the reversible causes of cognitive decline in older persons, which is often overlooked.

**Case Presentation:** We reported a case of vitamin B12 deficiency in a 78-year-old woman with type 2 Diabetes Mellitus (on Metformin), hypertension, and dyslipidaemia who presented in October 2024 with one-year progressive short-term memory loss and apathy. Her diet lacked animal protein. No history of gastric surgery. Her sister suffered from dementia. Clinical assessment revealed peripheral sensory deficit and Mini-Mental State (MMSE) score of 19, discrepancies in orientation, attention and recall, with low instrumental activity daily living score (i-ADL) of 1 out of 8. Laboratory test confirmed a low vitamin B12 level of 65pmol/L. She received four months of intramuscular cyanocobalamin followed by lifelong oral supplementation since November 2024. At six-month follow-up, she showed marked cognitive improvement (MMSE 23), reduced neuropathy symptoms and i-ADL score of 5. Her vitamin B12 levels normalized at 617 pmol/L.

**Discussion:** As this case demonstrates, vitamin B12 deficiency leads to a range of neurological manifestations including cognitive impairment and peripheral neuropathy. The cognitive impairment mimics other neurocognitive conditions such as Alzheimer's disease and vascular dementia.

**Conclusion:** This case highlights the importance of vitamin B12 screening in older persons with cognitive decline in a primary care. Early diagnosis and timely intervention can help restore cognition and enhance quality of life, emphasizing the importance of raising awareness about reversible causes of cognitive decline in older persons.

**Keywords:** -vitamin B12 deficiency -older person -cognitive decline

## CCR / CS95

### When Cough Meets Jaundice: Outpatient Management of Mycoplasma Pneumonia Complicated by Cold Autoimmune Hemolytic Anemia

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**Introduction:** Cough is a frequent primary care complaint, but when accompanied by jaundice, it necessitates a careful diagnostic approach. While *Mycoplasma pneumoniae* is a recognized cause of atypical pneumonia, its rare complications, including autoimmune hemolytic anemia (AIHA), may go unrecognized.

**Case Presentation:** This case report details a 35-year-old man with a two-day history of fever, dry cough, and right-sided pleuritic chest pain. Physical examination revealed jaundice and mild hepatosplenomegaly. Further history uncovered chronic jaundice that worsened over the past day, accompanied by tea-coloured urine. Laboratory tests showed a normal leucocyte count, anemia (hemoglobin 7.9 g/dL), thrombocytopenia (platelet 134x10<sup>9</sup>/L), and elevated indirect bilirubin. Chest radiograph demonstrated right upper zone opacity with fissure thickening and blunted costophrenic angle. Peripheral blood film showed polychromasia, nucleated red cells, and features of Southeast Asian Ovalocytosis (SAO). Direct Coombs test (anti-C3d) and *Mycoplasma* IgM antibodies were detected. A diagnosis of *Mycoplasma pneumoniae* pneumonia with parapneumonic effusion, cold AIHA, transient thrombocytopenia, and chronic hemolysis due to SAO was made. The patient was treated as an outpatient with a 3-day course of azithromycin. Follow-up showed symptom resolution, improved anemia, and normalized platelets.

**Discussion:** This case highlights the importance of considering atypical pathogens in pneumonia with unusual features. Respiratory symptoms with hemolytic anemia should raise suspicion for *Mycoplasma pneumoniae*. Early recognition is essential, as conventional treatment-cold transfusions may worsen hemolysis and beta-lactam monotherapy is ineffective in *Mycoplasma* infection.

**Conclusion:** Primary care doctors should remain vigilant for atypical pneumonia and its complications to ensure the patients receive effective treatment and appropriate follow-up.

**Keywords:** Atypical pneumonia, *Mycoplasma pneumoniae*, cold autoimmune hemolytic anemia

**CCR / CS97****When It Looks Malignant but Isn't: A Case of Decidualized Polyp in Pregnancy**Mohamed Amiruddin AS<sup>1</sup>, Letchuman SD<sup>2</sup><sup>1</sup>*Klinik Kesihatan Changkat Lada, Primary Care, Perak, Malaysia;*<sup>2</sup>*Klinik Kesihatan Changkat Lada, Maternal Child Health, Perak, Malaysia*

**Introduction:** Cervical masses with abnormal bleeding are a significant concern for malignancy, given their serious implications for both maternal and fetal health. However, benign entities such as cervical polyps can mimic cancer clinically. This case report aims to show how a benign condition, like a decidualized polyp, can mimic cancer in pregnancy, and why early referral and further tests are important for proper diagnosis and care.

**Case Presentation:** A 25-year-old pregnant woman presented with daily vaginal bleeding beginning at 12 weeks of gestation, exacerbating her pre-existing antenatal issue of iron deficiency anemia in pregnancy. Besides that, she reported no other symptoms with no family history of malignancy. A gynecology examination revealed an irregular cervical mass with significant contact bleeding. Tertiary hospital was referred to exclude malignancy. An urgent histopathological examination (HPE) was subsequently conducted, revealing a decidualized polyp.

**Discussion:** Persistent vaginal bleeding with a cervical mass in pregnancy, is a red flag that warrants urgent attention. Although this patient exhibited features concerning malignancy, histopathology confirmed a benign decidualized polyp. From a primary care perspective, differentiating benign from malignant lesions based on clinical findings alone can be challenging. This case reinforces the importance of early referral for tertiary assessment and histopathological diagnosis to facilitate accurate, timely and safe management, particularly in pregnant patients.

**Conclusion:** Despite the benign nature of the final diagnosis, the decision for urgent referral and histopathological confirmation remained a pertinent decision. This case emphasizes the limitation of clinical assessment alone in differentiating cervical pathology and supports early escalation to ensure patient safety and reassurance.

**Keywords:** Antenatal Care, Cervical Mass, Decidualized Polyp

**CCR / CS98****When Pregnancy Turns Fatal: A Diagnostic Challenge of Acute Fatty Liver of Pregnancy (AFLP)**

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**Introduction:** Acute fatty liver of pregnancy is rare but debilitating condition that poses significant mortality risk. It occurs in the third trimester and characterised by rapidly progress to fulminant liver failure, disseminated intravascular coagulation (DIC), renal failure and multiorgan failures. Timely detection and immediate care are essential to improve outcomes.

**Case Presentation:** 33-year-old with IUI pregnancy for primary subfertility at 31 weeks of gestation presented with itchy rash over chest, upper arms for 1 month. She was treated as chronic papular eczema. Subsequently she developed fever, vomiting, diarrhoea for 5 days. She was then referred to tertiary care for further management. The initial impression was sepsis TRO dengue fever, leptospirosis, Intrahepatic cholestasis of pregnancy (ICP), HELLP and pre-eclampsia with evidence of AKI, transaminitis and coagulopathy. Diagnosis of AFLP was established on day 3 of admission based on Swansea's criteria following MDT discussion. Unfortunately, fetal demise was confirmed on the same day. EMLSCS was performed delivering fresh stillbirth baby of 1640g. Her condition improved temporarily until she experienced worsening respiratory distress and DIVC. Hence, patient was reintubated but deteriorated, succumbed to death on day 9 of admission. Post-mortem histopathology report confirmed presence of microvesicular steatosis throughout the liver.

**Discussion:** Early diagnosis remains challenging due to non-specific symptoms and clinical overlap with condition such as ICP, HELLP syndrome and pre-eclampsia. Prompt delivery of the fetus is the mainstay treatment for AFLP.

**Conclusion:** A delay in diagnosing AFLP can lead to severe complications and increased mortality, emphasizing the necessity of a high index of suspicion and early multidisciplinary evaluation in pregnant woman once AFLP is suspected.

**Keywords:** Acute fatty liver of pregnancy, sepsis, liver failure

**CCR / CS99****When UTIs Don't Resolve: Primary Care Diagnosis of Urinary Tract TB**Abu Bakar NAF<sup>1</sup><sup>1</sup>*Klinik Kesihatan Sultan Ismail, Primary Care, Johor Bahru, Malaysia*

**Introduction:** Urinary tuberculosis presents as a diagnostic challenge in the primary care setting, particularly when symptoms overlap with common conditions. This case highlights the importance of having a high degree of suspicion and the use of a rapid diagnostic test in diagnosing urinary tuberculosis.

**Case Presentation:** A 28-year-old sexually active female reported recurrent UTI symptoms despite several courses of antibiotics, associated with severe pelvic pain causing difficulty walking. Clinical examination revealed suprapubic, vulvovaginal and adnexal tenderness with pyuria. A full panel STD screen done was negative. Imaging showed stricture at the right ureter, right renal cortical cyst and multiple calcified intraabdominal nodes with splenic calcifications. Pulmonary tuberculosis workup showed negative results. A urine Xpert MTB that was subsequently sent detected Mycobacterium tuberculosis, which was later confirmed with a positive mycobacterial culture. Patient was commenced on anti-tuberculosis medication and completed 9 months of treatment with 2 years of follow-up, recovering well.

**Discussion:** The Xpert MTB/RIF is a WHO recommended molecular test for the detection of tuberculosis and rifampicin resistance. Urogenital tuberculosis is often missed clinically due to lack of suspicion, insidious onset and overlapping clinical symptoms that mimic other conditions. The sensitivity and

specificity for the Xpert MTB using a urine specimen are high; while lower than that of mycobacterial culture, its use has been practiced because it gives faster results.

**Conclusion:** Urinary tuberculosis should be considered in sexually active patients with recurrent urinary symptoms in endemic regions. Early diagnosis enables appropriate treatment and mandatory TB notification, which is vital for effective public health surveillance.

**Keywords:** urinary, tuberculosis

## CCR / CS100

### Wrong time, wrong place: Consequences of undetected cervical pregnancy

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**Introduction:** Cervical pregnancy is a rare form of ectopic pregnancy. Incidence is estimated to be 1:10000 to 1:50000 deliveries with sonographic diagnosis being accurate in 87.5% of cases. Hysterectomy used to be the most common intervention. More conservative treatment that allows preservation of woman fertility is now preferred.

**Case Presentation:** 29-years-old single lady, presented with profuse per-vaginal bleed, anaemic symptoms and syncopal attack. Initial assessment found that she was in compensated shock; haemoglobin 2.2, platelet normal, ECG showed sinus tachycardia. Ultrasound revealed 18-19 week viable fetus with no free fluid. Per-speculum examination showed cervical effacement, 3 cm os dilation and bulging membrane, leading to an initial diagnosis of inevitable miscarriage. She was admitted for POC expulsion but developed massive postpartum haemorrhage, requiring emergency hysterectomy. Complications included DIVC, ischemic transaminitis and AKI necessitating 38-packed RBCs, 8-DIVC cycles and 20-platelet units. Diagnosis was revised to likely missed cervical pregnancy.

**Discussion:** Predisposing factors include previous curettage of uterine pregnancy, artificial insemination technique, IUCD and pelvic inflammatory disease. Studies emphasised the significance of early diagnosis and medical intervention, recommending systemic or local administration of methotrexate as the preferred treatment options. In this case, hysterectomy was performed as life-saving procedure to stop uncontrolled bleeding. Inevitable and incomplete miscarriage may have similar findings but profuse bleeding that impacts hemodynamic stability should raise suspicion of cervical pregnancy.

**Conclusion:** Early diagnosis and identification of risk factors are crucial to avoid morbidity and mortality associated with cervical pregnancy. Early detection can be managed with methotrexate therapy, uterine artery embolization or ligation and curettage of the uterine cavity.

**Keywords:** cervical pregnancy, ectopic pregnancy, post-partum hemorrhage

## Quality Improvement Initiative Study

### QIIS1

#### A Clinical Audit of Pre-Pregnancy Care (PPC) Services at Klinik Kesihatan Simpang Kuala, Alor Setar, Kedah

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**Introduction:** In 2024 Klinik Kesihatan Simpang Kuala (KKSK) recorded 139 women with high-risk pregnancy. High-risk pregnancy, is defined as having medical condition either pre-existing or diagnosed during pregnancy, requiring intervention to reduce complications. The main objective of the clinical audit PPC was to determine if these women received appropriate management optimization prior to pregnancy.

**Methods:** A retrospective review of antenatal books, family planning cards, and medical records of 139 women were audited using the National PPC Audit Form (Audit-PPC-1/2023). Data collected were PPC registration, appropriateness of interventions (defined as  $\geq 80\%$  appropriateness), and disease optimization.

**Results:** Out of 139 cases, 33 met the inclusion criteria. Of these, 90.9% (30) was registered for PPC. However, 26 defaulted follow-up, and 3 patients managed at the outpatient department was not registered. Only 4 patients received appropriate interventions. Disease optimization was achieved in 2 of 3 eligible patients (66%), 1 patient with diabetes achieved HbA1c  $< 6.5\%$ , 1 with hypertension had controlled BP  $< 140/90$  mmHg, and 1 with asthma had good control for at least three months pre-conception. Key gaps identified were failure to refer to PPC by the medical officer at MCH unit, non-registration and high defaulter rates. Recommendations to improve PPC services were implementation of standardized PPC checklists, enhance inter-unit communication and referrals, refined reminder systems, and individualized disease management plans.

**Conclusion:** This audit demonstrates that conducting PPC audits in primary care is feasible and necessary to identify service gaps. Targeted strategies are required to strengthen implementation and improve maternal-foetal health outcomes.

**Keywords:** Pre-pregnancy care, clinical audit, chronic disease

### QIIS2

#### A Clinical Audit On Management Of Gout In Hulu Langat District

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**Introduction:** Gout is the most common form of rheumatism worldwide and has emerged as a significant health concern. A study conducted at a Rheumatology Centre in Malaysia showed, only 34.9% of patients achieved the recommended serum urate (SU) target. Non-adherence to gout treatment was found to be the reason for failure to achieve the SU target. The main objective of this audit is to measure adherence to gout management according to local guidelines.

**Methods:** All gout patients aged >18 years from 12 health clinics in the Hulu Langat district who were on Allopurinol from August to October 2024 were identified using PHIS. Health records (manual or electronic) were retrieved, and data were collected using a data collection form.

**Results:** Majority of patients were male (85.5%) and Malay (67.6%), with a mean age of 61 years. Only 29.1% of gout patients achieved the treat-to-target serum urate (SU) level (<360 µmol/L). Hypertension and dyslipidemia were among the most common comorbidities, affecting 88.3% and 87.9% of patients, respectively. Monitoring of clinical outcomes—such as gout flare symptoms, medication compliance, and adverse effects—was documented in 51%, 69%, and 15% of cases, respectively. For non-pharmacological management, only 11.9% of patients were referred to a dietitian, 30.9% received health education on gout, and 50.2% were given advice on healthy lifestyle.

**Conclusion:** The clinical audit identified key areas for improvement in the management of patients with gout, including standardizing treatment protocols, increasing provider awareness and enhancing patient education. A follow-up audit is recommended after implementing these measures to assess progress and effectiveness.

**Keywords:** Gout, urate-lowering therapy, treat-to-target

### QIIS3

#### A Clinical Audit On The Diagnosis And Management Of Hyperthyroidism In Primary Care Clinics Of Muar District, Johor

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**Introduction:** Primary care plays a crucial role in managing hyperthyroidism by focusing on early detection, diagnosis, and initial treatment of the condition. However, evaluations of the appropriateness of hyperthyroid management in primary care settings are still lacking. Management of hyperthyroid is considered appropriate when there is adequate history taking and investigations done according to indications, enabling the etiology to be attributed; correct dosage of medication initiated and

adjustment done based on repeated thyroid function test (TFT) within recommended time intervals, resulting in euthyroidism within an acceptable time frame. This audit aimed to evaluate the appropriateness of the management of hyperthyroidism in the primary care setting.

**Methods:** A retrospective cross-sectional study was done among hyperthyroid patients who attended primary care clinics in Muar, Johor between July and December 2023. Data was collected using self-developed hyperthyroidism diagnosis and management audit clinical checklist and was analysed using SPSS. Ethical approval was obtained from National Medical Research Register Malaysia (NMRR).

**Results:** 32 patient records were analysed. The patients were mostly female (84.4%) with mean age of 46.7±17.1 years. 13 of the cases (40.6%) were managed appropriately (achieved audit marks of 80% and above). Five out of thirteen clinical care processes met the standards; which were documentation of history and physical examination, blood investigation (TFT), referral for ultrasonography, initial interval of follow-up after initiation of anti-thyroid drugs (ATD) and current dosage of ATD.

**Conclusion:** Although local clinical practice guidelines are available, there are limitations in the implementation. Innovative and sustainable action must be undertaken in primary care to ensure appropriate knowledge related to the diagnosis and management reaches all involved in managing these patients to improve the overall outcomes.

**Keywords:** Clinical audit, hyperthyroidism, appropriateness, primary care

### QIIS4

#### Are We Hitting the Target? A Clinical Audit on Gout Management Based on the Malaysian Clinical Practice Guideline 2021 in Klinik Kesihatan PKD Seremban

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**Introduction:** Gout, once considered a lifestyle disease, is now recognised as a marker of metabolic dysfunction associated with an increased risk of cardiovascular disease. Despite the availability of the national CPG, many patients still do not achieve good serum uric acid (SUA) control. This audit aimed to assess the adherence to the Malaysian CPG on Gout 2021 and provide critical insight into real-world practice gap of gout management in primary care settings.

**Methods:** A retrospective audit was conducted from March to May 2024, across four Klinik Kesihatan (KK) under PKD Seremban: KK Ampangan, KK Senawang, KK DesaRhu and KK Sikamat. Using systematic sampling, 99 patient records initiated on Allopurinol from 2020 onwards were reviewed. Clinical management was evaluated against the CPG, focusing on urate-lowering therapy (ULT) initiation, dose titration, SUA monitoring and non-pharmacological counselling.

**Results:** Patients had a mean age of 58.2 years; 85.9% were male

and 81.4% Malay. Common comorbidities included dyslipidaemia (80.8%), hypertension (79.8%) and diabetes (44.4%). Appropriate ULT initiation was observed in 78.5% of patients, but only 18.2% received proper dose titration. SUA targets (<360mikromol/L) were achieved in 29.3% patients, significantly associated with higher Allopurinol dose (225.9 vs 167.9 mg/day,  $p=0.048$ ) and longer treatment duration (3.34 vs 1.96 years,  $p<0.001$ ). Non-pharmacological advice was documented in 71.7% of cases.

**Conclusion:** While ULT is often correctly initiated, inadequate dose titration and follow-up reflect treatment inertia in gout care. Closing the gap between guidelines and practice through dose optimisation, regular monitoring and structured counselling is essential to improve gout outcomes in Malaysian primary care.

**Keywords:** Gout, uric acid, audit, primary care, Malaysian CPG

### QIIS5

#### Bridging Gaps in Diabetes Management in Primary Care: A Collaborative Approach for Early Detection of Periodontal Disease at Simpang Kuala Health Clinic

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**Introduction:** Type 2 Diabetes (T2D) significantly increases the risk of periodontal disease, with a well-established bidirectional link between poor glycaemic control and oral health complications. In November 2024, Simpang Kuala Health Clinic, Alor Setar launched an integrated care initiative combining diabetes and dental services to improve early detection and management of periodontal disease in people with T2D in primary care in the Simpang Kuala area.

**Methods:** This descriptive cross-sectional study was conducted from November 2024 to February 2025, during which 162 people with T2D were screened for periodontal disease. Data on consent, attendance, and reasons for non-participation were collected. Patients requiring further care were referred to periodontal specialist. Patients' feedback was analysed to identify barriers to accessing dental services.

**Results:** Of the 162 patients, 141 (87%) consented to participate, while 21 (13%) declined. 25 out of 120 patients examined (20.8%) needed periodontal specialist care. Among participants, 22 (15.6%) missed their dental appointments primarily due to logistical barriers such as transportation and work commitment.

**Conclusion:** The initiative highlighted the feasibility and benefits of integrating dental care into diabetes management. The relatively high rate of periodontal disease identified reinforces the importance of including dental assessments in routine diabetes care. However, challenges such as transportation and patient work commitments hindered participation. Tailored strategies are needed to improve accessibility. This programme serves as a model for collaborative healthcare, emphasising the importance of timely periodontal care in addressing the complex interplay between diabetes and oral health.

**Keywords:** Type 2 Diabetes, Periodontal Disease, Integrated Care

### QIIS6

#### Clinical Audit on Management of Prolonged Neonatal Jaundice in Primary Care Clinics of Tangkak District, Johor

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**Introduction:** Primary care plays a crucial role in the early recognition and management of prolonged neonatal jaundice (NNJ), helping to prevent delayed diagnoses of serious conditions such as biliary atresia, where timely intervention within 100 days is critical. Although national guidelines are available, the extent of adherence in the primary care setting remains unclear.

**Methods:** A retrospective clinical audit was conducted across several government health clinics in the Tangkak district, Johor. Two cohorts were assessed: neonates presenting with prolonged jaundice at day 14 (term) and 21 (preterm) ( $n=28$ ), and those beyond day 21 (term) and 28 (preterm) ( $n=17$ ). Data were collected using a structured audit checklist based on current national guidelines. Descriptive analysis was performed using SPSS version 26.

**Results:** A total of 45 clinical records were reviewed. The mean audit score for the day 14/21 group was 6.46 out of 11 (58.77%,  $SD=4.68$ ), and for the beyond 21/28 days group, 9.76 out of 17 (57.44%,  $SD=4.33$ ). The majority of cases in both groups scored below 80%, indicating suboptimal adherence to guideline-recommended practices. Wide variability in performance was noted across clinics, with audit scores ranging from 18% to 100%. Common deficiencies included inadequate documentation, incomplete investigations, and inconsistent follow-up.

**Conclusion:** Despite the availability of clinical guidelines, prolonged NNJ management in primary care remains inconsistent. This audit highlights the need for targeted education, standardized clinical workflows, and regular audit cycles. As this represents the first audit phase, further intervention and re-evaluation are necessary to measure improvements in practice and outcomes.

**Keywords:** Clinical audit, prolonged neonatal jaundice, primary care

### QIIS7

#### Clinical Audit on Asthma Management in Public Health Clinics of Kuala Selangor District

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**Introduction:** This clinical audit was performed to evaluate adherence to asthma management guidelines in government health clinics in Kuala Selangor.

**Methods:** A retrospective audit was conducted involving medical records of asthma patients and their prescription records. The convenience sampling method was employed, with inclusion criteria requiring patients to have attended at least two visits within the past year, from January 1st to December 31st 2024. Pregnant women and patients under the age of 12 were excluded.

**Results:** A total of 180 medical records were obtained for this audit. All six criteria of structure were met but a total of 17 out of 20 process criteria and 1 out of 3 outcome criteria did not meet the established standards. The audit revealed that 13.9% (n=25/180), of patients were prescribed short-acting beta-agonists (SABA) more than twice a year while 28.5% (n=47/165) of patients achieved poor asthma control (partly controlled and uncontrolled). None of the records showed SABA monotherapy as all patients received SABA with inhaled corticosteroids-containing therapy.

**Conclusion:** The audit revealed low levels of asthma control with a significant number of patients frequently using SABA. These findings highlight the urgent need for enhanced educational interventions to improve asthma management and patient outcomes

**Keywords:** asthma, SABA overuse, health clinic

## QIIS8

### Combating Pornography Addiction: The STAR Method and 12M Technique in Managing Adolescent Behavior at Klinik Kesihatan Penampang, Sabah

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**Introduction:** Pornography consumption among adolescents in Malaysia has become a growing concern, largely due to increased internet accessibility. Early exposure to explicit content can distort perceptions of sexuality, relationships, and gender norms, often leading to risky sexual behavior, unrealistic sexual expectations, and emotional or psychological issues (Choo, 2019; Yusof et al., 2017). A study involving 986 college students in Penang found that 74.5% had been exposed to pornography, with males more frequently exposed, beginning at a younger age, and typically viewing it alone at home (Alif, 2021).

**Methods:** The BSSK assessment of elementary and secondary schools in Penampang revealed an increase in the number of students experiencing sexual and reproductive health issues. In 2023, 26 out of 227 adolescents reported problems related to pornography viewing. In 2024, this number rose significantly to 354 out of 1,555 adolescents. Between April and December 2024, six adolescents were diagnosed with pornography addiction. These individuals received behavioral interventions using the STAR method and the 12M technique

**Results:** After six months of intervention, four adolescents successfully reduced the frequency and duration of their pornography use, while two achieved complete abstinence.

**Conclusion:** Although regulations exist, adolescents' easy access to pornography continues to be a significant challenge.

It emphasizes the need for comprehensive sexual education and targeted interventions to help adolescents navigate the digital space responsibly, mitigating the harmful effects of pornography on their development. The behavioral intervention aims to break the cycle of addiction, foster self-control, and promote long-term behavioral change.

**Keywords:** BSSK Borang saringan status kesihatan

## QIIS9

**COPD: Are we doing enough? Assessing knowledge, attitude and practice of COPD among primary care medical officers at Government Health Clinics in Seremban district.**

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**Introduction:** The World Health Organisation in 2023 stated that the burden of COPD is particularly pronounced in low- and middle-income countries with Malaysia reported COPD prevalence of 4.19% that contributes substantially to the nation's respiratory disease burden. Although primary care doctors play a crucial role in the early detection and disease management, studies have shown that COPD is frequently underdiagnosed and undertreated at primary care setting.

**Methods:** A cross-sectional study was conducted among primary care doctors at government health clinics in Seremban between 1st December 2024 to 28th February 2025. All 216 out of 238 eligible doctors are recruited using convenience sampling and required to answer an online survey that is specifically developed for this study. Results were graded according to Bloom's original cut-off points into good(>80%), moderate(60-79%) and poor(<60%) performance whilst attitude and performance score are divided into good(score 4-5), average(score 3-3.99) and poor(score<3).

**Results:** Although in general the primary care doctors demonstrated moderate knowledge performance(mean=6.84), average attitude(mean= 3.99) and good practice(mean=4.20), some significant knowledge deficits were identified particularly concerning COPD treatment and application of COPD guideline. Key practices such as spirometry use and CAT/mMRC utilisation also showed poor uptake among the primary care doctors. Time constraints and limited access to pulmonary rehabilitation programme were recognised as major barriers to good quality COPD care.

**Conclusion:** The identified gaps in knowledge and practice, despite generally positive attitudes, highlight the need for targeted interventions not only to improve the quality of COPD care but also to reduce the burden of COPD at primary care level.

**Keywords:** COPD, primary care, Seremban

## QIIS10

### Decentralised Hepatitis C Care: Insights from a Two-Year Retrospective Study

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**Introduction:** Since 2020, Hepatitis C treatment has been decentralised to Klinik Kesihatan Batu 9 to improve access for patients from underserved communities. This study aims to evaluate the sociodemographic characteristics of patients and the treatment outcomes of Direct-Acting Antivirals (DAAs), specifically by examining the achievement of Sustained Virologic Response at 12 weeks post-treatment (SVR12).

**Methods:** This descriptive, retrospective study was conducted over a two-year period at Klinik Kesihatan Batu 9, from January 2023 to December 2024. Sociodemographic and clinical data were extracted from medical records, and patient treatment outcomes were reviewed and analysed.

**Results:** Out of 144 patients diagnosed with Hepatitis C, 99 were initiated on direct-acting antiviral (DAA) therapy and successfully completed treatment. All 99 patients achieved SVR12, indicating a 100% cure rate among those treated. Twenty-nine patients were referred to tertiary centres due to pre-existing kidney or liver impairments, while 16 refused treatment. The majority of patients were male (96.5%), of Malay ethnicity (83%), and between the ages of 40 and 59 (56%).

**Conclusion:** Decentralising Hepatitis C treatment to primary care has proven to be effective, demonstrating high treatment success and low dropout rates. These findings indicate that primary care settings can play a crucial role in delivering Hepatitis C treatment, making it more accessible and improving patient outcomes. Expanding training and support for primary care providers will further enhance treatment success and contribute to achieving Hepatitis C elimination goals by 2030.

**Keywords:** Hepatitis C, Sustained Virologic Response, Primary Care

## QIIS11

### Development And Initial Validation Of A Malay Questionnaire Assessing Self-Care Practice Among Elderly Patient With Diabetes

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**Introduction:** Effective self-care practices are crucial for managing diabetes, particularly among the elderly who are at increased risk for complications. Developing culturally and linguistically appropriate assessment tools is essential for evaluating and promoting self-care behaviors. This study aimed to develop and evaluate the content and face validity of a newly developed Malay-language questionnaire assessing diabetes self-care practices among elderly patients in Malaysia.

**Methods:** The questionnaire's development comprised two stages: (1) item generation and (2) item validation. 10-panel experts

measure the items' clarity, relevancy, and necessity. 30 elderly diabetes patients evaluate the items' comprehension, clarity, and ease of answering. Another 5 participated in cognitive interviews. The content validity index (CVI), content validity ratio (CVR), and face validity index (FVI) were analyzed using Microsoft Excel.

**Results:** A total of 48 items were identified across five domains of diabetes self-care: dietary control, physical activity, self-blood glucose monitoring, foot care, and medication adherence. The scale-level Content Validity Index (S-CVI/Ave) achieved scores of 0.99 for clarity and 0.98 for relevance. Both are considered acceptable. The Content Validity Ratio (CVR) reached 1.00, exceeding the cut-off point. Seven items were removed, and three new items were added during the face validation phase. The scale-level Face Validity Index (S-FVI/Ave) scored 1.00 for comprehension, clarity, and ease of understanding, which is deemed acceptable. Following the validation phase, 44 items were finalized.

**Conclusion:** The findings support the validation of the newly developed Malay-language questionnaire for assessing diabetes self-care practices among elderly patients. The instrument is suitable for psychometric testing.

**Keywords:** diabetes self-care, elderly, validation

## QIIS12

### Development and Validation of "myNCD Journey: Diabetes Edition": An Educational Board Game for Diabetes Management

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**Introduction:** Diabetes mellitus is a significant health concern in Malaysia, with cases rising to 5.2 million in 2023. Traditional educational methods often lack engagement. This study aimed to design and validate "myNCD Journey: Diabetes Edition", a board game to educate Malaysian diabetic patients and promote healthy lifestyles and ensure accessibility and engagement.

**Methods:** This mixed-methods study had two phases. Phase 1: Game content development was done using a Nominal Group Technique, based on feedback from healthcare professionals and patients. Game content was developed across six diabetes care domains: medication adherence, diet, exercise, symptom recognition, complication prevention, and glucose monitoring. The game featured scenarios, question and experience cards, and a Health Points (HP) system. Phase 2: Content validation was conducted using quantitative measures. Eight experts assessed the content using the Content Validity Ratio (CVR) and Item-Level Content Validity Index (I-CVI). Items meeting  $CVR \geq 0.62$  and  $I-CVI \geq 0.78$  were retained. Face validity was evaluated with four diabetic patients.

**Results:** Content validity showed strong relevance for medication and diet, with 28 of 35 items (80%) meeting validation criteria. Seven items related to physical activity were removed due to low scores. The game was found clear and culturally acceptable.

**Conclusion:** The game demonstrated good content validity and user acceptability, particularly in medication and dietary education, offering a promising tool for enhancing diabetes education through active participation. Further evaluation is needed to assess its impact on patient behaviour and outcomes via pilot testing.

**Keywords:** Diabetes Mellitus, Educational Board Game, Validation Studies

### QIIS13

#### **Digitally Streamlined Severe Asthma Referrals: Early Outcomes From Kota Setar, Malaysia**

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**Introduction:** Sub-optimal referral processes for suspected severe asthma can delay diagnosis and treatment. The Severe Asthma Network initiative in Kota Setar, Kedah, Malaysia aims to accelerate early and proactive patient identification to improve referral efficacy, diagnosis capabilities and treatment outcome for severe asthma.

**Methods:** Hospital Sultanah Bahiyah has received referral from nearby district hospitals and health clinics between September 2023 to September 2024. Difficult-to-treat asthma patients were first assessed by physicians by their respective primary health clinics or district hospitals using simplified and digitalized Severe Asthma Referral Form (QR code based) adapted from existing Severe Asthma Referral Checklist by Malaysian Thoracic Society. Patients meeting any one of the four referral criteria in the checklist were referred.

**Results:** The initiative facilitated the referral for 58 patients, with 53 patients attending appointment at severe asthma clinic. Median time taken from the referral to first appointment is seven days, shorter than usual waiting time of 30 days ( $p < 0.001$ ). 5 patients (9.4%) were eventually diagnosed, with time to diagnosis ranging from 25 to 36 days for 3 patients, 182 and 196 days for the other two. Among the 53 patients, 14 patients (24.6%) underwent treatment escalation. Significant improvement in mean ACT scores for baseline vs latest for observed (17.2 vs 20.4,  $p = 0.009$ ).

**Conclusion:** The Kota Setar Severe Asthma Network has facilitated early referral of suspected severe asthma patients, showing early success in reducing waiting time while expediting severe asthma identification for optimised treatment outcome.

**Keywords:** severe asthma

### QIIS14

#### **Effectiveness of an Online Registry in Improving Comorbidity Screening and Management at the Methadone Clinic, Klinik Kesihatan AU2**

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**Introduction:** Patients enrolled in Methadone Maintenance Therapy (MMT) programme are at heightened risk for infectious and cardiovascular diseases. This study aims to evaluate the effectiveness of an online methadone registry in improving the screening and management among patients undergoing MMT at Klinik Kesihatan AU2.

**Methods:** An online methadone registry was created in 2024 to enhance the monitoring and management of patients in MMT

Clinic. The online registry encompassed (i) personal information; name, identification card, registration number, and occupation (ii) screening dates and results; Hepatitis B and C, HIV, tuberculosis and CVD screening (iii) dates of consultation with medical officer and (iv) outcomes of random urine drug screenings. Access to the registry was restricted to the members of MMT team to ensure patient confidentiality and was regularly updated to maintain accurate and current patient information.

**Results:** In 2022-2023, screening rates were suboptimal: 73% were screened for Hepatitis B and C, 26% for HIV, 55% for tuberculosis, and 48% for CVD. Following the intervention, 100% of the active patients screened for all four conditions. As a result, three patients were diagnosed with latent tuberculosis and initiated on appropriate treatment, four patients were diagnosed with Hepatitis C with liver cirrhosis and were referred to a Gastroenterologist for further management, and two patients achieved Sustained Virologic Response (SVR) after completed treatment in Klinik Kesihatan AU2.

**Conclusion:** The establishment of an online methadone registry significantly strengthened patient care in the MMT Clinic. The registry enabled timely diagnosis, appropriate treatment and referrals, support continuity of care while safeguarding confidentiality.

**Keywords:** Methadone, Comorbidity, Screening

### QIIS15

#### **Effectiveness of Antibiotic Stewardship Clerking Aids (ASCA) in Reducing Antibiotic Utilisation in Primary Care: A Defined Daily Dose Analysis**

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**Introduction:** Background Antibiotic overuse is a key driver of antimicrobial resistance globally. In Malaysia, primary care is a critical focus for antimicrobial stewardship interventions. The Antibiotic Stewardship Clerking Aids (ASCA) was developed as a structured tool to guide clinicians through symptom assessment, diagnosis and antibiotic selection aligned with national guidelines. Objective To evaluate the effectiveness of ASCA in reducing antibiotic utilisation using Defined Daily Dose (DDD) analysis of selected antibiotics in primary care and to identify antibiotics with the greatest reduction post-implementation.

**Methods:** This quasi-experimental study was conducted at Klinik Kesihatan Salak. ASCA was implemented in August 2023 as a web-based clerking template integrated during consultations to standardise documentation and ensure guideline-based prescribing. Monthly DDDs for seven antibiotics (amoxicillin, Augmentin, azithromycin, erythromycin ethylsuccinate [EES], cefuroxime, cephalexin and cloxacillin) were compared across pre-intervention (Jan-Aug 2023) and post-intervention (Sep 2023-Dec 2024) period and were analysed using independent sample t-tests.

**Results:** Significant reductions in mean DDD were observed post-ASCA. The greatest reductions were observed for amoxicillin (8.72 to 2.98,  $p < 0.001$ ), cephalexin (4.06 to 1.25,  $p < 0.001$ ) and EES (1.31 to 0.50,  $p < 0.001$ ). Cefuroxime and cloxacillin showed

moderate reductions, while azithromycin remained unchanged. Augmentin usage unexpectedly increased.

**Conclusion:** ASCA effectively reduced DDDs for several commonly prescribed antibiotics, reflecting improved adherence to antibiotic guidelines and prudent prescribing practices. This supports the integration of structured clerking tools as part of antimicrobial stewardship effort in outpatient settings. Further studies are warranted to investigate the reasons behind the increased Augmentin use and evaluate prescribers' decision-making patterns

**Keywords:** antimicrobial stewardship, antibiotics, defined daily dose

### QIIS16

#### Empowering Hearts: Revolutionising Heart Failure Care in Tanjong Karang, Selangor

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**Introduction:** Heart failure (HF) is increasingly prevalent and contributes to significant hospital admissions and mortality. Tanjong Karang Health Clinic, located 80 km from the National Cardiology Centre, has shown suboptimal heart failure management. Based on our local audit, findings revealed that many patients with suspected heart failure did not receive appropriate management. To address this, we developed a novel workflow to enhance community screening, reduce hospital visits, improve collaboration with the cardiology team, and optimize HF management at the primary care level.

**Methods:** Initiated in August 2024, this project developed a protocol and multidisciplinary team, comprising assistant medical officers (AMO), dietitian, pharmacists, and rehabilitation specialists, in collaboration with cardiologists and physicians from Tanjong Karang Hospital, UiTM, and Serdang Hospital. Four training modules (Diagnosis of HF, Management of Acute and Chronic HF, and Prevention of HF) were conducted for family physicians and medical officers over four months. An AMO was trained to perform bedside echocardiography using portable ultrasound. We began screening patients with suspected HF by assessing symptoms such as pedal edema and breathlessness. Eligible patients were managed in our dedicated clinic and were given individualised care, GDMT, dietary counselling, and patient empowerment. We are currently applying for the ProBNP device to enhance diagnostic accuracy.

**Results:** Within four months, 24 patients were enrolled (mean age: 66). 16 were found to have probable preserved HF and 21 were given optimised GDMT. Challenges included credentialing for echocardiogram among AMO and acquiring the proBNP device.

**Conclusion:** Preliminary results suggest that a structured, community-based approach can enhance HF management, with further support needed for sustainability and expansion.

**Keywords:** heart failure, echocardiogram, primary health care

### QIIS17

#### Factors Influencing Prescribing Habit of Proton Pump Inhibitors Among Primary Healthcare Doctors From Government and Private sector in Klang Valley

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**Introduction:** Proton pump inhibitors (PPIs) are widely prescribed for gastrointestinal conditions, making rational prescribing essential for optimizing patient care. This study evaluated the knowledge, attitude, and practice (KAP) of PPI use among primary healthcare providers in the Klang valley, identifying strengths and areas for improvement.

**Methods:** A cross-sectional study was conducted among 350 primary healthcare doctors in the Klang valley, including medical officers (MOs) and family medicine specialists (FMS), using an online questionnaire. The survey examined demographic characteristics, KAP scores, and factors influencing prescribing behaviors. Statistical analyses were performed to determine associations between sociodemographic variables and KAP scores.

**Results:** Among 350 primary healthcare providers, 67.7% prescribed PPIs, yet only 53.6% were aware of guidelines, and 46.0% had attended CME. While 60.3% had good knowledge (median score 11) and practice (median score 12), 50.0% had poor attitudes (median score 16.5). Private providers had lower odds of poor practice (AOR = 0.27, 95% CI 0.08-0.88, p = 0.029), while pharmacy monitoring was unexpectedly linked to poorer practice (AOR = 3.93, 95% CI 1.08-14.25, p = 0.038). Prescribing PPIs to 5-10 patients weekly was associated with better practice (AOR = 0.07, 95% CI 0.02-1.62, p = 0.018). Self-medication was common (55.3%), with 41.4% reporting persistent symptoms. Omeprazole use correlated with better knowledge (AOR = 0.35, 95% CI 0.13-0.96, p=0.042).

**Conclusion:** The findings highlight a strong foundation in PPI KAP among primary healthcare doctors in Klang valley. Continuous education initiatives and enhanced pharmacy monitoring could further optimize prescribing behaviors, strengthening through targeted interventions may further improve patient safety and healthcare efficiency.

**Keywords:** Proton Pump Inhibitors (PPIs), Knowledge, Attitude, Practice, Prescribing Patterns, Primary Healthcare Doctors, Rational Drug Use

## QIIS18

### GoFit2: Enhancing Protocol Adherence and Improving Metabolic and Psychological Outcomes in Primary Care Obesity Management

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**Introduction:** With 54.4% of Malaysian adults classified as overweight or obese, primary care plays a vital role for structured weight management. GoFit2, implemented at Klinik Kesihatan Pelabuhan Klang, aimed to enhance the multidisciplinary framework introduced in GoFit1 and analyse psychological and metabolic outcomes.

**Methods:** Adults aged 18–59 with BMI  $\geq 27.5$  kg/m<sup>2</sup> and comorbidities or BMI  $\geq 37.5$  kg/m<sup>2</sup> without comorbidities were enrolled. A multidisciplinary team (family medicine specialists, medical officers, nurses, a physiotherapist, dietitian, nutritionist and a psychologist) delivered non-pharmacological interventions, including monthly group sessions and WhatsApp engagement. Healthcare worker and patient survey feedback led to enhancements in GoFit2, including integration of the national obesity module, structured exercise prescriptions, a patient-held exercise diary and standardized weight management documentation.

**Results:** Of 25 participants, 52% completed the six-month programme, aligning with global completion rates of 47–67.4% in similar interventions. Common comorbidities were diabetes mellitus (32%) and hypertension (24%). Median weight loss was 2.5 kg, with 42% achieving  $\geq 3\%$  weight loss and 17% achieving  $\geq 5\%$ . Among participants living with diabetes, the median HbA1c reduction was 1.8%. Besides glycaemic control, blood pressure also improved. Psychological outcomes were encouraging where 92.3% showed reduced PHQ-9 scores and 84.6% reported improved WHO-5 well-being. Protocol adherence measured by the Model of Good Care improved from 42% in GoFit1 to 79% in GoFit2. A total of 92.9% of GoFit2 participants surpassed the expert-consensus benchmark of  $\geq 50\%$  protocol adherence.

**Conclusion:** GoFit2 achieved meaningful weight, metabolic, and psychological outcomes while strengthening protocol adherence. Improving patient retention and validating benchmarks will be key for broader implementation.

**Keywords:** Obesity / therapy, Weight Reduction Programs / methods, Primary Health Care / organization & administration

## QIIS19

### Impact of Enhanced Diabetes Clinic on Quality of Life, Glycaemic Control and Weight Management in Tangkak District, Malaysia

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**Introduction:** Type 2 Diabetes (T2D) is a major public health issue in Malaysia, with a 15.6% prevalence reported in NHMS 2023. To address this challenge, Enhanced Diabetes Clinic (EDC), led by Diabetes Advocators among Medical Officers (DAMO) was piloted in Tangkak District. EDC offers structured, patient-centered care with regular follow-ups, personalized management plans, diabetes education, and psychological support. This study evaluates the EDC's impact on patients' quality of life, blood sugar control, and weight management.

**Methods:** This pre-post quasi-experimental study involved 27 uncontrolled T2D patients aged 18 and above, selected through convenience sampling at Payamas and Bukit Serampang Health Clinics from October 2024 to January 2025. Pregnant women, program defaulters, and those unable to complete the validated Revised Diabetes Quality of Life (Rv-DQOL) questionnaire were excluded. The EDC provided biweekly to monthly care using structured tools and educational materials. Baseline HbA1c, weight, and Rv-DQOL were recorded and reassessed after at least five sessions. Self-monitoring of blood glucose was encouraged, and insulin titration was taught when needed.

**Results:** The mean age was 56.7 years, with 55.5% female. HbA1c improved significantly from 10.43% to 8.34% ( $p=0.003$ ). Rv-DQOL scores decreased by 9.4 points ( $p<0.001$ ), with a 12.5-point drop in the satisfaction component ( $p<0.001$ ). No significant change in body weight was observed.

**Conclusion:** The EDC model provided personalised, continuous care that improved glycaemic control and quality of life, despite limitations like small sample size and short follow-up. It showed strong potential for wider use in Malaysia's primary care.

**Keywords:** Enhanced Diabetes Clinic, quality of life, glycaemic control

## QIIS20

### Improving Antibiotic Use in Public Primary Health Care: Effectiveness of Antimicrobial Stewardship Programme

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**Introduction:** Antimicrobial resistance is a growing public health concern. However, limited data exist on the appropriateness of antibiotic prescribing in Malaysia's primary health care (PHC). This study aimed to evaluate the effectiveness of Antimicrobial Stewardship (AMS) implementation in public PHC across Malaysia since 2019.

**Methods:** An audit-based study was conducted across all public PHC clinics staffed by Family Medicine Specialists or Medical Officers and pharmacists. The Point Prevalence Survey (PPS) was conducted annually to assess antimicrobial prescribing rates and appropriateness for upper respiratory tract infections (URTI), based on the review of all patient records and prescriptions on a designated day. The Antimicrobial Clinical Audit (AMCA) was conducted by auditing 30 randomly selected records per clinic with antimicrobial prescriptions. Descriptive data analysis was performed using Microsoft Excel.

**Results:** In 2015, a total of 69,182 prescriptions were recorded, with an overall antibiotic prescribing rate of 8.9% (n=6,172). By 2024, this rate reduced to 4.3%, with 4,951 antibiotic prescriptions among 113,866 total. URTI-related antibiotic use decreased by 44.2%, from 12.9% (2019) to 7.2% (2024). AMCA scores improved from 55.3% (2019) to 91.0% (2024). One of the limitations of this study is that no further statistical analysis can be performed as we were using secondary data.

**Conclusion:** The implementation of AMS programs has effectively reduced antibiotic prescribing rates and enhanced the appropriateness of prescribing practices. Success was driven by multidisciplinary collaboration, audit-feedback, and leadership engagement. Future steps include expanding AMS into the private sector and engaging communities to sustain national efforts against antimicrobial resistance.

**Keywords:** Antimicrobial Stewardship, Antibiotic Resistance, AMS in public primary health care clinics

## QIIS21

### Improving documentation of both antimicrobial allergy & patient education among prescribers in Petra Jaya Health Clinic, Kuching, Sarawak

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**Introduction:** Antimicrobial stewardship (AMS) is part of primary health care's responsibility. In Petra Jaya Health Clinic (PJHC), Kuching, the annual antimicrobial clinical audit (AMCA-1) from 2020 to 2022 uncovered very poor documentation in 2 clinical elements of documenting statement of drug allergy (SDA) and health education (HE), namely about compliance and side effects to antimicrobials.

**Methods:** A local verification study was done with literature review, root problem analysis and a Knowledge-Attitude-Practice (KAP) study among 27 prescribers in PJHC. Intervention tools introduced were a Quality-Assurance-AMS-Intervention-Stamp (QAMIS) to use on prescription slips by prescribers at PJHC, together with a continuous medical education (CME) for prescribers on 28 April 2023 in between the pre- and post-intervention studies conducted from 14-30th March 2023 and 12-20th June 2023 respectively.

**Results:** From the baseline of 6.7-40% for SDA and 0-20% for HE from 2020-2022 (both below the standard of 80%), the pre- & post-intervention studies displayed improvements from 50% to 83% for documentations in SDA [Post-intervention Actual-Benefit-Not-Achieved (ABNA) overachieved at +3.3%], and from 20% to 73.3% for HE (Post-intervention ABNA shrunk to -6.7%). Knowledge in PJHC prescribers improved for all of antimicrobial prescription components (22% to 80%), importance of SDA (44% to 100%) and HE (66% to 100%). As for adherence to the QA-AMS stamp, it was only 50% (15/30).

**Conclusion:** Prescriber-centered quality interventions are shown to improve documentations of both drug allergies statements and health education during antimicrobial prescriptions. More is required to improve prescribers adherence and additionally empower pharmacists to screen and document the above.

**Keywords:** Stewardship, Antimicrobial, Prescribing documentation

## QIIS22

### Improving Gout Care: How an Audit Cycle Transformed Management in Kuala Selangor Health Clinic

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**Introduction:** Gout is a significant health concern globally and locally, associated with increased mortality, chronic disability, impaired quality of life, and higher healthcare utilisation.

Recognising the need for effective management strategies, a clinical audit was conducted to evaluate the quality of gout care at Kuala Selangor Health Clinic, with reference to the latest Ministry of Health (MOH) guidelines.

**Methods:** This retrospective cross-sectional audit sampled 30 outpatient cases prescribed colchicine between September and November 2023. Data were analyzed against standards for gout preventive strategies, comorbidity screening, urate-lowering therapy indication, treat-to-target approach, and patient monitoring.

**Results:** Findings revealed deficiencies in lifestyle counselling, initiation of treatment according to indications, achieving serum urate targets (<360  $\mu\text{mol/L}$ ), and clinical monitoring, particularly regarding drug-related adverse events. In response, interventions implemented included CME sessions, dissemination of reminders via WhatsApp, introduction of a gout clerking sheet, initiation of a gout patient registry, and provision of patient education leaflets. A second audit cycle three months post-intervention ( $n=22$ ) demonstrated improvements: 100% of patients with indicated gout received urate-lowering therapy, and monitoring rates improved from 5% to 90.9%. Although serum urate target achievement rates declined, this was attributed to early-phase treatment titration.

**Conclusion:** In conclusion, regular auditing and structured interventions are essential to enhance adherence to clinical guidelines, thereby improving outcomes and reducing complications among gout patients.

**Keywords:** Gout, Hyperuricemia, Allopurinol

### QIIS23

#### Improving The Percentage of Woman of Reproductive Age With Non-Communicable Disease (NCD) Who Received Appropriate Pre- Pregnancy Care (PPC) Intervention in Klinik Kesihatan Sultan Ismail (KCSI) Johor Bahru

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**Introduction:** A verification study showed only 12% received the appropriate PPC intervention: healthy lifestyle advice, client management, and adequate family planning counselling. Inappropriate PPC intervention leads to maternal and neonatal morbidity and mortality. The study aimed to improve the percentage of women of reproductive age with NCDs who receive appropriate PPC intervention in KCSI.

**Methods:** A quality improvement study was conducted; a verification study was carried out from November to December 2023, Cycle 1 from April to June 2024, and Cycle 2 from October to December 2024. The indicator is the number of women of reproductive age with NCDs receiving appropriate PPC intervention, measured out of those eligible women registered for PPC, a standard of  $\geq 80\%$  (Clinical Practice Guideline of PPC 2023).

**Results:** The contributing factors were no regular PPC audit (100%), low compliance with Model of Good Care (85%),

unorganised appointment system (73%) and poor attitude toward PPC among patients (71%). The remedial measures were established to address the contributing factors. In the first cycle, we organised regular audits, created appointment sheets and a PPC Record Book, and established a PPC Clinic. In the second cycle, the PPC portal was introduced. The percentage of women receiving appropriate PPC interventions increased from 12% to 75% in Cycle 1 and 87% in Cycle 2. Achievable Benefit Not Achieved (ABNA) improved from 68% to 5% and finally to -7%.

**Conclusion:** The PPC Record Book is now being used in Johor. We aim to expand to all primary clinics in Malaysia, along with multiple sharing sessions.

**Keywords:** Pre-pregnancy care, non-communicable disease, Quality Improvement Study

### QIIS24

#### Increasing Sputum AFB Screening among URTI Patients Attending the Outpatient Department (OPD) at PKD Baling

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**Introduction:** Sputum AFB screening rates among patients presenting with upper respiratory tract infections (URTI) at the outpatient department (OPD) of Baling Health Clinic were significantly low, recorded at only 3% in both 2022 and 2023. This emphasized the need for targeted intervention strategies to improve detection of tuberculosis (TB) in URTI patients. The key performance indicator (KPI) for this initiative was the proportion of URTI patients undergoing sputum screening, with a benchmark of 5% set according to the National Tuberculosis Control Action Plan 2023.

**Methods:** Data on sputum collection and TB detection were collected using convenient sampling method over a six-months period from June to December 2024. Both healthcare workers and patients completed questionnaires to assess their knowledge and awareness of TB. A teaching session was conducted for healthcare personnel, followed by a post test to evaluate learning outcomes. Additionally, a clinical audit of URTI clinic patient records was carried out to assess staff compliance with the standard operating procedures (SOP) established by PKD Baling.

**Results:** Following the interventions, sputum AFB screening rates increased significantly from 3% in 2023 to 10% in 2024. Contributing factors included improved staff adherence to SOPs (86.7%) and marked improvement in healthcare workers' TB knowledge, which rise from 8% to 50% after teaching session. Furthermore, TB cases with positive sputum results increased from 16 in 2023 to 25 in 2024, indicating enhanced detection and diagnosis.

**Conclusion:** Enhanced sputum screening for (TB) among URTI patients in OPD settings improve TB case detection.

**Keywords:** Sputum AFB, URTI

## QIIS25

### Metabolic Dysfunction-Associated Fatty Liver Disease (MAFLD) in Primary Care - Insights from a University-Based Primary Care Clinic

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**Introduction:** Metabolic Dysfunction-Associated Fatty Liver Disease (MAFLD) is increasingly prevalent and is associated with a projected rise in liver-related complications and mortality. Primary care doctors play a vital role in the detection, screening, and management of MAFLD. A clinical audit was conducted to assess whether the management of MAFLD aligns with the Malaysian Society of Gastroenterology and Hepatology (MSGH) consensus statement and other local clinical practice guidelines.

**Methods:** All patients diagnosed with MAFLD who attended the UiTM Primary Care Medicine Clinic (PCMC) between 1st January and 30th June 2024 were screened for inclusion. Patients with NAFLD without evidence of MAFLD, those with chronic liver disease due to other causes, and pregnant patients were excluded. The criteria and standards for structure, process, and outcome were established based on the MSGH consensus statement, relevant clinical practice guidelines, and findings from previous audits.

**Results:** A total of 283 medical records were audited retrospectively. Six out of eight structural criteria met the standard. In the process of care, only 8 of 26 criteria including assessments, non-pharmacological and pharmacological treatment, and metabolic risk management - were met. While none of the nine treatment targets were achieved, complication rates remained low, with more than 95% patients not progressing to advanced liver fibrosis or developing new cardiovascular disease.

**Conclusion:** This audit highlights major areas for improvement in patients' initial assessments, pharmacotherapy, and the achievement of treatment targets. Primary care plays a role in early detection, timely intervention, and consistent patient monitoring. It serves as a benchmark for future evaluations of MAFLD management. A follow-up review should be conducted to assess the effectiveness of the implementation since this audit.

**Keywords:** MAFLD, primary care, audit

## QIIS26

### Nationwide Implementation of Healthy Lung Masterclass (HLM): Impact on Asthma Management in Malaysian Primary Care

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**Introduction:** The Healthy Lung Masterclass (HLM) Asia Webinar Series provides updates and insights into asthma management, covering the following modules: diagnosis, treatment for adult patients, monitoring, referrals, and patient education.

A national-level HLM training was launched to train Family Medicine Specialist (FMS) and primary care doctors to disseminate knowledge nationwide.

**Methods:** Family Medicine Specialists' Association trained selected FMS nationwide to be trainers and shared insights on the HLM modules. Subsequently, an echo training was implemented to further train primary care practitioners. A pre and post survey was administered to assess their changes in awareness and prescribing attitudes. Concurrently, the Reliever Reliance Test (RRT) and Global Initiative for Asthma (GINA) recommendations were introduced in public health clinics.

**Results:** Among surveyed participants, full awareness of GINA 2023 recommendations increased from 6% to 53%. Strong agreement that asthma should not be managed with short-acting beta-agonists (SABA) alone rose from 59% to 92%. Agreement that inhaled corticosteroid/formoterol (ICS/formoterol) could replace SABA as needed (PRN) substantially increased from 38% to 85%. ICS/Formoterol is the preferred reliever across all asthma severities increased from 34% to 86%. Regarding prescribing behaviors, 91% intended to significantly reduce or eliminate SABA prescribing, with complete elimination increased from 5% to 23%. Additionally, 162 public health clinics conducted 2,338 RRTs, identifying 86% of patients as medium to high risk of SABA overreliance, reinforcing the need for improved asthma management.

**Conclusion:** HLM training increased awareness in asthma management optimisation, influenced prescribing intentions, and addresses SABA overreliance through RRTs screening.

**Keywords:** Family Medicine Specialist; SABA Overreliance; RRT

## QIIS27

### Pre-Pregnancy Care: Implementation of a One-Stop Approach Model of Care at Klinik Kesihatan Bandar Alor Setar, Kedah

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**Introduction:** The pre-pregnancy care (PPC) Service at Klinik Kesihatan Bandar Alor Setar (KKBAS) has been restructured into a One-Stop model of care. This centralised approach, based at the Women's Hub at the Outpatient unit (OPD) aims to deliver comprehensive services to women of reproductive age, particularly those with pre-existing medical conditions. A dedicated team of medical officers and nurses provide these services within a single integrated system.

**Methods:** This model aims to optimize women's health before conception through structured, continuous care in a single setting. Services are available every Monday and Wednesday with referrals accepted from outpatient clinics, maternal and child health units, hospitals, general practitioners and outreach programmes. An online appointment system streamlines scheduling and improves staff coordination. Services include chronic disease management, contraceptive counselling and the provision of contraceptive methods such as implants, Intrauterine contraceptive devices (IUCDs), oral pills and injections. Eligible women also receive cervical cancer screening, clinical breast examinations along with general health screenings. Routine follow-up includes biannual family planning reviews.

**Results:** In the past 5.5 months, a total of 300 patients have been seen under this model, with 104 new cases registered. Additionally, a total of 9 IUCDs and 9 implants were inserted, reflecting growing acceptance of long acting contraceptive methods.

**Conclusion:** The One-Stop PPC model has enhanced care delivery by reducing the need of multiple appointments and improving continuity of care. This patient-centered, integrated approach supports safer pregnancy planning and improves accessibility to comprehensive, evidence based reproductive health services.

**Keywords:** Pre Pregnancy Care, One-Stop Approach Model of Care, integrated health services

### QIIS28

#### Prevalence of Low Resilience and its Associated Factors among Public Primary Healthcare Workers in W.P. Kuala Lumpur

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**Introduction:** The primary healthcare system are rife with challenges, making it imperative to assess the resilience of primary healthcare workers (HCWs). This study aimed to uncover the prevalence of low resilience—defined as levels insufficient for maintaining effective occupational functioning. This study aimed to identify the prevalence and its associated factors among HCWs in W.P. Kuala Lumpur.

**Methods:** A cross sectional study was conducted among 430 HCWs in public primary healthcare facilities in W.P. Kuala Lumpur. Sociodemographic data, Patient Health Questionnaire-9 (PHQ-9) score, General Anxiety Disorder-7 (GAD-7) score and Resilience Questionnaire (Wagnild-Young 25 - Resilience Scale) questionnaires were administered and analysed with logistic regression.

**Results:** Four hundred thirty HCWs were approached and 415 were analysed (response rate 96.5%). The prevalence of low resilience was 31.6%. Female (OR 1.87; 95% CI 1.05-3.32), duration of working less than 10 years (OR 1.94; 95% CI 1.20-3.16) and depression (OR 2.53; 95% CI 1.46- 4.41) were associated with low resilience.

**Conclusion:** In conclusion, this study reveals that 30% of HCW have low resilience and high burnout risk, with female healthcare workers being especially vulnerable. Targeted support, stigma reduction, and improved access to mental health resources are essential to enhance well-being and intervention effectiveness.

These findings guide policymakers in strengthening Malaysia's healthcare system and preparedness for future crises.

**Keywords:** prevalence; resilience; primary healthcare workers.

### QIIS29

#### Syangi Keluarga, Utamakan Kesihatan: A Quality Improvement Initiative through the Changkat Lada Family Health Carnival

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**Introduction:** Low health literacy and limited access to preventive care remain key challenges in rural areas such as Changkat Lada. A Family Health Carnival was organized as a quality improvement initiative to raise awareness, promote early screening, and strengthen community-healthcare collaboration

**Methods:** The carnival was organized on 17 August 2024, led by Changkat Lada Health Clinic with support from HOPE UMMC, Jom Check UKM, LPPKN Manjung, PERKESO, and the Kampung Gajah dental team. Participants were recruited through local health volunteers, village heads, and public announcements. Eighteen booths offered services including blood pressure, glucose, cholesterol checks, mental health screening (DASS-21), child development assessments, HPV screening, dental checks, and health education. Data were collected on-site and referrals issued where needed.

**Results:** A total of 255 individuals participated (145 adults, 110 children). Among children, 45% had growth concerns, 23% were stunted or wasted, and 9.4% showed developmental delays; four were referred. Among adults, 26 needed further care, with 50.7% having previously undiagnosed high cholesterol and 11 screening positive for depression. Other outcomes included 75 dental check-ups, 20 HPV screenings, 16 mammogram referrals, and 9 smokers interested in cessation programs.

**Conclusion:** This initiative showed that a targeted, multisectoral approach can effectively identify unmet health needs and improve screening uptake. It highlights the effectiveness of multi-agency collaboration in promoting preventive healthcare in the community, reinforcing the importance of holistic family wellness. While immediate results are encouraging, long-term impact cannot be confirmed without follow-up. Future efforts should include post-intervention monitoring to assess sustained outcomes.

**Keywords:** Multisectoral Collaboration, Community Health Services, Preventive Health Services, Health Education

### QIIS30

#### Spotlight on Diabetic Kidney Disease: An Audit of Primary Care Practices.

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**Introduction:** From 2011 to 2021, diabetic kidney disease

(DKD) accounted for >50% of new end-stage kidney disease (ESKD) cases requiring dialysis in Malaysia. This audit assessed the quality of DKD diagnosis and management within a primary care clinic.

**Methods:** The retrospective audit included all patients with Type 2 Diabetes Mellitus (T2DM) with DKD from a single centre, seen between June and December 2023, having at least four prior follow-up visits. Exclusion criteria encompassed age<18, type 1 diabetes, pregnancy, and non-diabetic chronic kidney diseases. Standards adhered to the Malaysian Clinical Practice Guideline for Management of T2DM 2020 and Chronic Kidney Disease, 2018

**Results:** A total of 403 patients were included. Overall, 2 out of 5 structures, 14 out of 37 processes, and 2 of 9 clinical outcome criteria did not meet the set standards. Structure: A diabetes mellitus registry and quick reference guides were absent from consultation rooms (2/5 criteria). Process: Deficiencies (14/37 criteria) included DKD classification by eGFR (59.8%) and albumin category (43.8%), BMI documentation (94.5%), annual urine tests (99.0%), diabetic retinopathy screening (75.6%), HbA1c monitoring (60.3%), vitamin B12 monitoring for long term metformin use (8.7%), SGLT2i prescriptions (28.3%), CKD advice (60.0%), hypoglycemia awareness (53.0%), referrals to dietician (30.0%) and diabetes educators (18.1%), smoking cessation advice (66.7%) and weight management advice (76.3%). Outcome: Only 13.1% reached a 5-10% weight loss, while merely 37.7% met blood pressure targets of < 130/80 mmHg (2/9 criteria).

**Conclusion:** Overall, 18 out of 51 criteria (35.0%) failed to meet established standards. Underlying issues have been identified, and strategies developed to enhance the diagnosis and management of DKD in this clinic.

**Keywords:** diabetic kidney disease, clinical audit, primary health care

### QIIS31

#### Strengthening Geriatric Health in Primary Care: Insights from Nationwide Physiotherapy- Led Sarcopenia Risk Screening

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**Introduction:** As Malaysia transitions into an aging nation, sarcopenia has emerged as a significant yet under-recognized condition among older adults. Without timely identification and intervention, it can lead to decreased mobility, increased falls,

frailty, and rising healthcare costs. In response, physiotherapists in primary healthcare have implemented a nationwide screening initiative to detect at-risk individuals and support early intervention.

**Methods:** This retrospective analysis evaluated sarcopenia screening data collected between March and December 2024. Screenings were conducted by 454 physiotherapists at 276 Klinik Kesihatan across 15 states in Malaysia, targeting individuals aged 60 and above. Assessments followed the Asian Working Group for Sarcopenia guidelines, using handgrip strength and muscle mass measurements. Key parameters included the number screened and the proportion identified as at risk.

**Results:** A total of 90,348 older adults were screened, representing 55.3% of the national target (N=163,395). Of these, 25,785 individuals (28.5%) were identified as at risk. Notably, 4 out of 15 states, namely Negeri Sembilan (43.2%), Kedah (38.9%), Penang (38.5%), and Labuan (36.4%), recorded prevalence rates above 35% indicating regional disparities. Nearly 1 in 3 individuals screened were at risk, suggesting targeted interventions are needed.

**Conclusion:** This highlights the burden of sarcopenia among Malaysia's older population and affirms the feasibility of physiotherapy-led screening in primary care. Strengthening collaboration between physiotherapists and other healthcare providers, particularly the Family Medicine Specialists is essential to promote healthy aging and reduce disability.

**Keywords:** Sarcopenia; Older Adults; Physiotherapy; Asian Working Group of Sarcopenia

### QIIS32

#### Tackling Anaemia in Pregnancy: A Quality Improvement Strategy for Primary Care

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**Introduction:** Anaemia among pregnant women in Penampang, Sabah increased over four years, peaking at 12.1% in 2023. In 2024, a quality improvement (QI) initiative was introduced, resulting in a marked reduction to 5.7% (54/940 cases), surpassing the state target of less than 8.0%. This study describes the interventions implemented and their impact on anaemia outcomes.

**Methods:** This was a retrospective QI intervention study conducted at Klinik Kesihatan Penampang and its affiliated clinics. Data on haemoglobin level at 36 weeks' gestation were extracted from antenatal records between January and December 2024. The primary outcome was the proportion of pregnant women with anemia (Hb <11.0 g/dl). No formal statistical testing was performed; data were analysed descriptively. Interventions included switching from intramuscular to intravenous (IV) Cosmofer iron therapy for cases unresponsive to oral iron, administered between 16 and 30 weeks of gestation. An Excel-based calculator

was developed to guide the administration of IV iron dosing. Continuous medical education was conducted for medical officers and nurses. Nurses were empowered to initiate Zoncofer when indicated. Anaemic mothers received early referral for nutritional counseling and were enrolled in mother-friendly classes. Anaemic cases were also discussed regularly in high-risk meetings.

**Results:** Anaemia prevalence dropped from 12.1% in 2023 to 5.7% in 2024. The Excel calculator improved dosing accuracy and facilitated early intervention, while training and team-based care enhanced overall management.

**Conclusion:** Thsi QI initiative, supported by digital tool and team-based strategies, effectively reduced antenatal anaemia and may served as a scalable model for similar primary care settings.

**Keywords:** Anaemia, Iron deficiency, pregnancy complication

### QIIS33

#### **Improving Prediabetes Outcomes: A Clinical Audit of Registration, Monitoring, and Management in Pendang District**

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**Introduction:** Prediabetes is a critical stage in the progression to Type 2 Diabetes Mellitus, offering a vital window for early intervention in Malaysia. In Pendang district, prediabetes cases are increasing, with 173 cases reported from July to December 2023, though underreporting is possible. This clinical audit aims to evaluate the management and monitoring of prediabetes in Pendang health clinics, identifying gaps and opportunities for improvement. Key strategies include ensuring proper registration, timely repeat Oral Glucose Tolerance tests(OGTT) about six months, and early pharmacological intervention with metformin for high-risk individuals .

**Methods:** A clinical audit was conducted at all three government clinics in Pendang using universal sampling. The study evaluated registration practices, follow-up monitoring, and pharmacological management. The audit had pre- and post-intervention phases. Pre-intervention data (July-December 2023) showed that only 35.8% of prediabetes patients were registered, and just 27.4% underwent a repeat OGTT after six months. Interventions included staff briefings, standardization of procedures using workflow charts, and emphasis on early metformin initiation. Post-intervention data(January-June 2024) were collected to assess improvements.

**Results:** Following interventions, registrations improved from 35.8%( 62/174) to 85.6%(55/181). Repeat OGTT rates rose from 27.4 %to 70.9%. Metformin initiation among high-risk patients also improved from 0% to 29.6%. High-risk individuals were identified based on ADA proposed standards of care in diabetes and metformin were initiated.

**Conclusion:** Significant improvements were observed in registration, follow-up, and initiation of metformin, however with turnover of healthcare worker ,continuous staff education and repeat audit cycle is crucial to sustain improvements and prevent progression from prediabetes to diabetes.

**Keywords:** Prediabetic state, Metformin, Glucose Tolerance Test

### QIIS34

#### **Use And Adverse Reactions Of Parenteral Iron In Pregnant Women: A Retrospective Study In Kota Setar And Kubang Pasu Districts, Kedah**

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**Introduction:** In primary care, parenteral iron is utilized in pregnant women with iron deficiency anemia who are either intolerant or an inadequate response to oral iron therapy. Parenteral iron offers a more efficient and rapid approach to restoring iron reserves, thereby enhancing maternal health and supporting fetal development. However, the occurrence of adverse drugs reactions (ADRs) remains a concern. Evaluating the prevalence of these adverse effects in patients receiving parenteral iron is critical for identifying the most suitable formulation for primary care practice.

**Methods:** The primary aim of this retrospective study, which involves systematic collection of data regarding pregnant women who received parenteral iron therapy, is to assess and compare the prevalence of ADRs with parenteral iron therapy between PKD Kota Setar and Kubang Pasu throughout 2024. The eligibility for parenteral iron therapy is determined based on the clinical assessment and medical justification provided by the attending Medical Officer.

**Results:** The data indicates four iron formulations are predominately utilized in these districts. Intravenous (IV) Cosmofer, Intramuscular (IM) Cosmofer, IV Venofer and IV Hemofer. IV Cosmofer was the predominantly used in Kota Setar, whereas Kubang Pasu was IV Hemofer. IV Hemofer demonstrated the lowest incidence of ADRs compared to both IV Cosmofer and IV Venofer. IM Cosmofer appeared to be the most safest option without reported ADRs

**Conclusion:** IM Cosmofer has the lowest incidence of adverse drug reactions (ADRs) compared to other formulations. Alternatively, IV Hemofer shows a comparable safety profile to other intravenous preparations.

**Keywords:** Parenteral Iron Pregnant women Adverse Drug Reactions

### QIIS35

#### **Views And Experiences Of Primary Care Doctors On Prescribing Antidepressant For Depression: A Qualitative Study In Petaling District, Selangor**

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**Introduction:** Depression is a disease that affects millions of people worldwide and estimated to be the highest contributor to the disease burden in 2030. Primary care doctors are the gatekeepers of healthcare. Most patients with depression went to them for treatment. Previous studies in primary care showed undertreatment of depression, which was associated with various factors. The objectives of this study aimed to understand the challenges and facilitators for primary care doctors to prescribe antidepressants for patients with depression.

**Methods:** A qualitative study via in-depth face-to-face interviews was conducted among the 15 public primary care doctors which consisted of FMS and MO across six public health clinics in the Petaling District of Selangor. Interviews were done until data saturation was reached from April until May 2023. Audio recordings were transcribed verbatim, and thematic analysis was done with QDA Miner Lite.

**Results:** Three themes were found: 1) Primary care doctors find treating is harder than diagnosing depression. This includes training in psychiatry department which helps, more time required for consultation, and patients' disease acceptance. 2) Mass media facilitates public understanding of depression. This leads to less stigma and patients being forthcoming for antidepressant. 3) Strengthening the role of primary care in managing depression. Psychological intervention, expanded scope mental health clinic and psychiatrist collaboration were emphasized.

**Conclusion:** Systematic training for primary care doctors could be implemented to improve their confidence in treating depression. Mass media's role in disseminating information about depression can increase awareness. In treating depression, non-pharmacological interventions should also be prioritized. The development of expanded scope mental health services and collaboration with hospital psychiatrists can strengthen the management of depression in primary care.

**Keywords:** antidepressant, primary care, depression

### QIIS36

#### Stronger Together: Multidisciplinary Teamwork for Better Diabetes Outcomes in Rural Clinics

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**Introduction:** Background: Effective diabetes management requires a multidisciplinary approach, which can be challenging in resource-limited clinics without in-house family medicine specialists. At the end of 2023, a review at Ulu Dedap Health Clinic identified a high proportion of type 2 diabetes patients with poor glycaemic control (HbA1c > 8%). In response, the clinic introduced enhanced diabetic care sessions using a one-stop, multidisciplinary approach to improve patients' diabetic outcome. Objective: To evaluate the impact of structured, multidisciplinary diabetic care sessions on glycaemic control among patients with poorly controlled type 2 diabetes.

**Methods:** This quality improvement initiative involved a retrospective review of routine clinical data. 26 patients with HbA1c > 8% who attended enhanced diabetic care sessions between March and December 2024 were included. Patients who did not complete six-month follow-up or missed post-intervention blood tests were excluded. Each session was conducted during routine follow-up and involved consultations with a visiting family medicine specialist, trained medical officer and diabetes educator. Pharmacist involvement was included when indicated, particularly for patients on insulin therapy or with medication-related issues.

**Results:** Sixteen patients completed six-month program. Among them, 62.5% showed reduction in HbA1c, and 75% had

improved fasting blood sugar (FBS). Mean HbA1c decreased from 11.7% to 10%, while mean FBS improved from 13.6 mmol/L to 11.4 mmol/L.

**Conclusion:** Structured multidisciplinary diabetic care sessions implemented within routine clinic services led to measurable improvements in glycaemic control. This initiative demonstrates the potential of team-based care enhanced diabetes management in resource-limited primary care settings without the need for additional infrastructure.

**Keywords:** 1. Diabetes Mellitus, Type 2 2. Quality Improvement 2. Primary Health Care

### QIIS37

#### Improving Glycaemic Control in a Rural Primary Care Setting: Outcomes from an Integrated Diabetes Clinic in Kedah, Malaysia

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**Introduction:** Achieving optimal glycaemic control in patients with poorly controlled Type 2 Diabetes Mellitus (T2DM) remains a challenge in primary care, particularly in rural setting. Integrated diabetes care models involving multidisciplinary teams offer a structured approach to address therapeutic inertia and improve metabolic outcomes. Objective: To evaluate the effectiveness of an integrated diabetes clinic in improving glycaemic control among patients with T2DM and severely elevated HbA1c levels.

**Methods:** This retrospective cohort study was conducted at the Integrated Diabetes Clinic in Kota Kuala Muda Health Clinic. Medical records of patients with Type 2 Diabetes (T2DM) who were enrolled from January 2022 to April 2024 were reviewed. Eligible participants were adults with a baseline HbA1c of 10% and above. Patients with Type 1 Diabetes or pregnancy were excluded. Data extracted from clinical records included patient demographics and HbA1c values before and after clinic enrollment. The interventions included treatment intensification, diabetes education and multidisciplinary reviews. The primary outcome was the change in HbA1c from baseline to the most recent clinic follow-up and was analysed using descriptive statistics.

**Results:** Of the 24 patients, 23 (95.8%) were female with a mean age of 51.3 years. Mean HbA1c decreased significantly from 12.48% to 9.95% (mean reduction 2.53%; p<0.001). A total of 87.5% (21/24) showed HbA1c reduction, while 50% (12/24) achieved a reduction greater than 1%.

**Conclusion:** The integrated diabetes clinic model significantly improved glycaemic control in the rural primary care population. These findings support wider adoption of multidisciplinary diabetes care in similar settings, though larger prospective studies are recommended.

**Keywords:** Diabetes Mellitus, Type 2; Primary Health Care

## Community Project

### CP1

#### A Mental Health Awareness Initiative for Adolescents: Bringing Mental Health Experts to School

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**Introduction:** Globally, there is a critical need to enhance adolescent mental health awareness and to prioritize the prevention of mental health disorders within this vulnerable population. A collaborative community project on mental health awareness was conducted at a high school in Kajang, Malaysia, to evaluate baseline mental health literacy levels among secondary school students.

**Methods:** A single-day programme engaged 905 form one to form three students. An informal pre-programme assessment evaluated baseline knowledge across four domains: general mental health awareness, recognition of depression and anxiety symptoms, stress management understanding, and knowledge of coping strategies. The programme and assessment were implemented by a multidisciplinary team consisting of family medicine specialists, a public health specialist, a psychiatrist, and a pharmacologist.

**Results:** The assessment showed 70% of students had overall good mental health awareness. Qualitative observations revealed significant gender differences in engagement and receptiveness. Male students exhibited playful attitudes toward mental health topics, with some making light of content and random observation found one inappropriate questionnaire response. Female students demonstrated more serious engagement and attentiveness throughout the assessment process.

**Conclusion:** This assessment revealed both acceptable baseline knowledge levels and significant attitudinal barriers among Malaysian adolescents. The observed gender differences and stigma-related behaviours highlight underlying discomfort with mental health discussions, particularly among male students. These findings emphasize the need for culturally sensitive, gender-aware mental health education approaches that address underlying attitudes alongside knowledge transfer, demonstrating the importance of comprehensive assessment in understanding adolescent mental health needs.

**Keywords:** adolescent, mental health awareness, coping strategies

### CP2

#### Adolescence Mental Health Management Course and Suicide Prevention Day 2024 in Segamat

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**Introduction:** Adolescence is a life phase between childhood

and adulthood, age 10-19 years old. Globally, suicide is the third leading cause of death among older adolescents and young adults (ages 15-29). According to NHMS 2022, one in four adolescents experienced symptoms of depression, one in eight had suicidal thoughts and one in ten had attempted suicide. This community program held on 10th September 2024, targeted to school counselors in Segamat district to increase awareness and educate intervention methods aimed at preventing suicide among adolescents.

**Methods:** This program was led by ALP Psychiatry collaborated with Psychiatry Department, Education Department, Segamat Health Office, Hospital Permai and Parliament of Sekijang. Talks were given on adolescent physiology, adolescent friendly clinic service and adolescent mental health disease. Additional activities included role plays, group work, interactive booths and a forum on suicide prevention.

**Results:** A total of 80 participants including 39 school counselors attended the course. Pre and Post tests done. Average post test marks were 20.59 (82.3%) from full marks of 25 (n=30) respondents. The assessments covered knowledge and practices related to adolescent mental health problems. School counselors gave good feedback towards the program and found it beneficial in their daily practice.

**Conclusion:** Suicide among adolescents represents a major public health concern and affect country productivity. Literature showed individuals suffering from depression are 20 times more likely to attempt suicide. Early screening, enhancing awareness and knowledge, practices intervention strategies by school counselors in adolescent with depression can significantly reduce the risk of suicide in the future.

**Keywords:** adolescent depression, adolescent suicide

### CP3

#### Breaking Barriers: Ending Stigma in Methadone Care

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**Introduction:** Stigma causes barriers. Research shows that stigma associated with methadone treatment significantly affects patients' self-esteem, leading to shame, isolation, and internalised negativity. These barriers need to be dismantled in favour of a compassionate, health-centred decriminalisation policy. Thus, this community programme aimed to reduce stigma, enhance help-seeking behaviour, promote positive attitudes between healthcare workers and patients, and improve health literacy and accessibility.

**Methods:** The one-day program, themed "strengthening bonds, transforming lives," took place in Tanjong Karang on 21st February 2025. Activities were designed to meet the objectives: team-building exercises with healthcare providers and methadone patients aimed to reduce stigma; community talks and speeches from local ex-drug users encouraged health-seeking behaviour; batik canting and peer support sessions promoted positive attitudes; and health promotion campaigns and screening booths

enhanced health literacy and accessibility. Participants included the Malaysia-Ireland Training Programme for Family Medicine (MIInTFM) trainees and staff from the Tanjong Karang health clinic, AADK Kuala Selangor, Insaf Murni Association, and KPJ Kuala Selangor. Feedback forms were distributed to all participants.

**Results:** The event attracted 150 participants, including 80 methadone patients and 74 healthcare providers and community volunteers. Feedback was overwhelmingly positive, with many finding the activities beneficial and expressing interest in future events. Healthcare providers reported reduced stigma and improved social integration with the methadone community.

**Conclusion:** Community-driven stigma reduction initiatives can empower patients and humanise methadone care. Multisectoral collaboration is essential for programme replication and long-term impact in reducing discrimination and improving health outcomes.

**Keywords:** stigma, methadone

#### CP4

### Bridging Health and Community: Kuala Selangor Health Clinic Open Day

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**Introduction:** Health awareness and community engagement are essential to public health promotion. In alignment with the Ministry of Health's vision for a healthier and proactive society, the Kuala Selangor Health Clinic organised an Open Day on 20th of Syawal, coinciding with Hari Raya Celebrations. The initiative aimed to encourage preventive care and strengthen the community's bonding with healthcare services.

**Methods:** The event was held in collaboration with the Panel Penasihat and featured various health and cultural activities. It began with a 3km Fun Run named LebaRun promoting physical activity and festive spirit, where participants were encouraged to wear traditional baju raya. The event was officiated by the Political Secretary to the Minister of Health. Key highlights included 13 interactive health booths offering screening and counselling, a blood donation campaign with the Pusat Darah Negara, an ambulance exhibition and a demonstration of actual clinic services.

**Results:** A total of 316 people participated, showing strong community interest. The Fun Run drew 167 runners in festive attire, and 57 donated blood. Of 111 screened at the NHSI booth, 33 (29.7%) were overweight, 51 (45.9%) obese, 16 (14.4%) had abnormal blood sugar, and 14 (12.6%) had high blood pressure, prompting consultation and follow-up.

**Conclusion:** The Open Day successfully integrated health promotion with cultural celebration, enhancing health literacy and fostering community engagement. Screening results showed high prevalence of unhealthy body weight; 84 individuals (75.6%) were either overweight or obese. These findings provide valuable insight for developing future community-based programs focused on targeted health education and lifestyle interventions.

**Keywords:** Community health project Health promotion

#### CP5

### Community Health Programme: Caring For You, Growing With You

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**Introduction:** Health serves as a fundamental pillar of individual and community well-being, with particular importance for school-age children who face growing health challenges. Recent trends indicate rising concerns regarding childhood obesity, growth stunting and digital eye strain among primary school populations in Kuala Kedah. The Kuala Kedah Health Clinic, in collaboration with local partners, has organized this comprehensive health carnival to promote preventive healthcare and wellness education.

**Methods:** The carnival implements a comprehensive approach to health through medical screenings including body mass index, blood pressure, and glucose tests, along with vision examinations. It incorporates educational components featuring interactive displays, health talks, and quizzes, while promoting physical activity through aerobics sessions. Specialized nutritional guidance for children completes this multifaceted approach to community wellness, addressing both immediate health needs and long-term preventive care through integrated interventions.

**Results:** A total of 538 children aged 6-12 years were assessed for their nutritional status. The overall prevalence of underweight, normal weight, overweight, and obesity was found to be 111 (20.6%), 313 (58.2%), 51 (9.5%), and 63 (11.7%) respectively. Underweight status was most prevalent among 10-year-old children, whereas the highest rate of obesity was observed in 8-year-olds. Obesity was more common among boys (n=42) compared to girls (n=21).

**Conclusion:** This health carnival represents a community-centred approach to addressing health challenges. By integrating screening services with health education and nutritional guidance, it empowers participants with knowledge and tools for long-term wellness, while fostering collaborative relationships between healthcare providers and the community. It demonstrates an effective strategy for preventive healthcare delivery in school settings.

**Keywords:** childhood obesity growth stunting digital eye strain preventive care educational talks long term wellness

#### CP6

### Community Project: Promoting Healthy Lifestyles And Obesity Prevention Among Primary School Students In Tampin

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**Introduction:** Childhood obesity poses serious long-term health risks, including diabetes and cardiovascular diseases. This community project aimed to raise awareness, educate families, and encourage healthy habits through interactive activities.

**Methods:** Organized by Family Medicine Specialists Association (FMSA) Negeri Sembilan, Pejabat Kesihatan Daerah (PKD) Tampin, and Pejabat Pendidikan Daerah (PPD) Tampin; the event engaged 271 participants, including school children from 5 Primary schools in Tampin District in Negeri Sembilan, parents, and teachers. Key activities included a fun walk at Bukit Tampin to promote physical activity, a talk on childhood obesity, educational booths with anthropometric screening, and a healthy bento contest. A questionnaire was used to assess students' dietary habits, physical activity levels, and BMI awareness.

**Results:** Among 68 students who completed the questionnaire, the mean age was 10 years (SD +/- 0.24), with 30 males and 38 females. Based on World Health Organization (WHO) growth chart, 13.2% were underweight, 58.8% had normal Body Mass Index (BMI), 8.8% were overweight, and 19.1% were obese. Of the 19 overweight/obese children, 63.2% were unsure about their BMI status. 70.6% practiced healthy eating, and 85.3% ate regular meals, but only 15.8% of obese participants met recommended daily activity levels.

**Conclusion:** The community project successfully engaged students, parents, and educators in promoting awareness of childhood obesity and healthy lifestyle practices. The questionnaire findings reveal that many participants lacked awareness of their BMI status. To address this, educational workshops and school programmes are recommended to enhance children's understanding of BMI and promote healthy lifestyle habits.

**Keywords:** Obesity, students, lifestyles

## CP7

### Engaging and empowering the 'Orang Asli' community on basic life support – Training the trainers

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**Introduction:** Cardiac arrest is a life-threatening medical emergency which requires immediate resuscitation. It may happen to anyone including the native people that live faraway from healthcare centres with limited facilities. This will be the barrier to provide urgent treatment. Therefore, providing this population with basic life support training is very much important so that early resuscitation can be initiated prior to the arrival of health care professionals. This community project aimed to train the first

aiders among the community and empower them to teach the rest of community on basic life support (BLS).

**Methods:** BLS team of HSAAS, UPM provided a training program to the community about basic life support. First aiders were identified during first visit and underwent training and assessment to certify them as First Aiders. The module of training includes theoretical and practical knowledge. These first aiders were then invited for second visit to train the other community under BLS team monitoring.

**Results:** 19 first aiders were certified during first visit and 25 other community were successfully trained by them during second visit. Overall feedback by the community was the program is very impactful and should be done in other 'orang Asli' community.

**Conclusion:** This community can perform BLS if to be trained properly. Empowering this minor indigenous community is important, aligned with Sustainable development goal no 3 (good health and wellbeing), no 4 (quality education) and no 10 (reduced inequalities). Such empowering program should be done more in future.

**Keywords:** basic life support; orang Asli; empowering native, community project, cardiopulmonary resuscitation

## CP8

### Enhancing support for parents with autistic children through workshop at Klinik Kesihatan Bukit Minyak

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**Introduction:** A workshop for parents with autistic children was held at Klinik Kesihatan Bukit Minyak on 24 February 2024. Main objective was to provide support to parents through educational workshop especially on how to communicate and coping with autistic children. Other objectives are to assess for depression and identify area in which parents need support.

**Methods:** Parents with autistic children from Pusat Dalam Komuniti were invited to join the programme. The participants were 22 autistic children, 20 parents, 21 clinic and PDK staffs. The children had session with occupational therapists in which they incorporated play therapy and sensory therapy. Meanwhile, parents had session with speech therapist titled "How to communicate with your autistic child" and followed by session with clinical counsellor on how to cope with their children behaviour. Questionnaires were given to parents which include Patient Health Questionnaire PHQ9 to assess for depression and Autism Parenting Stress Index APSI to identify areas where parents need support with parenting skills. APSI has 13 domains which include social development, communication, tantrums, aggressive behavior, self injurious behavior, sleep problem and concern for future.

**Results:** Parents reported that the workshop were beneficial to them. PHQ-9 reported 18.8% parents have moderate to severe symptoms of depression. APSI questionnaire showed 93.7% parents worried about their children's future and whether they can be independent. 81.2% parents worried about their children's communication problem.

**Conclusion:** In conclusion, managing autistic children is difficult.

Therefore, it is crucial to support parents by giving educational workshops and training.

**Keywords:** autism, training workshop

## CP9

### Establishment of herb garden to combat maternal anemia

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**Introduction:** Anemia is an extremely common condition in pregnancy world-wide, conferring a number of health risks to mother and child. Dietary iron deficiency is one of the major reasons for global anemia. In March 2024, a small herb garden was established on a plot of land adjacent to Klinik Desa Bahagia as the center recorded the highest number of pregnant mothers with anemia in the year 2023. As part of nutrition education and iron supplementation, a mini herb garden was established with the aim of improving maternal anemia.

**Methods:** A nutritionist, together with nurses and villagers, took the initiative to create the garden. Pregnant mothers are now encouraged to harvest greens from the garden, and cooking demonstrations are held to teach them how to incorporate these greens into their meals. Discussion: Herb gardens provide access to fresh and iron-rich plants that can help increase hemoglobin levels and improve overall health in pregnant women. These gardens can serve as a reliable, cost-effective, and culturally acceptable source of micronutrients.

**Results:** As a result, the percentage of anemia among pregnant mothers at the Klinik Desa Bahagia has decreased from 21.6% to 10.0% in the year 2024.

**Conclusion:** In conclusion, a herb garden indirectly helps improve the hemoglobin level of the pregnant mother with anemia. The significant achievement was presented during the audit by the Bahagian Pemakanan Kementerian Kesihatan Malaysia and the Sektor Pemakanan Jabatan Kesihatan Negeri Sabah.

**Keywords:** Anemia, Herb garden, Maternal,

## CP10

### Fall Risk Assessment among Elderly in a Community Screening Programme in Kepala Batas, Penang

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**Introduction:** Prevalence of falls in elderly ranging from 19.1% to 47% in Malaysia. A national survey (2018) in Malaysia found that 14.1% of elderly aged 60 and above reported having at least 1 fall in the past 12 months. The timed up and go (TUG) and sit to stand (STS) tests are simple and widely used on evaluating functional mobility and fall risk in elderly.

**Methods:** It is a cross-sectional study, targeting elderly community in Kepala Batas using convenient sampling method. This study was conducted on 20th October 2024 involving 44 participants. A brief description on fall risk assessment explained and demographic details were collected using questionnaires. Data was transferred for analysis using Google sheet. Descriptive data analysis was used to summarise and present the collected results.

**Results:** Total numbers of 44 elderly were participating in the programme. Their age ranging from 60 years until 80 years old. There were 9 elderly males (20.5%) and 35 elderly females (79.5%). There were only 13 (29.5%) participants who have no known medical conditions. Another 31 (70.5%) participants had medical illness such as diabetes mellitus (31.8%), hypertension (25.0%) and others (13.6%). 8 elderly (18.2%) required more than 13.5 seconds to complete TUG and failed the STS assessment. Those who failed the assessments were referred to physiotherapy.

**Conclusion:** This programme highlights the importance of fall risk screening among elderly population. Early and appropriate assessment of fall risk significantly improve outcome and effective intervention will reduce the risk of fall and related injuries among elderly.

**Keywords:** Elderly, TUG, STS

## CP11

### Fit Fighter Port Dickson - A Structured Multidisciplinary Intervention Program Among Primary School Children to Combat Childhood Obesity

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**Introduction:** Childhood obesity is a significant public health concern, with NHMS 2022 reported that 1 in 3 teens aged 13-17 is overweight or obese. In response, Klinik Kesihatan Port Dickson in collaboration with the health clinic advisor panel, launched the Fit Fighter Program aiming at promoting sustainable lifestyle changes through a multidisciplinary approach involving healthcare professionals, teachers and parents.

**Methods:** A total of 47 out of 126 (37%) children from SK Si-Rusa were found to be obese. 28 students aged 9-12 years with no comorbidities with parental consent were enrolled in the program from October 2024 till March 2025. These students participated in 11 series of activities with doctors, nutritionist, physiotherapists, occupational therapist and counsellor. Each activity was comprehensively designed tailoring to adolescent needs, focusing on health and not only on weight while maintaining emotional well-being. Behavioural and dietary recall encouraged self-monitoring, mindful eating and positive body image.

**Results:** Among 28 recruited students, 25 successfully completed the program. Of the participant, 7 were girls and 18 were boys, with an average BMI of 28. After 6 months of intervention, 50%

had weight reductions, 8.7% maintained their initial weight and 41.3% had weight increments. Additionally, 62.5% of participants remained physically active, 69.5% felt motivated to maintain healthy lifestyle and 81.8% reported benefitting from the program.

**Conclusion:** The Fit Fighter Program highlighted diverse role of primary care not only in providing professional support but engaging family, school and community in tackling childhood obesity.

**Keywords:** Childhood obesity, Primary Care, Multidisciplinary Approach

### CP12

#### **From Hesitancy to Immunity: Empowering Rural Communities Through Health Advocacy at Changkat Lada 2.0**

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**Introduction:** Rural populations often face health inequities, including low health literacy and vaccine hesitancy. In Changkat Lada, these issues were exacerbated by misconceptions about vaccines and limited awareness of the role of nutrition in supporting optimal growth among children under five. Aim: To improve vaccine acceptance, enhance community health literacy, and promote preventive care through a family-centered, multidisciplinary outreach initiative.

**Methods:** Karnival Keluarga Sihat, Komuniti Sejahtera Changkat Lada 2.0 was held on 19 April 2025 through collaboration between Klinik Kesihatan Changkat Lada, HOPE@PPUM, JKN Perak, and community stakeholders. Activities included: A family health forum on childhood stunting, nutrition, and vaccination, featuring a paediatric endocrinologist, family medicine specialist, and paediatric dietitian. An influenza vaccination drive supported by trained vaccine communicators from PPUM. Health screenings for adults and children, including targeted nutritional assessments. Awareness booths on autism (NASOM), organ donation, and physical activity.

**Results:** A total of 123 adults and 40 children participated. Seventy-five individuals received influenza vaccines. Among 21 initially hesitant attendees, 16 (76%) accepted vaccination after engaging with trained communicators. Nineteen children received nutrition support (eggs and milk) through HOPE@PPUM.

**Conclusion:** This initiative embodied key Family Medicine principles—preventive care, patient-centeredness, community orientation, and continuity of care. Effective communication strategies notably improved vaccine acceptance. Future efforts will focus on sustained engagement, follow-up care, and adapting this model for other underserved rural communities.

**Keywords:** Vaccine Hesitancy, Community Health Services, Vaccine Communication, Health Literacy

### CP13

#### **From Outbreak to Awareness: A Collaborative Health Program in Kampung Orang Asli Hulu Kuang, Selangor**

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**Introduction:** Kampung Orang Asli Hulu Kuang, Selangor, home to approximately 500 residents, experienced a Rotavirus outbreak in early 2024, resulting in the tragic death of a child and multiple hospitalisations. The outbreak highlighted the urgent need for improved hygiene awareness and early recognition of warning signs in children. Additionally, tuberculosis (TB) remains a persistent health concern in the community. In response, a collaborative health program was organised to educate residents on disease prevention, hygiene practices, and early intervention strategies.

**Methods:** The program was conducted on 29th June 2024 at the Kampung Orang Asli Hulu Kuang community hall by Klinik Kesihatan Kuang in collaboration with PKD Gombak, JKOA and Panel Penasihat KK Kuang. The initiative featured interactive health talks, practical demonstrations on handwashing and oral hygiene, a cooking demonstration, and fun activities such as aerobics, colouring contests, and netball shooting to enhance engagement with the community. Additionally, educational booths offering information on TB, hygiene, and child health were available. Knowledge on hygiene, child danger signs and TB, based on verbal pre- and post-tests were carried out in adults over 18 years old.

**Results:** The program successfully engaged over 300 Orang Asli participants. Almost 80% of knowledge improvement was observed following intervention. To date, no further Rotavirus outbreaks have been reported, indicating better hygiene and disease awareness.

**Conclusion:** This initiative strengthened health awareness and preventive measures within the community. Ongoing engagement, periodic follow-ups, and sustained collaboration with local stakeholders are essential to maintaining these improvements and preventing future outbreaks.

**Keywords:** Orang Asli, community project, health awareness

### CP14

#### **Growing Stronger Together: Empowering Local Champions to Prevent Childhood Stunting**

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**Introduction:** Childhood stunting remains a major public health challenge, with the national prevalence among children under five reaching 21.2%. In Changkat Lada, the rate is even higher at 25%, highlighting urgent local needs. Recognizing nutrition as a key factor, the "Cegah Bantut" program was initiated through a collaboration between Changkat Lada Health Clinic and HOPE@PPUM to empower community members as mentors for stunting prevention.

**Methods:** Ten participants-including seven caregivers of children with stunting or poor weight gain and three community leaders aged 26 to 65 years-underwent interactive training. Modules addressed common growth myths, the causes of stunting, affordable nutritional meal planning and hygiene practices. Training was delivered by paediatric endocrinologist, public health officer, family medicine specialist and paediatric dietitian.

**Results:** The mean Pre-test score was 75.3%(median:77.8%), rising to 77.4%(median:85.7%) post-training. Participants with lower baseline scores showed notable improvement, indicating the program's effectiveness in enhancing knowledge among those with limited initial understanding.

**Conclusion:** The "Cegah Bantut" program successfully trained participants to serve as mentors in their community. Moving forward, these local champions will play a critical role in expanding the initiative by mentoring future "Cegah Bantut" programs at nearby health clinics. Sustained support and culturally tailored materials will be key to strengthening community ownership and achieving broader impact in the fight against childhood stunting.

**Keywords:** Stunting, Poor Weight Gain, Child Nutrition

#### CP15

##### H.E.B.A.T & SNAASSS: Peer-Led Interventions for a Smoke-Free Malaysia 2040

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**Introduction:** In response to Malaysia's Smoke-Free Nation 2040, Henti.Elak.Basmi.Asap.Tembakau (HEBAT) and Stop Nicotine Addiction Among Secondary School Students (SNAASSS) are peer-led interventions targeting adolescent nicotine addiction through peer advocacy. This is a collaborative effort between the Departments of Primary Care Medicine, University Malaya (UM) and University Teknologi MARA (UiTM) with students from the Health Education & Awareness Leaders Club (HEALX), UiTM. Medical students are trained as peer advocates, utilising the HEBAT and SNAASSS modules to deliver student-led advocacy sessions against nicotine among secondary school students.

**Methods:** The intervention involved 202 Form 2 students at SMK Sierramas, with baseline data on knowledge, attitudes, skills, and aspirations gathered via a questionnaire. Trained peer advocates conducted stimulating group activities and showcased anti-vape and tobacco exhibits. The effectiveness of the peer-led approach was evaluated by comparing pre-and post-intervention results. At-risk students were identified and offered behavioural intervention.

**Results:** A pre-and post-questionnaire survey of 202 Form 2 students (99 males,103 females ; 132 Malays, 49 Chinese, and 21 Indians) revealed an overall positive shift. Notable increases were evident in awareness and understanding of nicotine addiction (66% to 86%) and (48% to 85%), respectively; willingness and perceived skills to address the dangers of nicotine(52% to 76%) and (55% to 80%), respectively; readiness to implement these skills (47% to 67%), and renewed perceptions about smoking and vaping (53% to 85%).

**Conclusion:** This targeted university-school collaboration

identifies at-risk students and offers behavioural intervention by peer advocates, guided by primary care physicians, to promote a smoke and vape-free lifestyle among the next generation.

**Keywords:** peer advocacy, nicotine addiction, adolescents

#### CP16

##### Igniting Change: Collaborative Strategies for Improving Diabetic Care in the Tanjong Karang Community

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**Introduction:** Diabetes is a major global health issue affecting millions, with rising prevalence in Malaysia. Tanjong Karang residents are mainly elderly with low socioeconomic support. Located in the west coast area, Tanjong Karang is a suburban and remote district in Kuala Selangor, making it challenging for agencies and NGOs to provide diabetic care. The community program aims to establish collaborative strategies for preventive care, health education and diabetes management.

**Methods:** We held a diabetes community program on November 23, 2024; collaborating with local health organisations, we mobilised volunteers and identified community needs which emphasize proactive team-based care and community resources. Partnerships were formed with the Diabetes Malaysia Association, the Malaysian Endocrine and Metabolic Society (MEMS), and the Endocrinology unit from Sungai Buloh Hospital. Village chiefs representing 23 different villages took part. The program featured a charity fun run that beyond raising awareness in which it can strengthened community engagement. Small group discussions with endocrinologists were also conducted to enhance learning, as well as health screenings aimed to identify undiagnosed cases of diabetes, and competitions for youth that served as a fun way to disseminate education. We also introduced our new Diabetic Centre of Excellence (DCOE) aimed at empowers patients to understand risks, monitor, set goals, and take action for better self-management that ultimately enhancing diabetic care, concluding with a blue-light ceremony to support diabetes awareness.

**Results:** A total of 474 people participated, including 183 in the fun run. Feedback was positive, with many expressing interest in future events. The event was featured on the International Diabetes Federation's (IDF) website.

**Conclusion:** The strong turnout and collaboration indicate a solid partnership between healthcare providers and the community. This program strengthens community ties and aims to enhance access to care and improve health outcomes.

**Keywords:** diabetes, community, primary health care

**CP17****Improving Access to Contraceptive Services for Refugee Women in Penang: A Collaborative Initiative to Reduce Maternal Health Risks**Lim YL<sup>1,2,3</sup><sup>1</sup>*KK Tanjung Bungah, Family Medicine, Penang, Malaysia;* <sup>2</sup>*Wei Shuong, Tang, Penang, Malaysia;* <sup>3</sup>*Yen Chyet, Lee, Penang, Malaysia*

**Introduction:** A 2019 UNHCR study reported a maternal mortality of 62 per 100,000 live births among refugees in Malaysia, significantly exceeding the national average of 36 with postpartum haemorrhage and hypertensive disorders as leading causes. Financial barriers significantly limit access to antenatal care and family planning, resulting in a rise in unplanned pregnancies. In response, we collaborated with NGOs including the Mediciens Sans Frontieres (MSF), SelflessTogether and Penang Family Healthy Development (FHDA) to deliver contraceptive services and promote awareness. This initiative aligns with Sustainable Development Goals (SDG) 3, aiming to ensure universal access to sexual reproductive healthcare and integrate it into the national strategies by 2030

**Methods:** Refugee patients, regardless of UNHCR card status, register at Maternal and Child Clinic, Klinik Kesihatan Jalan Perak paying only the standard registration fee. After triage and consultation, they received family planning counselling and were assessed for Implanon or intramuscular (IM) progesterone based on MEC eligibility. Implanon insertion were performed by medical officers while nurses administered IM Depot. Contraceptives were supplied by MSF, with services scheduled on Fridays. Educational videos in Rohingya dialect, developed with MSF were accessible via QR codes.

**Results:** Between May 2024 and April 2025, 20 refugee women received Implanon insertions, while 10 women initiated three-monthly IM depot progesterone injections at Klinik Kesihatan Jalan Perak, including those with high-risk pregnancies.

**Conclusion:** This highlights the increasing acceptance of long-acting and injectable contraceptive methods among refugee women emphasizing the urgent need for accessible family planning to vulnerable groups.

**CP18****Karnival Warga Emas 2024**

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**Introduction:** Malaysia is projected to be an aged nation by 2023, with over 15% of the population aged 60 and above. By

2040, this figure is expected to reach 17.6%. In response, Penang FMSA organized the Karnival Warga Emas on 20th October 2024 at ILP Kepala Batas. Under the theme Sejahtera di Usia Emas, this program was organized in collaboration with Penang State Health Department, aimed to promote healthy aging while raising awareness about the unique needs of the elderly through engaging health activities.

**Methods:** Activities included Waitangkung exercise, forum, health talks by a Geriatrician, Psychogeriatrician, Urogynecologist, and interactive booths. Exhibits highlighted the 5I Geriatric Giants: Immobility, Instability, Impaired Cognition, Incontinence and Iatrogenesis. During the program, three booths took the initiative to conduct a survey using an opportunistic sampling method.

**Results:** The event saw 173 participants. The screenings revealed that many elderly participants were dealing with common aging-related issues. At the instability booth, 81% of 54 screened individuals were at risk for falling. Among 62 participants screened for urinary incontinence, 27.4% reported symptoms-8.1% stress incontinence, 8.1% urge incontinence, and 11.3% mixed incontinence. AD8 screening among 51 participants showed 20% with abnormal results, higher in males (30%) than females (17.1%). Those identified were referred for further care.

**Conclusion:** Although not fully representative, the findings highlight key geriatric risk and the importance of regular screening and health assessment. Early identification and interventions, are vital in supporting Malaysia's aging population.

**Keywords:** Elderly population, Geriatric Giants, instability, impaired cognition, incontinence

**CP19****Kluang Dementia Project: A Model of Community-Led Innovation in Primary Care**Ahmad Z<sup>1</sup>, Ibrahim F<sup>2</sup>, Samsudin K<sup>2</sup>, Rosli L<sup>2</sup><sup>1</sup>*Klinik Kesihatan Mengkibol, PKD Kluang, Kluang, Malaysia;* <sup>2</sup>*PKD Batu Pahat, PKD Batu Pahat, Batu Pahat, Malaysia*

**Introduction:** Malaysia's ageing population presents growing challenges in dementia care. In response, a community-based dementia management model was initiated in Kluang, Johor, incorporating core family medicine principles with innovative, multidisciplinary strategies. The initiative aimed to improve dementia awareness, reduce stigma, promote early detection, and support caregivers through structured community engagement.

**Methods:** Conducted from April 2023 to December 2024, the program targeted individuals aged 60 and above, caregivers, and the wider community. Core components included public education, caregiver training, and cognitive screening using MOCA, MMSE, LOTCA-G, and MBI. Caregiver burden was assessed using the 12-item Zarit Burden Interview (ZBI-12), with scores classified as mild ( $\leq 20$ ), moderate (21–30), or severe ( $> 30$ ). The multidisciplinary team comprised family medicine specialists, medical officers, nurses, pharmacists, physiotherapists, occupational therapists, dietitians, and counsellors. Interventions included clinic reviews, home visits, medication reconciliation, nutrition counselling, home safety assessments, and caregiver support.

**Results:** Over 500 older adults were screened, with 23% identified

with early cognitive decline. Awareness activities reached more than 2,000 individuals across health facilities, schools, and religious venues. Among 25 caregivers assessed, ZBI-12 scores improved significantly ( $p < 0.05$ ): mild burden rose from 50% to 84%, while moderate to severe burden decreased from 52% to 16%. Two caregivers were referred for counselling. Of 25 home assessments, 80% required modifications to enhance safety and dementia-friendliness. Multidisciplinary home care also improved chronic disease control, medication adherence, and patient independence.

**Conclusion:** The Kluang Dementia Project demonstrated that a primary care-led, community approach can reduce caregiver burden ( $p < 0.05$ ), detect early dementia, and improve home safety. Integrated screening, education, and home interventions enhanced both caregiver well-being and patient independence. This model offers a scalable, person-centred framework for dementia care in similar community settings

**Keywords:** Dementia Care, Community-Based Intervention, Multidisciplinary Approach, Geriatric Health

## CP20

### Navigating Puberty: A Guide To Healthy Growth' For Schoolchildren In Sk Bandar Seri Putra, Kajang, Selangor

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**Introduction:** Adolescents (age 10-19) and preadolescents (age 9-12) experience major physical, emotional and social changes. The National Health and Morbidity Survey 2022 identified concerning health risks among Malaysian adolescents, including smoking, alcohol use, unprotected sex, and poor nutrition. This project was initiated to support adolescents in understanding bodily changes during puberty and to promote healthy lifestyle practices through early, structured health education. This community project aims to provide health education tailored to students aged 9-12, focusing on puberty, safe and unsafe touch and risk behaviour prevention. It also sought to foster healthy habits and fostering safe dialogue between students, teachers and healthcare professionals.

**Methods:** Conducted over two days (10- 11th April 2025) at Sekolah Kebangsaan Bandar Seri Putra, Kajang, the program included three health education sessions tailored to Standard 3, 4-5 and 6 students. Delivered by Family Medicine Specialist and trainees, the sessions incorporated interactive discussions, educational videos, and exhibitions covering nutrition, smoking/vape addiction, sexually transmitted infections, and HIV prevention.

**Results:** A total of 1783 students participated. Interactive sessions revealed a high level of participation and openness to discuss sensitive topics. Teachers also observed increased student awareness and curiosity during the program. Several students who required further support were identified during the sessions and referred to school counselors for follow up.

**Conclusion:** Education on puberty and healthy lifestyle via school-based program is reaching and empowering adolescents. This initiative highlights the important role of family medicine

in promoting adolescents health and fostering community-based preventive care.

**Keywords:** puberty, adolescent health

## CP21

### Practical Help for Community - "Tabung Bantuan Pesakit Sejahtera Kedah"

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**Introduction:** The district of Pendang Kedah has a one-of-its-kind project called Tabung Bantuan Pesakit Sejahtera Kedah (TBPSK). The community project was established specifically to support the self-management of chronic diseases among patients attending primary care clinics in Pendang.

**Methods:** In 2021, Pendang's Medical Social Worker (MSW) and Family Medicine Specialist (FMS) presented paperwork to the Kedah State Executive Health Council. The Health Council accepted the paperwork and approved an annual budget of RM50,000.00 for practical help for the underprivileged and B40 clients. In this project, FMS and medical officers screen for eligible patients and create medical planning for them. Meanwhile, the MSW purchases and provides the practical items to the clients.

**Results:** An impressive amount of RM119,925.00 had been approved for 600 patients under TBPSK up till December 2024. Diabetic patients received glucometers, glucose strips, and insulin needles to help manage their blood sugar levels effectively. Meanwhile clients with hypertension may receive a blood pressure set to assist them in performing home blood pressure monitoring. The project also helped reduce the financial burden on domiciliary patients by providing essential items such as diapers, formula milk, and ripple mattresses. For elderly/stroke clients, suitable walking aids were provided to enhance their mobility and independence. Additionally, TBPSK offered transportation incentives to ensure patients could continue receiving care at tertiary hospitals.

**Conclusion:** TBPSK funding enhances person-centered care at primary care clinics. It improves the self-management of chronic diseases among our patients and support holistic management at the community level.

**Keywords:** Primary Health Care, Chronic Disease, Medical Device

## CP22

### Program Intervensi Cakna Kesihatan Warga Emas: A Community-Based Intervention to Reduce Hypertension Risk Among the Elderly in Lohan, Ranau, Sabah

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**Introduction:** Hypertension affects 67% of the elderly in Lohan, Ranau, a rural community of 15,000 people. The "Program

Intervensi Cakna Kesehatan Warga Emas", initiated by Lohan Health Clinic, aimed to reduce hypertension risk by promoting healthier salt intake practices. The objective of this community-based programme is to enhance knowledge, improve attitude and promote sustainable low-salt dietary practices among the elderly.

**Methods:** This six-month intervention (June-December 2024) involved 100 elderly participants and included the following activities: Health screenings Exercise sessions Educational talks on salt reduction Low-salt cooking demonstrations Community leaders and volunteers facilitated activities to ensure sustainability. Pre and post-intervention outcomes were evaluated using a structured and validated Knowledge, Attitude and Practice (KAP) questionnaire focused on salt intake. Data were analyzed descriptively to assess changes.

**Results:** The participants (mean age: 67 years, 53% male, 98% Kadazandusun, 54% with secondary education, 88% married) showed the following changes after the intervention: Knowledge scores improved from 2.28 to 2.58. Attitude scores showed minimal improvement (0.92 to 0.95). Practice score increased significantly from 1.35 to 3.05.

**Conclusion:** The intervention demonstrated positive changes in knowledge and dietary practices, indicating its effectiveness in supporting hypertension prevention efforts in a rural setting. The limited change in attitude suggests the need for long term engagement. To ensure continuity and sustainability, the formation of the "Kelab Warga Emas Lohan Community" has been established to promote ongoing community-led initiatives. This model may be adapted for similar rural populations facing hypertension challenges.

**Keywords:** Elderly, Salt intake, Hypertension

### CP23

#### Reaching the Unheard: Inclusive Health Outreach for the Deaf Community via HOPE@PPUM

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**Introduction:** People with hearing disabilities often face barriers to accessing healthcare, particularly preventive services, due to communication challenges and lack of inclusive health education. The Health Outreach Programme and Education (HOPE@PPUM) was developed under the directive and funding from the Ministry of Higher Education (MOHE) to deliver speciality care and health education to marginalised communities. One of its flagship programmes focused on the deaf community, aiming to address the gap in non-communicable disease (NCD) screening.

**Methods:** The programme was conducted on 8 March 2025 (Saturday) from 9:00 AM to 12:30 PM at Pusat Perubatan Universiti Malaya (PPUM) in collaboration with the Malaysian Federation of the Deaf (MFD). Services included screening for diabetes, hypertension, dyslipidaemia, as well as health talks on healthy diet, exercise, and smoking/vaping cessation. All health education was delivered with the assistance of certified sign language interpreters.

**Results:** A total of 85 deaf individuals participated (43.5% male, 56.5% female), aged 13-67 years. The majority (95.3%) were from

the B40 income group. Among them, 25.9% (n=22) had elevated capillary blood glucose despite no known diabetes, 61.2% (n=52) had total cholesterol of 5.2 mmol/L or more without a prior diagnosis of dyslipidaemia, and 21.2% (n=18) had raised blood pressure with no history of hypertension.

**Conclusion:** HOPE@PPUM demonstrates the value of inclusive outreach strategies in addressing health inequities. Targeted initiatives with appropriate communication support can significantly improve early detection and health literacy among people with disabilities.

**Keywords:** deaf community, health screening, inclusive healthcare

### CP24

#### Strengthening Vaccine Uptake through Effective Communication: HOPE@PPUM Vaccine Communication Training (VaCT) and Influenza Vaccination Drive in Perak Tengah

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**Introduction:** Vaccine communication remains critical in addressing hesitancy and improving uptake, especially amidst evolving public health strategies. With the Ministry of Health Malaysia (MOH) introducing influenza vaccination for older adults and COVID-19 XBB.1.5 booster doses in public health facilities, the Health Outreach and Education (HOPE@PPUM) leveraged its expertise through Vaccine Communication Training (VaCT) to support healthcare workers (HCWs) and the community.

**Methods:** On 18 April 2025, the VaCT workshop trained 32 healthcare workers (Family Medicine Specialists, Medical Officers, and nurses) from Perak Tengah. The full-day session included four lectures, a hands-on demonstration, and group role-playing facilitated by six trainers. The training applied WHO-recommended strategies: presumptive approach, specific strategies tailored to hesitancy spectrum, and motivational interviewing in driving behaviour change. For sustainability, trained HCWs received a logbook to record encounters with hesitant individuals over six months. The VaCT team will assess the logbooks and knowledge retention during follow-up. Pre- and post-training assessments used a questionnaire validated by six FMSEs, covering experience, confidence, and 10 knowledge-based items. On 19 April, an influenza vaccination drive was held, offering vaccines to individuals aged  $\geq 9$  years without current season's vaccination.

**Results:** The mean pre-training score was 4.55/10, improving to 8.56/10 post-training. During the carnival, a total of 75 individuals were vaccinated. Among 21 initial refusers, 16 (76.2%) accepted vaccination after tailored counselling by trained communicators.

**Conclusion:** VaCT enhances HCWs' communication skills, improves vaccine uptake, and reduces burnout by equipping providers with tailored strategies to address hesitancy, aligning with evidence that most individuals are vaccine-accepting when offered the right support.

**Keywords:** vaccine communication, vaccine hesitancy, motivational interviewin

## CP25

### Virtual Consultation Service In Primary Healthcare, Ministry Of Health Malaysia

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**Introduction:** Virtual consultation (VC) adoption is part of harnessing digital technologies strategy under Pillar 1: Transforming Health Service Delivery of the Malaysian Health White Paper.

**Methods:** It is a method of virtual, live and interactive delivery of health services that complements the existing clinic services and makes it easier for clients to receive health services. Virtual Consultation Services Guideline in Health Clinics was developed in 2022 as part of this initiative. Primary healthcare services delivered virtually include blood results, diabetes management treatment, directly observed therapy short course (DOTS), allied health, antenatal, postnatal including home visit follow-ups and group classes among others.

**Results:** This service has been successfully piloted in 5 government primary healthcare facilities as part of the National Health Reform Agenda in 2019. Started with 3,101 VC sessions delivered in the pilot clinics, the number of VC sessions has gradually increased yearly to 163,975 sessions in 2024 conducted in 432 primary healthcare facilities. This covers 37% of the 1173 government health clinics and government mother and child health clinics in Malaysia. These successful VC sessions were conducted using multiple platforms such as Google Meet MyGovUC 2.0, MySejahtera-MyVAS, RekodPesakit Health Information Exchange (RP-HIE), Skype for Business, BookDoc and video call via WhatsApp applications.

**Conclusion:** The increasing number of VC sessions was facilitated by the improvement of network bandwidth and hardware availability in primary healthcare facilities and related Key Performance Index (KPI) in place. Collaboration with NADI-National Information Dissemination Centre has been initiated to further expand VC services by addressing internet access in vulnerable communities.

**Keywords:** Virtual consultation, digital health, health transformation

